

Embedded System Platform Solutions

As the leading Industrial System provider, IEI continues to extend the product footprint from component level to system integration service. Our strong knowledge of market and technology innovation offers reliability, flexibility and interoperability for all of our industrial products with choices of size, performance and features.

1. Transportation System

Model Name	Processor
IKARPC-05A	Rockchip PX5 Cortex-A53 1.5GHz
IKARPC-07A	Intel® Atom™ E3826 1.46 GHz, Freescale™ i.MX 6 Cortex™-A9 1.0 GHz
IKARPC-W10A-BT	Intel® Atom™ E3826 1.46 GHz
IVS-300-BT/ULT3	Intel® Core™ i5-6300U 2.4 GHz, Intel® Celeron® J1900 2.0GHz
IVS-200-ULT2	Intel® Core™ i5-5350U 1.8 GHz, Intel® Celeron® 3765U 1.9 GHz
IVS-110-AL	Intel® Atom™ E3930 1.8GHz, Intel® Atom™ E3940 1.8GHz, Intel® Atom™ E3950 2.0GHz
IVS-100-BT	Intel® Atom™ E3826 1.46 GHz
ITCS-100-H81	Intel® Core™ i5-4570TE 2.7GHz, Intel® Celeron® G1820TE 2.2GHz
TRS-100-ULT3	Intel® Celeron® 3855U 1.6GHz
IRS-100-ULT3	Intel® Core™ i5-6300U 2.4 GHz
SBOX-100-QM87	Intel® Core™ i5-4400E 2.7 GHz



2. Industrial Automation System

Model Name	Processor
TANK-871-Q170	Intel® Core™ i7-6700TE 2.4 GHz, Intel® Core™ i5-6500TE 2.3 GHz
TANK-870-Q170	Intel® Core™ i7-6700TE 2.4 GHz, Intel® Core™ i5-6500TE 2.3 GHz
TANK-870e-H110	Intel® Core™ i7-6700TE 2.4 GHz, Intel® Core™ i5-6500TE 2.3 GHz
TANK-860-HM86	Intel® Core™ i5-4400E 2.7 GHz, Intel® Celeron® 2000E 2.2 GHz
TANK-820-H61	Intel® Core™ i5/i3, Pentium® processor
TANK-801-BT	Intel® Celeron® J1900 2 GHz
TANK-800-D525	Intel® Atom™ D525 1.8 GHz
TANK-760-HM86	Intel® Core™ i7-4700EQ 2.4 GHz, Intel® Core™ i5-4400E 2.7 GHz, Intel® Celeron® 2000E 2.2 GHz
TANK-720-Q67	Intel® Core™ i5/i3, Pentium® processor
TANK-700-QM67	Intel® Core™ i5/i3, Pentium® Mobile processor
TANK-620-ULT3	Intel® Celeron® 3855U 1.6GHz
TANK-610-BW	Intel® Celeron® N3160 1.6GHz
TANK-600-D2550/N2600	Intel® Atom™ D2550 1.86 GHz / Intel® Atom™ N2600 1.6 GHz
TANK-6000-C226	Intel® Xeon® E3 1225-v3 3.2 GHz, Intel® Core™ i3 4330 3.5 GHz



3. Machine Vision Embedded System

Model Name	Processor
MVS-100-Q170	Intel® Core™ i7-6700TE 2.4GHz, Intel® Core™ i5-6500TE 2.3GHz Intel® Core™ i7-6700 3.4GHz, Intel® Core™ i5-6500 3.2GHz



4. DIN-Rail Embedded System

Model Name	Processor
DRPC-120-BT	Intel® Atom™ E3845 1.91 GHz
DRPC-100-CV	Intel® Atom™ N2800 1.86 GHz
DRPC-130-AL	Intel® Atom™ E3930 1.8GHz



5. Compact Size Embedded System

Model Name	Processor
uIBX-250-BW	Intel® Celeron® N3160 1.6GHz
uIBX-230-BT	Intel® Celeron® N2930 1.83 GHz
uIBX-210-CV	Intel® Atom™ N2600 1.6 GHz



6. Digital Signage Embedded System

Model Name	Processor
IDS-300-BW	Intel® Celeron® N3160 1.6GHz



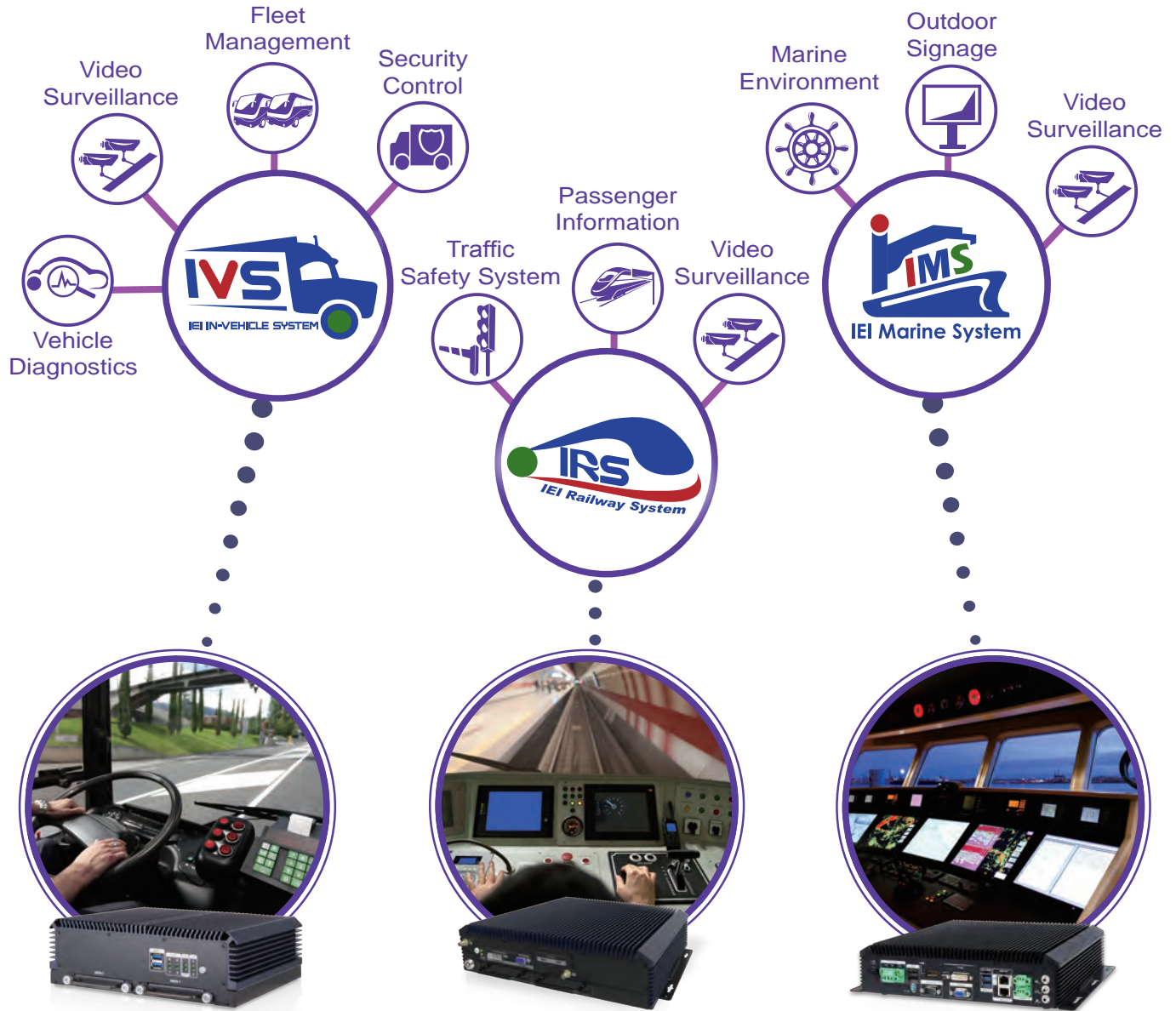
7. Medical Embedded System

Model Name	Processor
HTB-100-HM170	Intel® Core™ i7-6822EQ, Intel® Core™ i5-6442EQ

Transportation Solution

IEI transportation series is divided into three categories for different markets: in-vehicle, railway and marine. All these products have passed harsh vibration and shock test and can withstand in extreme temperature. This series allows wide voltage input and features multiple communication options. In addition, our products are in fanless design suitable for various markets and with rich I/O for different applications.

Ruggedized Solution



■ IVS & IKARPC Series In-Vehicle Features

- Wide working temperature
- Wide DC input range
- E-mark certification
- OBD-II function
- Multi wireless communication
- IP 4X protection

■ IRS Series Railway Features

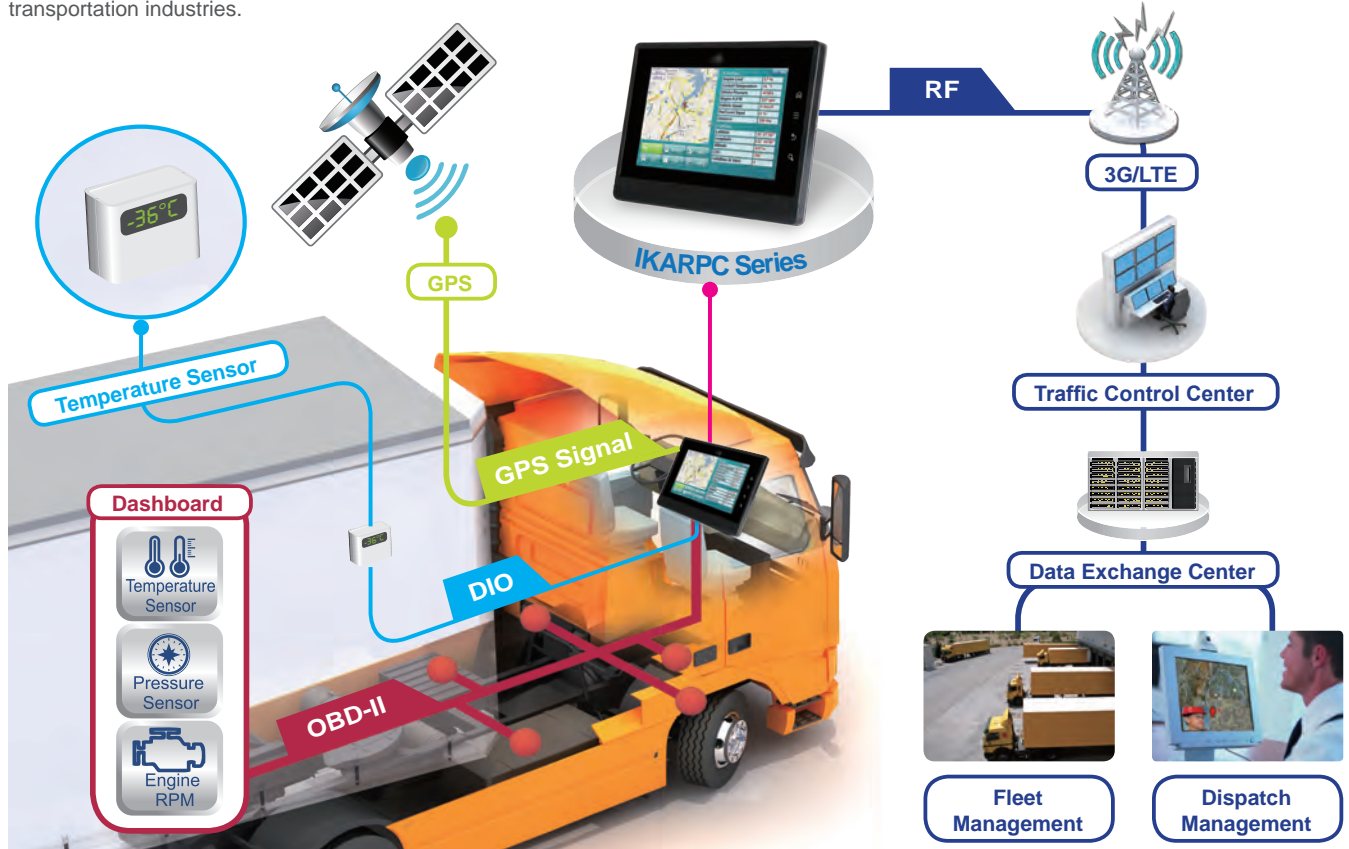
- Wide working temperature
- Support DVI and VGA dual display
- EN-50155 certification
- Dual SIM slot
- M12 connector

■ SBOX Series Marine Features

- Isolation protection ports
- Three independent displays
- Full range dimming
- DNV, IEC 60945 4th, IACS-E10, IEC 61174 certification
- IP 4X protection

In-Vehicle: IKARPC Series

Logistics industry's commonly used satellite positioning systems, electronic maps, Internet access, mobile communication systems with 3.75G/LTE/Wi-Fi/Bluetooth/GPS/Rfid are all combined together in our solutions for fleet management, logistics, manufacturing and passenger transportation industries.



Key Features

■ High Brightness Screen



The IKARPC-07A series is equipped with an ultra-high brightness LCD panel to help drivers avoid low visibility caused by direct sunlight.

■ Communication

The transportation series reserves multiple PCIe Mini slots for different network communication. Users can use CDMA/GPRS/HSUPA+/LTE to transmit and receive real-time data, use Wi-Fi for data acquisition, or use GPS to get accurate location data.

■ CAN Bus/OBD-II (Optional)

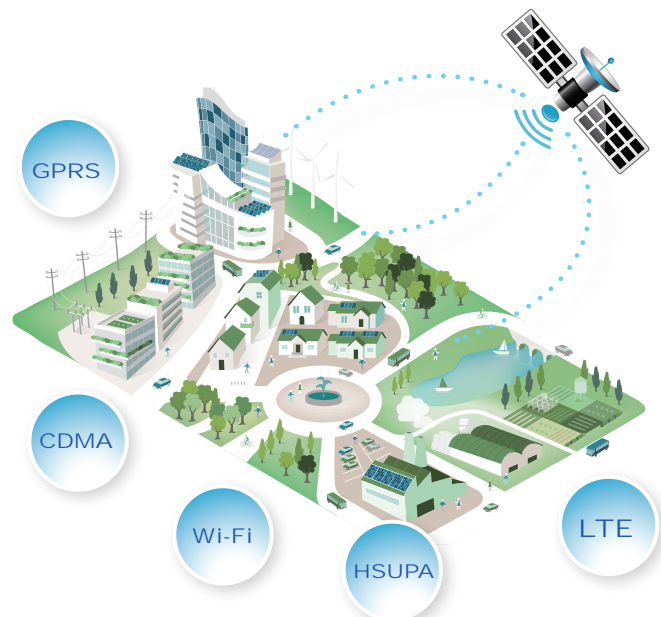


The IKARPC series supports On Board Diagnostics (OBD) and Controller Area Network (CAN bus) and is built-in with OBD-II and CAN bus for real time vehicle diagnostic. CAN has a high degree of flexibility to adjust capacity which can be added in the existing network of nodes.

■ X86/ARM solution

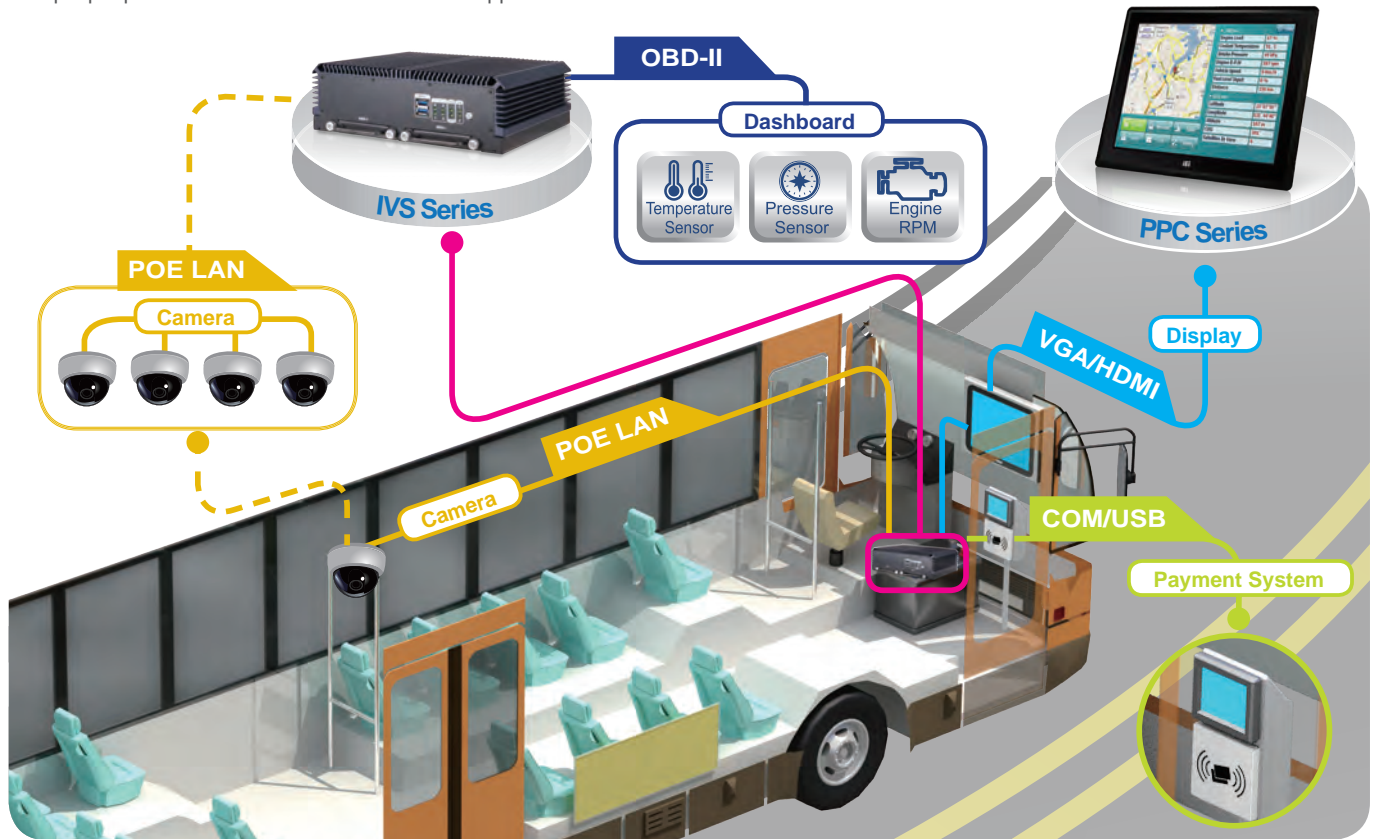


The IKARPC-07A has two solutions, Intel and ARM architecture for customers. You can choose Intel solution which supports Windows OS, or you can choose ARM solution which supports Android OS.



In-Vehicle: IVS Series

The IVS series vehicle box PC is designed with reliable performance for harsh environments. Rich I/O ports are provided to connect with multiple peripheral devices in vehicle for different applications.



Key Features

■ Wide Range Temperature



IEI fanless product series has leading-edge thermal design and has been tested under extreme temperature conditions in order to ensure that IEI fanless products can work in any harsh environment.

■ E-mark Certification



All vehicles, vehicle parts, and electronic products for the car must be enforced EMC testing. IEI IVS and IKARPC In-Vehicle series product all get E-Mark certification which are required for the European market.

■ Vibration and Shock Resistance



In-vehicle systems must be able to withstand the shock and vibration that comes with driving a vehicle. IEI transportation series meet the requirement for different environments and has passed particular verification dependent on MIL-STD-810G 514.5 standard, EN61373 for railway market, EN60721 for in-vehicle market.

■ Particular Power Solution



We design wide power input to prevent surge when starting engine. We develop power management for users. For in-vehicle market, we design wide DC input and ACC power to ensure users can operate the system well.



Railway: IRS Series

IEI's Railway System (IRS) is focused on the rolling stock market with a variety of advanced technologies designed. The IRS-100 series is compliant with EN 50155 standard. The IRS-100 provides multiple storage bays for data saving, lockable connectors, GPS function and Wi-Fi for wireless communication. Users can control passenger information system (PIS) and network video recorder (NVR) through the IRS-100. The popular IP cameras for surveillance application can also be implemented to provide real time video monitoring to ensure passengers' safety.



Key Features

■ Dual SIM Slot



The IRS-100 offers dual SIM slot with the ability to automatically switch between two different networks in order to maintain seamless connectivity in remote areas. The system supports GPRS/UMTS/HSDPA/LTE technologies for transmission.

■ Lockable M12 Connectors



To against vibration and shock, the M12 connector is used for dual LAN communication which offers a reliable performance for high-quality data acquisition or transmission. The M12 connector can ensure that all cables can be tightly secured and improve anti-vibration capability.

■ Multiple Isolated Port Protection



The IRS-100 provides 1.5kV isolation on the RS-232/422/485, DIO and power in order to protect from any stray electrical signals from other devices and to ensure stable operation in harsh environments.

Front View



Rear View



■ Operating Temperature and EN 50155 Compliance

EN50155 is the standard for electronic equipment used on rolling stock. IEI's railway system (IRS-100) complies with EN50155 TX column 2 standard and passed tests for vibration, shock, and wide temperature. IRS-100 can run in an extremely hot or cold environment -40°C ~ 70°C.

Standard	EN50155 T1	EN50155 T2	EN50155 T3	EN50155 TX
Internal Cabinet Temperature Range	-25°C - +55°C	-40°C - +55°C	-25°C - +70°C	-40°C - +70°C

■ Wide Range of DC/DC Converters

Railway rolling stock is required to meet the requirement of EN50155 for electronic equipment.

IRS-100 has wide range of input voltages of 24VDC~110VDC (±40%), therefore, users are able to install variety devices in different railway rolling stock applications.

Nominal Input	24V	37.5V	48V	72V	96V	110V
Input Range (0.7-1.25 Vin)	17-30V	26-47V	34-60V	50-90V	67-120V	77-137V
Brownout 100ms (0.6xVin)	14V	22V	29V	43V	58V	66V
Transient 1s (1.4xVin)	34V	61V	67V	101V	135V	154V

■ Compliant with Electromagnetic Interference Requirements

Railway electronic systems are subjected to different level of electromagnetic interference requirements.

Standard	Parameter		EN50155	
Rolling Equipment	Vibration	Category < 0.3 kg	Shock (half sine)	Long. / Trans. / Vert. axis
	Frequency range	5 - 150 Hz	Peak acceleration	5 g / 2 g / 1 g
	Acceleration	5 g	Duration	50 ms / 20 ms / 20 ms

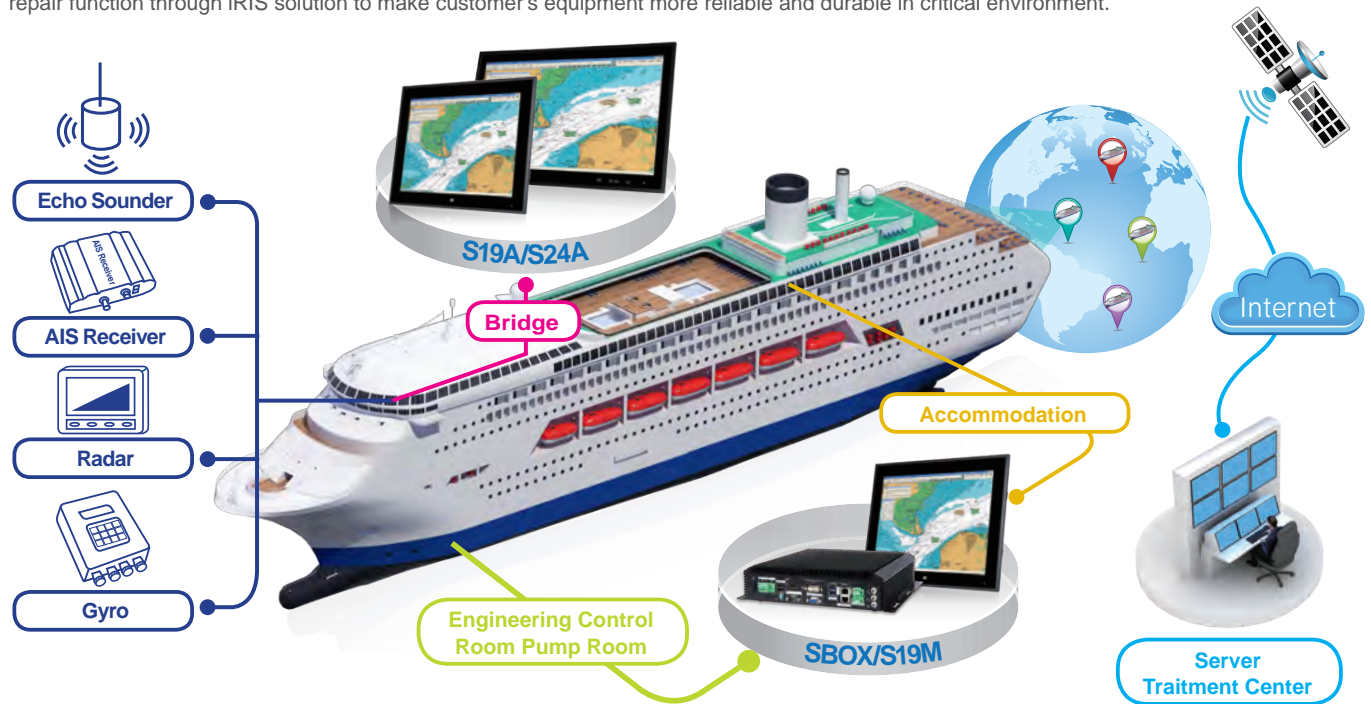
■ Compliant with Mechanical Requirements

Railway electronic systems are subjected to high-level mechanical environmental constraints depending on their implementation.

	Generic Standards	EN 50121-3 and -4	EN 50155
Radio electrical conducted emission <30MHz 0,15 - 0,5 MHz (quasi peak) 0,5 - 5 MHz (quasi peak) 5 - 30 MHz (quasi peak)	EN55032 EN55011	EN55011 level +20 dB : 79 dB/μV/m+20dB (quasi peak) 73 dB/μV/m+20dB (quasi peak) 73 dB/μV/m+20dB (quasi peak)	Level: 70 dB/μV/ qp 70 dB/μV/ qp 70 dB/μV/ qp
Radio magnetic emission qp at 10m >30MHz 30 - 80 MHz 80 - 230 MHz 230 - 1,000 MHz	EN55032 EN55011	EN55011 level class B : 40 dB/μV/m (quasi peak) 40 dB/μV/m (quasi peak) 47 dB/μV/m (quasi peak)	Level: 70 dB/μV/m < 70 dB/μV/m < 70 dB/μV/m
Electrostatic discharge immunity (Internal)	EN61000-4-2 or IEC-801-2	Level: 6KV contact cond. B Level: 8KV air cond. B	
Radio frequency electromagnetic fields immunity (80 - 1,000 MHz)	EN61000-4-3 or IEC-801-3 EN50140	Level: 10V/m condition A Level: 20V/m condition A	Level: 10V/m Level: 20V/m
Fast transient/burst immunity (DC power port and I/O ports)	EN61000-4-4 or IEC-801-4	Level: 0.5KV condition A Level: 2KV condition A	Level: 2KV
Surge immunity	EN61000-4-5 or IEC-801-5	Level: 2KV condition B Impedance 42 Ohm	Level: 1.8 KV
Conducted disturbances induced by radio frequency fields immunity (150KHz-80MHz) (DC power port and I/O port)	EN50141 or EN61000-4-6 or EN50121-4	Level: 3V condition A Modulation 80% AM Impedance 150 Ohm Level: 10V condition A	
Damped oscillatory magnetic field immunity	EN61000-4-10	Level: 30A/m condition B	

Marine: SBOX Series

It is difficult to send out technical support for maritime field application due to the location limitation. The best way to solve the urgent issue is remote troubleshooting with IEI iRIS solution. IEI marine-grade solutions provide the most convenient method of real-time system alert notice and repair function through iRIS solution to make customer's equipment more reliable and durable in critical environment.



Key Features

■ 3 independent displays: HDMI, DVI, and VGA

The three simultaneously independent displays are supported via the on-board video output combinations of VGA, DVI and HDMI. This versatile combination of display output options makes the marine system ideal for multi-monitor required applications in the bridge room.



■ Multiple Isolated Ports for Comprehensive Protection against Electrical Surges

Ground loop and electric surges are common in the marine applications of electronic products due to the dense placement of devices. These stray electrical signals can cause equipment damage or malfunction.

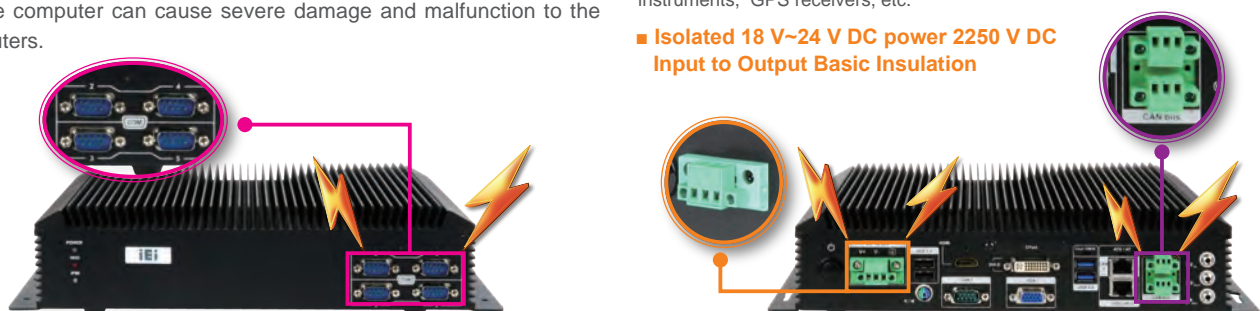
■ 2.5 kV isolation protection on the RS-232/422/485

IEI marine computer is protected from any stray electrical signals from other devices on the ship. Electric surges that were generated from other electronic devices which often passed through serial lines to the marine computer can cause severe damage and malfunction to the computers.

■ Two independent CAN 2.0B channels with 2.5 kV isolation protection

CAN 2.0B is a kind of marine electronic data network for communication between marine electronic devices such as chart plotters, navigation instruments, GPS receivers, etc.

■ Isolated 18 V~24 V DC power 2250 V DC Input to Output Basic Insulation



DNV Compliance

The DNV regulation is one of the most stringent standards in the maritime industry. It sets the minimum requirements of devices based on where the device is located. IEI marine series complies with DNV regulations and has passed tests for temperature, humidity, vibration, EMC and water- and dust-proof levels.

■ Operating Temperature

The marine series can run in wide temperature environment from -15°C to 55°C.

Temperature	Class A	Class B	Class C	Class D
Location	Machinery spaces, control rooms, accommodation, bridge	Inside cubicles, desks, etc. with temperature rise of 5° C or more	Pump rooms, holds, rooms with no heating	Open deck, masts
Minimum equipment specification	Ambient temperatures: +5°C to +55°C	Ambient temperatures: +5° C to +70°C	Ambient temperatures: -25°C to +55°C	Ambient temperatures: -25°C to +70°C

■ Humidity

The marine series conforms to DNV class A of humidity.

Humidity	Class A	Class B
Location	Locations where special pre-cautions are taken to avoid condensation	All other locations
Minimum equipment specification	Relative humidity up to 96 % at all relevant temperatures.	Relative humidity up to 100 % at all relevant temperatures

■ Vibration

The marine series is subjected to DNV Class A vibration test and can be widely used on bulkheads, beams, deck and bridge.

Vibration	Class A	Class B	Class C
Location	On bulkheads, beams, deck, bridge	On machinery such as internal combustion engines, com-pressors, pumps, including piping on such machinery	Masts
Minimum equipment specification	Frequency range: 3-13.2 Hz, Amplitude: 1.0 mm (peak value) Frequency range: 13.2-100 Hz, Acceleration amplitude: 0.7 g	Frequency range: 3-25 Hz, Amplitude: 1.6 mm (peak value) Frequency range: 25-100 Hz, acceleration amplitude: 4.0 g	Frequency range: 3-13.2 Hz, Amplitude: 3.0 mm (peak value) Frequency range: 13.2-50 Hz, Acceleration amplitude: 2.1 g

■ EMC

Being different to CE and FCC standards, DNV regulations especially emphasize the importance of electromagnetic compatibility. IEI marine series is compliant with strict class B level and can provide a safe operating environment of sailing period.

Vibration	Class B			
Location	All locations including bridge and open deck			
Minimum equipment specification	Immunity			
	Conducted Low Frequency (Test 3.14.4)		Electrical Fast Transient/Burst (Test 3.14.5)	Electrical Slow Transient Surge (Test 3.14.6)
	AC 50/60 Hz Supply Voltage up to 15 th harmonics: 10% of UN 15 th to 100 th harmonics: decreasing from 10% to 1% of UN 100 th to 200 th : harmonics 1% of UN	DC Supply Voltage Frequency Sweep Range: 50 Hz to 10 kHz Signal Level: 3 V r.m.s. max 2W	Amplitude : 2 kV line on power supply port/earth; 1 kV on I/O data control and communication ports(coupling clamp)	Amplitude: 0.5 kV, differential mode 1 kV, common mode
	Conducted Radio Frequency (Test 3.14.7 – Table 3.20/3.21)		Radiated Electromagnetic Field (Test 3.14.8)	Electrostatic Discharge (Test 3.14.9)
	Frequency range:150 kHz - 80 MHz Voltage level (e.m.f.): 3 V r.m.s. Spot frequencies: 2/3/4/6.2/8.2/12.6/16.5/18.8/22/25 MHz. Voltage level (e.m.f.) :10 V r.m.s.		Frequency range: 80 MHz to 2 GHz Electric field strength: 10 V/m	Output voltage Air: 8 kV Contact: 6 kV
	Emission			
	Radiated (Test 3.14.10 - 11)			
	Enclosure Port	Frequency range	Measuring bandwidth	Limits (quasi-peak)
	EMC B All locations including bridge and open deck	0.15-0.3 MHz	9 kHz	80 - 52 dBµV/m
		0.30-30 MHz	9 kHz	52 - 34 dBµV/m
30-2000 MHz		120 kHz	54 dBµV/m	
Except: 156-165 MHz		9 kHz	24 dBµV/m	
Conducted (Test 3.14.10 - 12)				
Power Port	Frequency range	Measuring bandwidth	Limits (quasi-peak)	
EMC B All locations including bridge and open deck	10-150 kHz	200 Hz	96 – 50 dBµV	
	150-350 kHz	9 kHz	60 – 50 dBµV	
	0.35 - 30 MHz	9 kHz	50 dBµV	

■ Enclosure

The marine series is compliant with high waterproof and dustproof level. The front bezel complies with IP66 rating and the rear side complies with IP22.

Enclosure	Class A	Class B	Class C	Class D
Location	Control rooms, accommodation, bridge	Engine room	Open deck, masts, below floor plates in engine room	Submerged application, bilges
Minimum equipment specification	IP22	IP44	IP56	IP68

E-Window Tool Kit

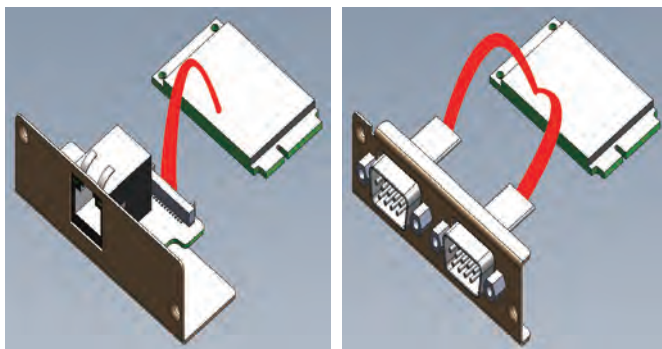
Innovative E-Window technology is a new modular way of adding flexible functionality to a wide range of device. Using standardized component helps system integrators easily add more features without any costly efforts.



E-Window

Features

- Easy maintenance
- Various module & I/O plate with flexible customization
- Integration of multiple functions
- Easy for replacement with different modules



E-Window I/O Plate with PCIe Mini Card

An E-Window module uses a PCIe Mini slot embedded on the motherboard.

Supported Model

Transportation System
IVS-110-AL
ITCS-100-H81
TRS-100
Industrial Automation System
TANK-870e-H110



E-MPCIE-LAN-R10



E-MPCIE-DLAN-R10

Ordering Information

Part No.	Description
E-MPCIE-DLAN-R10	PCIe Mini card supports 2-port GbE with Intel I211 controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-LAN-R10	PCIe Mini card supports 1-port GbE with Realtek RTL8111E controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-CClink-R10	PCIe Mini card supports CC-Link Slave interface according to V2.0 and V1.1, with black C I/O bracket and 250mm cable, R10
E-MPCIE-PROFIBUS-R10	PCIe Mini card supports universal PROFIBUS DP card for Master or Slave, with black C I/O bracket and 250mm cable, R10
E-MPCIE-EtherCAT-R10	PCIe Mini card supports universal for all Real-Time Ethernet protocols, with black C I/O bracket and 280mm cable, R10
E-MPCIE-UART-KIT01-R10	PCI Express Mini supports quad RS-232/422/485 port module

Transportation System



Preliminary



Model Name		IKARPC-05A	IKARPC-07A-A9	IKARPC-07A-BT	IKARPC-W10A-BT
Chassis	Color	Black C	Black C + Silver	Black C + Silver	Blue C + Black C
	Dimensions (WxDxH) (mm)	150 x 28 x 110	210 x 154 x 28	210 x 154 x 28	277 x 186 x 27
	System Fan	Fanless	Fanless	Fanless	Fanless
	Chassis Construction	PC + ABS plastic	PC + ABS plastic	PC + ABS plastic	PC + ABS plastic
Display	Size	5"	7"	7"	10.1"
	Resolution	1920 x 1080	1024 x 3 (RGB) x 600	1024 x 3 (RGB) x 600	1280 x 800
	Brightness (cd/m ²)	690	500	500	350
	Contrast Ratio	500:1	700:1	700:1	800:1
	Pixel Pitch (mm)	TBD	0.05 (W) x 0.15 (H)	0.05 (W) x 0.15 (H)	0.0565 (W) x 0.1695 (H)
	Viewing Angle (H/V)	120° (H) / 120° (V)	130° (H) / 140° (V)	130° (H) / 140° (V)	150° (H)/145° (V)
	Touchscreen	Projected capacitive touch with I ² C interface	Projected capacitive touch with USB interface		
Motherboard	CPU	Rockchip PX5 Cortex A53 (Octa-core 1.5GHz)	Freescaler™ i.MX 6 Cortex™-A9 (quad-core, 1.0 GHz)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)
	Chipset	N/A	N/A	SoC	SoC
	System Memory	On-board 2GB LPDDR3	On-board 1 GB SDRAM	On-board 2 GB SDRAM	On-board 2 GB DDR3L
Storage	Hard Drive	N/A	N/A	N/A	1 x 2.5" SATA 3Gb/s HDD/SSD drive bay
	SD card	1 x microSD slot (supports SD 2.0, max. 32 GB)	1 x SD slot (supports SD 2.0, max. 32 GB)	1 x microSD slot (supports SD 2.0, max. 32 GB)	1 x SD slot (supports SD 2.0, max. 32 GB)
	Flash	On-board 16 GB eMMC	On-board 8 GB iNAND flash	N/A	N/A
	mSATA	N/A	N/A	1 x mSATA (SATA 3Gb/s) optional	N/A
Communication	WLAN	On-board Wi-Fi 802.11a/b/g/n	On-board Wi-Fi 802.11a/b/g/n	PCIe Mini Wi-Fi 802.11a/b/g/n/ac (optional)	
	Bluetooth	Bluetooth 4.0	Bluetooth 3.0+HS	BT 4.0/3.0+HS (combo with WLAN optional module)	
	WWAN	PCIe Mini 3G / LTE (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)		
	RFID	N/A	13.56 MHz ISO4443 A/B, read-write capable, ISO 14443A (MIFARE), ISO 14443B (FeliCa)	N/A	N/A
	GPS	On-board GPS	On-board GPS	On-board GPS	On-board GPS
I/O Interfaces	20-pin Connector	N/A	1 x 10/100 LAN, 1 x OBD-II/J1939, 1 x USB 2.0	1 x GbE LAN, 1 x OBD-II/J1939, 1 x USB 2.0	N/A
	24-pin Connector	1 x RS-232, 1 x RS-485 1 x Line in 1 x Mic in 6-bit digital I/O (3-bit input, 3-bit output)	1 x Audio line-out(R+L) 1 x Audio line-in 1 x RS-232 4-bit digital I/O (2-bit input, 2-bit output)		N/A
	8-pin Connector	N/A	Video input	N/A	N/A
	USB 3.0	N/A	N/A	1	1
	USB 2.0	2 (1 x USB Type A, 1 x Micro USB)	2	1	1
	Ethernet	N/A	N/A	N/A	1 x RJ-45 PCIe GbE by Realtek 8111E
	COM Port	N/A	N/A	N/A	2 x DB-9 RS-232
	Digital I/O	N/A	N/A	N/A	8-bit digital I/O (4-bit input, 4-bit output)
	CAN-Bus/OBD-II	N/A	N/A	N/A	1 x DB-9 OBD-II/J1939
	Display	1 x HDMI out	N/A	1 x HDMI	1 x HDMI
	SIM	1 x on-board SIM card slot	1 x on-board SIM card slot	2 x on-board SIM card slot	2 x on-board SIM card slot
Antenna	1 x GPS, 1 x WWAN	1 x GPS, 1 x WWAN	1 x GPS, 1 x WWAN	1 x GPS, 1 x WWAN	
Expansions	PCIe Mini	1 x Full-size PCIe Mini (reserved for WWAN)	1 x Full-size PCIe Mini (reserved for WWAN)	1 x Full-size PCIe Mini (reserved for mSATA module), 1 x Full-size PCIe Mini (reserved for WWAN module), 1 x Half-size PCIe Mini (reserved for WLAN module)	1 x Full-size PCIe Mini (reserved for WWAN module), 1 x Full-size PCIe Mini (reserved for WLAN module)
Multimedia	Speaker	N/A	1 x Speaker (2 W)	1 x Speaker (2 W)	1 x Speaker (2 W)
	Camera	N/A	5-megapixel CMOS	2-megapixel CMOS	2-megapixel CMOS
Power	Power Input	Cigarette lighter power cable, DC 9 V~30 V			
	Power Consumption	TBD	12 V @ 0.8 A	12V @ 1.25 A	12 V @ 1.73 A
Reliability	Mounting	VESA 75	VESA 75	VESA 75	VESA 100
	Operating Temperature	-10°C ~ 50°C with air flow	-20°C ~ 60°C with air flow	-20°C ~ 60°C with air flow	-20°C ~ 60°C with air flow
	Weight (Net/Gross)	315g/TBD	0.9 kg/2.1 kg	0.9 kg/2.1 kg	1.3 kg/2.8 kg
	Safety/EMC	CE/FCC/E-Mark/IP 54 compliant front panel	CE/FCC/E-Mark/IP 54 compliant front panel	CE/FCC/E-Mark/IP 54 compliant front panel	CE/FCC/E-Mark/IP 64 compliant front panel
OS	Supported OS	Android 6.0	Android 4.2.2	Microsoft® Windows Embedded 8, Microsoft® Windows Embedded Standard 7 E	

Transportation System



Model Name		IVS-300	IVS-200-ULT2	IVS-110-AL	IVS-100-BT	
Chassis	Color	Blue C	Blue C	Black	Blue C	
	Dimensions (WxDxH) (mm)	255 x185 x80	255 x 150 x 63	261 x 60 x 170	200 x 150 x 76	
	System Fan	Fanless	Fanless	Fanless	Fanless	
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy	Extruded aluminum alloy	Extruded aluminum alloy	
Motherboard	CPU	Intel® Celeron® J1900 processor (quad-core 2GHz, 10W TDP) or Intel® Core™ i5-6300U processor (dual-core, 2.4 GHz, 15W TDP)	Intel® Core™ i5-5350U processor (dual-core, 1.8 GHz, 15W TDP) or Intel® Celeron® 3765U processor (dual-core, 1.9 GHz, 15W TDP)	Intel® Atom™ x7 E3950 processor (dual-core, 2.0GHz, 12W TDP)	Intel® Atom™ E3826 processor (dual-core, 1.46 GHz, 7W TDP)	
	Chipset	SoC	SoC	SoC	SoC	
	System Memory	IVS-300-BT: 2 x 204-pin DDR3L SO-DIMM, 4GB pre-installed (system max. 8 GB) IVS-300-ULT3: 2 x 260-pin DDR4 SO-DIMM, 4GB pre-installed (system max. 32 GB)	2 x 204-pin DDR3L SO-DIMM slot 4 GB Pre-installed (system max. 16 GB)	2 x 204-pin DDR3L SO-DIMM. 4GB pre-installed (system max. 8GB)	2 x 204-pin DDR3L SO-DIMM slot, 2 GB pre-installed (system max. 8GB)	
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD removable drive bay	1 x 2.5" SATA 6Gb/s HDD/SSD removable drive bay	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay	1 x 2.5" SATA 3Gb/s HDD/SSD drive bay	
	SD Card	N/A	N/A	N/A	1 (supports SD 2.0, max. 32 GB)	
	Flash	N/A	N/A	1 x eMMC 5.0 8GB (reserved)	N/A	
	mSATA	N/A	1 x mSATA (SATA 6Gb/s)	1 x mSATA (PCIe Mini Slot) 1 x eMMC 5.0 8G (reserved)	N/A	
Communication	WLAN	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)	PCIe Mini Wi-Fi 802.11b/g/n (optional)	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)	PCIe Mini Wi-Fi 802.11b/g/n (optional)	
	Bluetooth	BT 4.0/3.0+HS (combo with WLAN optional module)	Bluetooth 2.1 (combined with WWAN optional module)	BT 4.0/3.0+HS (combo with WLAN optional module)	Bluetooth 2.1 (combined with WWAN optional module)	
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	
	RFID	N/A	N/A	N/A	UHF module, 902 MHz ~ 928 MHz operating band (optional)	
	GPS	On board GPS	N/A	On board GPS	On board GPS	
I/O Interfaces	USB 3.0	2	2	4	4	
	USB 2.0	N/A	2	N/A	N/A	
	Ethernet	4 x RJ-45 PCIe GbE by Intel® i210-AT Support PoE IEEE802.3af (Each port max 15.4W)	4 x RJ-45 connector LAN1: PCIe GbE by Intel® I218 LAN2: PCIe GbE by Intel® I211 LAN3: PCIe GbE by Intel® I211 LAN4: PCIe GbE by Intel® I211	1 x RJ-45 PCIe GbE by Intel® I210-IT	2 x RJ-45 PCIe GbE by Realtek 8111E	
	COM Port	2 x DB-9 RS-232 1 x DB-15 isolated RS-422/485	2 x DB-9 RS-232/422/485 4 x DB-9 RS-232 (optional)	1 x DB-9 RS-232/422/485 (BIOS configuration)	2 x DB-9 RS-232 1 x DB15 GPIO & RS-422/485	
	Digital I/O	Isolated 8-bit digital I/O (4-bit input / 4-bit output)	8-bit digital I/O (4-bit input / 4-bit output) (optional)	1 x Printer port 16-bit digital I/O (8-bit input / 8-bit output)	8-bit digital I/O (4-bit input / 4-bit output)	
	CAN-bus/OBD-II	1 x DB9 OBD-II/J1939	N/A	1 x DB9 OBD-II/J1939	1 x DB9 OBD-II/J1939	
	Display	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI	
	Resolution	VGA : Up to 1920 x 1080 @60 Hz HDMI : Up to 1920 x 1080 @60 Hz	VGA: up to 2560 x 1600 @60 Hz HDMI: up to 3840 x 2160 @60 Hz	VGA : Up to 1920 x 1600 @60 Hz HDMI : Up to 3840 x 2160 @30 Hz	HDMI: Up to 1920 x 1080 @60 Hz VGA: Up to 1920 x 1080 @60 Hz	
	Audio	1 x Line out, 1 x Mic in	1 x Line out, 1 x Mic in	1 x Line out	1 x Line in, 1 x Line out	
	SIM	2 x on-board SIM card slot	1 x on-board SIM card slot	2 x on-board SIM card slot	2 x on-board SIM card slot	
	Antenna	1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi	1 x 3G, 1 x BT, 1 x Wi-Fi	1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi	2 x Wi-Fi/BT, 1 x WWAN, 1 x GPS, 4 x UHF	
	Expansions	PCI	N/A	N/A	N/A	1 x PCI-104
		PCIe Mini	1 x Half-size PCIe Mini (reserved for WLAN) 1 x Full-size PCIe Mini (reserved for WWAN) 1 x Full-size PCIe Mini (only for skylake platform)	1 x Full-size PCIe Mini (reserved for WWAN or mSATA) 1 x Half-size PCIe Mini (reserved for WLAN)	1 x Full/Half-size PCIe Mini slot (reserved for WWAN) 1 x Full/Half-size PCIe Mini slot (reserved for mSATA or E-window) 1 x Half-size PCIe Mini slot (reserved for WLAN)	1 x Full-size PCIe Mini (reserved for WWAN) 1 x Full-size PCIe Mini (reserved for capture card module) 1 x Full-size PCIe Mini (reserved for analog DIO module) 1 x Half-size PCIe Mini (reserved for WLAN)
Power	Power Input	Cigarette lighter power cable : DC 9 V-30 V	DC jack : 9 V-36 V DC	Cigarette lighter power cable : 9 V- 36 V DC	Cigarette lighter power cable : DC 9 V-30 V	
	Power Consumption	12 V @ 14A (Intel® i5-6300U with 4 GB DDR4 memory + 4 PoE)	12 V @ 2.1 A (Intel® i5-5350U with 4 GB DDR3 memory)	12V @ 5A (Intel® Atom™ x7 E3950 with 8 GB DDR3 memory)	12 V @ 3.2 A (Intel® Atom™ E3826 with 2 GB DDR3 memory)	
Reliability	Mounting	Wall mount	VESA 100	Wall mount / VESA 100	VESA 100	
	Operating Temperature	-20°C ~60°C with air flow	-20°C ~ 60°C with air flow (SSD)	-30°C ~ 70°C with air flow	-20°C ~ 60°C with air flow	
	Weight (Net/Gross)	3 kg / 4.5 kg	2.2 kg / 3 kg	2.4kg / 3.8kg	2.1 kg / 3.6 kg	
OS	Safety/EMC	CE/FCC/E-Mark	CE/FCC/E-Mark	CE/FCC/E-Mark/ IP rating : IP 4X compliant	CE/FCC/E-Mark	
	Supported OS	Microsoft® Windows Embedded 8, Microsoft® Windows Embedded Standard 7 E	Microsoft® Windows Embedded 8, Microsoft® Windows Embedded Standard 7 E	Microsoft® Windows 10 IoT Enterprise	Microsoft® Windows Embedded Standard 7 E	

Transportation System



Preliminary



New



Model Name	ITCS-100-H81	TRS-100	IRS-100-ULT3	SBX-100-QM87	
Chassis	Color	Black	Blue C	Black	
	Dimensions (WxDxH) (mm)	310 x 200 x 112.8	235 x 65 x 160 (235 x 65 x 170)	290 x 225 x 69	290 x 225 x 75
	System Fan	Fanless	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Aluminum alloys	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® G1820TE processor (dual-core, 2.2 GHz, 35W TDP) or Intel® Core™ i5-4570TE processor (dual-core, 2.7 GHz, 35W TDP)	Intel® Celeron® 3855U processor, dual-core 1.6GHz (Kaby Lake Core™ i3/i5/i7)	Intel® Core™ i5-6300U processor (dual-core, 2.4 GHz, 15W TDP)	Intel® mobile Core™ i5-4400E (2.7 GHz, 37W)
	Chipset	Intel® H81	SoC	SoC	Intel® QM87
	System Memory	2 x 204-pin DDR3 SO-DIMM 4GB pre-installed (system max 32GB)	4GB on-board memory (expandable to 8GB)	2 x 260-pin DDR4 SO-DIMM 4GB pre-installed (system max. 32 GB)	2 x 204-pin DDR3 SO-DIMM slot (system max. 16 GB) Pre-installed 4 GB DDR3 SO-DIMM
IPMI	iRIS Solution	N/A	N/A	1 x iRIS-2400	
Storage	Hard Drive	2 x 3.5" SATA 6Gb/s HDD drive bay	1 x 2.5" SATA 6Gb/s HDD/SSD Bay	2 x 2.5" SATA 6Gb/s HDD/SSD drive bay	2 x 2.5" SATA 6Gb/s SSD bay with RAID 0/1 function
	CFast/CF Card	N/A	N/A	1 x CFast	1 x CFast
	Flash	2GB on-board flash	N/A	N/A	N/A
	mSATA	N/A	1 x mSATA (PCIe Mini Slot, signal from SATA2)	1 x mSATA	N/A
I/O Interfaces	PS/2 (KB/MS)	1 x KB, 1 x MS	N/A	N/A	1
	USB 3.0	N/A	4	2	2
	USB 2.0	4	2	1 (M12 connector)	2
	Ethernet	2 x RJ-45 connector 1 x PCIe GbE by Intel® I211AT 1 x PCIe GbE by Intel® I210AT	2 x RJ-45 PCIe GbE by Intel® I210-AT (2 x M12 GbE by Intel® I210-AT)	2 x M12 connector PCIe GbE by Intel® I211	2 x RJ-45 with teaming support 1 x PCIe GbE by Intel® I217LM 1 x PCIe GbE by Intel® I210-AT (2 with 2 kV isolation)
	COM Port	4 x RS-232 + 4 x RS-232/422/485 (SCSI type, 4 x RS-232/422/485 with isolated)	2 x RS-232/422/485 (BIOS configuration) 2 x RS-232 (internal pin header)	2 x DB-9 RS-232/422/485 (with 1.5 kV isolation)	1 x DB-9 (non-isolated) 4 x RS-232/422/485 (with 2.5 kV isolation)
	Digital I/O	1 x D-SUB 25 pin connector 24-bit digital I/O (12-bit input / 12-bit output)	1 x DB-9 (8-bit digital I/O 4 in / 4 out "+5V")	1 x Terminal block 8-bit digital I/O (4-bit input / 4-bit output, 1.5 kV isolation)	N/A
	CAN-bus/OBD-II	N/A	1 x DB-9 CAN-bus (2 ports)	N/A	2 x CAN-bus (with 2.5 kV isolation)
	Display	1 x VGA + 1 x DVI-D	1 x VGA, 1 x iDP (internal pin header)	1 x VGA, 1 x DVI-D	1 x VGA, 1 x DVI-D, 1 x HDMI
	Resolution	VGA : Up to 1920 x 1080 @60Hz DVI-D : Up to 1920 x 1080 @60Hz	VGA : Up to 3840 x 2160 @60Hz iDP : Up to 1290 x 1200 @60Hz	VGA : Up to 1920 x 1200 @60Hz DVI-D : Up to 1920 x 1200 @60Hz	VGA: Up to 1920 x 1200 @ 60 Hz HDMI: Up to 2500 x 1600 @ 60 Hz DVI-D: Up to 2500 x 1600 @ 60 Hz
	Audio	1 x Line-out + 1 x Line-in	1 x Line-in, 1 x Line-out	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Line-in, 1 x Mic-in
	TPM	1 x 20-pin LPC	N/A	N/A	N/A
	SIM	N/A	1 x SIM slot (on board)	2 x SIM card slot	N/A
	Antenna	N/A	1 x LTE, 1 x GPS, 1 x Wi-Fi, 1 x BT	1 x 3G, 1 x BT, 2 x Wi-Fi	2 x Antenna SMA hole (reserved)
Expansions	PCIe Mini	1 x Full-size PCIe Mini slot (reserved for 3G/4G) 1 x Full/Half-size PCIe Mini slot (for mSATA or E-Window or GPS) 1 x M.2 slot (for Wi-Fi + BT)	2 x Full-size PCIe Mini (for WWAN / WLAN module)	2 x Full size	
Power	Power Input	DC jack : 9V~36V DC	9V ~ 30V DC-in, 1 x 4pin connector (1 x M12 connector (IVS-IO-A))	M12 connector: Typical: 24V / 110V DC input 24V @ 2A	Terminal block: Isolated 24V DC (18~31.2 V DC) 100 W
	Power Consumption	12V @ 5A (Intel® i5-4570TE with 4 GB DDR3 memory)	TBD	(Intel® i5-6300U with 4 GB DDR4 memory)	(Intel® mobile Core™ i5-4400E with 4 GB DDR3 memory)
Reliability	Mounting	Wall mount	Wall mount	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 55°C with air flow	-25°C ~ 60°C with air flow	-40°C ~ 70°C with air flow (with industrial SSD/CF), compliant with EN 50155	*-15°C ~ 55°C (5°F ~131°F) with air flow (SSD)
	Weight (Net/Gross)	6.36 kg/9.2 kg	TBD	3.9 kg / 5.1 kg	4.08 kg / 6.03 kg
OS	Supported OS	CE/FCC	CE / FCC / E-mark / EN50155 T1 / EN50121-3-2 / EN 45545-2 / DNV	CE/FCC Compliance with EN50155, EN50121	EMC/CE/FCC/DNV, IEC 60945 4th, IACS-E10, IEC 61174 compliant IP rating: IP22 compliant rear cover
		Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E, Linux (Ubuntu)	Windows® Embedded Standard 7 / Windows® 10	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

IKARPC-05A

Vehicle Computer Series

Preliminary



Features

- 5" sunlight readable TFT LCD with projected capacitive touchscreen
- Built-in Wi-Fi and Bluetooth
- Built-in GPS receiver
- Optional 3G / LTE module

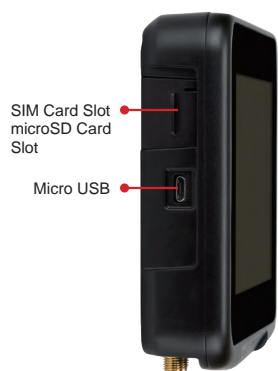


Specifications

Model Name	IKARPC-05A	
Chassis	Color	Black C
	Dimensions (WxHxD) (mm)	150 x 110 x 28
	System Fan	Fanless
	Chassis Construction	PC + ABS plastic
Display	Size	5"
	Resolution	1920 x 1080
	Brightness (cd/m ²)	690
	Contrast Ratio	500:1
	Viewing Angle (H/V)	120° (H) / 120° (V)
	Touchscreen	Projected capacitive touch with I ² C interface
Motherboard	CPU	Rockchip PX5 Cortex-A53 (octa-core 1.5GHz)
	System Memory	On-board 2GB LPDDR3
Storage	SD Card	1 x microSD slot (supports SD 2.0, max. 32 GB)
	Flash	On-board 16 GB eMMC
Communication	WLAN	On-board Wi-Fi 802.11a/b/g/n
	Bluetooth	Bluetooth 4.0
	WWAN	PCIe Mini 3G / LTE (optional)
	GPS	On-board GPS
I/O Interfaces	24-pin Connector	1 x RS-232, 1 x RS-485 6 x DIO (3 in / 3 out) 1 x Line in 1 x Mic in
	USB 2.0	1 x USB Type A, 1 x Micro USB
	Display	1 x HDMI out
	SIM	1 x on-board SIM card slot
	Antenna	1 x GPS, 1 x WWAN
Expansions	PCIe Mini	1 x Full-size PCIe Mini (reserved for WWAN)
LED Indicator & Button	Indicator	Power/Wi-Fi/GPS
	Button	1 x Power button
Power	Power Input	Cigarette lighter power cable, DC 9 V~30 V
	Consumption	TBD
Reliability	Mounting	VESA 75
	Operating Temperature	-10°C ~ 50°C with air flow
	Storage Temperature	-10°C ~ 60°C
	Humidity	10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	315g/TBD
Safety/EMC	CE/FCC/E-Mark/IP 54 compliant front panel	
OS	Supported OS	Android 6.0

Fully Integrated I/O

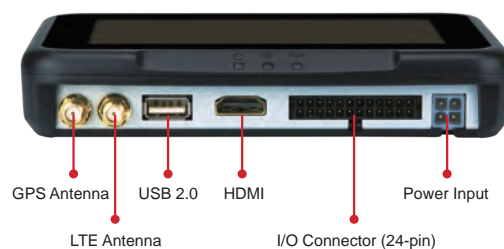
Left view



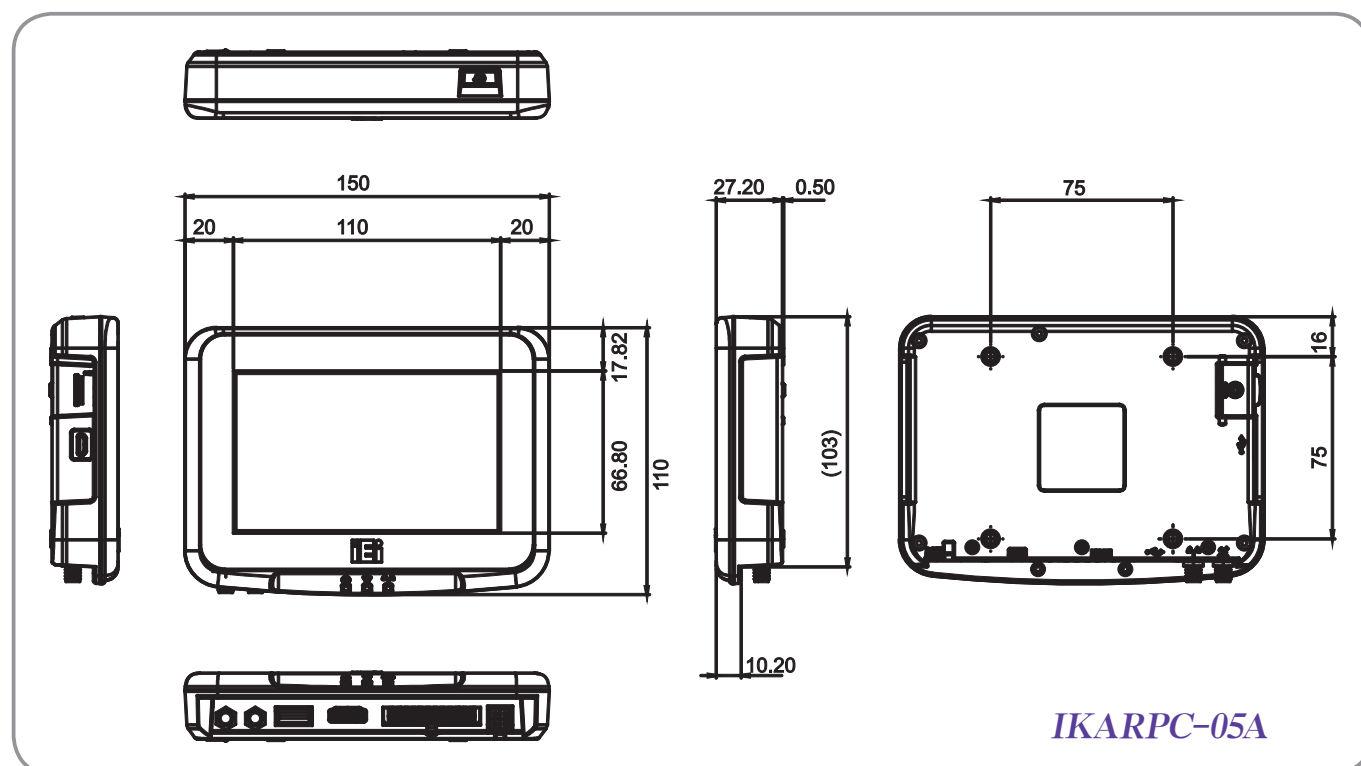
Top view



Bottom view



Dimensions (Unit: mm)



IKARPC-05A

Ordering Information

Part No.	Description
IKARPC-05A-A53-R10	5" 690 cd/m ² 800 x 480, Android 6.0 in-vehicle panel PC with Rockchip RK3368 Cortex-A53 octa-core 1.5GHz processor, 2GB LPDDR3, 8GB eMMC Flash, GPS, WIFI/BT, optional LTE, RoHS

Options

Item	Part No.	Description
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
Cigarette lighter power cable	32002-004000-100-RS	Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V) + ψ 3 green LED, (B) MOLEX 5557-0400 P=4.2, SHANGHAI YING YU, RoHS
VESA mount stand	IVI-MK03-R10	138mm 75x75 VESA mount stand
ACC power cable	32002-001900-100-RS	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, RoHS
GPS/LTE antenna	32506-000400-100-RS	INTEGRATION Antenna, Magnetic Antenna Base+GPS/4G LTE ANTENNA, RG 174, 5000MM, AU-4S-LTE, GPS Gain:27dB, LTE Gain:0dBi, 50Q, SANAV, 1575.42MHz/704-960MHz/1710-2766MHz, VSWR \leq 2.0, SMA PLUG, REVERSE SMA PLUG, RoHS

Packing List

Item	Qty	Description
Utility CD	1	User manual and driver CD

IKARPC-07A Vehicle Computer Series

Features

- 7" sunlight readable TFT LCD with projected capacitive touchscreen
- Optional HSUPA/GPRS/GSM, Wi-Fi and Bluetooth
- Built-in GPS receiver
- Built-in OBD-II/J1939



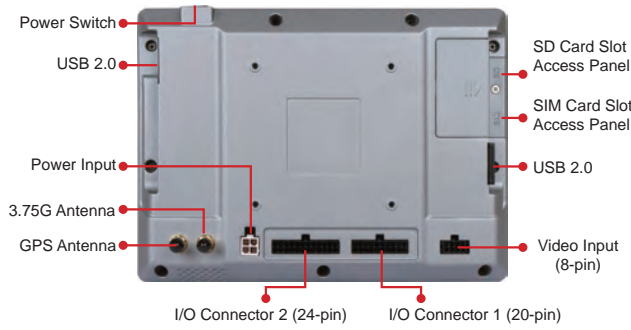
Specifications

Model Name		IKARPC-07A-A9	IKARPC-07A-BT
Chassis	Color	Black C + Silver	Black C + Silver
	Dimensions (WxHxD) (mm)	210 x 154 x 28	210 x 154 x 28
	System Fan	Fanless	Fanless
	Chassis Construction	PC + ABS plastic	PC + ABS plastic
Display	Size	7"	7"
	Resolution	1024 x 3 (RGB) x 600	1024 x 3 (RGB) x 600
	Brightness (cd/m ²)	500	500
	Contrast Ratio	700:1	700:1
	Pixel Pitch (mm)	0.05 (W) x 0.15 (H)	0.05 (W) x 0.15 (H)
	Viewing Angle (H/V)	130° (H) / 140° (V)	130° (H) / 140° (V)
	Touchscreen	Projected capacitive touch with USB interface	Projected capacitive touch with USB interface
Motherboard	CPU	Freescale™ i.MX 6 Cortex™-A9 (quad-core, 1.0 GHz)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)
	Chipset	N/A	SoC
	System Memory	On-board 1 GB SDRAM	On-board 2 GB SDRAM
Storage	SD Card	1 x SD slot (supports SD 2.0, max. 32 GB)	1 x Micro SD slot (supports SD 2.0, max. 32 GB)
	Flash	On-board 8 GB INAND flash	N/A
	mSATA	N/A	1 x mSATA (SATA 3Gb/s) optional
Communication	WLAN	On-board Wi-Fi 802.11a/b/g/n	PCIe Mini Wi-Fi 802.11a/b/g/n/ac (optional)
	Bluetooth	Bluetooth 3.0+HS	BT 4.0/3.0+HS (combo with WLAN optional module)
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)
	RFID	13.56 MHz ISO4443 A/B, read-write capable, ISO 14443A (MIFARE), ISO 14443B (FeliCa)	N/A
	GPS	On board GPS	On board GPS
I/O Interfaces	20-pin Connector	1 x 10/100 LAN 1 x OBD-II/J1939 1 x USB 2.0	1 x GbE LAN 1 x OBD-II/J1939 1 x USB 2.0
	24-pin Connector	1 x Audio line-out (R+L) 1 x Audio line-in 1 x RS-232 4-bit digital I/O (2-bit input, 2-bit output)	1 x Audio line-out (R+L) 1 x Audio line-in 1 x RS-232 4-bit digital I/O (2-bit input, 2-bit output)
	8-pin Connector	Video input	N/A
	USB 3.0	N/A	1
	USB 2.0	2	1
	Display	N/A	1 x HDMI
	SIM	1 x on board SIM card slot	2 x on board SIM card slot
	Antenna	1 x GPS, 1 x WWAN	1 x GPS, 1 x WWAN
Expansions	PCIe Mini	1 x Full-size PCIe Mini (reserved for WWAN)	1 x Full-size PCIe Mini (reserved for mSATA module), 1 x Full-size PCIe Mini (reserved for WWAN module), 1 x Half-size PCIe Mini (reserved for WLAN module)
Multimedia	Speaker	1 x Speaker (2 W)	1 x Speaker (2 W)
	Camera	5-megapixel CMOS	2-megapixel CMOS
LED Indicator & Button	Indicator	Power/BT/Wi-Fi/3G	Power/HDD/Wi-Fi/3G
	Button	1 x Power button	1 x Power button
Power	Power Input	Cigarette lighter power cable, DC 9 V~30 V	Cigarette lighter power cable, DC 9 V~30 V
	Consumption	12 V @ 0.8 A	12V @ 1.25 A
Reliability	Mounting	VESA 75	VESA 75
	Operating Temperature	-20°C ~ 60°C with air flow	-20°C ~ 60°C with air flow
	Storage Temperature	-30°C ~ 70°C	-30°C ~ 70°C
	Humidity	10% ~ 95%, non-condensing	10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	0.9 kg/2.1 kg	0.9 kg/2.1 kg
	Safety/EMC	CE/FCC/E-Mark/IP 54 compliant front panel	CE/FCC/E-Mark/IP 54 compliant front panel
OS	Supported OS	Android 4.2.2	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

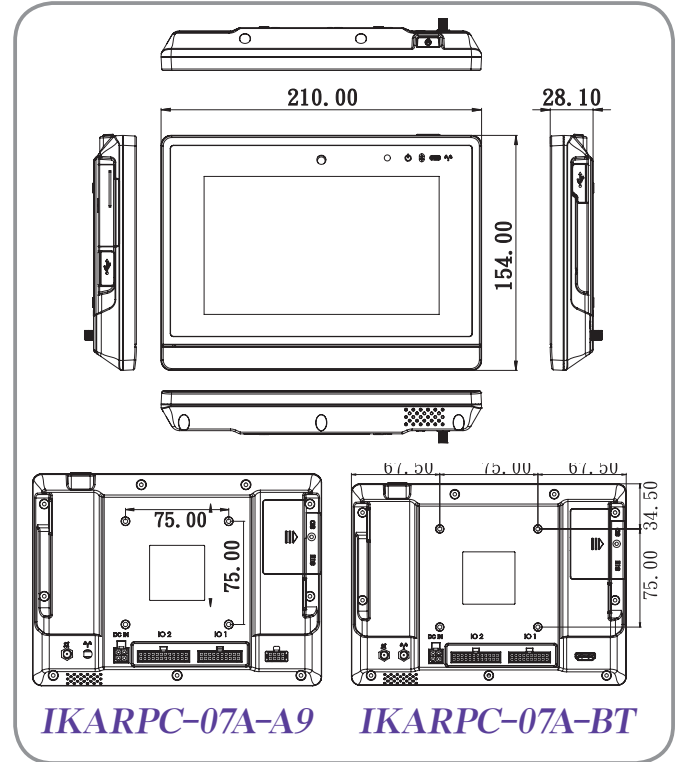
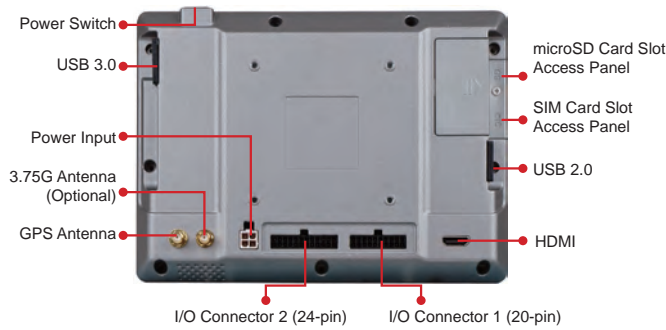
Fully Integrated I/O

Dimensions (Unit: mm)

IKARPC-07A-A9 Rear view



IKARPC-07A-BT Rear view



Ordering Information

Part No.	Description
IKARPC-07A-A9-R11	7" 500 cd/m2 1024 x 600, In Vehicle Panel PC with Freescale iMX6 Qual core Processor,1.0GHz , 1GB SDRAM , 8GB EMMC Flash, 5M Camera,RFID Reader, OBDII, HSUPA , GPS, WIFI/BT, ROHS
IKARPC-07A-BT-E3/2G-R11	7" 500 cd/m2 1024 x 600 In Vehicle Panel PC with Intel® Atom E3826 1.46GHz, 7W TDP, 2GB DDR3L on board memory, OBDII, GPS on board, 2M Camera, ROHS

Options

Item	Part No.	Description
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
Cigarette lighter power cable	32002-004000-100-RS	Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V)+ ψ3 green LED, (B) MOLEX 5557-0400 P=4.2, SHANGHAI YING YU, RoHS
VESA mount stand	IVI-MK03-R10	138mm 75x75 VESA mount stand
OBD-II cable	32025-003400-100-RS	Round cable, OBD-II cable, 2000 mm, 24 AWG, (A) OBD-II 16P male, (B) D-sub 9P female, one piece package with label, NIAN YEONG, RoHS

IKARPC-07A-A9 Series

Item	Part No.	Description
I/O connector 1 cable (20-pin)	32024-002400-100-RS	Round cable, integration cable, I/O cable, 300 mm, 24 AWG, (A)terminal block 3P P=5.08, (B)USB A type female+2 NUT, (C)PCB jack: RJ-45 8P8C, (D)D-sub 9P male, (E)MOLEX 5557-2000 P=3.0, one piece package with label, RoHS
I/O connector 2 cable (24-pin)	32024-002900-100-RS	Round cable, integration cable, I/O cable, 300 mm, 22 AWG, (A)terminal block 8P P=5.08, (B)MOLEX 43025-2400 P=3.0, (C)D-sub 9P male, (D)phone jack 3.5_3P+NUT, (E)phone jack 3.5_5P+NUT, one piece package with label, RoHS
Video input cable (8-pin)	32010-001700-100-RS	Round cable, video cable, 300 mm, 26 AWG, (A)MOLEX 43025-0800 P=3.0, (B)RCA jack, yellowx4, RoHS

IKARPC-07A-BT Series

Item	Part No.	Description
I/O connector 1 cable (20-pin)	32024-003000-100-RS	Round cable, integration cable, I/O cable, 300 mm, 24 AWG (A)terminal block 3P P=5.08, (B)USB A type female+2 NUT, (C)PCB jack: RJ-45 8P8C, (D)D-sub 9P male, (E)MOLEX 5557-2000 P=3.0, one piece package with label, RoHS
I/O connector 2 cable (24-pin)	32124-003700-100-RS	Round cable, integration cable, I/O cable, 300 mm, 22 AWG, (A)terminal block 8P P=5.08, (B)MOLEX 43025-2400 P=3.0, (C)D-sub 9P male, (D)phone jack 3.5_3P+NUT, (E)phone jack 3.5_5P+NUT, one piece package with label, RoHS
OS: Windows Embedded 7 (DVD-ROM)	IKARPC-07A-BT-WES7P-R10	OS image with Windows® Embedded Standard 7 E for IKARPC-07A-BT Series, DVD-ROM, RoHS
OS: Windows Embedded 8 (DVD-ROM)	IKARPC-07A-WE8S-R10	OS image with Windows® Embedded Standard 8 E for IKARPC-07A-BT Series, WE8S license label, DVD-ROM, RoHS
Wireless kit	IKARPC-WIFI-KIT01-R10	1T1R wifi module kit for embedded system, IEEE 802.11b/g/n, 1 x wifi module, RoHS
WWAN kit	IKARPC-3G-KIT02-R10	F260 3.75G module kit for embedded system, with BT V2.1, RoHS

Packing List

Item	P/N	Qty	Description
ACC power cable	32002-001900-100-RS	1	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, RoHS
GPS/GSM antenna	32506-000100-100-RS	1	Integration antenna, GPS/GSM, RG 174, 5000 mm/5000 mm, PPF-5423SA5X-999, magnetic mount: φ55 mm x 22mm, 1575.42 MHz/850 MHz/900 MHz/1800 MHz/1900 MHz, 2 x SMA plug, RoHS
Utility CD		1	User manual and driver CD

IKARPC-W10A

Vehicle Computer Series

Features

- 10.1" TFT LCD with projected capacitive touchscreen
- Intel® Atom™ E3826 1.46 GHz CPU
- Windows® Embedded Standard 7
- Option HSUPA/GPRS/GSM, Wi-Fi and Bluetooth
- Built-in GPS function
- Built-in OBD-II/J1939



Specifications

Model Name	IKARPC-W10A	
Chassis	Color	Blue C + Black C
	Dimensions (WxHxD) (mm)	277 x 186 x 27
	System Fan	Fanless
	Chassis Construction	PC + ABS plastic
Display	Size	10.1"
	Resolution	1280 x 800
	Brightness (cd/m ²)	350
	Contrast Ratio	800:1
	Pixel Pitch (mm)	0.0565 (W) x 0.1695 (H)
	Viewing Angle (H/V)	150° (H)/145° (V)
	Touchscreen	Projected capacitive touch with USB interface
Motherboard	CPU	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)
	Chipset	SoC
	System Memory	On-Board 2GB DDR3L 1 x 204-pin DDR3L SO-DIMM. (Max. 4GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD drive bay
	SD Card	1 x SD slot (supports SD 2.0, max. 32 GB)
Communication	WLAN	PCIe Mini Wi-Fi 802.11a/b/g/n/ac (optional)
	Bluetooth	BT 4.0/3.0+HS (combo with WLAN optional module)
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)
	GPS	On board GPS
I/O Interfaces	USB 3.0	1
	USB 2.0	1
	Ethernet	1 x RJ-45 PCIe GbE by Realtek 8111E
	COM Port	2 x DB-9 RS-232
	Digital I/O	8-bit digital I/O (4-bit input / 4-bit output)
	CAN-bus/OBD-II	1 x DB9 OBD-II/J1939
	Display	1 x HDMI
	Resolution	HDMI: Up to 1920 x 1080 @ 60 Hz
	Audio	1 x Line out, 1 x Mic in
	SIM	2 x on board SIM card slot
Expansions	Antenna	1 x GPS, 1 x WWAN
	PCIe Mini	1 x Full-size PCIe Mini (reserved for WWAN module), 1 x Full-size PCIe Mini (reserved for WLAN module)
Multimedia	Audio	1 x Speaker (2 W)
	Camera	2-megapixel CMOS
LED Indicator & Button	Indicator	Power/Wi-Fi/HDD/3.5G
	Button	1 x Power button
Power	Power Input	Cigarette lighter power cable, DC 9 V~30 V
	Consumption	12 V @ 1.73 A
Reliability	Mounting	VESA 100
	Operating Temperature	-20°C ~ 60°C with air flow
	Storage Temperature	-30°C ~ 70°C
	Humidity	10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	1.3 kg/2.8 kg
OS	Safety/EMC	CE/FCC/E-Mark/IP 64 compliant front panel
	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

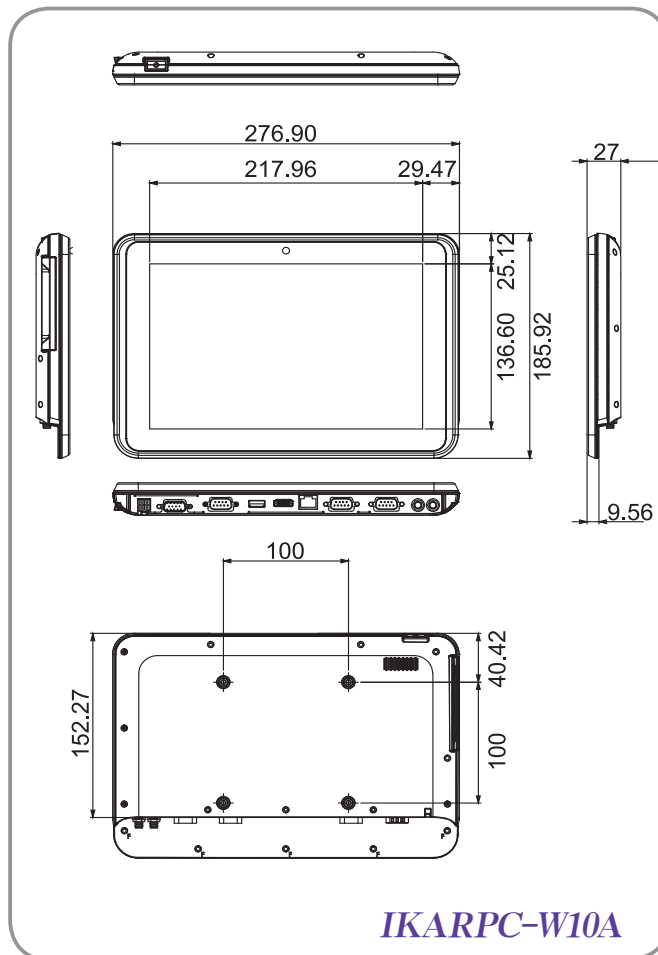
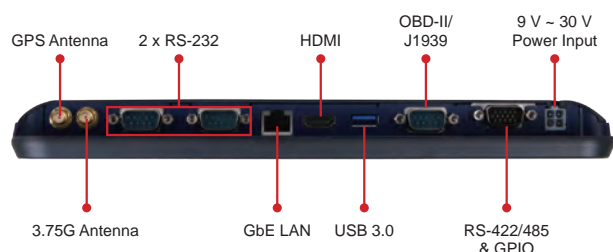
Fully Integrated I/O

Dimensions (Unit: mm)

Rear view



Bottom view



Ordering Information

Part No.	Description
IKARPC-W10A-BT-E3/2G-R10	10.1" 350 cd/m2 1280 x 800, in-vehicle panel PC with Intel® Atom E3826 1.46GHz, 7W TDP, 2GB DDR3L on-board memory, OBD-II, on-board GPS, 2-megapixel camera, RoHS

Options

Item	Part No.	Description
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
Cigarette lighter power cable	32002-004000-100-RS	Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V)+ ψ 3 green LED, (B) MOLEX 5557-0400 P=4.2, RoHS
OBD-II cable	32025-003400-100-RS	Round cable, OBD-II cable, 2000 mm, 24 AWG, (A) OBD-II 16P male, (B) D-sub 9P female, one piece package with label, RoHS
OS: Windows Embedded 7 (DVD-ROM)	IKARPC-W10A-BT-WES7P-R10	OS image with Windows® Embedded Standard 7 E for IKARPC-W10A-BT Series, DVD-ROM, RoHS
OS: Windows Embedded 8 (DVD-ROM)	IKARPC-W10A-WE8S-R10	OS image with Windows® Embedded Standard 8 E for IKARPC-W10A Series, WE8S license label, DVD-ROM, RoHS
Wireless kit	IKARPC-WIFI-KIT02-R10	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, RoHS
WWAN kit	IKARPC-3G-KIT02-R10	F260 3.75G module kit for embedded system, with BT V2.1, RoHS
VESA mount stand	IVI-MK02-R10	286mm 75x75 / 100x100 VESA mount stand

Packing List

Item	P/N	Qty	Description
ACC power cable	32002-001900-100-RS	1	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, SHANGHAI YING YU, RoHS
GPS/GSM antenna	32506-000100-100-RS	1	Integration antenna, GPS/GSM, RG 174, 5000 mm/5000 mm, PPF-5423SA5X-999, magnetic mount: ϕ 55 mm x 22mm, 1575.42 MHz/850 MHz/900 MHz/1800 MHz/1900 MHz, 2 x SMA plug, RoHS
Utility CD		1	User manual and driver CD

IVS-300

Vehicle Surveillance System

New

Features

- Intel® Skylake ULT /Baytrail processor
- 4 x PoE IEEE802.3af
- Optional 3G/Wi-Fi
- 2 x RS-232, 1 x Isolated RS-422/485
- 4 x DI/DO
- 1 x HDMI (lockable), 1 x VGA

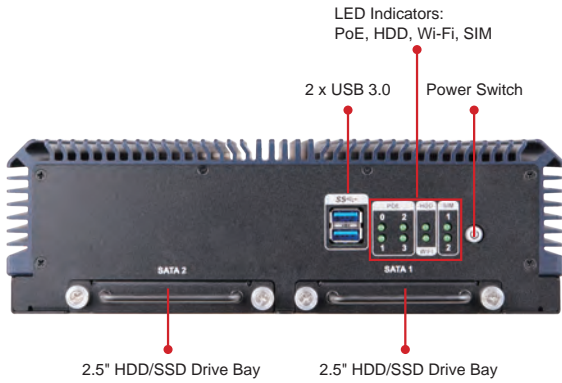


Specifications

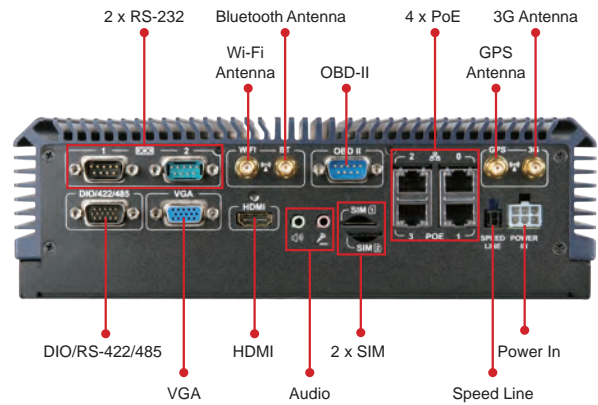
Model Name		IVS-300-BT	IVS-300-ULT3
Chassis	Color	Blue C	Blue C
	Dimensions (WxHxD) (mm)	255 x 80 x 185	255 x 80 x 185
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® J1900 Processor (quad-core 2GHz, 10W TDP)	Intel® Core™ i5-6300U processor (dual-core, 2.4 GHz, 15W TDP)
	Chipset	SoC	
	System Memory	2 x 204-pin DDR3L SO-DIMM. 4GB pre-installed (system max. 8 GB)	2 x 260-pin DDR4 SO-DIMM, 4GB pre-installed (system max. 32 GB)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s SSD removable drive bay	2 x 2.5" SATA 6Gb/s SSD removable drive bay
Communication	WLAN	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)
	Bluetooth	BT 4.0/3.0+HS (combo with WLAN optional module)	BT 4.0/3.0+HS (combo with WLAN optional module)
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	PCIe Mini WCDMA/HSDPA/HSUPA (optional)
	GPS	On board GPS	On board GPS
I/O Interfaces	USB 3.0	2	2
	Ethernet	4 x RJ-45 PCIe GbE by Intel® i210-AT Support PoE IEEE802.3af (Each port max 15.4W)	4 x RJ-45 PCIe GbE by Intel® i210-AT Support PoE IEEE802.3af (Each port max 15.4W)
	COM port	2 x DB-9 RS-232 1 x DB-15 isolated RS-422/485	2 x DB-9 RS-232 1 x DB-15 isolated RS-422/485
	Digital I/O	Isolated 8-bit digital I/O (4-bit input, 4-bit output)	Isolated 8-bit digital I/O (4-bit input, 4-bit output)
	CAN-Bus/OBD-II	1 x DB9 OBD-II/J1939	1 x DB9 OBD-II/J1939
	Display	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI
	Resolution	VGA : Up to 1920 x 1080 @60Hz HDMI : Up to 1920 x 1080 @60Hz	VGA : Up to 1920 x 1080 @60Hz HDMI : Up to 1920 x 1080 @60Hz
	Audio	1 x Mic in, 1 x Line out	1 x Mic in, 1 x Line out
	SIM	2 x on board SIM card slot	2 x on board SIM card slot
	Antenna	1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi	1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi
Expansions	PCIe Mini	1 x Half-size PCIe Mini (reserved for WLAN) 1 x Full-size PCIe Mini (reserved for WWAN) 1 x Full-size PCIe Mini (only for skylake platform)	1 x Half-size PCIe Mini (reserved for WLAN) 1 x Full-size PCIe Mini (reserved for WWAN) 1 x Full-size PCIe Mini (only for skylake platform)
	Led Indicator & Button	Indicator: 8 x LED (4 PoE, 1 HDD, 1 Wi-Fi, 2 SIM) Button: 1 x Power button	Indicator: 8 x LED (4 PoE, 1 HDD, 1 Wi-Fi, 2 SIM) Button: 1 x Power button
Power	Power Input	Cigarette lighter power cable: DC 9 V~30 V	Cigarette lighter power cable: DC 9 V~30 V
	Consumption	12 V @ 12A (Intel® J1900 with 4 GB DDR3L memory + 4 PoE)	12 V @ 14A (Intel® i5-6300U with 4 GB DDR4 memory + 4 PoE)
Reliability	Mounting	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow	-20°C ~ 60°C with air flow
	Storage Temperature	-30°C ~ 70°C	-30°C ~ 70°C
	Humidity	10% ~ 95%, non-condensing	10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	3kg/4.5kg	3kg/4.5kg
	Safety/EM C	CE / FCC / E-Mark	CE / FCC / E-Mark
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

Fully Integrated I/O

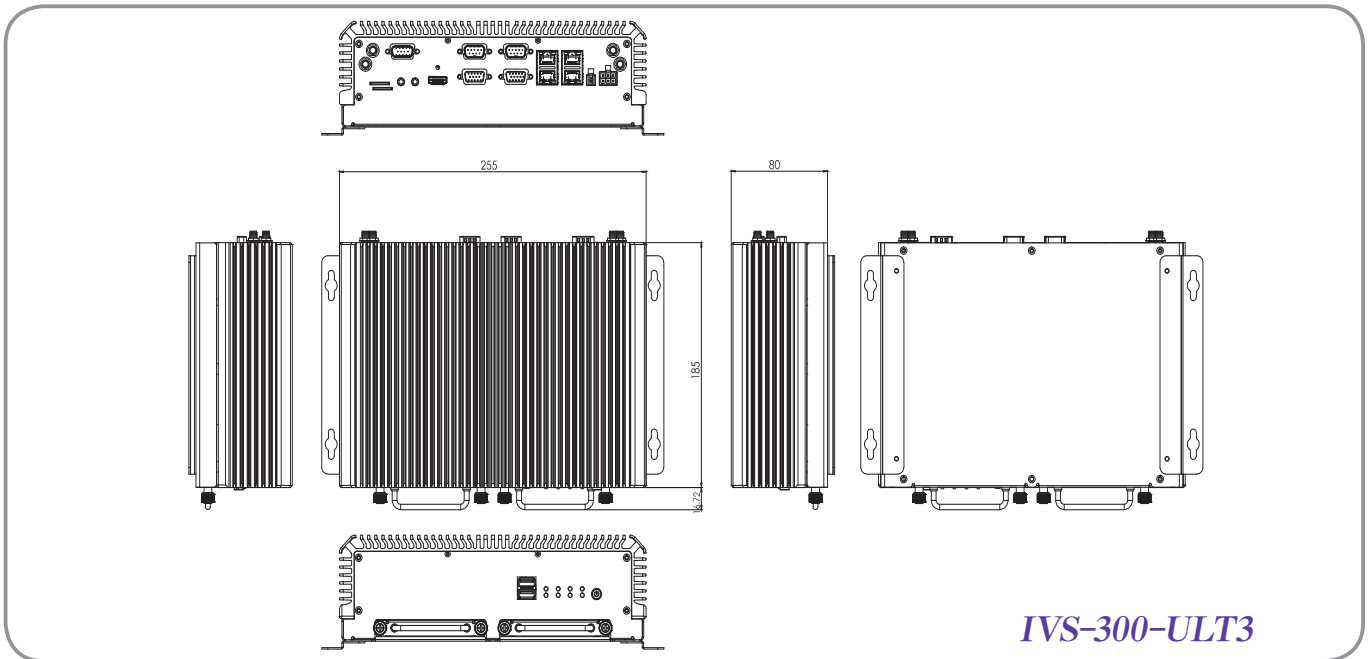
Front view



Rear view



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IVS-300-BT-J1/4G-R10	Fanless embedded system with Intel® Celeron® Processor J1900 (10W) Processor with 4GB DDR3L pre-installed memory, PoE, on board GPS, HDMI, VGA, two 2.5" removable SATA HDD bay, RoHs
IVS-300-ULT3-i5/4G-R10	Fanless embedded system with 6th generation 14nm Intel® Core™ i5-6300U (15W) mobile processor (ULT) with 4GB DDR4 pre-installed memory, PoE, on-board GPS, HDMI, VGA, two 2.5" removable SATA HDD bay, RoHs
IVS-300-ULT3-i7/4G-R10	Fanless embedded system with Intel® Core™ i7-6600U (15W) Processor (ULT) with 4GB DDR4 pre-installed memory, PoE, on board GPS, HDMI, VGA, two 2.5" removable SATA HDD bay, RoHs

Options

Part No.	Description
IVS-300-ULT3-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for IVS-300-ULT3, with DVD-ROM, RoHS
IVS-300-BT-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for IVS-300-BT, with DVD-ROM, RoHs
IVS-WIFI-KIT02-R10	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 1 x Antenna, RoHS
IVS-3G-KIT02-R10	3G module kit for embedded system, F260, 1 x 3G module, RoHs
IVIPOWER-6PIN-R10	Power adapter with 6-pin transfer cable, RoHS

Packing List

Item	P/N	Qty	Description
ACC power cable	32002-001900-100-RS	1	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, RoHS
GPS/GSM antenna	32506-000100-100-RS	1	Integration antenna, GPS/GSM, RG 174, 5000 mm/5000 mm, PPF-5423SA5X-999, magnetic mount: φ55 mm x 22mm, 1575.42 MHz/850 MHz/900 MHz/1800 MHz/1900 MHz, 2 x SMA plug, RoHS
Utility CD		1	User manual and driver CD

IVS-200-ULT2

Vehicle Surveillance System



Features

- Intel® i5-5350U dual-core 1.8 GHz CPU or Intel® Celeron® 3755U dual-core 1.7 GHz CPU
- Four Intel® GbE LAN ports
- 9 V~36 V DC input
- Two RS-232/422/485
- E-Mark certification



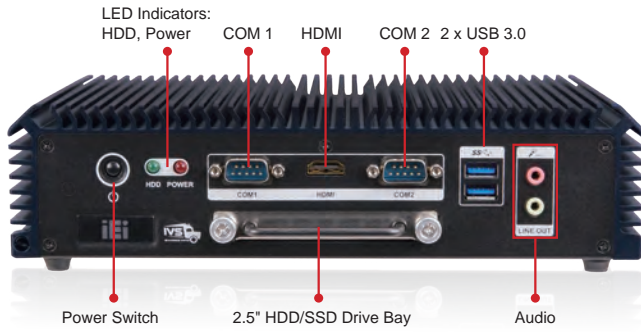
Specifications

Model Name		IVS-200-ULT2	
Chassis	Color	Blue C	
	Dimensions (WxHxD) (mm)	255 x 63 x 150	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloy	
Motherboard	CPU	Intel® Core™ i5-5350U Processor (dual-core, 1.8 GHz, 15W TDP) or Intel® Celeron® 3755U Processor (dual-core, 1.9 GHz, 15W TDP)	
	Chipset	SoC	
	System Memory	2 x 204-pin DDR3L SO-DIMM slot 4 GB Pre-installed (system max. 16 GB)	
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD removable drive bay	
	mSATA	1 x mSATA (SATA 6Gb/s)	
Communication	WLAN	PCIe Mini Wi-Fi 802.11b/g/n (optional)	
	Bluetooth	Bluetooth 2.1 (combined with WWAN optional module)	
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)	
I/O Interfaces	USB 3.0	2	
	USB 2.0	2	
	Ethernet	4 x RJ-45 connector LAN1: PCIe GbE by Intel® I218 LAN2: PCIe GbE by Intel® I211 LAN3: PCIe GbE by Intel® I211 LAN4: PCIe GbE by Intel® I211	
	COM Port	2 x DB-9 RS-232/422/485 4 x DB-9 RS-232 (optional)	
	Display	1 x VGA, 1 x HDMI	
	Resolution	VGA: up to 2560 x 1600 @ 60 Hz HDMI: up to 3840 x 2160 @ 60 Hz	
	DIO	8 bit digital I/O (4-bit input, 4-bit output) (optional)	
	SIM	1 x on board SIM card slot	
	Antenna	1 x 3G, 1 x BT, 1 x Wi-Fi	
	Audio	1 x Line out, 1 x Mic in	
	Expansions	PCIe Mini	1 x Full-size PCIe Mini (reserved for WWAN or mSATA)* 1 x Full-size PCIe Mini (reserved for WLAN)
		Power Input	DC jack : 9 V~36 V DC
	Power	Consumption	12 V @ 2.1 A (Intel® i5-5350U with 4 GB DDR3 memory)
Mounting		VESA 100	
Reliability	Operating Temperature	-20°C ~ 60°C with air flow (SSD)	
	Storage Temperature	-30°C ~ 70°C	
	Humidity	10% ~ 95%, non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	
	Weight (Net/Gross)	2.2 kg/3 kg	
	Safety/EMC	CE/FCC/E-Mark	
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E	

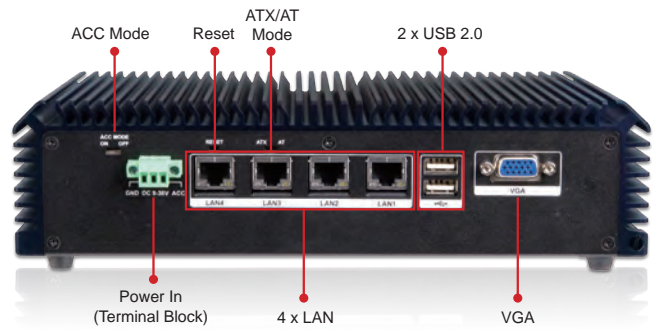
*IVS-200-ULT2-QGW-R10 has only one PCIe mini slot(Full size)

Fully Integrated I/O

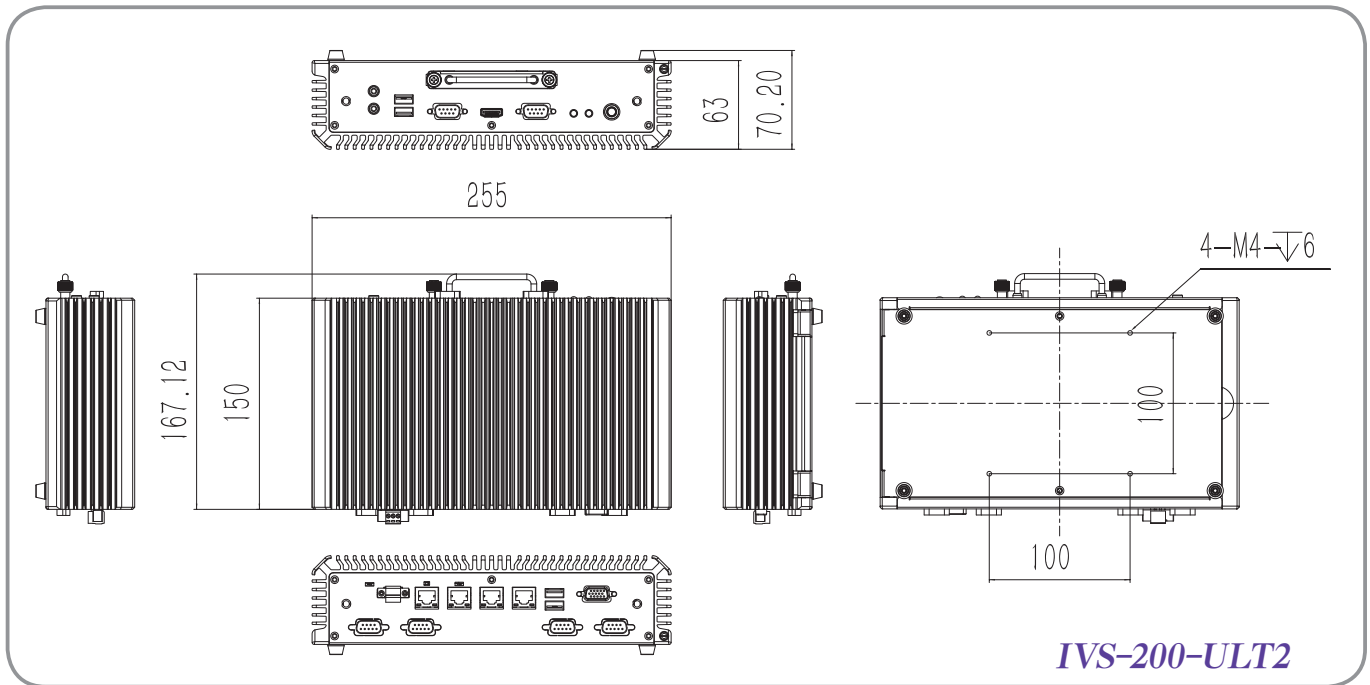
Front view



Rear view



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IVS-200-ULT2-I5/4G-R10	Fanless system with Intel® Core™ i5-5350U CPU, up to 2.9GHz, TDP 15W, four GbE LAN ports, one HDMI, one VGA, two RS-232/422/485, one 2.5" removable SATA HDD bay, 4 GB memory pre-installed, 9 V~36 V DC, R10, RoHS
IVS-200-ULT2-C/4G-R10	Fanless system with Intel® Celeron® 3765U 1.7GHz CPU, TDP 15W, four GbE LAN ports, one HDMI, one VGA, two RS-232/422/485, one 2.5" removable SATA HDD bay, 4 GB memory pre-installed, 9 V~36 V DC, R10, RoHS
IVS-200-ULT2-QGW-R10	Fanless System with Intel® Core™ i5-5350U up to 2.9GHz, TDP 15W, 4 x GbE LAN port , 1 x HDMI, 1 x VGA, 2 x RS-232/422/485, 1 x 2.5" removable SATA HDD bay, 8G memory pre-installed, with QTS-Gateway, 9~36V DC, RoHS

Options

Item	Part No.	Description
OS	IVS-200-ULT2-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for IVS-200-ULT2, DVD-ROM, RoHS
Serial cable	32205-005400-100-RS	RS-232 cable, 150 mm, 2x5 pin
DIO cable	32231-000100-200-RS	DIO cable, 150 mm, 2x5 pin

Packing List

Item	Qty	Description
Utility CD	1	User manual and driver CD

IVS-110-AL

Vehicle Fleet Management System

New

Features

- Intel® Apollo Lake processor
- Dual SIM slot
- Optional 3G/Wi-Fi
- 1 x Isolated RS-232/422/485
- 16 x DI/DO
- 1 x HDMI (lockable), 1 x VGA
- Built-in GPS function
- E-Mark certification
- Built-in OBD-II/J1939
- IP4X protection



Specifications

Model	IVS-110-AL	
Chassis	Color	Black
	Dimensions (WxHxD) (mm)	261 x 170 x 60
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ x7-E3950 Processor (dual-core 2.0GHz, 12W TDP)
	Chipset	SoC
	System Memory	2 x 204-pin DDR3L SO-DIMM. 4GB pre-installed (system max. 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay
	mSATA / eMMC	1 x mSATA (PCIe Mini Slot) 1 x eMMC 5.0 8G (reserved)
Communication	WLAN	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)
	Bluetooth	BT 4.0/3.0+HS (combo with WLAN optional module)
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)
	GPS	On board GPS
I/O Interfaces	USB 3.0	4
	Ethernet	1 x RJ-45 PCIe GbE by Intel® I210-IT
	COM Port	1 x RS-232/422/485 (BIOS configuration)
	Digital I/O	1 x Printer port 16-bit digital I/O (8-bit input / 8-bit output)
	OBD-II/J1939	1 x DB9 OBD-II/J1939
	Display	1 x VGA, 1 x HDMI
	Resolution	VGA : Up to 1920 x 1200 @ 60 Hz HDMI : Up to 3840 x 2160 @ 30 Hz
	Audio	1 x Line out
	SIM	2 x on board SIM card slot
Expansions	TPM	1 x 20-pin header
	PCIe Mini	1 x Full/Half-size PCIe Mini slot (reserved for WWAN) 1 x Full/Half-size PCIe Mini slot (reserved for mSATA or E-window) 1 x Half-size PCIe Mini slot (reserved for WLAN)
	Power Input	Cigarette lighter power cable: 9 V~ 36 V DC
Power	Consumption	12V @ 5A (Intel® Atom™ x7-E3950 with 8GB DDR3 memory)
	Mounting	Wall mount / VESA 100
Reliability	Operating Temperature	-30°C ~ +70°C with air flow
	Storage Temperature	-40°C ~ 80°C
	Humidity	10% ~ 95%, non-condensing
	Operating Shock	50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
	Operating Vibration	5 Grms, 5-500 Hz, 3 Axes(with SSD, according to IEC60068-2-64) MIL-STD-810F 514.5C-2 (SSD)
	Weight (Net/Gross)	2.4 kg / 3.8 kg
	Safety/EMC	CE/FCC/E-Mark/IP rating : IP 4X compliant
OS	Supported OS	Microsoft® Windows 10 IoT Enterprise

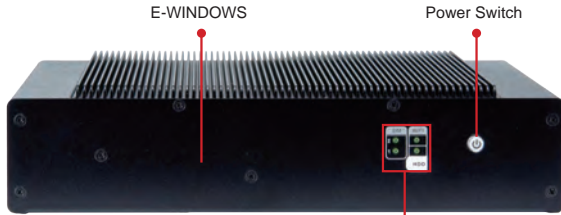
Fleet Management Tracking System



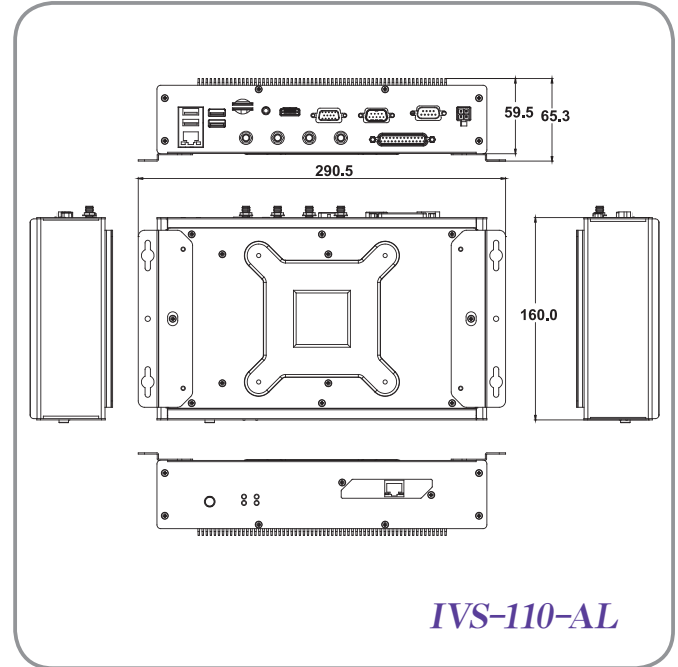
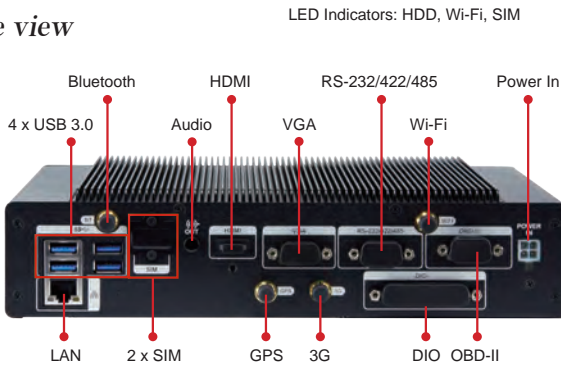
Fully Integrated I/O

Dimensions (Unit: mm)

Front view



Side view



IVS-110-AL

Ordering Information

Part No.	Description
IVS-110-AL-E3/4G-R10	Fanless embedded system with Intel® Atom™ x7-E3950 (12W) Processor with 4GB DDR3L pre-installed memory, on board GPS, HDMI, VGA, one GbE LAN, one 2.5" SATA HDD bay, two SIM slots, RoHS
IVS-110-AL-E2/4G-R10	Fanless embedded system with Intel® Atom™ x5-E3940 (9.5W) Processor with 4GB DDR3L pre-installed memory, on board GPS, HDMI, VGA, one GbE LAN, one 2.5" SATA HDD bay, two SIM slots, RoHS
IVS-110-AL-E1/4G-R10	Fanless embedded system with Intel® Atom™ x5-E3930 (6.5W) Processor with 4GB DDR3L pre-installed memory, on board GPS, HDMI, VGA, one GbE LAN, one 2.5" SATA HDD bay, two SIM slots, RoHS

Options

Item	Part No.	Description
GPS/LTE antenna	32506-000400-100-RS	Integration Antenna, Magnetic Antenna Base+GPS/4G LTE ANTENNA, RG 174, 5000MM, AU-4S-LTE, GPS Gain:27dB, LTE, Gain:0dBi, 50Ω, SANAV, 1575.42MHz/704-960MHz/1710-2766MHz, VSWR ≤ 2.0, SMA PLUG, REVERSE SMA PLUG, RoHS
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
OBD-II cable	32025-003400-100-RS	Round cable, OBD-II cable, 2000 mm, 24 AWG, (A) OBD-II 16P male, (B) D-sub 9P female, one piece package with label, RoHS
Cigarette lighter power cable	32002-004000-100-RS	Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V)+ ψ3 green LED, (B) MOLEX 5557-0400 P=4.2, SHANGHAI YING YU, RoHS
Wireless kit	IVS-WIFI-KIT02-R10	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x Antenna, RoHS
WWAN kit	IKARPC-3G-KIT02-R10	3G module kit for embedded system, F260, 1 x 3G module, RoHS
WWAN kit	MIL-27538-000002-RS	LTE/DC-HSPA+/EGPRS mini pcie modules, ZonBest, MPCI-L210H, TOBY-L210, USB, CCL, RoHS
ACC power cable	32002-001900-100-RS	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, SHANGHAI YING YU, RoHS

Packing List

Item	Qty	Description
Utility CD	1	User manual and driver CD

IVS-100-BT

Vehicle Fleet Management System

Features

- Intel® Atom® E3826 1.46 GHz CPU
- Powered by Windows® Embedded Standard 7
- Supports 2.5" SATA 3Gb/s SSD
- Built-in GPS function
- Built-in VGA output and HDMI output
- Dual SIM slot
- Optional 3G/Wi-Fi/UHF reader modules
- Optional software compression video capture card



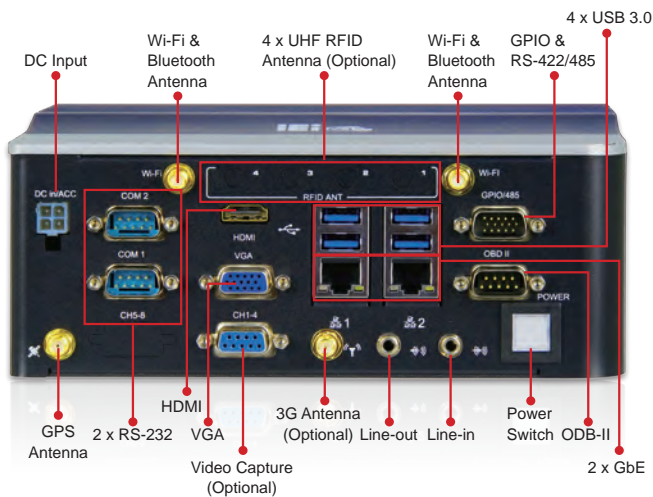
Specifications

Model Name	IVS-100-BT	
Chassis	Color	Blue C
	Dimensions (WxHxD) (mm)	200 x 76 x 150
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W TDP)
	Chipset	SoC
	System Memory	2 x 204-pin DDR3L SO-DIMM slot, 2 GB pre-installed (system max. 8GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD drive bay
	SD Card	1 (supports SD 2.0, max. 32 GB)
Communication	WLAN	PCIe Mini Wi-Fi 802.11b/g/n (optional)
	Bluetooth	Bluetooth 2.1 (combined with WWAN optional module)
	WWAN	PCIe Mini, WCDMA/HSDPA/HSUPA (optional)
	RFID	UHF module, 902 MHz ~ 928 MHz operating band (optional)
	GPS	On board GPS
I/O Interfaces	USB 3.0	4
	Ethernet	2 x 10/100/1000 Mbps RJ-45 by RTL8111E PCIe GbE
	COM Port	2 x DB-9 RS-232 1 x DB15 GPIO & RS-422/485
	Digital I/O	8-bit digital I/O (4-bit input, 4-bit output)
	CAN-bus/OBD-II	1 x DB-9 OBD-II/J1939
	Display	1 x VGA, 1 x HDMI
	Resolution	HDMI: Up to 1920 x 1080 @60 Hz VGA: Up to 1920 x 1080 @60 Hz
	Audio	1 x Line in, 1 x Line out
	SIM	2 x on board SIM card slot
	Antenna	2 x Wi-Fi/BT, 1 x WWAN, 1 x GPS, 4 x UHF
	Other	4-channel SC video capture card (optional)
	Expansions	PCI
PCIe Mini		1 x Full-size PCIe Mini (reserved for WWAN)
		1 x Full-size PCIe Mini (reserved for capture card module)
		1 x Full-size PCIe Mini (reserved for analog DIO module) 1 x Half-size PCIe Mini (reserved for WLAN)
Power	Power Input	Cigarette lighter power cable, DC 9 V~30 V
	Consumption	12 V @ 3.2 A (Intel® Atom™ E3826 with 2 GB DDR3 memory)
Reliability	Mounting	VESA 100
	Operating Temperature	-20°C ~ 60°C with air flow
	Storage Temperature	-30°C ~ 70°C
	Humidity	10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2.1 kg/3.6 kg
	Safety/EMC	CE/FCC/E-Mark
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

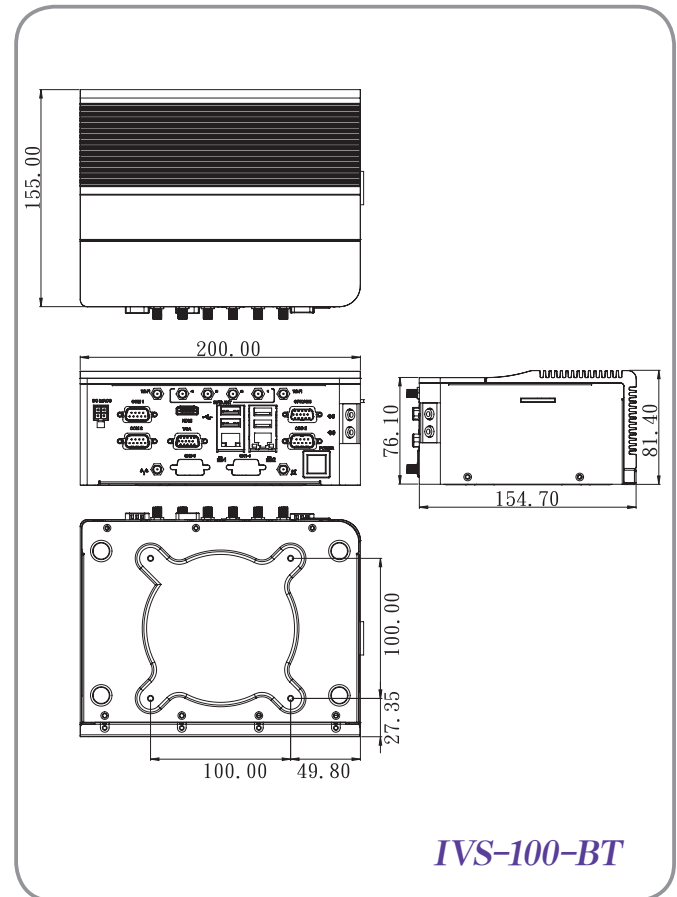
Fully Integrated I/O

Dimensions (Unit: mm)

Front view



Side view



IVS-100-BT

Ordering Information

Part No.	Description
IVS-100-BT-E3/2G-R10	Fanless embedded system with Intel® Atom™ E3826 1.46 GHz processor, 7W TDP, pre-installed 2 GB DDR3L memory, two GbE LAN, one HDMI, one VGA, one 2.5" SATA HDD bay, on-board GPS, RoHS

Options

Item	Part No.	Description
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
Cigarette lighter power cable	32002-004000-100-RS	Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V)+ψ3 green LED, (B) MOLEX 5557-0400 P=4.2, RoHS
OBD-II cable	32025-003400-100-RS	Round cable, OBD-II cable, 2000 mm, 24 AWG, (A) OBD-II 16P male, (B) D-sub 9P female, one piece package with label, RoHS
OS: Windows Embedded 7 (DVD-ROM)	IVS-100-WES7E-R10	OS image with Windows® Embedded Standard 7 E for IVS-100 Series, DVD-ROM, RoHS
Wireless kit	IVS-WIFI-KIT02-R10	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 1 x Antenna, RoHS
WWAN kit	IVS-3G-KIT02-R10	3G module kit for embedded system, F260, 1 x 3G module, RoHS
UHF module	IVS-UHF01-R10	UHF RFID patch antenna, 915 MHz, only for United States
UHF RFID antenna (Patch Antenna 915 MHz)	AVL-2000PLUS-FCC01-R10	UHF RFID antenna module, patch antenna, 915 MHz, 8.5dBi, with RFID cable, LMR195, 10000 mm, SMA PLUG, RoHS
4-channel video capture card	IVS-SC01-R10	Video capture card, PCIe Mini card with 4-channel video capture, SC330N4 MC, RoHS
Dead reckoning box	IVI-DR-R10	IVI dead reckoning box, USB output

Packing List

Item	P/N	Qty	Description
ACC power cable	32002-001900-100-RS	1	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, SHANGHAI YING YU, RoHS
GPS/GSM antenna	32506-000100-100-RS	1	Integration antenna, GPS/GSM, RG 174, 5000 mm/5000 mm, PPF-5423SA5X-999, magnetic mount: φ55 mm x 22mm, 1575.42 MHz/850 MHz/900 MHz/1800 MHz/1900 MHz, 2 x SMA plug, RoHS
Utility CD		1	User manual and driver CD

ITCS-100-H81 Toll Gate Device Control System

Features

- Intel® Core™ i5-4570TE CPU dual-core 2.7 GHz or Intel® Celeron® Processor G1820TE dual-core 2.2 GHz
- 9~36 V DC input
- 4 x RS-232, 4 x RS-232/422/485
- 1 x VGA, 1 x DVI-D
- 2 x 3.5" SATA 6Gb/s HDD drive bay
- 24 x DIO

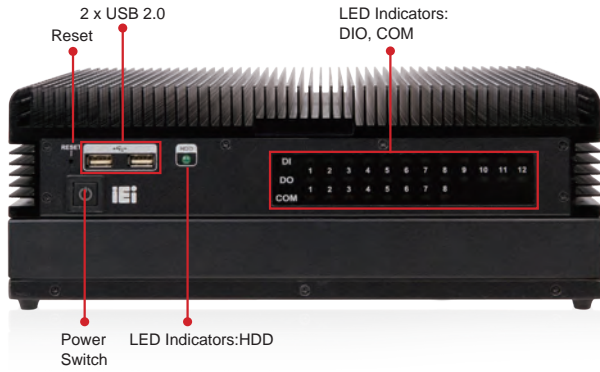


Specifications

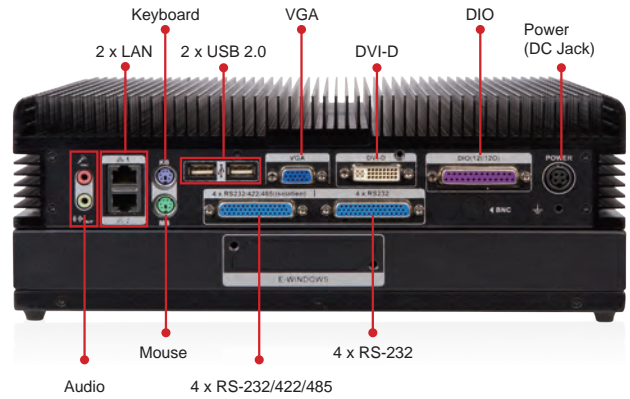
Model Name		ITCS-100-H81-C/4G-R10	ITCS-100-H81-i5/4G-R10
Chassis	Color	Black	
	Dimensions (WxHxD) (mm)	310 x 112.8 x 200	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloy	
Motherboard	CPU	Intel® Celeron® G1820TE Processor (dual-core 2.2 GHz, 35W TDP)	Intel® Core™ i5-4570TE Processor (dual-core 2.7 GHz 35W TDP)
	Chipset	Intel® H81	
	System Memory	2 x 204-pin DDR3 SO-DIMM 4GB pre-installed (system max 32GB)	
Storage	Hard Drive	2 x 3.5" HDD bay SATA 6Gb/s	
	Flash	2GB on-board flash	
I/O Interfaces	USB 2.0	4	
	Ethernet	2 x RJ-45 connector 1 x PCIe GbE by Intel® I211AT 1 x PCIe GbE by Intel® I210AT	
	COM Port	4 x RS-232 + 4 x RS-232/422/485 (SCSI type, 4 x RS-232/422/485 with isolated)	
	Digital I/O	1 x D-SUB 25 pin connector 24-bit digital I/O (12-bit input / 12-bit output)	
	Display	1 x VGA + 1 x DVI-D	
	Resolution	VGA: Up to 1920 x 1080@60Hz DVI-D: Up to 1920 x 1080@60Hz	
	PS/2 (KB/MS)	1 x KB, 1 x MS	
	Audio	1 x Line-out + 1 x Line-in	
	TPM	1 x 20-pin LPC	
	Expansions	1 x Full-size PCIe Mini (for E-window)	
	LED Indicator & Button	Button	1 x Power button, 1 x Reset button
Indicator		1 x Software LED, 1 x HDD LED, 24 x DIO, 8 x COM port	
Power	Power Input	DC jack : 9V~36V DC	
	Consumption	12V @ 5A (Intel® i5-4570TE with 4 GB DDR3 memory)	
Reliability	Mounting	Wall mount	
	Operating Temperature	-20°C ~ 55°C with air flow	
	Storage Temperature	-30°C ~ 70°C	
	Humidity	10% ~ 90%, non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810G 514.6C-1	
	Weight (Net/Gross)	6.36 kg/9.2 kg	
OS	Safety/EMC	CE/FCC	
	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E, Linux (Ubuntu)	
	Watchdog Timer	Software programmable supports 1~255 sec, system reset	

Fully Integrated I/O

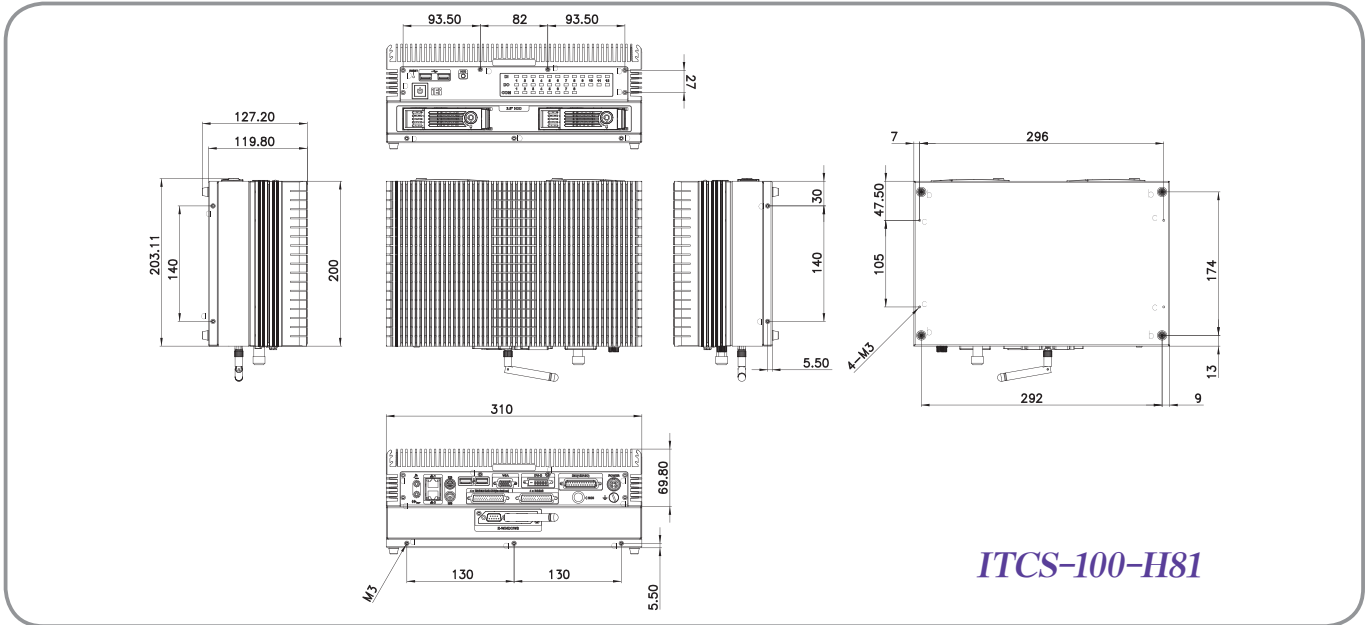
Front view



Rear View



Dimensions (Unit: mm)



ITCS-100-H81

Ordering Information

Part No.	Description
ITCS-100-H81-i5/4G-R10	Fanless embedded system with Intel® H81 chipset, Intel® Core™ i5-4570TE Processor dual-core 2.7 GHz, 35W TDP, 4GB DDR3L pre-installed memory, RS-232/422/485, 24-bit DIO, E-windows, two 3.5" removable SATA HDD bays, RoHS
ITCS-100-H81-C/4G-R10	Fanless embedded system with Intel® H81 chipset, Intel® Celeron® Processor G1820TE dual-core 2.2 GHz, 35W TDP, 4GB DDR3L pre-installed memory, RS-232/422/485, 24-bit DIO, E-windows, two 3.5" removable SATA HDD bays, RoHS

Packing List

Item	P/N	Qty	Description
DIO cable	32031-000200-100-RS	1	DIO cable, round cable, 3, 1500 mm, 26AWG, (A)D-sub 25-pin male *3, one piece package with label, RoHS
DB-44 to quad DB-9 cable	32005-003300-100-RS	1	RS-232/422/485 cable, round cable, 5, 1500 mm, 28AWG, (A)D-sub 44-pin male, (B)D-sub 9-pin male *4, one piece package with label, RoHS
DB-44 to quad DB-9 cable	32005-003400-100-RS	1	RS-232/422/485 cable, round cable, 5, 1500 mm, 28AWG, (A)D-sub 44-pin male, (B)D-sub 9-pin male *4, one piece package with label, blue, RoHS
One Key Recovery CD	7B000-001169-RS	1	DVD-ROM Disk, v1.6, One Key Recovery (supports SkyLake, Braswell), RoHS
Utility CD		1	User manual and driver CD

Options

Item	Part No.	Description
Power adapter	63040-010090-101-RS	Adapter Power, FSP, FSP090-DIEBN2, 9NA0904739, Active PFC, Vin:90~264VAC, 90W, Plug=6.5mm, Cable=1500mm, Erp(NO LOAD 0.5W), Vout:19VDC, Din 4Pin/lock, CCL, RoHS
Power cord	32702-000400-200-RS	Power cord, European code (VDE), 2, 1800 mm, (A)Plug: SH-025 (16A/250V), (B)Connector: SM-112 (2.5A/250V), Self-Man, CCL, RoHS
OS:Windows Embedded 7	ITCS-100-H81-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for ITCS-100-H81, with DVD-ROM, RoHS
OS:Windows Embedded 8	ITCS-100-H81-WE8E64-R10	OS Image with Windows® 8 Embedded 64-bit for ITCS-100-H81, with DVD-ROM, RoHS

TRS-100 *Multi-function Transportation System*

Preliminary

Features

- Intel® Skylake ULT
- Optional M12 connector
- 2 x RS-232/422/485
- 4 x DI/DO
- 2 x CAN Bus



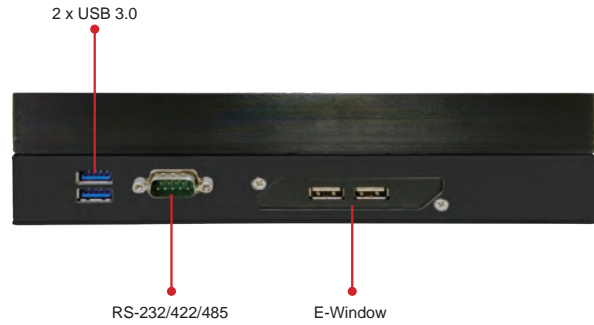
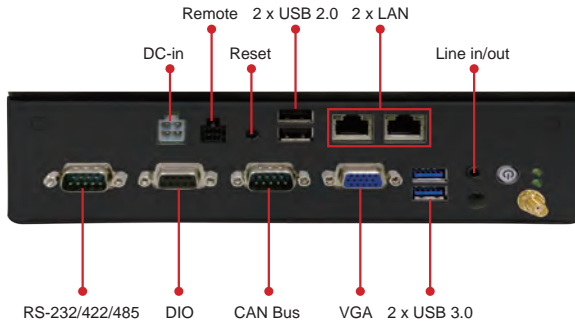
Specifications

Model Name		TRS-100-ULT3-B-CE/4G-R10	TRS-100-ULT3-A-CE/4G-R10
Chassis	Color	Blue C	
	Dimensions (WxHxD) (mm)	235 x 160 x 65 (235 x 170 x 65)	
	System Fan	Fanless	
	Chassis Construction	Aluminum alloys	
Motherboard	CPU	Intel® Celeron® 3855U processor dual-core 1.6GHz (Kaby Lake Core™ i3/i5/i7)	
	System Memory	4GB on-board memory (expandable to 8GB)	
Communication	WLAN + Bluetooth	M.2 slot Wi-Fi 802.11a/b/g/n/ac + BT (optional)	
	WWAN	PCIe Mini, WCDMA/HSDPA/HSUPA (optional)	
	GPS	PCIe Mini GPS (in-vehicle model only, uBlox) (optional)	
Storage	HDD/SSD	1 x 2.5" SATA 6Gb/s HDD/SSD Bay	
	mSATA / eMMC	1 x mSATA (PCIe Mini Slot, signal from SATA2)	
	Others	1 x eMMC 5.0 8G (reserved)	
I/O Interfaces	USB 3.0	4 x USB 3.0 on board (two on front, two on rear)	
	USB 2.0	2	1 x M12 (2 x USB 2.0 signal)
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I210-AT	2 x M12 GbE by Intel® I210-AT
	COM Port	2 x RS-232/422/485 (BIOS configuration) 2 x RS-232 (internal pin header)	
	Digital I/O	1 x DB-9 (8-bit Digital I/O 4 in / 4 out "+5V")	
	CAN-bus/OBD-II	1 x DB-9 CAN-bus (2 ports)	
	Display	1 x VGA, 1 x iDP (internal pin header)	
	Audio	1 x Line in / out	
	SIM	1 x SIM slot (on board)	
	Expansions	PCIe Mini	1 x Full/Half-size PCIe Mini slot (reserved for 3G/4G) 1 x Full/Half-size PCIe Mini slot (for mSATA or E-Window or GPS) 1 x M.2 slot (for Wi-Fi + BT)
Button		1 x Power button, 1 x Reset button (hidden), 1 x Remote Power/Reset connector (2x2 pin)	
LED Indicator & Button	Indicator	1 x HDD LED, 1 x Radio Frequency LED	
	Power Input	9V ~ 30V DC-in 1 x 4-pin connector	9V ~ 30V DC-in 1 x M12 connector (IVS-IO-A)
Reliability	Consumption	TBD	
	Mounting	Wall mount	
	Operating Temperature	-25°C ~ 60°C with air flow	
	Storage Temperature	-25°C ~ 70°C	
	Humidity	10% ~ 90%, non-condensing	
	Protection	IP 42	
	Weight (Net/Gross)	TBD	
	Safety/EMC	CE / FCC / E-mark / EN50155 T1 / EN50121-3-2 / EN 45545-2 / DNV	
OS	Supported OS	Windows® Embedded Standard 7 / Windows® 10	
	Watchdog Timer	Software programmable support 1~255 sec. system reset	

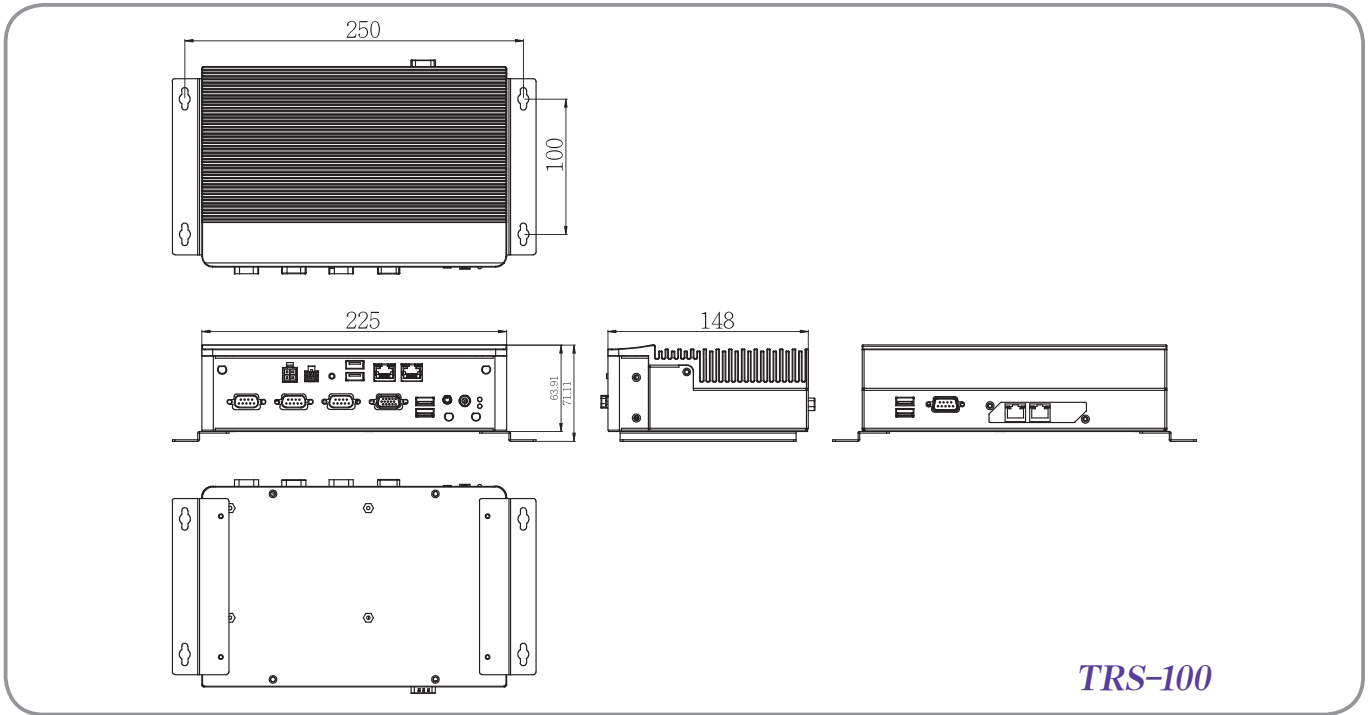
Fully Integrated I/O

Front view

Rear View



Dimensions (Unit: mm)



TRS-100

Ordering Information

Part No.	Description
TRS-100-ULT3-CE-B/4G-R10	Fanless embedded system with Intel® Celeron® 3855U 1.6GHz (dual-core, TDP 15W), on-board 4GB DDR4 memory, 9 V~30V DC (M12), USB, dual Intel® PCIe GbE (M12), COM, DIO, VGA, RoHS
TRS-100-ULT3-CE-A/4G-R10	Fanless embedded system with Intel® Celeron® 3855U 1.6GHz (dual-core, TDP 15W), on-board 4GB DDR4 memory, 9 V~30V DC, USB, dual Intel® PCIe GbE, COM, DIO, VGA, RoHS

Options

Item	Part No.	Description
GPS/LTE antenna	32506-000400-100-RS	Integration Antenna, Magnetic Antenna Base+GPS/4G LTE ANTENNA, RG 174, 5000MM, AU-4S-LTE, GPS Gain:27dB, LTE Gain:0dBi, 50Ω, SANAV, 1575.42MHz/704-960MHz/1710-2766MHz, VSWR ≤ 2.0, SMA PLUG, REVERSE SMA PLUG, RoHS
Power adapter	IVIPOWER-4PIN-R10	Power adapter with 4-pin transfer cable, RoHS
ACC power cable	32002-001900-100-RS	Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, RoHS

Packing List

Item	Qty	Description
Utility CD	1	User manual and driver CD

IRS-100-ULT3

Railway Surveillance System

New

Features

- Intel® Skylake ULT processor
- Dual M12 LAN port
- VGA / DVI dual display
- Dual SIM card design
- 24V and 110V DC input (±40%) DC input
- 2 x 2.5" hot-swappable SATA SSD drive bay
- EN 50155

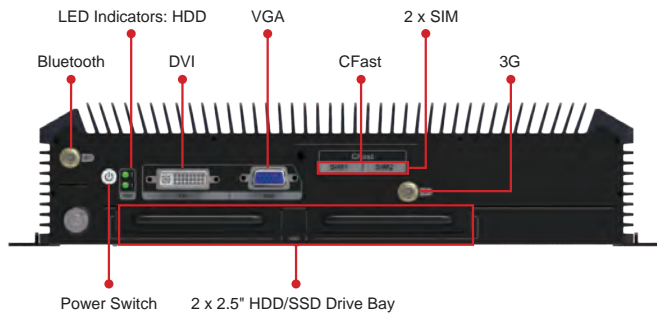


Specifications

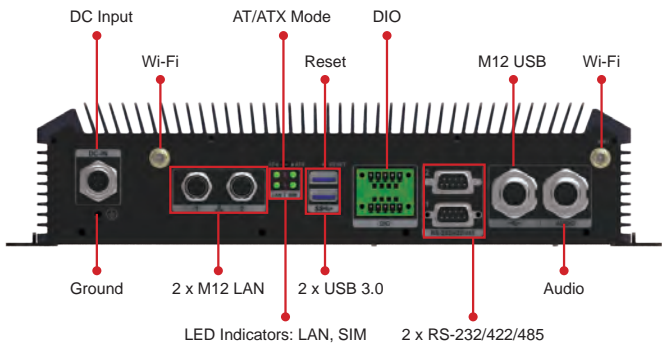
Model Name		IRS-100-ULT3
Chassis	Color	Blue C
	Dimensions (WxHxD) (mm)	290 x 69 x 225
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Core™ i5-6300U processor (dual-core, 2.4 GHz, 15W TDP)
	Chipset	SoC
	System Memory	2 x 260-pin DDR4 SO-DIMM 4GB pre-installed (system max. 32 GB)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s SSD drive bay
	CFast/CF Card	1 x CFast (SATA 6Gb/s)
	mSATA	1 x mSATA (SATA 6Gb/s)
Communication	WLAN	PCIe Mini Wi-Fi 802.11 a/b/g/n/ac (optional)
	Bluetooth	BT 4.0/3.0+HS (combo with WLAN optional module)
	WWAN	PCIe Mini WCDMA/HSDPA/HSUPA (optional)
I/O Interfaces	USB 3.0	2
	USB 2.0	1 (M12 connector)
	Ethernet	2 x M12 connector PCIe GbE by Intel® I1211
	COM Port	2 x DB-9 RS-232/422/485 (with 1.5 kV isolation)
	Digital I/O	1 x Terminal block for 8-bit digital I/O (4-bit input/4-bit output, 1.5 kV isolation)
	Display	1 x VGA, 1 x DVI-D
	Resolution	VGA : Up to 1920 x 1200 @60Hz DVI-D : Up to 1920 x 1200 @60Hz
	Audio	1 x Line-out, 1 x Mic-in
	SIM	2 x SIM card slot
Expansions	PCIe Mini	2 x Full-size PCIe Mini (for WWAN / WLAN module)
Power	Power Input	M12 Connector: 24V and 110V DC input
	Consumption	24V @ 2A (Intel® i5-6300U with 4 GB DDR4 memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-40°C ~ 70°C with air flow (with industrial SSD/CF), compliant with EN 50155
	Storage Temperature	-40°C ~ 85°C
	Humidity	10% ~ 95%, non-condensing
	Operating Shock	Compliant with EN 61373 Category 1 Class B
	Operating Vibration	Compliant with EN 61373 Category 1 Class B
	Weight (Net/Gross)	3.9 kg / 5.1 kg
Safety/EM C	CE/FCC, compliant with EN 50155, EN 50121-3-2	
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

Fully Integrated I/O

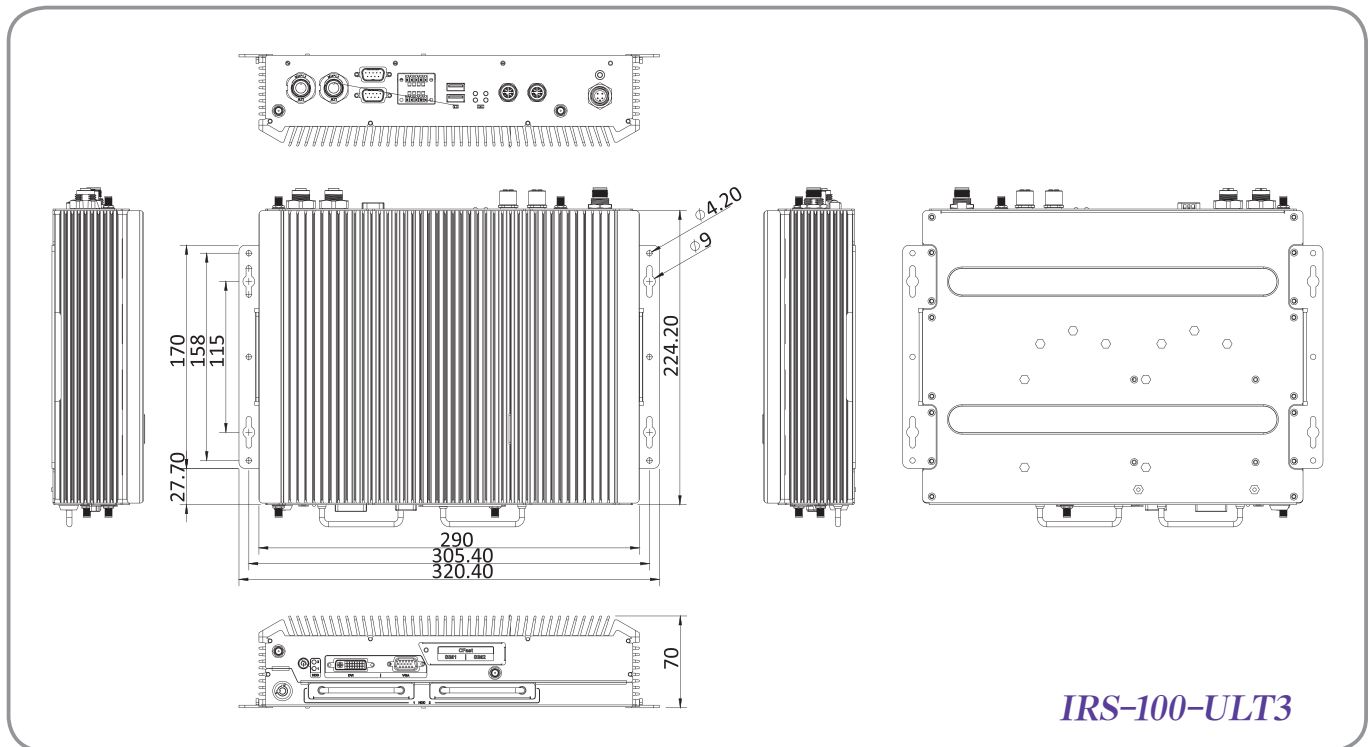
Front view



Rear view



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IRS-100-ULT3-i5/4G-R10	Fanless railway system with Intel® Core™ i5-6300U processor (15W), 4GB DDR4 pre-installed memory, two 2.5" SATA SSD bays, VGA, DVI, two M12 GbE LAN

Options

Part No.	Description
OS	IRS-100-ULT3-WES7E64-R10 OS Image with Windows® Embedded Standard 7 E 64-bit for IRS-100-ULT3, DVD-ROM, RoHS
DC cable	32002-009000-100-RS Power cable, 2000 mm, 16AWG, M12 5-pin female; label: V+, V-, GND; RoHS
USB cable	32001-022700-200-RS USB cable, 2000 mm, 24AWG; (A) Amphenol LTW: M12 5-pin male IP68 (12-05BMMA-SL8001), (B) USB Type A 4-pin female; RoHS
LAN cable	32013-003400-100-RS LAN cable, 1000 mm, 26AWG; (A) METZ: M12 plug 8-pin (MNF881A315-001), (B) RJ-45 8P8C plug; RoHS
Audio cable	32007-005400-100-RS Audio cable, 1200 mm, 28AWG; (A) Amphenol LTW: M12 5-pin male (12-05BMMA-SL8001), (B) DC stereo jack: 3.5mm*2; RoHS
Wireless Kit	IRS-100-WIFI-KIT02-R10 1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x antennas, 2 x cables RoHS
WWAN Kit	IRS-100-3G-KIT02-R10 3G module kit for embedded system, F260, 1 x 3G module, 1 x antenna, 2 x cables, RoHS

Packing List

Item	Qty	Description
Utility CD	1	User manual and driver CD

SBOX-100-QM87

Maritime Embedded System

New

Features

- Fanless marine computer with 4th generation Intel® Core™ i5 dual-core processor
- -15°C ~ +55°C wide temperature
- Isolation protection
 - » 4 x RS-232/422/485 isolated serial ports
 - » Isolated 18 V~24 V DC input
 - » 2 x Isolated CAN-bus 2.0B
- 2 x 2.5" SSD bay with RAID 0/1 function
- Supports IEC 61131-3 (IPMI 2.0 compliant)



Intel® Core™ i5 High Performance Computing Power in a Fanless Design

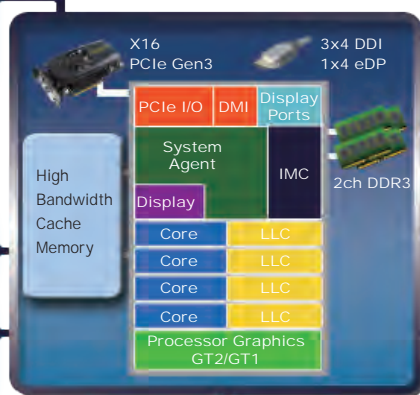
IEI's high performance marine solutions are built with the powerful Intel® Core™ i5 CPU within a fanless system architecture. No matter your applications are general marine system management, monitoring or conning systems, radar systems, or ECDIS navigation, IEI's marine computers will give you the most stability than ever.

- Improved CPU performance with Intel® 22nm 4th Generation Mobile Core™ i5-4400E 2.7 GHz processor
- Two 204-pin 1600/1333MHz dual-channel DDR3 SDRAM support up to 16 GB

Next Generation Intel® HD Graphics with DX 11.1, OpenGL 4.x, OpenCL 1.2

Fully Integrated VR

3 Independent Displays High Resolution DP v1.2, HDMI 1.4a



Built-in 22 nm Processor

Intel® Turbo Boost Technology

2 Ch DDR3L 1600 MHz 1/2 DIMM per Channel

Up to 4C and 8MB of Intel® Smart Cache

Intel® AVX 2.0 + Intel® AES New Instructions and Improvements



With IEI's fanless solutions, your vessels can avoid the bothersome of replacement of fan, increasing safety and efficiency for the crew and the entire ship.

Three independent aluminum heat sinks help the heat dissipate averagely, and help the system efficiently achieve wide operating temperature range between -15°C~55°C.

3 independent displays: HDMI, DVI, and VGA

The three simultaneously independent displays are supported via the on-board video output combinations of VGA, DVI and HDMI. This versatile combination of display output options make the marine system ideal for multi-monitor required applications in the bridge room.

Display 1

Display 2

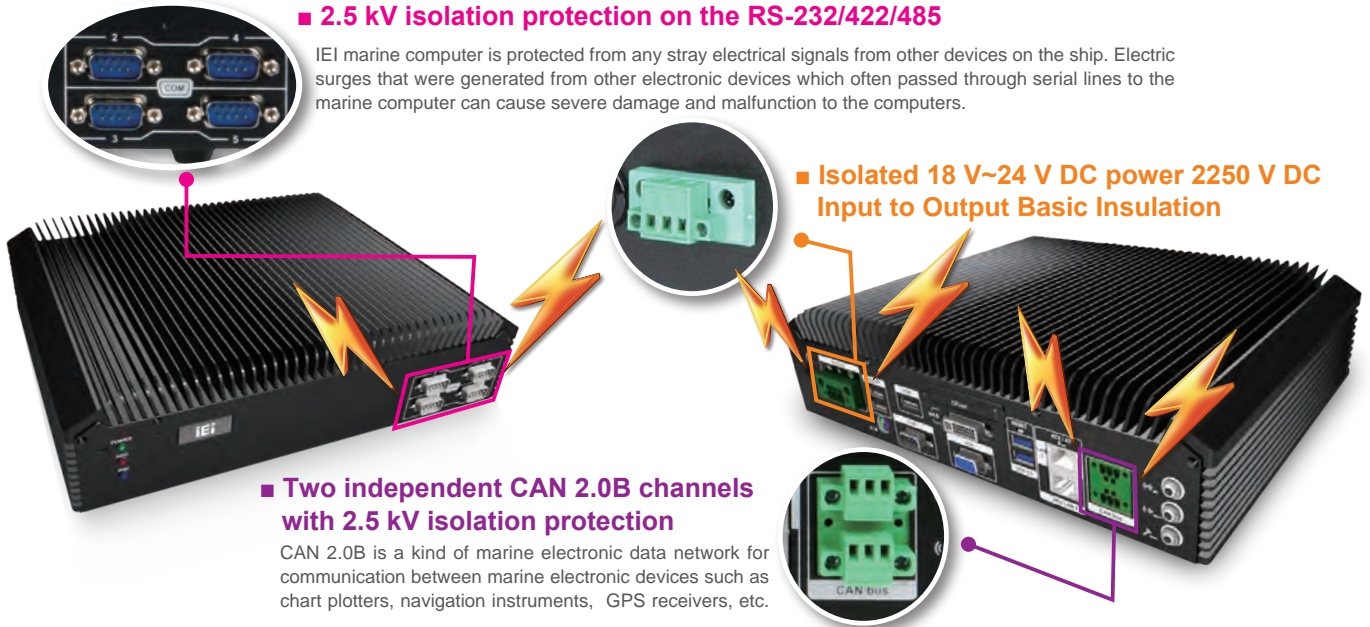


Multiple Isolated Ports for Comprehensive Protection against Electrical Surges

Ground loop and electric surges are common in the marine applications of electronic products due to the dense placement of devices. These stray electrical signals can cause equipment damage or malfunction.

■ 2.5 kV isolation protection on the RS-232/422/485

IEI marine computer is protected from any stray electrical signals from other devices on the ship. Electric surges that were generated from other electronic devices which often passed through serial lines to the marine computer can cause severe damage and malfunction to the computers.



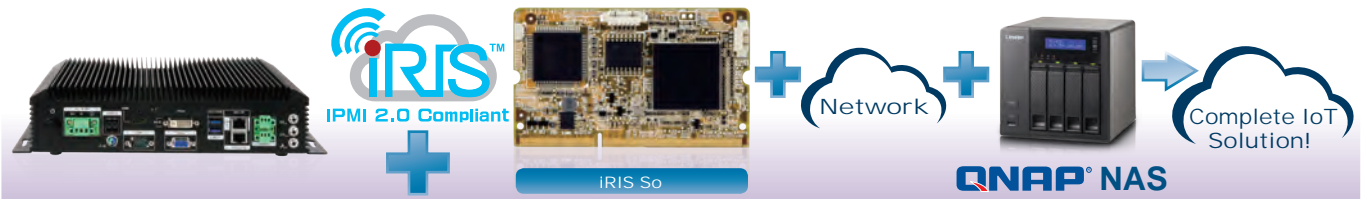
■ Two independent CAN 2.0B channels with 2.5 kV isolation protection

CAN 2.0B is a kind of marine electronic data network for communication between marine electronic devices such as chart plotters, navigation instruments, GPS receivers, etc.



IEI Remote Intelligent Management System

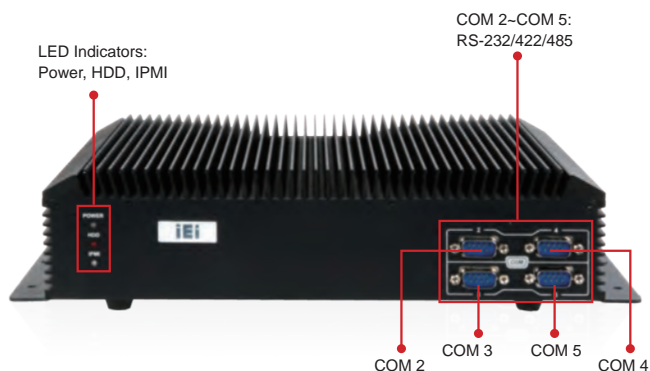
The marine computer supports IEI iRIS remote management solution which helps users to manage multiple devices through single management interface and elevates work efficiency. The iRIS solution only requires a module and Internet connection!



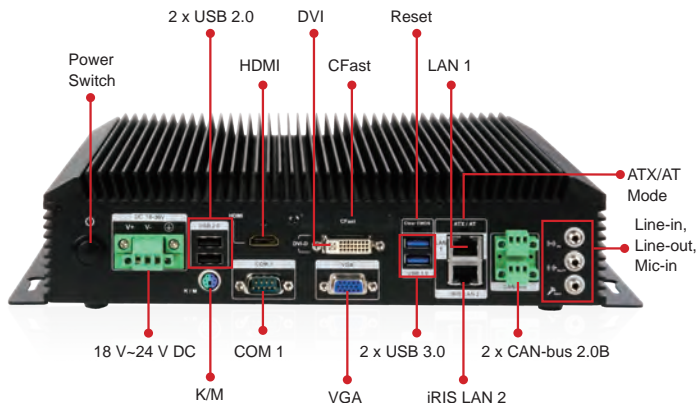
iRIS Key Feature	Detailed Functions	iRIS Key Feature	Detailed Functions
System health monitor	<ul style="list-style-type: none"> • Hardware monitor • Health log • Event log 	Screen record	<ul style="list-style-type: none"> • Remote video streaming record • Event Trigger Setting & video record
Remote system maintenance	<ul style="list-style-type: none"> • Remote BIOS update • Remote OS recovery • Remote KVM + One Key Recovery • Remote out-of-band backup 	Remote power control	<ul style="list-style-type: none"> • Reset Power • Power Off Server — Immediately • Power Off Server — Orderly • Power On Server • Power Cycle Server
Active alert & notice	<ul style="list-style-type: none"> • Send instant system alerts via e-mail • Send instant system alerts via SMS • Send instant system alerts to management server 	Remote troubleshooting	<ul style="list-style-type: none"> • Remote software update • Remote OS installation & recovery • Remote KVM • Post code display
Remote device control	<ul style="list-style-type: none"> • Fan control • Remote KVM • Remote setting BIOS 	Diagnose before dispatch	<ul style="list-style-type: none"> • Health log analysis • Event log analysis
		Group control	<ul style="list-style-type: none"> • Group control

Fully Integrated I/O

Front view



Rear view

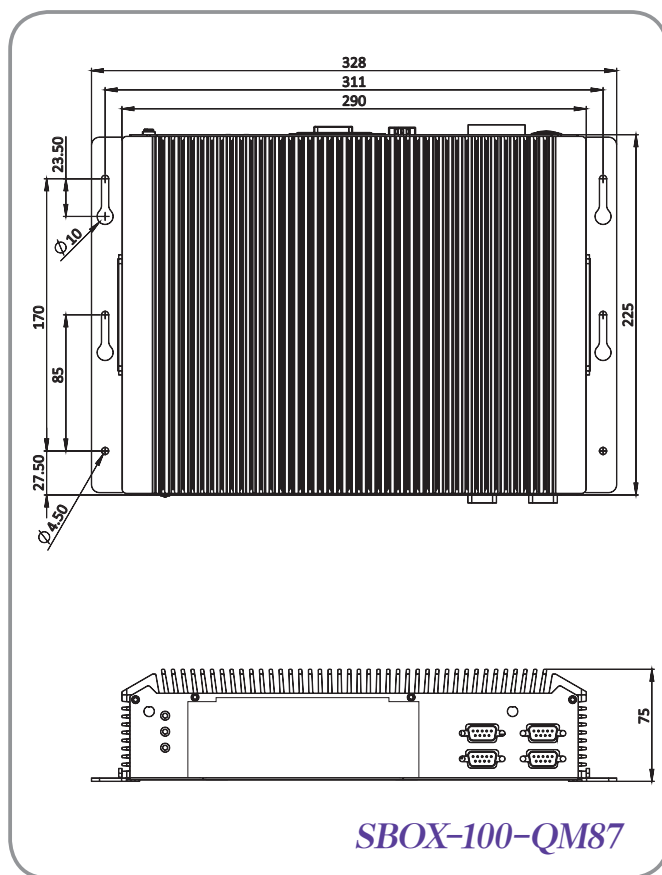


Specifications

Model Name		SBOX-100-QM87
Chassis	Color	Black
	Dimensions (WxHxD) (mm)	290 x 75 x 225
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® mobile Core™ i5-4400E (2.7 GHz, 37W)
	Chipset	Intel® QM87
	System Memory	2 x 204-pin DDR3 SO-DIMM slot (system max. 16 GB) Pre-installed 4 GB DDR3 SO-DIMM
IPMI	iRIS Solution	iRIS-2400
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s SSD bay with RAID 0/1 function
	CF Card/CFast	1 x CFast
I/O Interfaces	PS2 (KB/MS)	1
	USB 3.0	2
	USB 2.0	2
	Ethernet	2 x RJ-45 with teaming support 1 x PCIe GbE by Intel® I217LM 1 x PCIe GbE by Intel® I210-AT (2 with 2 kV isolation)
	COM Port	1 x DB-9 (non-isolated) 4 x RS-232/422/485 (with 2.5 kV isolation)
	CAN-bus/OBD-II	2 x CAN-bus (with 2.5 kV isolation)
	Display	1 x VGA, 1 x DVI-D, 1 x HDMI
	Resolution	VGA: Up to 1920 x 1200 @ 60 Hz HDMI: Up to 2500 x 1600 @ 60 Hz DVI-D: Up to 2500 x 1600 @ 60 Hz
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in
	Wireless	2 x Antenna SMA hole (reserved)
Expansions	PCIe Mini	2 x Full size*
LED Indicator & Button	Indicator	Power (power on: green, power off: orange), storage (red, blinking), IPMI (blue)
	Power Input	Terminal block: Isolated 24V DC (18-31.2 V DC)
Power	Consumption	100 W (Intel® mobile Core™ i5-4400E with 4 GB DDR3 memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-15°C ~ 55°C (5°F ~131°F) with air flow (SSD)
	Storage Temperature	-20°C ~ 60°C (-4°F ~140°F)
	Humidity	5% ~ 95%, non-condensing
	Operating Shock	IEC 60945 and DNV 2.4 IASC-E10 compliant
	Operating Vibration	
	Weight (Net/Gross)	4.08 kg / 6.03 kg
Safety/EMC	EMC/CE/FCC/DNV, IEC 60945 4th, IACS-E10, IEC 61174 compliant IP rating: IP22 compliant rear cover	
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

*SBOX-100-QM87i-QGW-R10 has only one Half-size PCIe Mini slot

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
SBOX-100-QM87i-i5/4G-R10	Fanless marine computer with Intel® Mobile Core™ i5-4400E 2.7 GHz processor, 4 GB DDR3 memory, iRIS-2400 supported, isolated 18 V-36 V DC, R10
SBOX-100-QM87i-QGW-R10	Fanless marine computer with Intel® Mobile Core™ i5-4400E 2.7GHz Processor, DDR3 8GB, iRIS-2400 supported, with QTS-Gateway, isolated 18-36V DC, RoHs

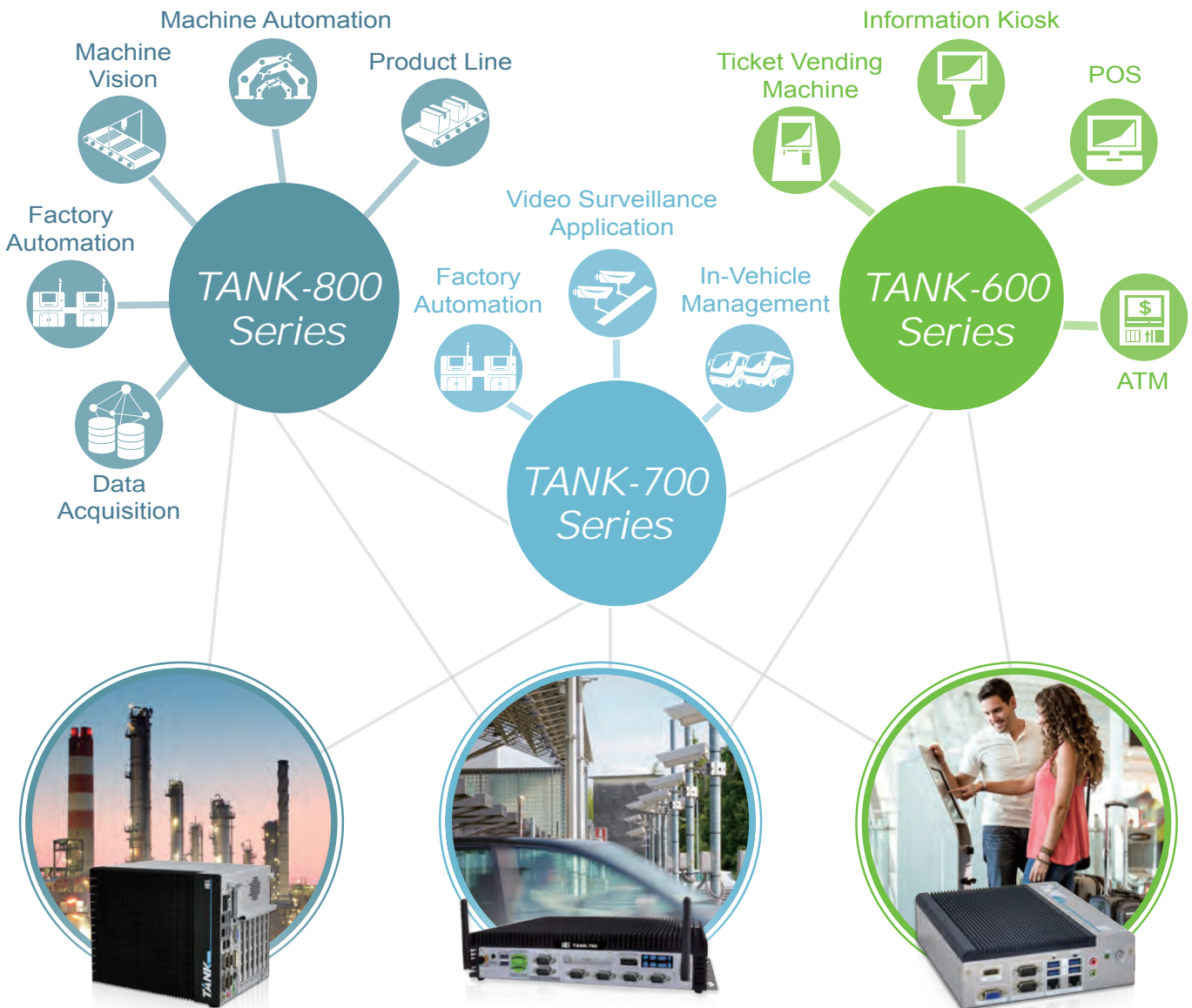
Packing List

Item	P/N	Qty	Description
User manual & driver CD		1	Drivers and user manual
PS/2 cable	32006-000300-100-RS	1	PS/2 cable
Rubber pad & screw pack		1	Rubber pad & screw pack

Industrial Automation Solution

IEI offers complete rugged fanless products with a wide range of I/O interfaces and multiple expansion, allowing users to connect to different devices for comprehensive automation solution. IEI's industrial automation solution provides a reliable platform to fulfill a wide variety of application demand, such as machine automation, surveillance application, and information kiosk. To fight the upcoming trend of IoT, IEI develops an IPMI 2.0 compliant technology - iRIS (IEI Remote Intelligent System). iRIS is a hardware-level remote management solution that can make your systems more efficient in system integration. "TANK" is a model name for a series of IEI ruggedized embedded box products.

Ruggedized Solution



■ TANK-800 Series

Multiple PCI/PCle Expansion

- Great flexibility of expansion slots
- IPMI function for remote control management
- Design fulfills high storage demand
- Wide range temperature

■ TANK-700 Series

Multiple PCIe Mini Expansion

- Support triple display
- Flexible expansion design
- 8-channel audio/video capture capability
- Military compliant

■ TANK-600 Series

Multiple Serial Port

- Support 8 COM ports
- mSATA and 2.5" SATA storage device
- Wide range temperature
- Low power

TANK Series Selection Guide

The TANK series contains great coverage of the Intel® desktop, mobile and Atom™ solutions. From high performance to low power consumption, IEI provides a vast series of specifications to fulfill the diverse demands of our customers.



Platform		Multiple PCI/PCIe Expansion	Multiple PCIe Mini	Multiple COM Port
Desktop	Sandy Bridge	TANK-820-H61	TANK-720-Q67	-
	Skylake	TANK-870-Q170, TANK-870e-H110	-	-
Mobile	Sandy Bridge	-	TANK-700-QM67	-
	Haswell	TANK-860-HM86	TANK-760-HM86	-
Atom™	Pineview	TANK-800-ICH8M	-	-
	Cedarview	-	-	TANK-600-NM10
	Bay Trail	TANK-801-BT	-	-
	Braswell	-	-	TANK-610-BW

Key Features

Fanless design



The advantage of IEI fanless product series is to reduce the failure caused by fan and maintenance efforts. IEI also design functional heatsink to make sure the products can work in harsh environments.

Wide range temperature



IEI fanless product series has leading-edge thermal design, and has been tested under extreme temperature environments in order to ensure that IEI fanless products can be operated in any harsh environment.

Wide range power input



The 9 V ~ 36 V DC wide power input allows the TANK series to be used in different applications. IEI provides you safe and reliable operations under industrial conditions with a wide range of acceptable inputs.

EMC & safety certifications



IEI TANK series has been CE and FCC certified, which proves that we give top priority to quality control and inspection of all our products.



(TANK-760 only)

A Variety of Applications

IEI TANK ruggedized embedded box series is ideal for applications that require remote control or multiple video outputs. Furthermore, with the IEI iRIS technology, the users can achieve Internet of Things (IoT) among different devices, such as panel PCs and single board computers.

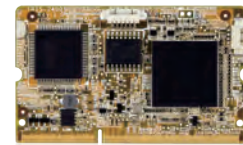


Remote management

By installing the IEI iRIS module, IEI products are capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

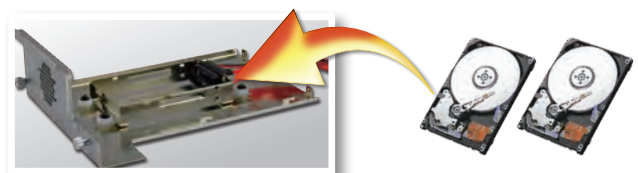


iRIS-2400



Easy maintenance and expansion

The internal components of the TANK-800, such as 2.5" SATA HDD/SSD, can be quickly installed and maintained by removing the HDD bracket.



The TANK-700 Series is equipped with multiple PCIe Mini card slots for expansions, such as Wi-Fi, 3G and GPS cards. These expansion slots can be accessed easily for adding extra functions to the system.



Industrial Automation System



New



New



Model Name		TANK-871-Q170	TANK-870-Q170	TANK-870e-H110
Chassis	Color	Black C + Silver	Black C + Silver	Dark silver purple + Silver
	Dimensions (WxDxH) (mm)	82.2 x 255.2 x 204	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205	132.6 x 255.2 x 190
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i7-6700TE 2.4 GHz Intel® Core™ i5-6500TE 2.3 GHz	Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35W) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35W)	Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35W) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35W)
	Chipset	Intel® Q170	Intel® Q170	Intel® H110
	System Memory	2 x 260 pin DDR4 SO-DIMM, Pre-installed one 4GB (system max:64GB)	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 64GB)	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 32GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	1 x iRIS-2400 (optional)	N/A
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	mSATA	1 x mSATA	1 x mSATA	N/A
I/O Interfaces	USB 3.0	4	4	4
	USB 2.0	4	4	N/A
	Ethernet	2 x RJ-45 LAN1: Intel® I219LM PCIe controller LAN2 (iRIS): Intel® I210 PCIe controller	2 x RJ-45 LAN1: Intel® I219LM PCIe controller LAN2 (iRIS): Intel® I210 PCIe controller	2 x RJ-45 PCIe GbE by RTL8111G controller
	COM Port	4 x RS-232 (2 x RJ-45, 2 x DB-9 w/ isolation) 2 x RS-232/422/485 (DB-9)	4 x RS-232 (2 x RJ-45, 2 x DB-9 w/ isolation) 2 x RS-232/422/485 (DB-9)	2 x RS-232/422/485 (DB-9, w/ isolation)
	Digital I/O	8 bit Digital I/O , 4 bit input / 4 bit output	8-bit digital I/O , 4-bit input / 4-bit output	N/A
	Display	1 x VGA, 1 x HDMI/DP, 1 x iDP (optional)	1 x VGA, 1 x HDMI/DP, 1 x iDP (optional)	1 x VGA, 1 x HDMI 1.4
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI: Up to 4096x2160@24Hz	VGA: Up to 1920 x 1200@60Hz HDMI/DP: Up to 4096x2304@60Hz	VGA: Up to 1920 x 1200@60Hz HDMI 1.4: Up to 4096x2160@24Hz
	Audio	1 x Line-out ; 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11 a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)
Expansions	Backplane	N/A	2-slot model: 1 x PCIe x16, 1 x PCI 2-slot model: 2 x PCIe x8 4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mini 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mini	3A: 1 x PCIe x16 , 2 x PCI 3B: 1 x PCIe x16 , 1 x PCIe x4, 1 x PCI 3C: 3 x PCI
	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)	1 x Full-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 9 V~36 V DC
	Power Consumption	19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)	19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)	19 V@3.44 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power Connector	5V@3A or 12V@3A	5V@3A or 12V@3A	5V@3A or 12V@3A
Reliability	Mounting	Wall mount	Wall mount	Wall mount & Din Rail
	Operating Temperature	i7-6700TE -20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	i7-6700TE *-20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing i5-6500TE *-20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~ 50°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G; 11ms; 100 shocks per axis	Half-sine wave shock 5G, 11ms, 100 shocks per axis	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6 C-1 (with SSD)	MIL-STD-810G 514.6 C-1 (with SSD)	MIL-STD-810G 514.6C-1 (with SSD)
	Weight (Net/Gross)	TBD	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg	2.8 kg/4.3 kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise		

Industrial Automation System



Model Name		TANK-860-HM86	TANK-801-BT	TANK-820-H61	TANK-800-D525
Chassis	Color	Black C + Silver	Black C + Silver	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205 6-slot: 195.4 x 255.2 x 205	136 x 219 x 188	133 x 269 x 208	136 x 219 x 188
	System Fan	Fanless	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i5-4400E 2.7 GHz Intel® Celeron® 2000E 2.2 GHz	Intel® Celeron® J1900 2 GHz	Intel® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)	Intel® Atom™ D525 1.8 GHz
	Chipset	Intel® HM86	SoC	Intel® H61	Intel® ICH8M
	System Memory	2 x 204-pin DDR3 SO-DIMM, one 4GB pre-installed (system max: 16 GB)	1 x 204-pin DDR3L SO-DIMM, 2GB pre-installed (system max: 8 GB)	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	On-board DDR3 1 GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (system max: 3 GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	1 x iRIS-2400 (optional)	N/A	N/A
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	CF Card/CFast	1 x CFast	1 x CFast	1 x CF Type II	1 x CF Type II
I/O Interfaces	USB 3.0	4	2	2	N/A
	USB 2.0	2	2	4	4
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I211	2 x RJ-45 PCIe GbE by Realtek 8111E controller	2 x RJ-45 PCIe GbE by Realtek 8111E controller
	COM Port	4 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	2 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9, with isolation)	6 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	4 x RS-232 (DB-9) 2 x RS-422/485 (RJ-45)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	16-bit digital I/O, 8-bit input/8-bit output	8-bit digital I/O, 4-bit input/4-bit output	8-bit digital I/O, 4-bit input/4-bit output
	Display	1 x VGA, 1 x DVI-I, 1 x DisplayPort	1 x DisplayPort, 1 x DVI-I	1 x VGA, 1 x DVI-I	1 x VGA
	Resolution	VGA: Up to 1920 x 1200@60Hz DVI-I: Up to 2500 x 1600@60Hz Displayport: Up to 2500 x 1600@60Hz	DisplayPort: Up to 2560 x 1600 MHz DVI-I: Up to 2560 x 1600 MHz	VGA: Up to 2048 x 1536@75Hz DVI-I: Up to 1920 x 1080@60Hz	VGA: Up to 2048 x 1536@75Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
Wireless	Wireless	1 x 802.11b/g/n (optional)	1 x 802.11b/g/n (optional)	N/A	N/A
	PCI/PCIE	2A: Two PCIe x8 (physical PCIe x16 slot) 4A: Two PCIe x8 (physical PCIe x16 slot) + 2 x PCI 6A: One PCIe x8 (physical PCIe x16 slot) + two PCIe x4 + three PCI	3A: One PCIe x1 + Two x PCI 3B: Two PCIe x1 + One x PCI 3C: Three x PCI	2P1E: Two PCI, One PCIe x8 (physical PCIe x16 slot) 1P2E: One PCI, One PCIe x1 (physical x4 slot), One PCIe x8 (physical x16 slot)	2P1E: Two PCI, One PCIe x4 (physical PCIe x16 slot) 1P2E: One PCI, One PCIe x1 (physical x4 slot), One PCIe x2 (physical x16 slot)
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 9 V~24 V DC Terminal Block: 9 V~24 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.34 A (Intel® Core™ i5-4400E with 4 GB memory)	19 V@1.8 A (Intel® Celeron® J1900 with 2 GB DDR3 memory)	19 V@3.5 A (Intel® Core™ i3-2100 with 6 GB DDR3 memory) w/o add-on card	19 V@1.73 A (Intel® Atom™ D525 with 1 GB DDR3 Memory)
Reliability	Mounting	Wall mount	Wall mount	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg 6-slot: 4.8 kg/6.9 kg	2.8 kg/4.3 kg	4.2 kg/6.3 kg	2.6 kg/4.1 kg
Safety/EMC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® WES7E, Microsoft® Windows® 10 IoT Enterprise	Microsoft® Windows® 8 Embedded, Microsoft® WES7E, Microsoft® Windows® 10 IoT Enterprise	Microsoft® WES7E, Microsoft® Windows® XP Embedded	Microsoft® WES7E, Microsoft® Windows® XP Embedded

*Notes : Power adapter supports 0°C ~ 40°C

Industrial Automation System



Model Name		TANK-760-HM86	TANK-720-Q67	TANK-700-QM67	TANK-620
Chassis	Color	Black C + Silver	Blue C + Silver	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	310 x 200 x 69.8	310 x 200 x 70	310 x 200 x 62	260 x 200 x 100
	System Fan	Fanless	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloy
Motherboard	CPU	Intel® Core™ i7-4700EQ 2.4 GHz Intel® Core™ i5-4400E 2.7 GHz Intel® Celeron® 2000E 2.2 GHz	Intel® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)	Intel® Core™ i5-2xxE (above 2.5 GHz) Intel® Core™ i3-2xxE (above 2.2 GHz) Intel® Celeron® B8xx (above 1.6 GHz)	Skylake 3855U 15W
	Chipset	Intel® HM86	Intel® Q67	Intel® QM67	SoC
	System Memory	2 x 204-pin DDR3 SO-DIMM, one 4GB pre-installed (system max: 16 GB)	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	1 x On-board 4 GB 1 x DDR4 2133 MHz SO-DIMM (system max : 32GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	N/A	N/A	N/A
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x SATA 3Gb/s with 2.5" HDD/SSD support 1 x SATA 6Gb/s with 2.5" HDD/SSD support	2 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
	CF Card/CFast	1 x CFast	N/A	N/A	1 x CF Card (optional)
out/IO Interfaces	USB 3.0	4	2	2	4
	USB 2.0	2	4	4	4
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM	2 x Combo (SFP Fiber/RJ-45) 1 x PCIe GbE by Intel® 82579 1 x PCIe GbE by Intel® 82583V	2 x Combo (SFP Fiber/RJ-45) 1 x PCIe GbE by Intel® 82579 1 x PCIe GbE by Intel® 82583V	2 x RJ-45 PCIe GbE by Intel I211
	Fiber	N/A	2 x Combo (SFP Fiber/RJ-45)	2 x Combo (SFP Fiber/RJ-45)	6 x RS-232 (optional by pin header)
	COM Port	4 x RS-232 (DB-9, with isolation) 2 x RS-232/422/485 (DB-9, with isolation)	4 x RS-232 (DB-9) 2 x RS-232 (RJ-45, with isolation) 2 x RS-422/485 (RJ-45, with isolation)	4 x RS-232 (DB-9) 2 x RS-232 (RJ-45, with isolation) 2 x RS-422/485 (RJ-45, with isolation)	8 x RS-232/422/485 ports with automatic flow control
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	8-bit digital I/O, 4-bit input/4-bit output	8-bit digital I/O, 4-bit input/4-bit output	1 x 24-bit GPIO
	CAN-bus	2 x Phoenix terminal block with isolation	1 x Phoenix terminal block	1 x Phoenix terminal block	TBD
	Display	1 x VGA, 1 x HDMI, 1 x DisplayPort	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI	2 x VGA, 1 x LVDS or 3 x VGA
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI: Up to 2500 x 1600@60Hz DisplayPort: Up to 2500 x 1600@60Hz	VGA: Up to 2048 x 1536@75Hz HDMI: Up to 1920 x 1200@60Hz	VGA: Up to 2048 x 1536@75Hz HDMI: Up to 1920 x 1200@60Hz	3 x VGA (up to 1920 x 1200@60Hz) or 1 x LVDS (up to 1920 x 1200@60Hz) 2 x VGA (up to 1920 x 1200@60Hz)
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Mic-in, 1 x Speaker, 1 x line-out
	Wireless	1 x 802.11b/g/n (optional)	1 x 802.11a/b/g/n 3T3R (optional)	1 x 802.11a/b/g/n 3T3R (optional)	1 x 802.11b/g/n (optional)
	Other	Reserved IO window for PCIe Mini card expansion	Optional 4-channel audio/video input PCIe Mini card	Optional 4-channel audio/video input PCIe Mini card	1 x System reset, power button, AT/ATX switch
Expansions	PCI	N/A	N/A	N/A	N/A
	PCIe	N/A	N/A	N/A	N/A
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC	9 V ~ 36 V DC
	Power Consumption	19 V@3.2 A (Intel® Core™ i5 4400E with 4 GB memory)	19 V@3.1 A (Intel® Core™ i3-2100T with 4 GB DDR3 Memory)	19 V@3.3 A (Intel® Core™ i5-2540M with 4 GB DDR3 Memory)	TBD
Reliability	Mounting	Wall mount	Wall mount	Wall mount	Wall Mount
	Operating Temperature	-20°C ~ 70°C with air flow (SSD) for i5-4400E & 2000E -20°C ~ 50°C with air flow (SSD) for i7-4700EQ	-20°C ~ 50°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing	-30°C ~ 70°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810G 514.6C-1 (with SSD)
	Weight (Net/Gross)	4.2 kg/6.9 kg	4.2 kg/6.9 kg	3.8 kg/6.5 kg	TBD
Safety/EMC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® WES7E, Microsoft® Windows® 10 IoT Enterprise	Microsoft® WES7E, Microsoft® Windows® XP Embedded	Microsoft® WES7E, Microsoft® Windows® XP Embedded	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10

Industrial Automation System



Model Name		TANK-610-BW	TANK-600-D2550	TANK-600-N2600	TANK-6000-C226
Chassis	Color	Black C + Silver	Black C + Silver	Black C + Silver	Black
	Dimensions (WxDxH) (mm)	184 x 200.6 x 58.2	193.4 x 200 x 57	193.4 x 200 x 57	310 x 199.5 x 112
	System Fan	Fanless	Fanless	Fanless	92 mm x 92 mm x 25 mm
	Chassis Construction	Extruded Aluminum alloy	Aluminum alloys	Aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Celeron® N3160 processor (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)	Intel® Atom™ D2550 1.86 GHz	Intel® Atom™ N2600 1.6 GHz	Intel® Xeon® E3 1225-v3 3.2 GHz Intel® Core™ i3 4330 3.5 GHz
	Chipset	SoC	Intel® NM10	Intel® NM10	Intel® C226
	System Memory	2 x 204-pin DDR3L SO-DIMM, one 2GB pre-installed (system max: 8 GB)	On-board DDR3 4 GB	On-board DDR3 2 GB	4 x 240-pin DDR3 U-DIMM Pre-installed 4 GB DDR3 memory (system max: 32 GB)
IPMI	iRIS Solution	N/A	N/A	N/A	1 x iRIS-2400 on board
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	3 x 2.5" SATA 6Gb/s HDD/SSD drive bay
	CF Card/CFast	N/A	N/A	N/A	N/A
I/O Interfaces	USB 3.0	4	N/A	N/A	4
	USB 2.0	N/A	6	6	2
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I210-IT controller	2 x RJ-45 PCIe GbE by Realtek 8111E controller	2 x RJ-45 PCIe GbE by Realtek 8111E controller	4 x RJ-45 1 x PCIe GbE by Intel® I217 PHY 3 x PCIe by GbE Intel® i210
	Fiber	N/A	N/A	N/A	2 x Combo (SFP Fiber/RJ-45), combo with LAN 1/LAN 2
	COM Port	6 x RS-232 2 x RS-232/422/485	6 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9)	6 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9)	2 x RS-232 (DB-9)
	CAN-bus	N/A	N/A	N/A	N/A
	Display	1 x VGA, 1 x HDMI	1 x VGA	1 x VGA	1 x HDMI, 1 x VGA
	Resolution	VGA: Up to 1920 x 1200@60HZ HDMI: Up to 3840 x 2160@30Hz	VGA: Up to 2048 x 1536@75Hz	VGA: Up to 2048 x 1536@75Hz	HDMI: Up to 1920 x 1200@60Hz VGA: Up to 1920 x 1200@60Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)	N/A	N/A	N/A
Expansions	PCIe	N/A	N/A	N/A	2 x PCIe x8 (Gen 3)
	PCIe Mini	1 x Full-size PCIe Mini (support mSATA, co-lay SATA, w/o USB Signal), 1 x Half-size PCIe Mini	1 x Half-size PCIe Mini 1 x Full-size PCIe Mini (supports mSATA, colay with SATA)	1 x Half-size PCIe Mini 1 x Full-size PCIe Mini (supports mSATA, colay with SATA)	N/A
Power	Power Input	DC Jack: 9 V~36 V DC	DC Jack: 9 V~36 V DC	DC Jack: 9 V~36 V DC	DC Jack: 19 V/24 V DC
	Power Consumption	12 V@1.49 A (Intel® Celeron® N3160 with 4 GB DDR3L memory)	12 V@2.2 A (Intel® Atom™ D2550 with 4 GB DDR3 memory)	12 V@2 A (Intel® Atom™ N2600 with 2 GB DDR3 memory)	19 V@4.8 A (Intel®Xeon® E3-1225 v3 with 8 GB memory)
Reliability	Mounting	Wall mount, VESA 100	VESA 100, DIN-Rail	VESA 100, DIN-Rail	Wall mount
	Operating Temperature/Humidity	-40°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 55°C with air flow (SSD), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6C-1 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2.2Kg/3Kg	2.2 kg/3 kg	2.2 kg/3 kg	2.5 kg/4.6 kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows 8 Embedded, Microsoft® WES7E, Microsoft® Windows® 10 IoT Enterprise	Microsoft® WES7E, Microsoft® Windows® XP Embedded	Microsoft® WES7E, Microsoft® Windows® XP Embedded	Microsoft® Windows® 8 Embedded, Microsoft® WES7E

*Notes : Power adapter supports 0°C ~ 40°C

TANK-871-Q170

- High-Performance 6th Generation Intel® Core™ Processor
- Fanless Embedded Computer



Features

- 6th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- IEI iRIS-2400 solution

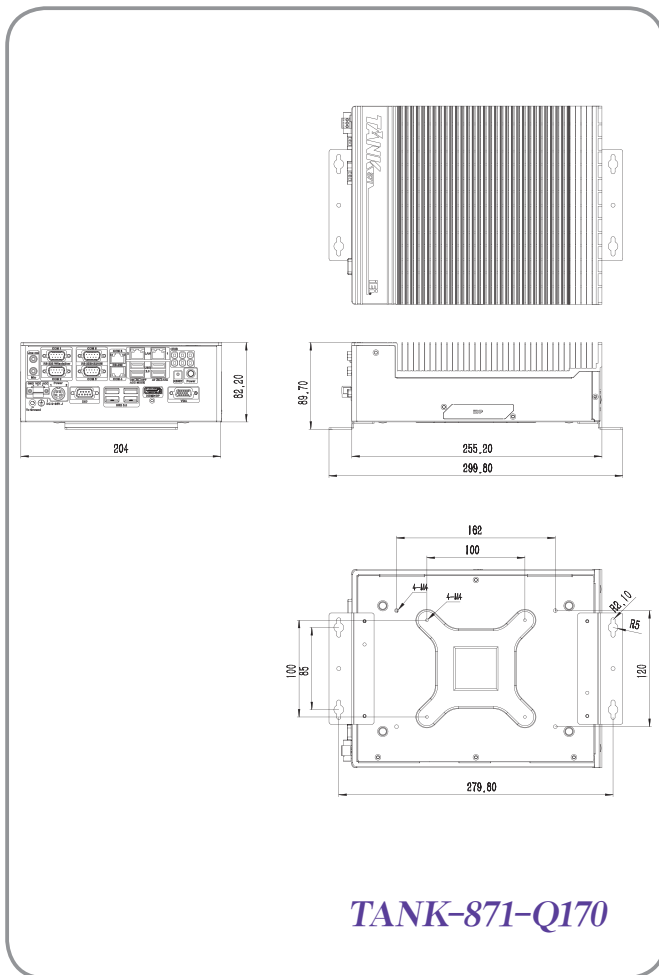
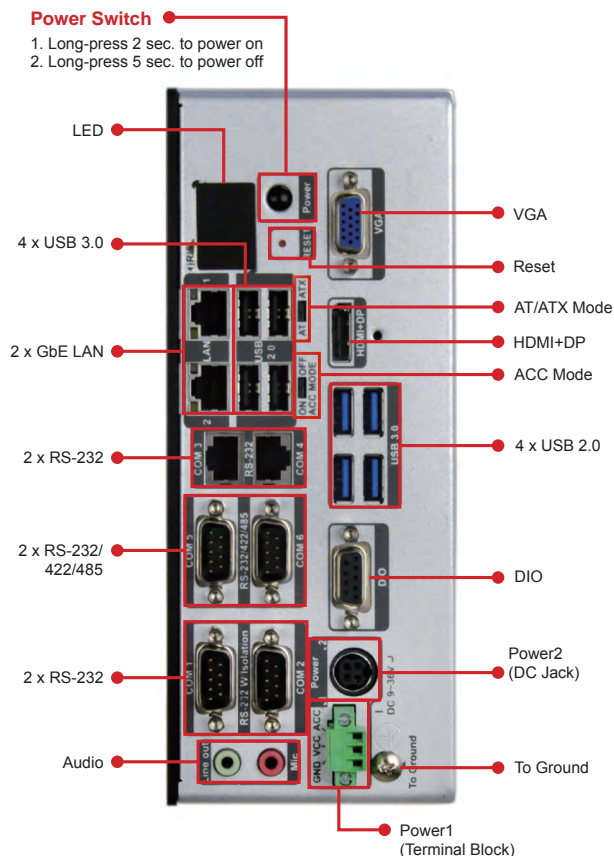


Specifications

Model Name		TANK-871-Q170
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	82.2 x 255.2 x 204
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Core™ i7-6700TE 2.4 GHz Intel® Core™ i5-6500TE 2.3 GHz
	Chipset	Intel® Q170
	System Memory	2 x 260-pin DDR4 SO-DIMM, pre-installed one 4GB (system max: 64GB)
IPMI	iRIS solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)
I/O Interfaces	USB 3.0	4
	USB 2.0	4
	Ethernet	2 x RJ-45 LAN1 (iRIS): Intel® I210 PCIe controller LAN2: Intel® I219LM PCIe controller
	COM Port	4 on rear I/O (2 isolation) 2 on rear I/O
	Digital I/O	8 bit Digital I/O, 4 bit input / 4 bit output
	Display	1 x VGA, 1 x HDMI+DP, 1 x IDP
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI: Up to 4096 x 2160@24Hz
	Audio	1 x Line-out ; 1 x Mic-in
Expansions	Wireless	1 x 802.11a/b/g/n/ac (optional)
	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature/Humidity	i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature/Humidity	*-40°C ~85°C with air flow (SSD), 10% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G; 11ms; 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6 C-1 (with SSD)
	Weight (Net/Gross)	TBD
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

Fully Integrated I/O

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-871-Q170i-i7/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-871-Q170i-i5/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS

Options

Part No.	Description
19200-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
32702-000400-200-RS	European power cord
63040-010090-101-RS	Adapter power, FSP090-DIEBN2, 9NA0904739, Active PFC, Vin:90~264VAC, 90W, plug=6.5mm, cable=1500mm, Erp (no load 0.5W), Vout:19VDC, 4-pin DIN with lock, CCL, RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI IDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI IDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual channel LVDS converter board (for IEI IDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI IDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI IDP connector)
TANK-870-Q170-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS

Packing List

1 x Utility CD	1 x Chassis Screw	1 x One Key Recovery CD	1 x Mounting Bracket
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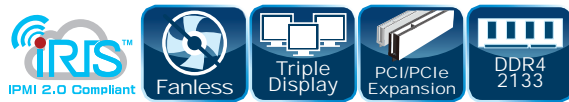
TANK-870-Q170

- High-Performance 6th Generation Intel® Core™ Processor
- Fanless Embedded Computer

New

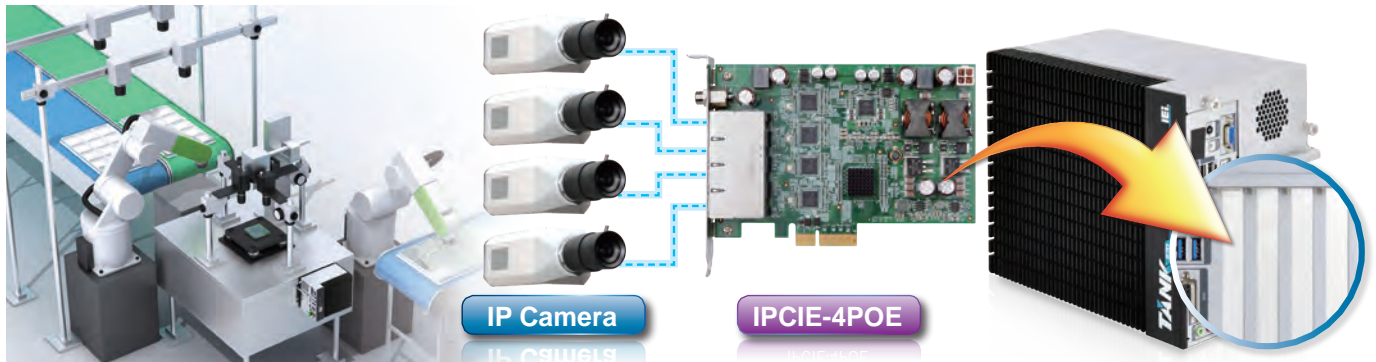
Features

- 6th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion



Smart Choice for Surveillance System

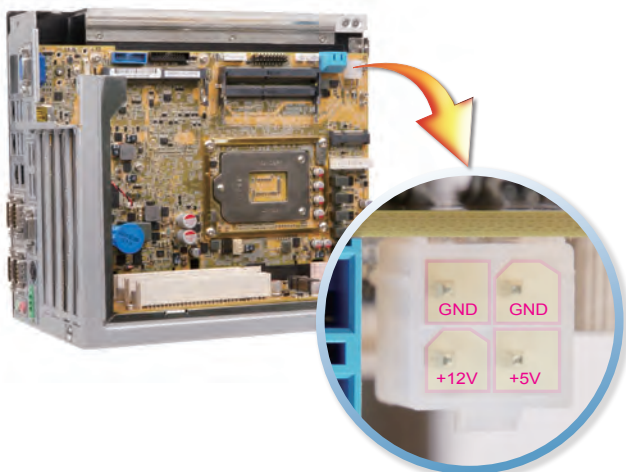
The TANK-870-Q170 integrated with IEI PoE Ethernet port expansion card can be used as a surveillance system for factory and public security. IEI PoE expansion card can support up to four PoE IEEE802.3af ports (max. 15.4 W per port) by PCIe x4.



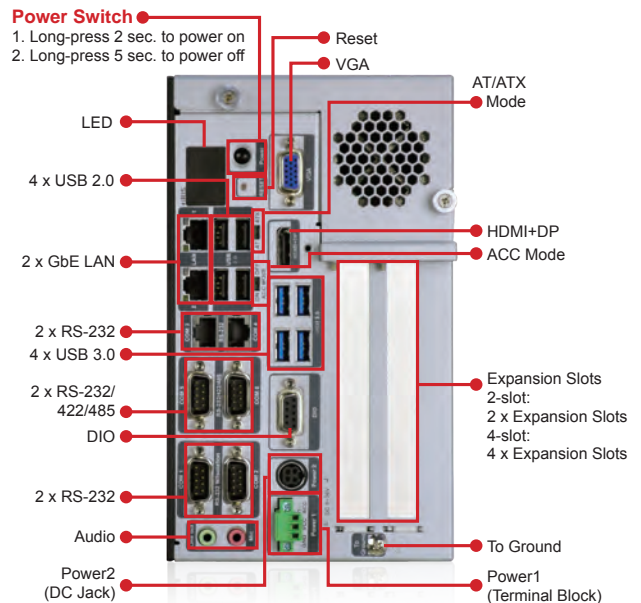
5V@3A or 12V@3A

Internal Power Connector

The TANK-870-Q170 provides the most convenient 4-pin internal power connector for add-on card usage, adding more flexibility to the embedded system in industrial environment.



Fully Integrated I/O



Flexible Expansion Interface

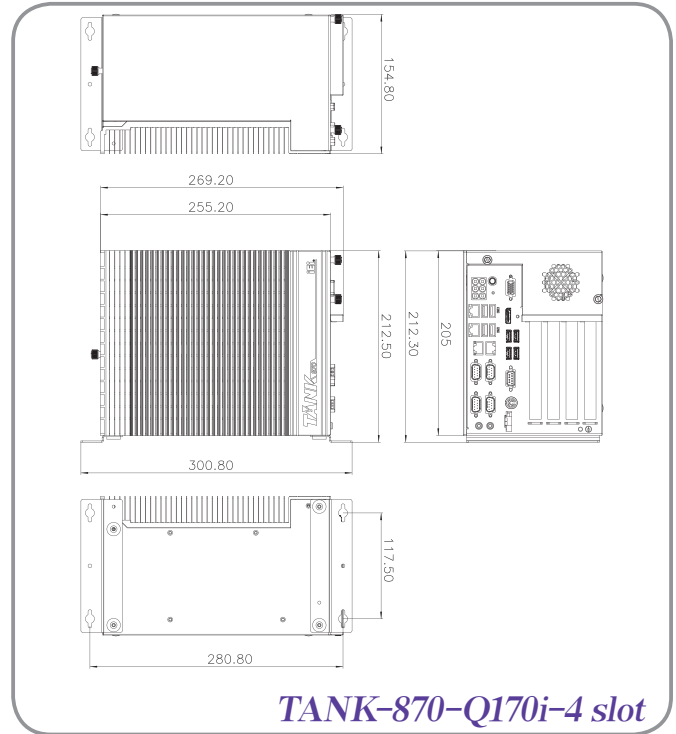
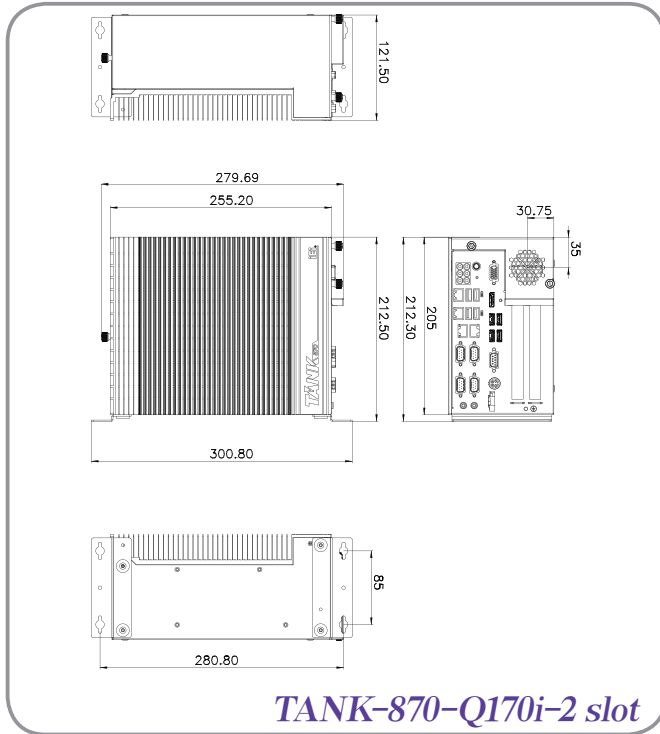
Backplane	TANK-870-Q170i-2A	TANK-870-Q170i-2B	TANK-870-Q170i-4A		TANK-870-Q170i-4B	
Slot Type	PCIe x16	PCIe x16	PCIe x16	PCIe x16	PCIe x16	PCI
Signal	PCIe x8	PCIe x16	PCIe x8	PCIe x8	PCIe x16	PCI
Slot Type	PCIe x16	PCI	PCI	PCI	PCI	PCI
Signal	PCIe x8	PCI	PCI	PCI	PCI	PCI
PCIe Mini	N/A	N/A	1		1	

* The expansions described above are provided by the backplanes

Specifications

Model Name		TANK-870-Q170
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35)
	Chipset	Intel® Q170
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 64GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)
I/O Interfaces	USB 3.0	4
	USB 2.0	4
	Ethernet	2 x RJ-45 LAN1: Intel® I219LM PCIe controller LAN2 (iRIS): Intel® I210 PCIe controller
	COM Port	4 x RS-232 (2 x RJ-45, 2 x DB-9 w/2.5KV isolation protection) 2 x RS-232/422/485 (DB-9)
	Digital I/O	8-bit digital I/O , 4-bit input / 4-bit output
	Display	1 x VGA 1 x HDMI/DP 1 x iDP (optional)
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI/DP: Up to 4096x2304@60Hz
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11 a/b/g/n/ac (optional)
	TPM	1 x TPM pin header (2 x 10 pin)
Expansions	Backplane	2-slot model: 1 x PCIe x16, 1 x PCI 2-slot model: 2 x PCIe x8 4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mni 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mni
	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power output	5V@3A or 12V@3A
Reliability	Mounting	Wall mount
	Operating Temperature	i7-6700TE -20°C ~ 45°C with air flow (SSD), 10% ~ 95%, non-condensing i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40°C ~85°C with air flow (SSD), 10% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6 C-1 (with SSD)
	Weight (Net/Gross)	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-870-Q170i-i5/4G/2A-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i5/4G/2B-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i5/4G/4A-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i5/4G/4B-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 3 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i7/4G/2A-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i7/4G/2B-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i7/4G/4A-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i7/4G/4B-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 3 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS

Options

Part No.	Description
32702-000400-200-RS	European power cord
63040-010120-210-RS	Power adapter, FSP120-ABBN2, 9NA1205302, Active PFC, Vin:90~264VAC, 120W, plug=6.5mm, cable=1500mm, Erp (no load 0.15W), Vout:19VDC, 4-pin DIN with lock, CCL, RoHS
19Z00-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
IRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI IDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI IDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual channel LVDS converter board (for IEI IDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI IDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI IDP connector)
IPICIE-4POE-R10	PCI Express Power over Ethernet frame grabber card, 4-port 1000 Base(T), 802.3af compliant, RoHS
TANK-870-Q170-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS

* The TANK-870 can support up to 40°C operating temperature when installing with the IPICIE-4POE-R10.

Packing List

1 x Utility CD	1 x Chassis Screw	1 x One Key Recovery CD	1 x Mounting Bracket
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TANK-870e-H110

- High-Performance 6th Generation Intel® Core™ Processor
- Fanless Embedded Computer



Features

- 6th Gen Intel® Core™ processor platform with Intel® H110 chipset and DDR4 memory
- Support dual display VGA+HDMI
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion



Specifications

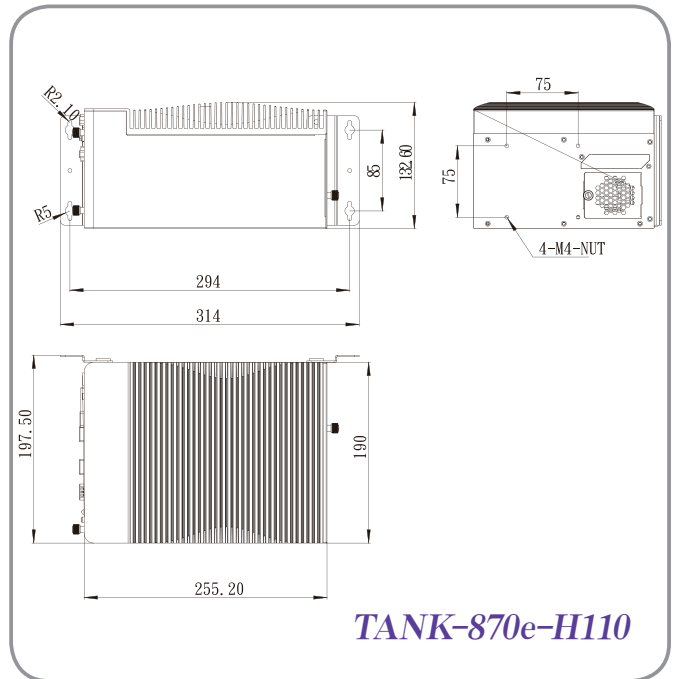
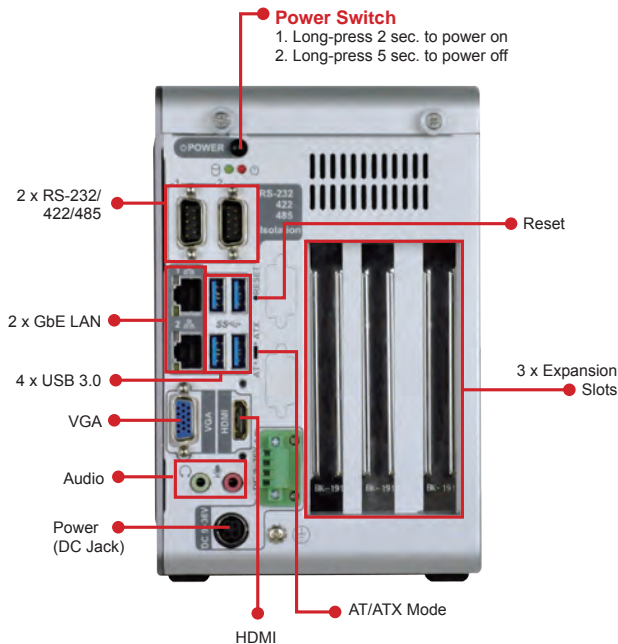
Model Name		TANK-870e-H110
Chassis	Color	Dark silver purple + Silver
	Dimensions (WxDxH) (mm)	132.6 x 255.2 x 190
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35)
	Chipset	Intel® H110
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 32GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	USB 3.0	4
	Ethernet	2 x RJ-45 PCIe GbE by RTL8111G controller
	COM Port	2 x RS-232/422/485 (DB-9, w/ 2.5kV isolation protection)
	Display	1 x VGA, 1 x HDMI 1.4
	Resolution	VGA: Up to 1920 X 1200@60Hz HDMI 1.4: Up to 4096x2160@24Hz
	Audio	1 x Line-out ; 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)
Expansions	Backplane	3A: 1 x PCIe x16 , 2 x PCI 3B: 1 x PCIe x16 , 1 x PCIe x4, 1 x PCI 3C: 3 x PCI
	PCIe Mini	1 x Full-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 9 V~36 V DC
	Power Consumption	19 V@3.44 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power Connector	5V@3A or 12V@3A
Reliability	Mounting	Wall mount & DIN Rail
	Operating Temperature	i7-6700TE -20°C ~ 50°C with air flow (SSD), 10% ~ 95%, non-condensing i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 5% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Non-Operating Shock	Half-sine wave shock 15G, 11ms, 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6C-1 (with SSD)
	Non-Operation Vibration	Half-sine mode IEC-60068-2-06
	Weight (Net/Gross)	4.2 kg/6.3 kg
Safety/EMC	CE/FCC	
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

Versatile Expansion Interface

Backplane	3A HPE-3S6		3B HPE-3S7			3C HPE-3PCI
Slot	2 x PCI	1 x PCIe x16	1 x PCI	1 x PCIe x4	1 x PCIe x16	3 x PCI
Signal	PCI	PCIe x16	PCI	PCIe x1	PCIe x1	PCI

Fully Integrated I/O

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-870e-H110-i5/4G/3A-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCI and 1 x PCIe by 1 expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i5/4G/3B-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCI and 2 x PCIe by 1 expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i5/4G/3C-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 3 x PCI expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i7/4G/3A-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCI and 1 x PCIe by 1 expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i7/4G/3B-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCI and 2 x PCIe by 1 expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i7/4G/3C-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 3 x PCI expansion, VGA/HDMI, 9~36V DC, RoHS

Options

Part No.	Description
32702-000400-200-RS	European power cord
63040-010120-210-RS	Power adapter, FSP120-ABBN2, 9NA1205302, Active PFC, Vin:90~264VAC, 120W, plug=6.5mm, cable=1500mm, Erp (no load 0.15W), Vout:19VDC, 4-pin DIN with lock, CCL, RoHS
19Z00-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TANK-870e-H110-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870e-H110 Series, with DVD-ROM, RoHS
DK-75-R10	DIN mount kit adapter for VESA-75

Packing List

1 x Utility CD	1 x Chassis Screw	1 x One Key Recovery CD	1 x Mounting Bracket
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TANK-860-HM86

- Intel® HM86 mobile solution
- Three different expansion slot options

Features

- Intel® HM86 chipset + 4th generation Intel® Core™ CPU
- Great flexibility of expansion slots
 - » 2-slot model: 2 x PCIe by 16, 1 x PCIe Mini slot
 - » 4-slot model: 2 x PCIe by 16, 2 x PCI, 2 x PCIe Mini slot
 - » 6-slot model: 1 x PCIe by 16, 2 x PCIe by 4, 3 x PCI, 2 x PCIe Mini slot
- IPMI function for remote control management
- Three independent video outputs support high resolution
- 2 x 2.5" SATA HDD bay design fulfills high storage demand



Automation Solution

The TANK-860 is a fanless expandable embedded system with PCIe and/or PCI slots. With rich I/O, customers can make it as a control center. Furthermore, the ruggedized design makes the TANK-860 more reliable even in harsh environments.

- Rich I/O
- PCI/PCIe Expansion
- Ruggedized System

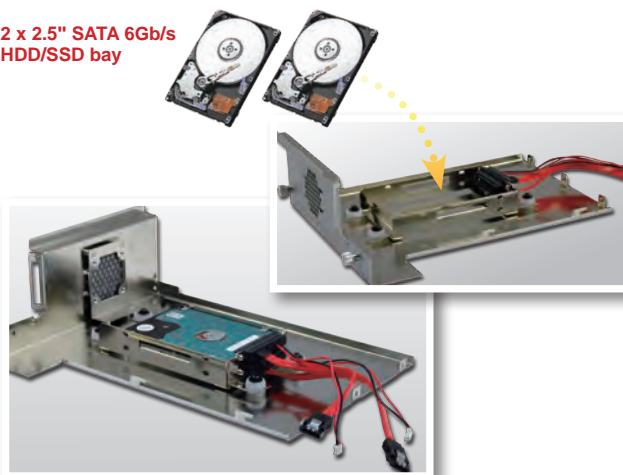


- Automation
- Machine Vision
- Data Acquisition

Dual 2.5" SATA HDD/SSD Bay

With two 2.5" SATA HDD/SSD bays, users can fulfill large storage requirement and use it as a terminal for data acquisition. The easy-to-assemble design reduces user fatigue in system installation.

2 x 2.5" SATA 6Gb/s HDD/SSD bay



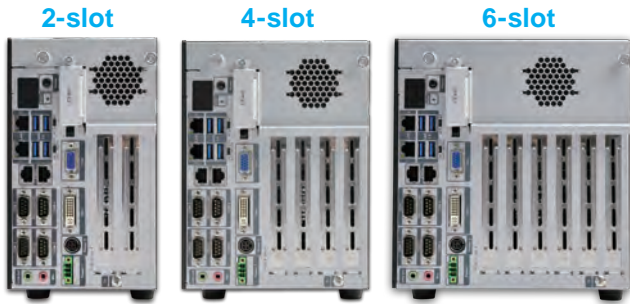
Swappable CFast Design

CFast is based on the Serial ATA bus and supports up to 300 MBps transfer rates, which is much higher than the CF card. With the hot-swappable design, users can replace the CFast even when the system is running.



Abundant Expansion Interface

The TANK-860 series has a great variety of different expansion interfaces. From basic 2-slot expansion model to advanced 6-slot expansion model, customers can choose the most suitable one to apply.



Versatile Expansion Interface

	2-slot model	4-slot model		6-slot model		
Physical Slot	PCIe x16	PCIe x16	PCIe x16	PCIe x16	PCIe x4	PCIe x4
Signal	PCIe x8	PCIe x8	PCIe x8	PCIe x8	PCIe x4	PCIe x4
Slot type	PCIe x16	PCI	PCI	PCI	PCI	PCI
Signal	PCIe x8	PCI	PCI	PCI	PCI	PCI

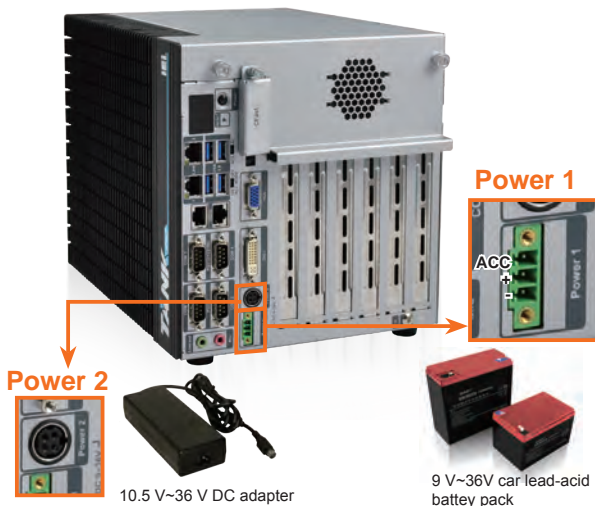
Wide Range Temperature

The TANK-860-HM86 series is designed to withstand wide range of temperatures. With this design, the TANK-860-HM86 series can even be installed in a high-temperature roadside cabinet.



Dual DC Power Input

The TANK-860-HM86 adopts dual DC power input design, which ensures uninterrupted power supply to the system and eliminates the risk of sudden shutdown and data loss, even if one power is unavailable or low voltage capacity is present.



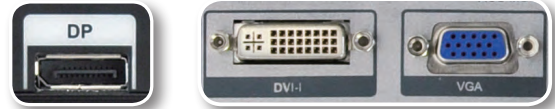
iRIS Solution



By installing the IEI iRIS-2400 module, the TANK-860 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

Triple Display

The TANK-860 contains VGA/DisplayPort/DVI video outputs, which can be applied to multi-display application and support high Full HD video quality.



Anti-Vibration and Anti-Shock Design

With the rugged design, the TANK-860-HM86 series is reliable in industrial environments to resist strong vibrations and can be used as a core computer required to be installed on moving objects.



Wide Range DC Power Input

The TANK-860-HM86 series accepts wide range DC power input, allowing it to be powered anywhere, no matter if a 12 V/24 V DC source or a 19 V power adapter is available.



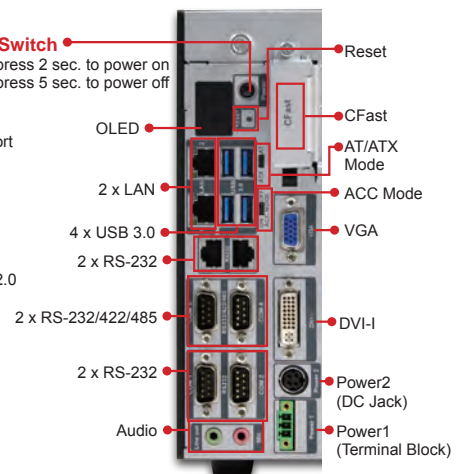
Fully Integrated I/O

Front View



- Power Switch
1. Long-press 2 sec. to power on
2. Long-press 5 sec. to power off
- DisplayPort
- DIO
- 2 x USB 2.0

Rear View



- Reset
- CFast
- AT/ATX Mode
- ACC Mode
- VGA
- DVI-I
- Power2 (DC Jack)
- Power1 (Terminal Block)
- Audio
- 2 x RS-232/422/485
- 2 x RS-232
- 4 x USB 3.0
- 2 x LAN
- 2 x RS-232
- OLED

Specifications

Model Name		TANK-860-HM86
Chassis	Color	Black C + Silver
	Dimensions (WxHxD) (mm)	2 slot: 121.5 x 255.2 x 205 4 slot: 154.8 x 255.2 x 205 6 slot: 195.4 x 255.2 x 205
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i5-4400E 2.7 GHz Intel® Celeron® 2000E 2.2 GHz
	Chipset	Intel® HM86
	System Memory	2 x 204-pin DDR3 SO-DIMM, one 4GB pre-installed (system max: 16 GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay
	CF Card/CFast	1 x CFast
I/O Interfaces	USB 3.0	4
	USB 2.0	2
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM
	COM Port	4 x RS-232 (2 DB-9 w/ isolation, 2 RJ-45) 2 x RS-232/422/485 (DB-9)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output
	Display	1 x VGA, 1 x DVI-I, 1 x DisplayPort
	Resolution	VGA: Up to 1920 x 1200@60Hz DVI-I: Up to 2500 x 1600@60Hz Displayport: Up to 2500 x 1600@60Hz
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)
	Expansions	PCI/PCIe
PCIe Mini		2A: 1 x Full-size (supports mSATA, colay with SATA) 4A: 1 x Full-size (supports mSATA, colay with SATA) + 1 x Full-size (on backplane) 6A: 1 x Full-size (supports mSATA, colay with SATA) + 1 x Full-size (on backplane)
Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.34 A (Intel® Core™ i5-4400E with 4 GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing
	Storage Temperature	-30°C ~ 70°C with air flow (SSD), 5% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg 6-slot: 4.8 kg/6.9 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

Ordering Information

Part No.	Description
TANK-860-HM86i- i5/4G/2A-R10	Intel® Core™ i5-4400E 2.7 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 2 x PCIe expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-HM86i- i5/4G/4A-R10	Intel® Core™ i5-4400E 2.7 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 2 x PCIe and 2 x PCI expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-HM86i- i5/4G/6A-R10	Intel® Core™ i5-4400E 2.7 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 3 x PCIe and 3 x PCI expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-HM86i- C/4G/2A-R10	Intel® Celeron® 2000E 2.2 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 2 x PCIe expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-HM86i- C/4G/4A-R10	Intel® Celeron® 2000E 2.2 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 2 x PCIe and 2 x PCI expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-HM86i- C/4G/6A-R10	Intel® Celeron® 2000E 2.2 GHz dual-core, TDP 37W, 4GB DDR3 pre-installed memory, 3 x PCIe and 3 x PCI expansion, VGA/DVI-I/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, R10, RoHS
TANK-860-QGW- i5/8G/2A-R10	Intel® Core™ i5-4400E CPU, 2 x 4GB DDR3 memory, 2 x PCIe expansion, Dual GbE, COM, DIO, VGA/DVI-I/DisplayPort, iRIS-2400 optional, with QTS-Gateway, 9 V~36 V DC, RoHS
TANK-860-QGW- i5/8G/4A-R10	Intel® Core™ i5-4400E CPU, 2 x 4GB DDR3 memory, 2 x PCIe and 2 x PCI expansion, Dual GbE, COM, DIO, VGA/DVI-I/DisplayPort, iRIS-2400 optional, with QTS-Gateway, 9 V~36 V DC, RoHS
TANK-860-QGW- i5/8G/6A-R10	Intel® Core™ i5-4400E CPU, 2 x 4GB DDR3 memory, 3 x PCIe and 3 x PCI expansion, Dual GbE, COM, DIO, VGA/DVI-I/DisplayPort, iRIS-2400 optional, with QTS-Gateway, 9 V~36 V DC, RoHS

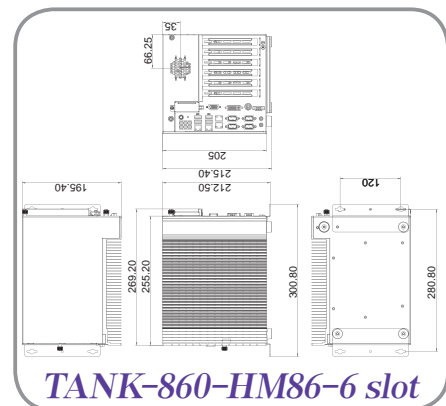
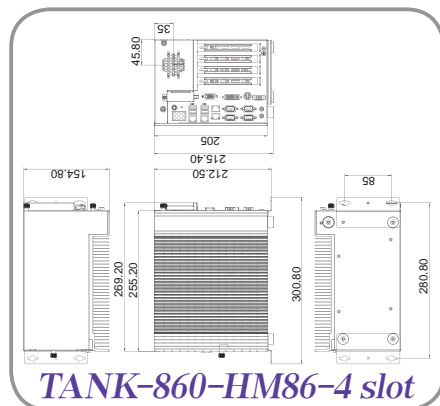
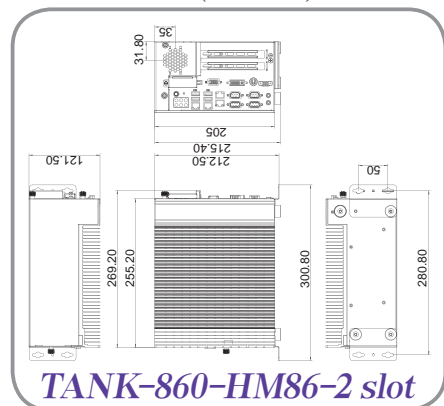
Options

Part No.	Description
32702-000400-200-RS	European power cord
63040-010120-210-RS	Power adapter, FSP120-ABBN2, 9NA1205302, Active PFC, Vin:90~264VAC, 120W, plug=6.5mm, cable=1500mm, Erp (no load 0.15W), Vout:19VDC, 4-pin DIN with lock, CCL, RoHS
19200-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TANK-860-HM86-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-860 H Series, with CD-ROM, RoHS

Packing List

1 x Utility CD	1 x Chassis Screw
1 x One Key Recovery CD	1 x Mounting Bracket

Dimensions (Unit: mm)



TANK-801-BT

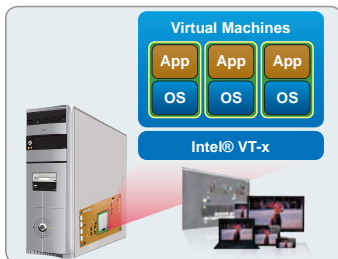
- Intel® Celeron® J1900 2 GHz, 10W
- Versatile three different backplane types

Features

- Intel® Celeron® J1900 2 GHz, 10W
- 16-bit digital I/O, 8-bit input/8-bit output
- 1 x DVI-I
1 x DisplayPort
- Various expansion type:
 - » 3A: One PCIe x1 + Two x PCI
 - » 3B: Two PCIe x1 + One x PCI
 - » 3C: Three x PCI
- Dual DC power input



Enhanced Visual Experience



Support Intel® Virtualization Technology



Automation

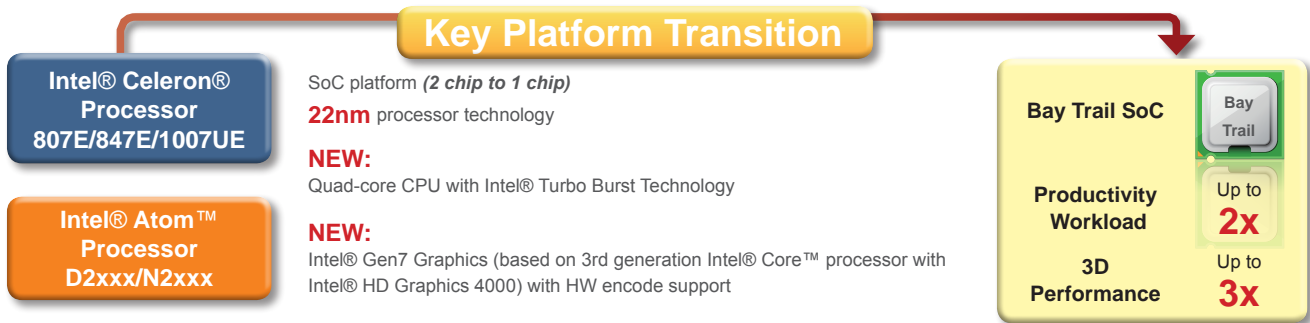


Video HD Technology
Spectacular HD Playback

Intel® Bay Trail Solution

Intel® Bay-Trail SoC (system on chip) integrates with CPU and graphics. With the Gen 7 graphics and the DX11 and full HD support, the TANK-801-BT is a good solution for visual application.

■ Intel® Bay Trail Platform Transition



■ Intel® Bay Trail Graphics and Media Features

3D Graphics	DX11.1, OGL 4.0, OGL ES 2.0, OVG 1.1
Video Decode	H.264, MPEG2, MPEG4, VC1/WMV9, VP8 up to 1080p decode
Video Encode	H.264, MPEG2

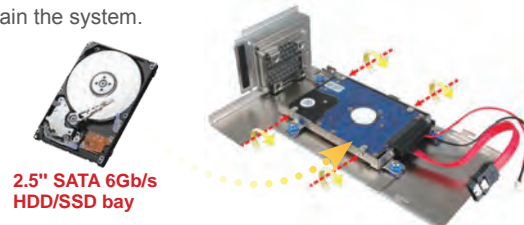
Diversified Expansion Interfaces

The TANK-801 series has three different expansion options on PCI and PCIe slot selection. Users can choose the suitable model for their application.

Backplane	TANK-801	
	Slot type	Signal
HPE-3S6 (2P1E)	PCI	PCI
	PCIe x16	PCIe x1
HPE-3S7 (1P2E)	PCI	PCI
	PCIe x4	PCIe x1
HPE-3PCI	PCIe x16	PCIe x1
	PCI	PCI

Easy of Installation

Users can easily install SO-DIMM, PCIe Mini cards and expansion cards by removing the TANK-801's top cover. A 2.5" SATA HDD/SSD bay is located on the top cover, which is very convenient for users to maintain the system.

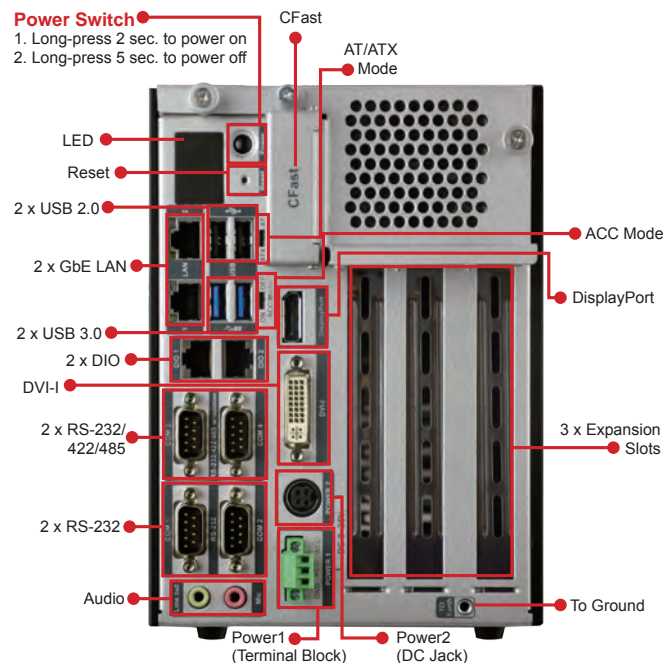


2.5" SATA 6Gb/s
HDD/SSD bay

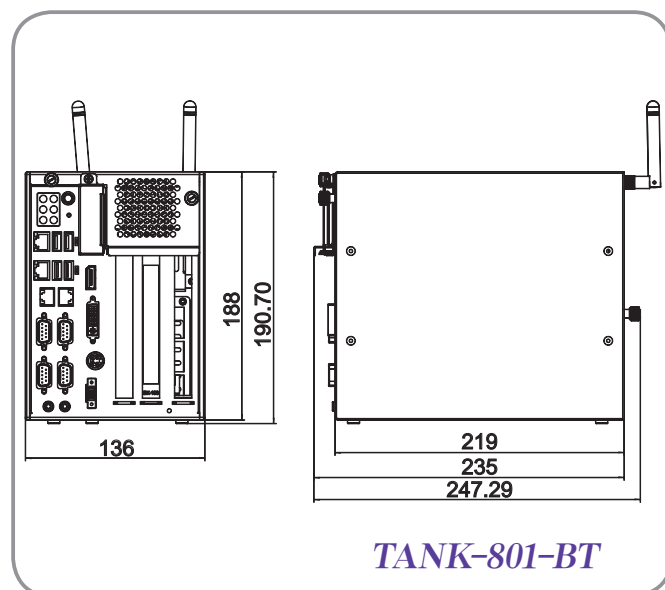
Specifications

Model Name		TANK-801-BT	
Chassis	Color	Black C + Silver	
	Dimensions (WxDxH) (mm)	136 x 219 x 188	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloys	
Motherboard	CPU	Intel® Celeron® J1900 2 GHz	
	Chipset	SoC	
	System Memory	1 x 204-pin DDR3L SO-DIMM, 2GB pre-installed (system max: 8 GB)	
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	
	CF Card/CFast	1 x CFast	
I/O Interfaces	USB 3.0	2	
	USB 2.0	2	
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I211	
	COM Port	2 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9, with isolation)	
	Digital I/O	16-bit digital I/O, 8-bit input/8-bit output	
	Display	1 x DisplayPort, 1 x DVI-I	
	Resolution	DisplayPort: Up to 2560 x 1600 MHz DVI-I: Up to 2560 x 1600 MHz	
	Audio	1 x Line-out, 1 x Mic-in	
	Wireless	1 x 802.11b/g/n (optional)	
	Expansions	PCI/PCIe	3A: One PCIe x1 + Two x PCI 3B: Two PCIe x1 + One x PCI 3C: Three x PCI
		PCIe Mini	1 x Full-size PCIe Mini
	Power	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
		Power Consumption	19 V@1.8 A (Intel® Celeron® J1900 with 2 GB DDR3 memory)
	Reliability	Mounting	Wall mount
Operating Temperature		-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	
Storage Temperature		-40°C ~ 85°C with air flow (SSD), 5% ~ 90%, non-condensing	
Operating Shock		Half-sine wave shock 5G, 11ms, 3 shocks per axis	
Operating Vibration		MIL-STD-810F 514.5C-2 (with SSD)	
Weight (Net/Gross)		2.8 kg/4.3 kg	
Safety/EMC		CE/FCC	
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E	

Fully Integrated I/O



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-801-BT-J1/2G/3A-R11	Fanless embedded system with two PCI and one PCIe x1 expansion, Intel® Bay-Trail J1900 2 GHz, TDP 10W, 2GB DDR3L pre-installed memory, 1 x DVI-I, 1 x DisplayPort, iRIS-2400 optional, 9 V~36 V DC, RoHs
TANK-801-BT-J1/2G/3B-R11	Fanless embedded system with one PCI and two PCIe x1 expansions, Intel® Bay-Trail J1900 2 GHz, TDP 10W, 2GB DDR3L pre-installed memory, 1 x DVI-I, 1 x DisplayPort, iRIS-2400 optional, 9 V~36 V DC, RoHs
TANK-801-BT-J1/2G/3C-R11	Fanless embedded system with three PCI expansion, Intel® Bay-Trail J1900 2 GHz, TDP 10W, 2 GB DDR3L pre-installed memory, 1 x DVI-I, 1 x DisplayPort, iRIS-2400 optional, 9 V~36 V DC, RoHs

Options

Part No.	Description
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19FFD124010HBNBG-000002-RS	FAN, +12V DC, 4PIN, 31100-000377-RS, STANDARD, FD124010HB-NBG(2W7G), CABLE L:250mm, MOLEX 5051-04P P=2.54, CCL, RoHS
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TPM-IN01-R20	20-pin INFINEON TPM Module, S/W management Tool, Firmware V4.4
TANK-801-BT-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-801 Series, CD-ROM, RoHS

Packing List

1 x Utility CD	1 x Power Adapter (With PSE & ErP Certified)	1 x Chassis Screw
1 x One Key Recovery CD	1 x Power Cord	1 x Mounting Bracket

TANK-800-D525 820-H61

- Intel® D525 3-Slot Fanless Embedded System
- Intel® Sandy Bridge 3-Slot Embedded System

Features

- Intel® Atom™ D525 1.8 GHz dual-core processor for TANK-800
2nd/3rd generation Intel® Core™ low power desktop processors (max TDP: 65W) for TANK-820
- On-board 1GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 3GB) for TANK-800
On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10GB) for TANK-820
- Dual wide range DC power support (TANK-800-D525: 9 V~36 V DC/ TANK-820-H61: 9 V~24 V DC)



Versatile Expansion Interface

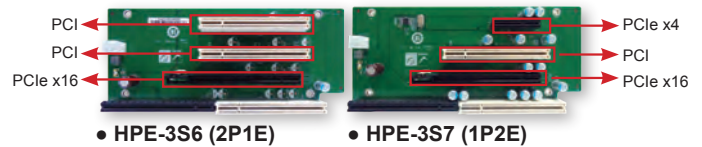
The TANK-800/820 series has various kinds of expansion interfaces which allow you to connect additional circuits or expansion boards to the system via IEI riser cards. These expansion options provide flexible function enhancement and simplify system integration.

- The two types of backplane support standard PCI/PCIe cards with maximum dimensions (111 mm in width x 190 mm in length).
- The rated voltage and current of the backplane

Voltage	Current	Voltage	Current
+5 V	7 A	-12 V	0.1 A
+12 V	3.75 A	+3.3 V	8 A

Max. power supported by the backplane: <45W

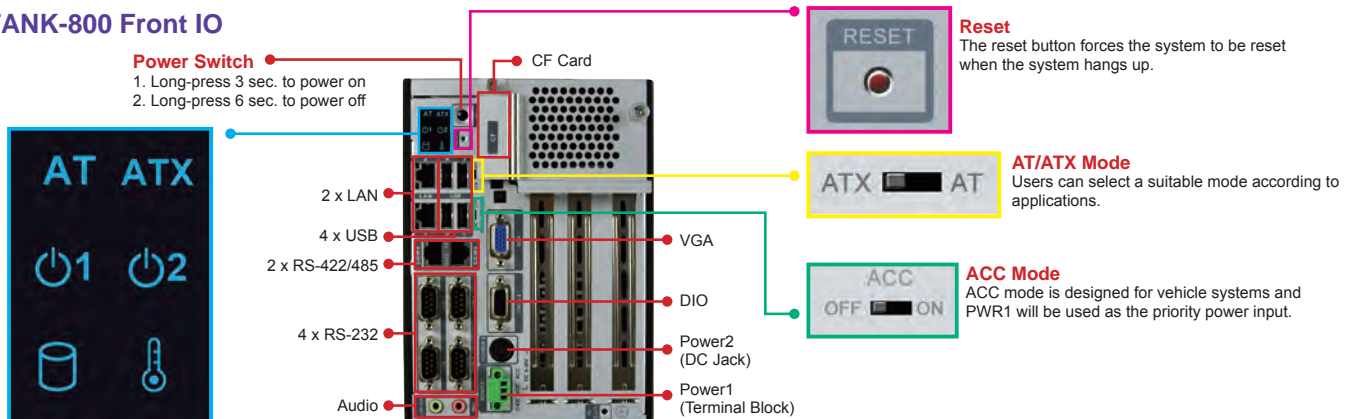
The system default power is 90 W. **The maximum total power of the backplane to support expansion cards is 45 W.** The power of the selected expansion cards can not exceed the max. power (45 W), otherwise, the system may be unstable.



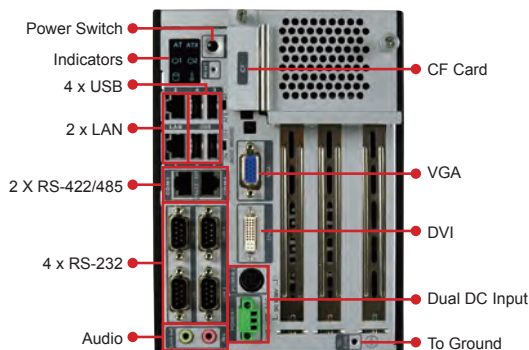
Backplane	Slot	TANK-800	TANK-820
		Signal	Signal
HPE-3S6 (2P1E)	PCI	PCI	PCI
	PCIe x16	PCIe x4	PCIe x8
HPE-3S7 (1P2E)	PCI	PCI	PCI
	PCIe x4	PCIe x1	PCIe x1
	PCIe x16	PCIe x2	PCIe x8

Fully Integrated I/O

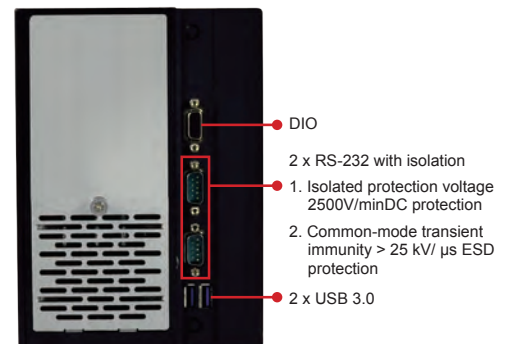
TANK-800 Front IO



TANK-820 Front IO



Rear I/O



Specifications

Model Name		TANK-820-H61	TANK-800-D525
Chassis	Color	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	133 x 269 x 208	136 x 219 x 188
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)	Intel® Atom™ D525 1.8 GHz
	Chipset	Intel® H61	Intel® ICH8M
	System Memory	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	On-board DDR3 1 GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (system max: 3 GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	CF Card/CFast	1 x CF Type II	1 x CF Type II
I/O Interfaces	USB 3.0	2	N/A
	USB 2.0	4	4
	Ethernet	2 x RJ-45 PCIe GbE by Realtek 8111E controller	2 x RJ-45 PCIe GbE by Realtek 8111E controller
	COM Port	6 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	4 x RS-232 (DB-9) 2 x RS-422/485 (RJ-45)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	8-bit digital I/O, 4-bit input/4-bit output
	Display	1 x VGA, 1 x DVI-I	1 x VGA
	Resolution	VGA: Up to 2048 x 1536@75Hz DVI-I: Up to 1920 x 1080@60Hz	VGA: Up to 2048 x 1536@75Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
Expansions	PCI	2P1E: 2 x PCI, 1P2E: 1 x PCI	2P1E: 2 x PCI, 1P2E: 1 x PCI
	PCIe	2P1E: One PCIe x8 (physical PCIe x16 slot) 1P2E: One PCIe x1 (physical x4 slot), One PCIe x8 (physical x16 slot)	2P1E: One PCIe x4 (physical PCIe x16 slot) 1P2E: One PCIe x1 (physical x4 slot), One PCIe x2 (physical x16 slot)
Power	Power Input	DC Jack: 9 V~24 V DC Terminal Block: 9 V~24 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.5 A (Intel® Core™ i3-2100 with 6 GB DDR3 memory) w/o add-on card	19 V@1.73 A (Intel® Atom™ D525 with 1 GB DDR3 Memory)
Reliability	Mounting	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~70°C with air flow (SSD), 5% ~ 95%, non-condensing
	Storage Temperature	-20°C ~ 70°C	-20°C ~ 70°C
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	4.2 kg/6.3 kg	2.6 kg/4.1 kg
	Safety/EMC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded

Ordering Information

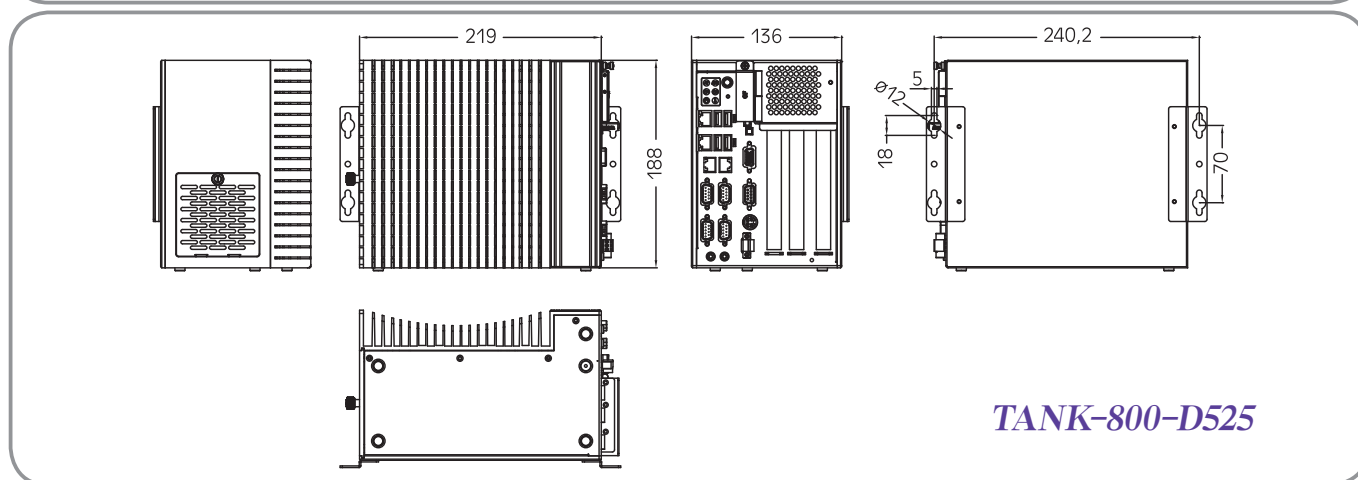
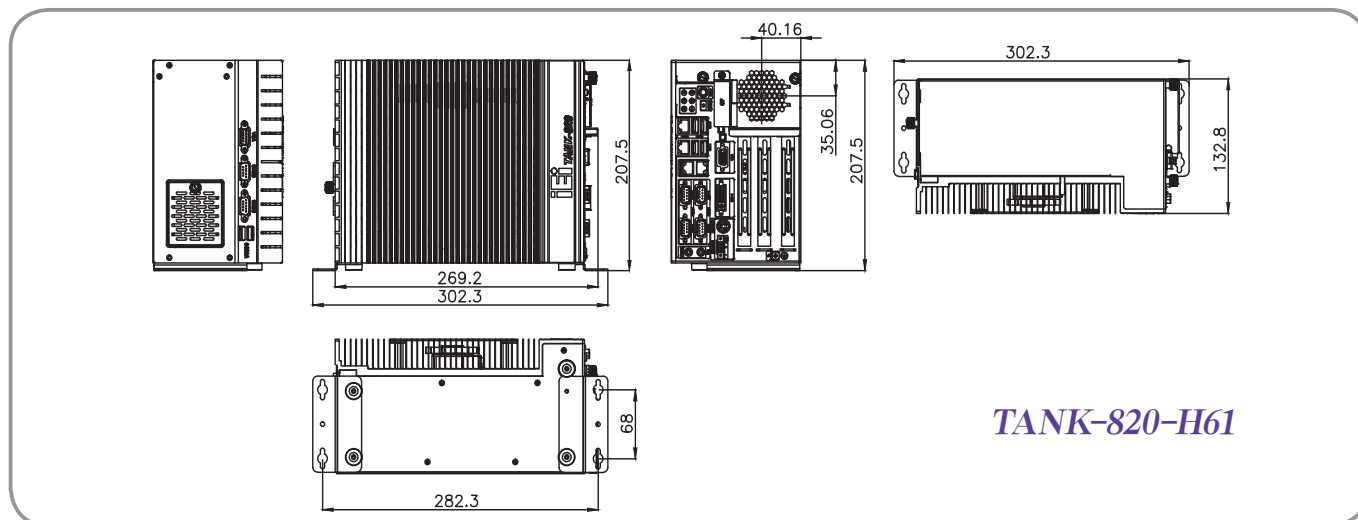
TANK-820 series

Part No.	Description
TANK-820-H61-i5/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-i5/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-i3/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-i3/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-P/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-P/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C

TANK-800 series

Part No.	Description
TANK-800-D525/1GB/2P1E-R12	Extended temperature fanless embedded system with one PCIe x4 and two PCI expansion, Intel® Atom™ D525 1.8 GHz dual core processor, dual 9 V-36 V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS
TANK-800-D525/1GB/1P2E-R12	Extended temperature fanless embedded system with one PCIe x1, one PCIe x2 and one PCI expansions, Intel® Atom™ D525 1.8 GHz dual core processor, dual 9 V-36 V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS

Dimensions (Unit: mm)



Options

TANK-820 series

Item	Part No.	Description
OS: XP	TANKCF-800-D525-XPE-4G-R10	OS Image with XPE, For TANK-800 D525 Series, W/Compact Flash Memory Card 4GB, R10
OS: Windows Embedded 7 (4GB CF Card)	TANKCF-800-D525-WES7E-4G-R10	OS Image with Windows® Embedded Standard 7 E for TANK-800 D525 Series, 4 GB CompactFlash® card, RoHS
System Fan	19Z00-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x 10 mm, 6500RPM, RoHS

TANK-800 series

Item	Part No.	Description
OS: Linux (2GB CF Card)	TANKCF-820-H61-LNX-2G-R10	OS Image with Linux for TANK-820 H61, Debian operating system, Kernel version 2.6.26, 2 GB CompactFlash® card, RoHS
OS: XP	TANKCF-820-H61-XPE-4G-R10	OS Image with XPE, for TANK-820-H61 series, W/Compact Flash Memory Card 4GB, R10, RoHS
OS: Windows Embedded 7 (4GB CF Card)	TANKCF-820-H61-WES7E-4G-R10	OS Image with Windows® Embedded Standard 7 E for TANK-820 H61 Series, 4 GB CompactFlash® card, RoHS

Packing List

TANK-820 series

1 x Power Cord	4 x HDD Screw	1 x Pluggable DC-in Terminal Block
1 x Power Adapter	4 x Rubber Foot Pad Screw	1 x Utility CD
2 x Mounting Bracket	2 x Foot Pad	1 x One Key Recovery CD
4 x Mounting Bracket Screw	2 x RJ-45 to DB-9 COM Port Cable	4 x Fan screw

TANK-800 series

1 x Power Cord	4 x HDD Screw	1 x Pluggable DC-in Terminal Block
1 x Power Adapter	8 x Rubber Foot Pad Screw	1 x Utility CD
2 x Mounting Bracket	4 x Foot Pad	1 x One Key Recovery CD
4 x Mounting Bracket Screw	2 x RJ-45 to DB-9 COM Port Cable	

TANK-760-HM86

- Intel® HM86 mobile solution
- Three independent video outputs

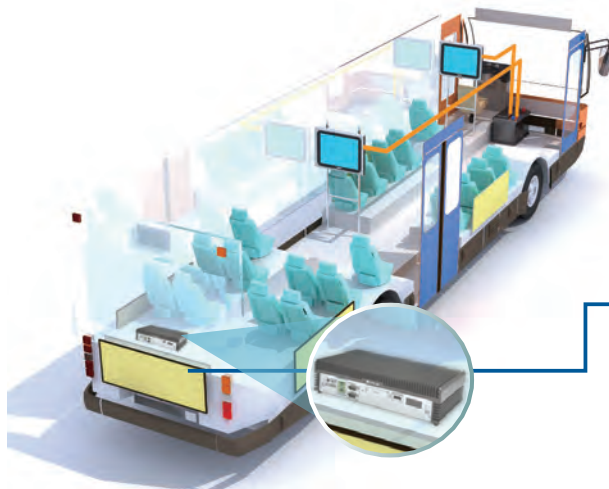
Features

- Intel® Core™ i7-4700EQ 2.4 GHz qual-core processor
- Intel® Core™ i5-4400E 2.7 GHz dual-core processor
- Intel® Celeron® 2000E 2.2 GHz dual-core processor
- One CFAST socket
- Support three independent video outputs
- Built-in two 2.5" SATA 6Gb/s HDD bays
- 9 V~36 V DC input
- Support IEI iRIS-2400 (IPMI 2.0 compliant)



Vehicle Control Center

The TANK-760 is a platform based on the 4th generation Intel® Core™ i5 or Celeron® processor (codenamed Haswell) and the Intel® HM86 chipset. The TANK-760 is equipped with an abundant of I/O ports and supports a wide range of operating temperature. The TANK-760 can be used as a control center for in-vehicle application, such as buses or trucks. With dual CAN-bus port, more peripheral devices can be connected for vehicle applications.



Flexible Expansion Design

The TANK-760 is designed with four D-sub knockout holes and three PCIe Mini card slots for installing I/O expansion cards, such as video/audio capture cards or COM port cards.

PCIe Mini Video/Audio Capture Card



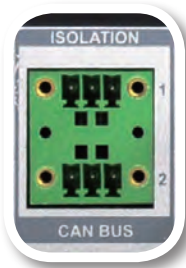
Dual 2.5" SATA HDD/SSD Bay

With two 2.5" SATA HDD/SSD bays, users can fulfill large storage requirement and use it as a terminal for data acquisition. The easy-to-assemble design reduces user fatigue in system installation.

2 x 2.5" SATA 6Gb/s HDD/SSD Bay



Dual CAN-Bus Port

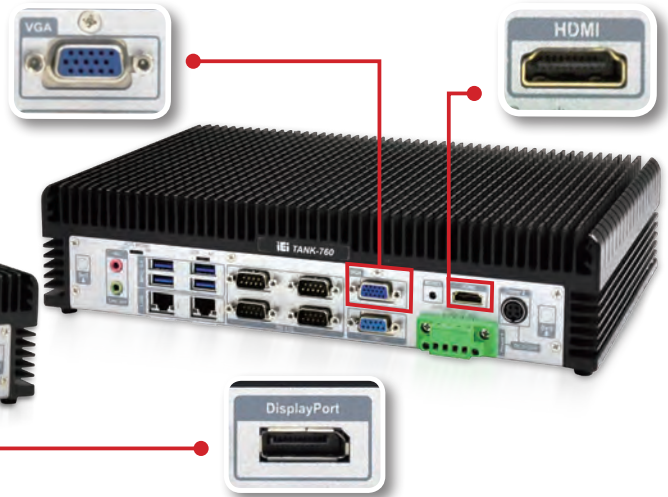


Controller Area Network (CAN or CAN-bus) is a vehicle bus standard designed to communicate or detect errors with each other within a vehicle, industrial automation and medical equipment. The TANK-760 has two CAN-bus interfaces, which allow customers to connect more devices in vehicle application.



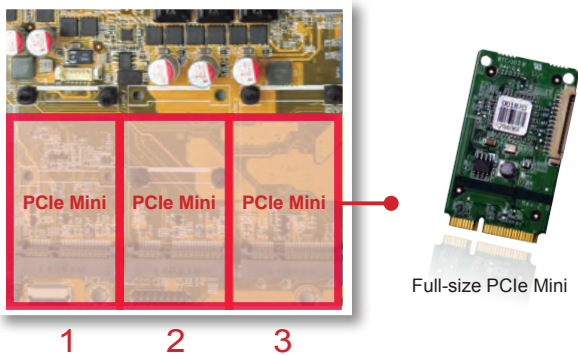
Triple Display

The TANK-760 contains VGA, DisplayPort and HDMI video outputs, which can be applied to multi-display application and support high Full HD video quality.



Three PCIe Mini

There are lots of different PCIe Mini cards for various applications, such as Wi-Fi, 3G and GPS cards. With three PCIe Mini cards, customers can add extra functions via PCIe Mini cards to apply the TANK-760 in different environments.



Military Compliant

The TANK-760 is compliant with MIL-STD-810F standard for shock and vibration. The MIL-STD-810 test series is approved for use by all departments and agencies of the United States Department of Defense (DoD).



E-Mark Compliant



E-Mark is a commonly recognized certificate in the automobile industry in Europe. E-mark is from the Economic Commission for Europe (Economic Commission of Europe, referred to as ECE) and including 28 countries currently. It is compulsory for vehicles application.

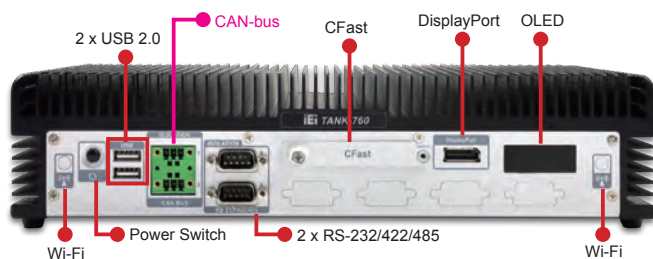
iRIS Solution



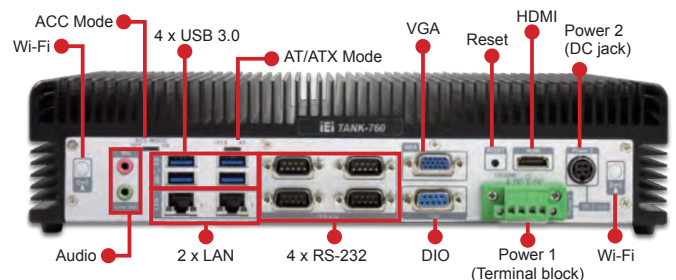
By installing the IEI iRIS-2400 module, the TANK-760 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

Fully Integrated I/O

Front View



Rear View



Specifications

Model Name		TANK-760-HM86	
Chassis	Color	Black C + Silver	
	Dimensions (WxDxH) (mm)	310 x 200 x 69.8	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloys	
Motherboard	CPU	Intel® Core™ i7-4700EQ 2.4 GHz Intel® Core™ i5-4400E 2.7 GHz Intel® Celeron® 2000E 2.2 GHz	
	Chipset	Intel® HM86	
	System Memory	2 x 204-pin DDR3 SO-DIMM, one 4GB pre-installed (system max: 16 GB)	
iRIS Module	iRIS Solution	1 x iRIS-2400 (optional)	
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	
	CF Card/CFast	1 x CFast	
I/O Interfaces	USB 3.0	4	
	USB 2.0	2	
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM	
	COM Port	4 x RS-232 (DB-9, with isolation) 2 x RS-232/422/485 (DB-9, with isolation)	
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	
	CAN-bus	2 x Phoenix terminal block with isolation	
	Display	1 x VGA, 1 x HDMI, 1 x DisplayPort	
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI: Up to 2500 x 1600@60Hz DisplayPort: Up to 2500 x 1600@60Hz	
	Audio	1 x Line-out, 1 x Mic-in	
	Wireless	1 x 802.11b/g/n (optional)	
	Other	Reserved IO window for PCIe Mini card expansion	
	Expansions	PCIe Mini	1 x Full-size PCIe Mini slot 1/2* 1 x Full-size PCIe Mini slot 3 (supports mSATA, colay with SATA)
		Power	Power Input: DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC Power Consumption: 19 V@3.2 A (Intel® Core™ i5 i5-4400E with 4 GB memory)
	Reliability	Mounting	Wall mount
Operating Temperature		-20°C ~ 70°C with air flow (SSD) for i5-4400E & 2000E -20°C ~ 50°C with air flow (SSD) for i7-4700EQ	
Operating Shock		Half-sine wave shock 5G, 11ms, 3 shocks per axis	
Operating Vibration		MIL-STD-810F 514.5C-2 (with SSD)	
Weight (Net/Gross)		4.2 kg/6.9 kg	
OS	Safety/EMC	CE/FCC	
	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E	

* TANK-760-QGW-i5/8G-R10 has only two Full-size PCIe Mini slots(slot 2 & slot 3)

Ordering Information

Part No.	Description
TANK-760-HM86i-i7/4G-R10	Fanless embedded system , Intel® Core™ i7-4700EQ Quad core 2.4GHz, TDP 47W, 4GB DDR3 pre-installed memory , VGA/HDMI/Displayport, iRIS-2400 optional, 9~36V DC, RoHs, R10
TANK-760-HM86i-i5/4G-R10	Fanless embedded system, Intel® Core™ i5 dual-core i5-4400E 2.7 GHz, TDP 37W, 4GB DDR3 pre-installed memory, VGA/HDMI/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, RoHs, R10
TANK-760-HM86i-C/4G-R10	Fanless embedded system, Intel® Celeron® dual-core 2000E 2.2 GHz, TDP 37W, 4GB DDR3 pre-installed memory, VGA/HDMI/DisplayPort, iRIS-2400 optional, 9 V~36 V DC, RoHs, R10
TANK-760-QGW-i5/8G-R10	Fanless embedded system, Intel® Core™ i5 dual-core i5-4400E 2.7 GHz, TDP 37W, 2 x 4GB DDR3 pre-installed memory, VGA/HDMI/DisplayPort, iRIS-2400 optional, with QTS-Gateway, 9 V~36 V DC, RoHs

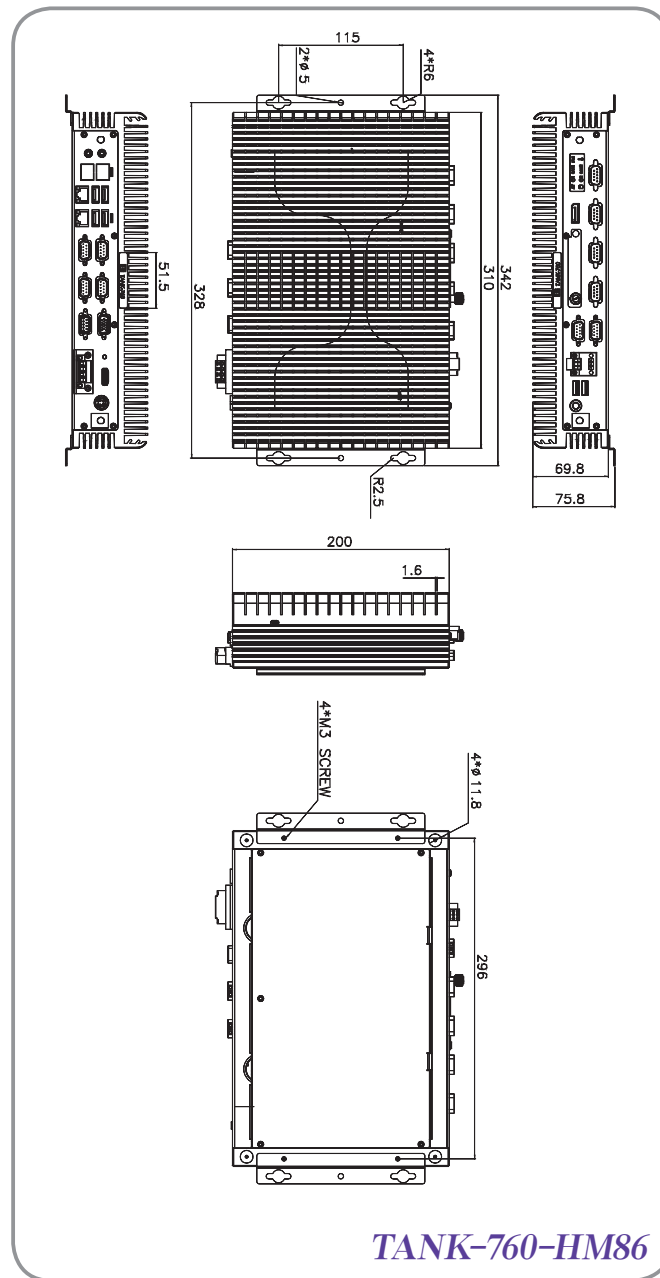
Options

Part No.	Description
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TANK-760-HM86-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-760 HM86 Series, CD-ROM, RoHS

Packing List

1 x Utility CD	1 x Power Adapter	1 x Chassis Screw
1 x One Key Recovery CD	1 x Power Cord	1 x Mounting Bracket

Dimensions (Unit: mm)



TANK-760-HM86

TANK-700-QM67 720-Q67

- Intel® 2nd Gen Core™ Mobile Processor
- Intel® 2nd Gen Core™ Desktop Processor

High Performance Fanless Embedded System with 2nd Generation Intel® Core™ i7/i5/i3 Processor

Combo Gigabit LAN (SFP Fiber/RJ-45)



Features

- 2nd Gen Intel® Core™ i7/i5/i3 or Celeron® mobile processors for TANK-700
- 2nd Gen Intel® Core™ i5/i3 Pentium® and Celeron® desktop processors for TANK-720
- Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10 GB)
- Dual combo (10/100/1000 BASE-T(X) or 1000 baseSFP slot RJ-45 port) Gigabit LAN ports, supporting Intel® AMT 7.0
- Supports 8-channel audio/video capture and dual display by VGA and HDMI
- Dual-band 2.4/5 GHz 802.11a/b/g/n 3T3R MIMO Wi-Fi for high speed wireless transmission



8-Channel Audio/Video Capture Solution

With an H.264 codec, the TANK-700/720 series is capable of compressing and decompressing Full HD (1920x1080) video in real-time without increasing CPU loadings. By supporting real-time recording, previewing, and HD video transmission through surveillance devices, the TANK-700/720 series is suitable as an intelligent monitoring system and transportation intelligent scheduling system solution.

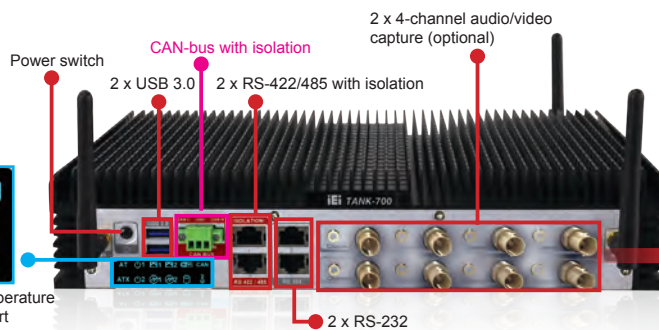
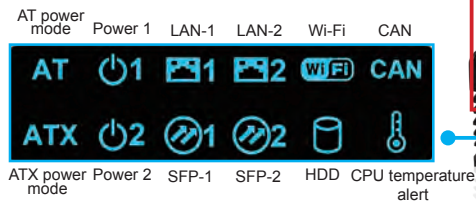
2 x 4-channel audio/video capture (system model name: IVCS-7008)



Fully Integrated I/O

Power switch and LED

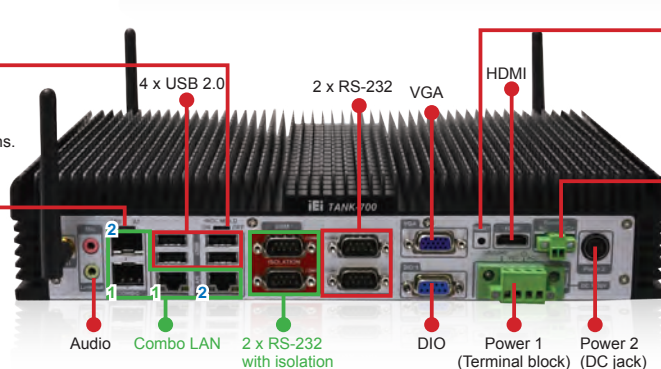
1. Long-press 3 sec. to power on
2. Long-press 6 sec. to power off



ACC on/off
ACC on mode is designed for vehicle applications. Use the ACC signal to control power on/off.



AT/ATX mode
Users can select a suitable mode according to the application.



Reset
The reset button forces the system to be reset when system hangs up.

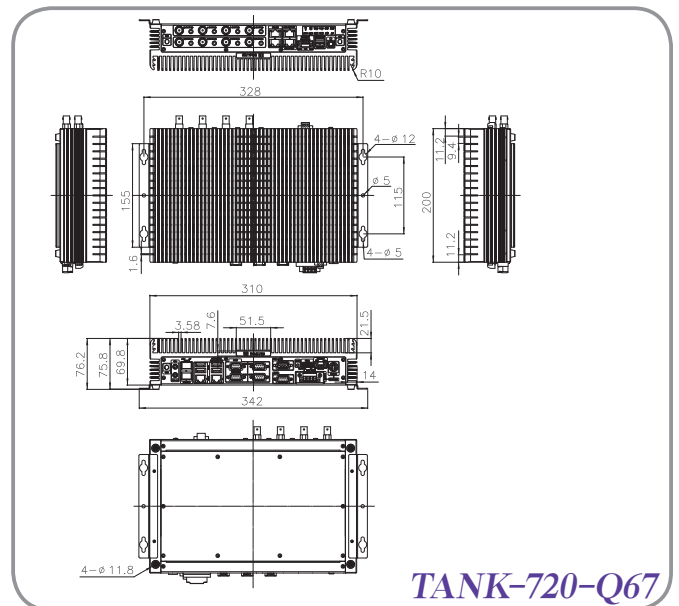
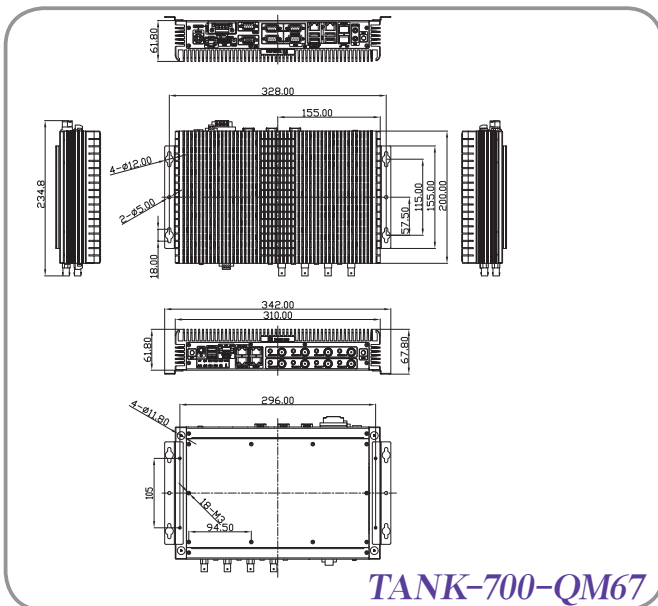


Remote control
Users can power on/off the system by inputting low or high voltage into the terminal block.
High (2 V~5 V): Power off
Low (< 0.4 V): Power on

Specifications

Model Name		TANK-700-QM67	TANK-720-Q67
Chassis	Color	Black C + Silver	Blue C + Silver
	Dimensions (WxDxH) (mm)	310 x 200 x 62	310 x 200 x 70
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i5-2xxE (above 2.5 GHz) Intel® Core™ i3-2xxE (above 2.2 GHz) Intel® Celeron® B8xx (above 1.6 GHz)	Intel® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)
	Chipset	Intel® QM67	Intel® Q67
	System Memory	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)
Storage	Hard Drive	2 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x SATA 3Gb/s with 2.5" HDD/SSD support 1 x SATA 6Gb/s with 2.5" HDD/SSD support
I/O Interfaces	USB 3.0	2	2
	USB 2.0	4	4
	Ethernet	2 x Combo (SFP Fiber/RJ-45) 1 x PCIe GbE by Intel® 82579 1 x PCIe GbE by Intel® 82583V	4 x RS-232 (DB-9, 2 x w/ isolation) 2 x RS-232 (RJ-45, with isolation) 1 x PCIe GbE by Intel® 82583V
	Fiber	2 x Combo (SFP Fiber/RJ-45)	2 x Combo (SFP Fiber/RJ-45)
	COM Port	4 x RS-232 (DB-9, 2 x w/ isolation) 2 x RS-232 (RJ-45, w/ isolation) 2 x RS-422/485 (RJ-45, with isolation)	4 x RS-232 (DB-9) 2 x RS-232 (RJ-45, with isolation) 2 x RS-422/485 (RJ-45, with isolation)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	8-bit digital I/O, 4-bit input/4-bit output
	CAN-bus	1 x Phoenix terminal block	1 x Phoenix terminal block
	Display	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI
	Resolution	VGA: Up to 2048 x 1536@75Hz HDMI: Up to 1920 x 1200@60Hz	VGA: Up to 2048 x 1536@75Hz HDMI: Up to 1920 x 1200@60Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n 3T3R (optional)	1 x 802.11a/b/g/n 3T3R (optional)
	Other	Optional 4-channel audio/video input PCIe Mini Card	Optional 4-channel audio/video input PCIe Mini Card
	Expansions	PCIe Mini	3 x Full-size PCIe Mini
Power	Power Input	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.3 A (Intel® Core™ i5-2540M with 4 GB DDR3 Memory)	19 V@3.1 A (Intel® Core™ i3-2100T with 4 GB DDR3 Memory)
Reliability	Mounting	Wall mount	Wall mount
	Operating Temperature	-20°C ~70°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~50°C with air flow (SSD), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	3.8 kg/6.5 kg	4.2 kg/6.9 kg
	Safety/EMC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded

Dimensions (Unit: mm)



Ordering Information

TANK-700 series

Part No.	Description
TANK-700-QM67-i5/2G-R22	Embedded System Active Fanless embedded system, Core™ i5 Dual Core 2xxE CPU (Above 2.5 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS
TANK-700-QM67-i3/2G-R22	Embedded System Active Fanless embedded system, Core™ i3 Dual Core 2xxE CPU (Above 2.2 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS
TANK-700-QM67-C/2G-R22	Embedded System Active Fanless embedded system, Celeron® Dual Core B8xx CPU (Above 1.6 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS

TANK-720 series

Part No.	Description
TANK-720-Q67-i5/2G-R21	Fanless embedded system, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS
TANK-720-Q67-i3/2G-R21	Fanless embedded system, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS
TANK-720-Q67-P/2G-R21	Fanless embedded system, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS

Options

Options	Part No.	Description
Gigabit Ethernet SFP Module	SFP1G-SX-I	1Gbps SFP optical transceiver, multi-mode/550m, 850nm (0°C ~ 70°C)/industrial grade (-20°C ~ 85°C)
	SFP1G-MLX-I	1Gbps SFP optical transceiver, multi-mode/2Km, 1310nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
	SFP1G-LX10-I	1Gbps SFP optical transceiver, single-mode/10Km, 1310nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
	SFP1G-XD50-I	1Gbps SFP optical transceiver, single-mode/50Km, 1550nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
Fiber Cord	FPC-LCLC-MM3M	Optical connector LC/LC, multi-mode, diameter 62.5/125 µm, length 3m
Fiber Cord	FPC-SCSC-SS3M	3m length cable with SC to SC connector (single mode, 9/125µm)
Wi-Fi Kit	EMB-WIFI-KIT03-R10	3T3R Wi-Fi module kit for embedded system, IEEE 802.11a/b/g/n, 1 x Wi-Fi module, 3 x RF cable, 3 x Antenna, RoHS
OS: XP	TANK-700-QM67-XPE-R10	OS Image with XPE, For TANK-700 QM67 Series, with CDROM, RoHS
	TANK-720-Q67-XPE-R10	OS Image with XPE, For TANK-720 Q67 Series, with DVDROM, R10
OS: Windows Embedded 7	TANK-700-QM67-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-700 QM67 Series, CD-ROM, RoHS
	TANK-720-Q67-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-720 Q67 Series, DVD-ROM, R10

Packing List

Item	Qty	Description
Pluggable DC-in Terminal Block	1	4-pin
Pluggable CAN-bus Terminal Block	1	3-pin
Pluggable Remote Control Terminal Block	1	2-pin
RJ-45 to DB-9 COM Port Cable	4	Round cable, RS-232/422/485, RS-232 cable, 2, 300mm, 26AWG, (A)D-SUB 9P male, (B)RJ-45 8P8C+SHELL, RoHS
Power Cord Convert Cable	1	Convert normal type cord to triangle type cord cable
Power Cord	1	1500 mm, European Standard
Power Adapter	1	FSP090-DIEBN2, 90 V~264 V AC input, 90 W, 19 V DC output, ErP, 4-pin DIN
Mounting Bracket	2	
Mounting Bracket Screws	8	M3*6 mounting bracket screws
Chassis Screw	8	M3*4 chassis screws for backup
One Key Recovery CD	1	DVD-ROM disk for One Key Recovery, RoHS
Utility CD	1	Drivers and user manual

TANK-620

- Intel Skylake ULT CPU
- Fanless Embedded Computer



Features

- Intel® Celeron® 3855U Skylake processor, TDP 15W
- Multiple COM port (up to 14)
- Multiple USB & LAN
- 24-bit DIO control
- DIO & COM port with TX signal LED indicator for data transmission indication
- Easy accessible storage
- E-Window for expansion

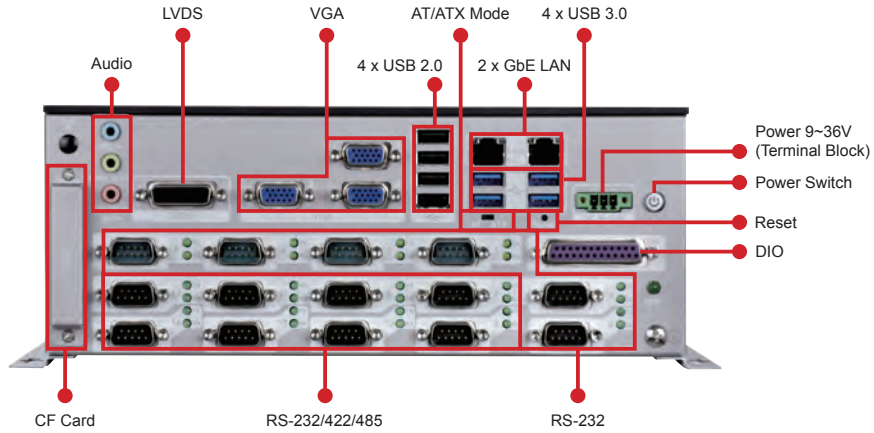


Specifications

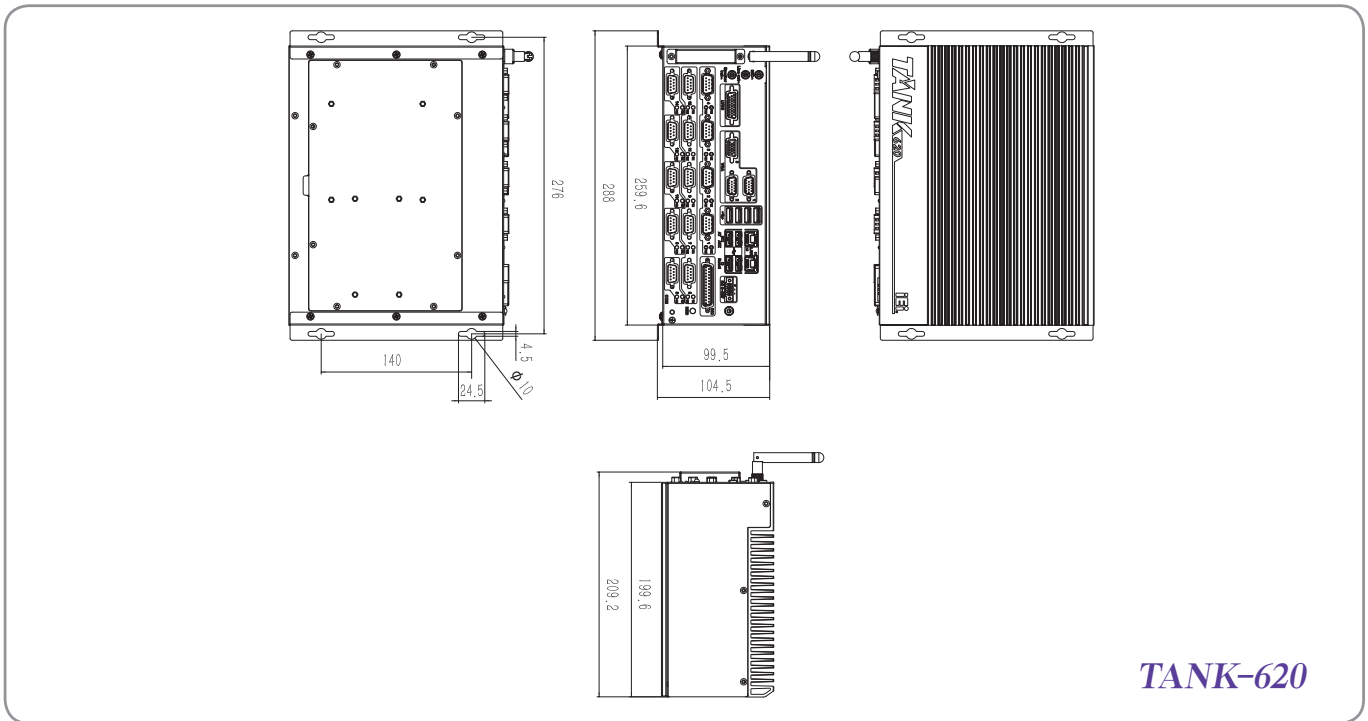
Model Name		TANK-620
Chassis	Color	Black C + Silver
	Dimensions (WxDxH)	260 x 200 x100
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® 3855U 15W Skylake processore
	Chipset	SoC
	System Memory	1 x 260-pin DDR4 SO-DIMM one on-board DDR4 4GB pre-installed (system max: 32GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
	CF	1 x CF card (optional*)
	NVRAM	1 Mb FRAM
I/O Interfaces	USB 3.0	4
	USB 2.0	4
	Ethernet	2 x RJ-45 2 x Intel® I211-AT
	RS-232/422/485	6 x RS-232 (DB-9) 8 x RS-232/422/485 ports with automatic flow control (DB-9)
	Digital I/O	1 x 24-bit digital I/O
	Display	2 x VGA, 1 x LVDS or 3 x VGA
	Resolution	3 x VGA (up to 1920 x 1200@60Hz) or 1 x LVDS (up to 1920 x 1200@60Hz) 2 x VGA (up to 1920 x 1200@60Hz)
	Audio	1 x Mic in, 1 x Speaker out, 1 x Line in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Expansions	PCIe Mini
Power Input		9 ~ 36 V DC +/- 5%
Power	Power Consumption	TBD
	Others	1 x System reset, power button, AT/ATX switch
	Mounting	Wall Mount
Reliability	Operating Temperature/Humidity	-30 ~ 70 °C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40 ~ 85 °C
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Operation Vibration	MIL-STD-810G 514.6C-1 (with SSD)
	Weight (Net/Gross)	TBD
	Safety / EMC	CE/FCC
	Watchdog Timer	Programmable 1~255 sec/min
Others	LED	power LED, HDD LED, COM PORT
OS	Supported OS	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10

* only support with SATA converter card

Fully Integrated I/O



Dimensions (Unit: mm)



TANK-620

Ordering Information

Part No.	Description
TANK-620-ULT3-CE/4G-VG-R10	Fanless wide temperature embedded system with Intel® Celeron® 3855U 1.6GHz (dual-core, TDP 15W), on-board 4GB DDR4 memory, 9 V~36V DC, with USB, three VGA, dual Intel® PCIe GbE, COM, DIO, RoHS
TANK-620-ULT3-CE/4G-VL-R10	Fanless wide temperature embedded system with Intel® Celeron® 3855U 1.6GHz (dual-core, TDP 15W), on-board 4GB DDR4 memory, 9 V~36V DC, with USB, two VGA & LVDS, dual Intel® PCIe GbE, COM, DIO, RoHS

Options

Part No.	Description
32702-000400-200-RS	European power cord
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
63040-010096-100-RS	Power adapter; FSP096-AHAN2; 9NA0961102; Active PFC; Vin:90~64VAC; 96W; Dim:75.6*151.3*25.4mm; plug=6.5mm; cable=1500mm; Erp (noload 15W); Vout: 12VDC; 4-pin DIN w/ lock; CCL; RoHS
TANK-620-ULT3-WES7E64-R10	OS image with Windows® Embedded Standard 7E 64-bit for TANK-620-ULT3 series, with DVD-ROM, RoHS

Packing List

1 x Power cord	1 x Wall mount bracket	1 x Screw set	1 x One Key Recovery CD	1 x Utility CD
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TANK-610-BW

Fanless Embedded System



Features

- Intel® Celeron® N3160 processor
- Multiple COM ports: six RS-232 and two RS-232/422/485
- VGA and HDMI dual independent display
- mSATA and one 2.5" SATA storage device
- Wide range temperature



Specifications

Model Name	TANK-610-BW	
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	184 x 200.6 x 58.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® N3160 processor (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
	Chipset	SoC
	System Memory	2 x 204-pin DDR3L SO-DIMM, one 2GB pre-installed (system max: 8 GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
I/O Interfaces	USB 3.0	4
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I210-IT controller
	COM Port	6 x RS-232, 2 x RS-232/422/485
	Display	1 x VGA, 1 x HDMI
	Resolution	VGA: Up to 1920 x 1200@60HZ, HDMI: Up to 3840 x 2160@30Hz
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11 b/g/n (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini (support mSATA, co-lay SATA, w/o USB Signal), 1 x Half-size PCIe Mini
Power	Power Input	DC Jack: 9 V~36 V DC
	Power Consumption	12 V@1.49 A (Intel® Celeron® N3160 with 4 GB DDR3L memory)
Reliability	Mounting	Wall mount, VESA 100
	Operating Temperature	-40°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40°C ~ 80°C
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6C-1 (with SSD)
	Weight (Net/Gross)	2.2 kg/3 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

Various Applications



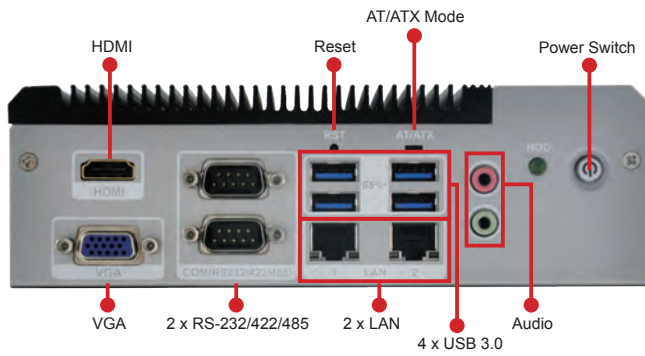
3 x Kiosk

Control Center

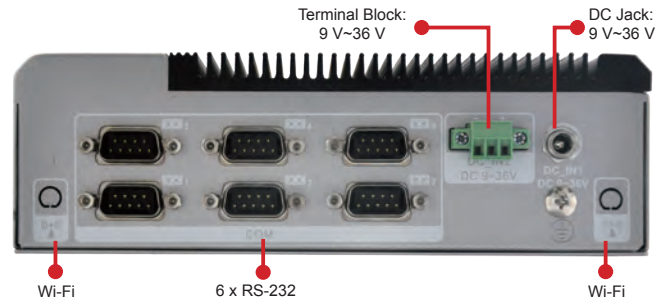
3 x AFC

Fully Integrated I/O

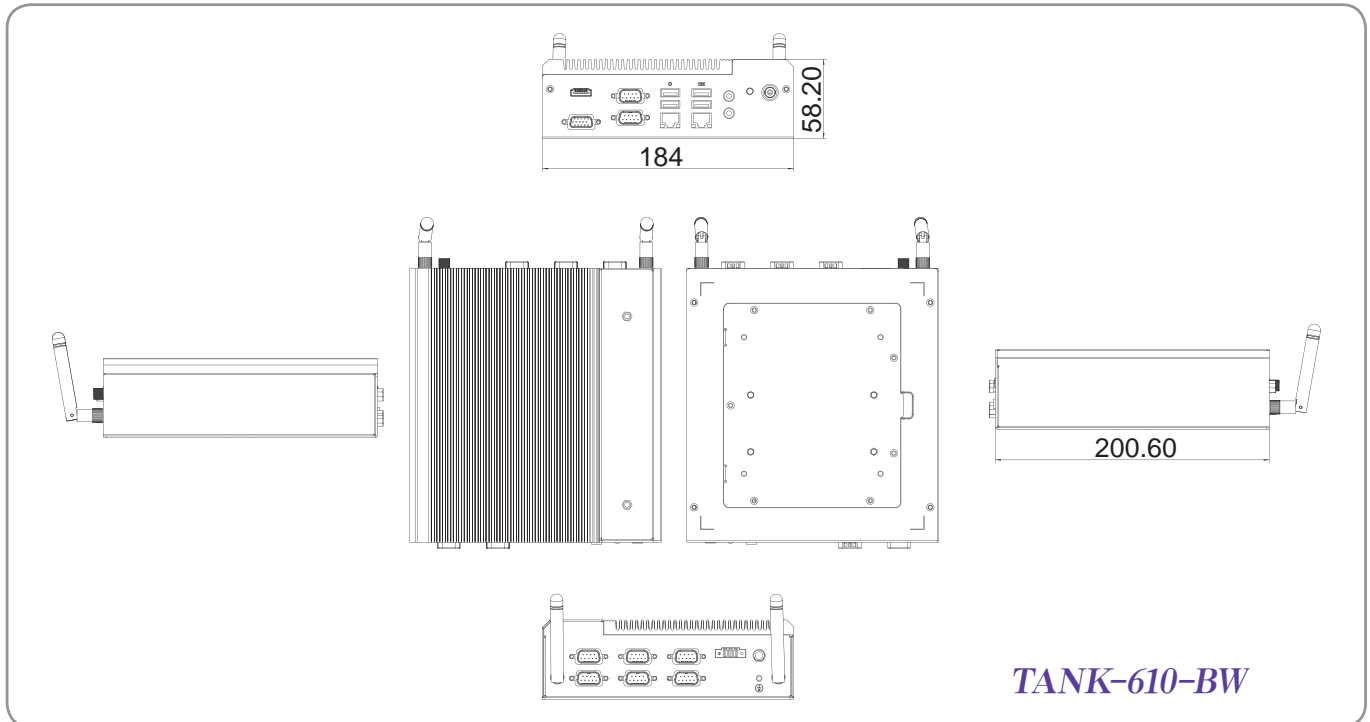
Front View



Rear View



Dimensions (Unit: mm)



TANK-610-BW

Ordering Information

Part No.	Description
TANK-610-BW-N3/2G-R10	Fanless wide temperature embedded system with Intel® Celeron® N3160 1.6GHz, (up to 2.24 GHz, quad-core, TDP 6W), 2GB DDR3L pre-installed memory, 9 V~36 V DC, with RS-232/422/485, USB 3.0, VGA/HDMI, dual Intel® PCIe GbE, RoHS

Options

Part No.	Description
AFLWK-19	VESA 100 mount kit
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TANK-610-BW-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-610 BW Series, with DVD-ROM, RoHS, R10
DK-100-R10	VESA 100 to DIN-Rail mounting kit

Packing List

Item	Qty	Description
Power cord	1	1500 mm, European Standard
Power adapter (Meet PSE & ErP)	1	FSP065-REBN2, 90 V~264 V AC input, 65 W, 19 V DC output, ErP
Wall mount bracket	1	Wall mount bracket/holder
Screw set	1	
One Key Recovery CD	1	DVD-ROM disk for One Key Recovery, RoHS
Utility CD	1	Drivers and user manual

TANK-600-D2550 ■ Fanless Embedded System

TANK-600-N2600 ■ Intel® Celerarview Dual Core Atom™ CPU

Features

- Intel® Atom™ D2550 1.86 GHz dual-core processor
- Intel® Atom™ N2600 1.6 GHz dual-core processor
- Eight COM ports: six RS-232 and two RS-232/422/485
- 6 x USB 2.0
- Dual PCIe GbE LAN for high-speed network applications



Specifications

Model Name		TANK-600-D2550	TANK-600-N2600
Chassis	Color	Black C + Silver	
	Dimensions (WxDxH) (mm)	193.4 x 200 x 57	
	System Fan	Fanless	
	Chassis Construction	Aluminum alloys	
Motherboard	CPU	Intel® Atom™ D2550 1.86 GHz	Intel® Atom™ N2600 1.6 GHz
	Chipset	Intel® NM10	
	System Memory	On-board DDR3 4 GB	On-board DDR3 2 GB
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	
I/O Interfaces	USB 2.0	6	
	Ethernet	2 x RJ-45 PCIe GbE by Realtek 8111E controller	
	COM Port	6 x RS-232 (DB-9) 2 x RS-232/422/485 (DB-9)	
	Display	1 x VGA	
	Resolution	VGA: Up to 2048 x 1536@75Hz	
	Audio	1 x Line-out, 1 x Mic-in	
	Expansions	PCIe Mini	1 x Half-size PCIe Mini 1 x Full-size PCIe Mini (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 9 V~36 V DC	
	Power Consumption	12 V@2.2 A (Intel® Atom™ D2550 with 4 GB DDR3 memory)	12 V@2 A (Intel® Atom™ N2600 with 2 GB DDR3 memory)
Reliability	Mounting	VESA 100, DIN-Rail	
	Operating Temperature	-20°C ~70°C with air flow (SSD), 5% ~ 95%, non-condensing	
	Storage Temperature	-30°C ~80°C	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	
	Weight (Net/Gross)	2.2 kg/3 kg	
	Safety/EMC	CE/FCC	
	OS	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded

Fulfill a Great Variety of Applications



AFC



ATM



Automation



Kiosk

Wide Range Temperature



The TANK-600 supports -20°C~70°C wide range environment.

The best choice for some ruggedize applications.

RS-232



RS-232 is a standard serial port to connect between DTE (Data Terminal Equipment) and DCE (Data Communication Equipment). With the advantage of long distance transmission and simple transmission line, the TANK-600 can fulfill users' demand to connect a large number of devices through the RS-232 serial ports.

Versatile Mounting Ways

The TANK-600 series can be mounted with VESA 100 devices, DIN rail or wall mount kit providing users different ways to meet their applications.



Wall mount bracket

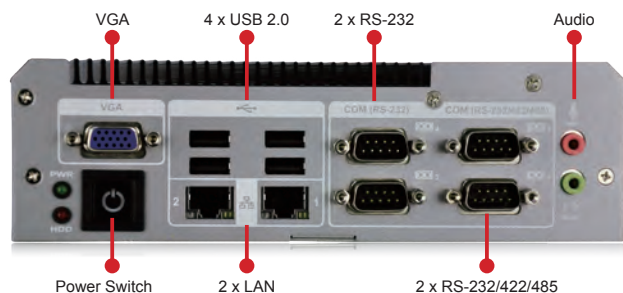


DIN-Rail

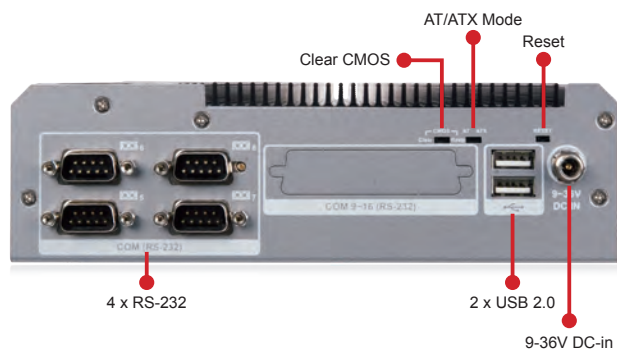


VESA 100

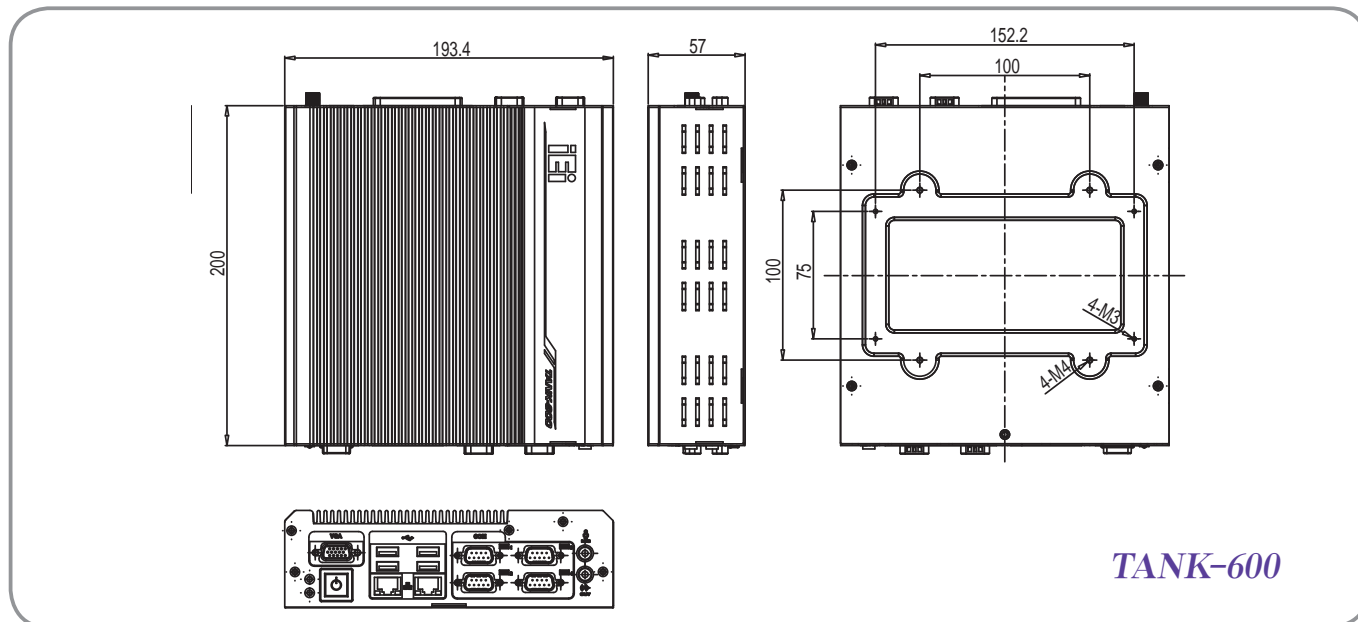
Front View



Rear View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-600-CV-D2550-8C/4G-R11	Fanless wide temperature embedded system with Intel® Atom™ D2550 1.86 GHz processor dual-core CPU, with 4 GB on-board DDR3 RAM, one VGA, dual GbE LAN, six USB 2.0, two RS-232/422/485, six RS-232, RoHS
TANK-600-CV-N2600-8C/2G-R11	Fanless wide temperature embedded system with Intel® Atom™ N2600 1.6 GHz processor dual-core CPU, with 2 GB on-board DDR3 RAM, one VGA, dual GbE LAN, six USB 2.0, two RS-232/422/485, six RS-232, RoHS

Options

Part No.	Description
DK-84MB	DIN mount kit for embedded system, black, RoHS
AFLWK-19	VESA 100 mount kit

Packing List

Item	Description
Power cord	Power cord, European code (VDE), 2, 1830 mm, (A) Plug (16 A 250 V) SH-005, (B) Connector (10 A 250 V) SH-006, Self-Man, CCL, RoHS
Power adapter (Meet PSE & ErP)	FSP065-REBN2, 90 V~264 V AC input, 65 W, 19 V DC output, ErP
Wall mount bracket	Wall mount bracket/holder NCT processing formation, TANK-600-CV, PAINTING, PMS 8401C, 41019-1106XX, NCT(N), SECC, VER:00, CCL, RoHS
Screw set	
One Key recovery CD	CD-ROM Disk, V1.3, RECOVERYV13.ISO, for One Key Recovery, RoHS
Utility CD	Drivers and user manual

TANK-101B-D525-N455

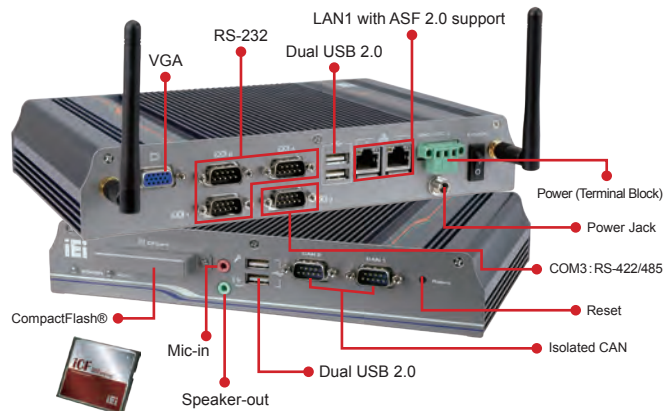
Fanless Embedded Controller with Dual-Core Intel® Atom™ D525 Processor

Features

- Dual-core Intel® Atom™ D525 processor inside
- Wide range 9 V~36 V DC power input
- Isolation protected COM and CAN communication
- Extended temperature fanless design supports -20°C ~ 70°C (N455)



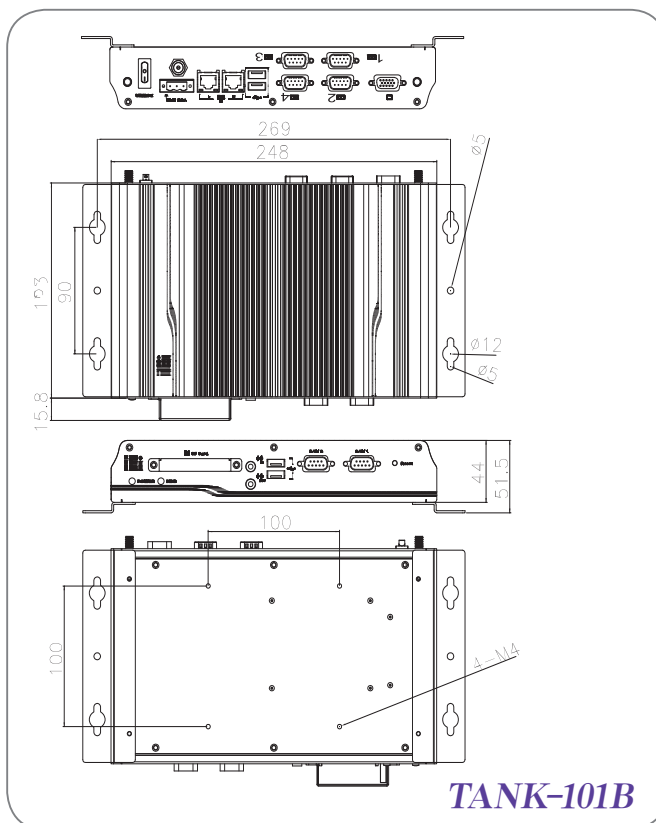
Isolation Protection



Specifications

Model Name	TANK-101B		
Chassis	Color	Cool Gray+Blue	
	Dimensions (WxDxH) (mm)	248 x 153 x 44	
	System Fan	Fanless	
	Chassis Construction	Aluminum alloys with heavy duty metal	
Motherboard	CPU	Intel® Atom™ D525 1.8 GHz Intel® Atom™ N455 1.66 GHz	
	Chipset	Intel® ICH8M	
Storage	System Memory	On-board DDR3 1 GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (system max: 3 GB)	
	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	
	CF Card/CFast	1 x CF Type II	
System Function	USB 2.0	4	
	Ethernet	2 x RJ-45 PCIe GbE by Realtek 8111E controller	
	COM Port	3 x RS-232 (DB-9) 1 x RS-422/485 (DB-9, Default RS-422 with isolation)	
	CAN Bus	2 x CAN-bus (DB-9 w/ isolation)	
	Display	1 x VGA	
	Resolution	VGA: Up to 2048 x 1536@60Hz	
	Audio	1 x Line-out, 1 x Mic-in	
	Wireless	1 x 802.11b/g/n (optional)	
	Expansions	PCIe Mini	1 x Full-size PCIe Mini
	Power	Power Input	DC Jack: 9 V~36 V DC
Power Consumption		12 V@1.85 A (Intel® Atom™ D525 with DDR3 1 GB)	
Reliability	Mounting	Din-rail, wall mount	
	Operating Temperature	-20°C~60°C (D525 with air flow CF/SSD), 5% ~ 95%, non-condensing -20°C~70°C (N455 with air flow CF/SSD), 5% ~ 95%, non-condensing	
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810F 514.5C-1 with SATA HDD MIL-STD-810F 514.5C-2 with CompactFlash®/SSD	
	Weight (Net/Gross)	2.1 kg/3.9 kg	
OS	Safety/EMC	CE/FCC	
	Supported OS	Microsoft® Windows® XP Embedded	

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-101B-R11/D525/1GB	Extended temperture fanless embedded system with dual-core Intel® Atom™ Processor D525 1.8 GHz CPU with two isolated CAN, one isolated serial port, 1 GB DDR3 memory on board, 9 V~36 V DC in, Pantone 287C + Cool Gray 2C, -20°C ~ 60°C, RoHS
TANK-101B-R11/N455/1GB	Extended temperture fanless embedded system with Intel® Atom™ Processor N455 1.66 GHz CPU with two isolated CAN, one isolated serial port, 1 GB DDR3 memory on board, 9 V~36 V DC in, Pantone 287C + Cool Gray 2C, -20°C ~ 70°C, RoHS

Packing List

1 x Power cord	1 x SATA HDD drive cable
1 x 60W 12 V power adapter (Meet PSE & ErP)	1 x One Key Recovery CD
2 x Wall mount brackets	1 x Driver CD
1 x Screw set	1 x QIG

TANK-6000-C226

- ◆ Support IPMI 2.0 via IEI iRIS solution
- ◆ Intel® E3 1225 v3/i3 4330 high performance CPU

Features

- Workstation with Intel® C226 chipset
- Intel® E3 1225 v3/i3 4330 high performance CPU
- Support two PCIe by 8 expansion cards
- 4 x LAN port (two SFP fiber combo ports)
- 3 x 2.5" HDD/SSD bay
- Support IPMI 2.0 via IEI iRIS solution
- Support programmable OLED display module

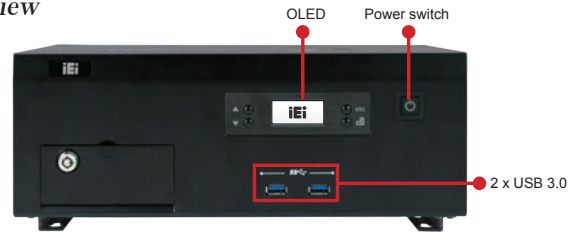


Specifications

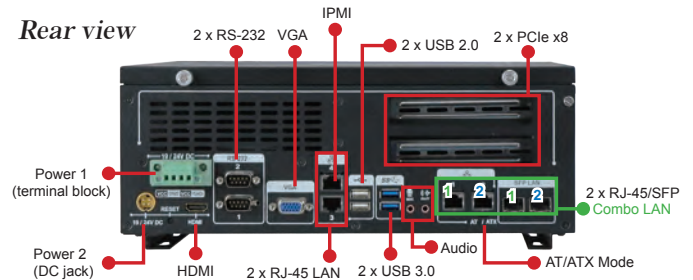
Model Name	TANK-6000-C226		
Chassis	Color	Black	
	Dimensions (WxHxD) (mm)	310 x 199.5 x 112	
	System Fan	92 mm x 92 mm x 25 mm	
	Chassis Construction	Extruded aluminum alloys	
Motherboard	CPU	Intel® Xeon® E3 1225-v3 3.2 GHz Intel® Core™ i3 4330 3.5 GHz	
	Chipset	Intel® C226	
System Memory	System Memory	4 x 240-pin DDR3 U-DIMM, 4 GB pre-installed (system max: 32 GB)	
	iRIS Solution	1 x iRIS-2400 on board	
Storage	Hard Drive	3 x 2.5" SATA 6Gb/s HDD/SSD drive bay	
	USB 3.0	4	
I/O Interfaces	USB 2.0	2	
	Ethernet	4 x RJ-45 1 x PCIe GbE by Intel® i217 PHY 3 x PCIe by GbE Intel® i210	
	Fiber	2 x Combo (SFP Fiber/RJ-45), combo with LAN 1/LAN 2	
	COM Port	2 x RS-232 (DB-9)	
	Display	1 x HDMI, 1 x VGA	
	Resolution	HDMI: Up to 1920 x 1200@60Hz VGA: Up to 1920 x 1200@60Hz	
	Audio	1 x Line-out, 1 x Mic in	
	Expansions	PCIe	2 x PCIe x8 (Gen 3)
	Power	Power Input	DC Jack: 19 V/24 V DC
		Power Consumption	19 V@4.8 A (Intel®Xeon® E3-1225 v3 with 8 GB memory)
Reliability	Mounting	Wall mount	
	Operating Temperature	-20°C ~ 55°C with air flow (SSD), 5% ~ 95%, non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	
	Weight (Net/Gross)	2.5 kg/4.6 kg	
OS	Safety/EMC	CE/FCC	
	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E	

Fully Integrated I/O

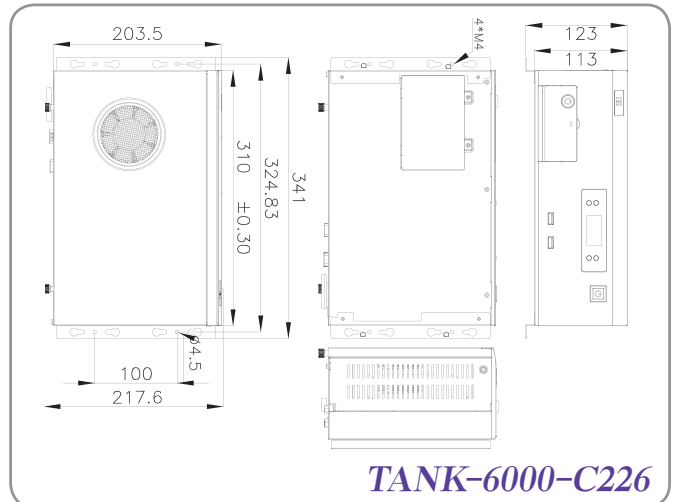
Front view



Rear view



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-6000-C226i-E3/4G-R11	Embedded System with Intel® C226 chipset, Intel® quad-core Xeon® E3-1225 v3 3.2 GHz, TDP 84W, OLED indicator, two PCIe by 8 expansion, three 2.5" SATA HDD bays, DDR3 U-DIMM 4GB pre-installed (2 x 2GB), iRIS-2400 supported, 19 V/24 V DC, RoHS, R11
TANK-6000-C226i-i3/4G-R11	Embedded System with Intel® C226 chipset, Intel® dual-core i3- 4330 3.5 GHz, TDP 54W, OLED indicator, two PCIe by 8 expansion, three 2.5" SATA HDD bays, DDR3 U-DIMM 4GB pre-installed (2 x 2GB), iRIS-2400 supported, 19 V/24 V DC, RoHS, R11

Options

Part No.	Description
TANK-6000-C226-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for TANK-6000 Series, CD-ROM, RoHS

Packing List

1 x Power Adapter (With PSE & ErP Certified)	
1 x Wall mount kit	1 x One Key Recovery CD
1 x Screw pack	1 x Utility CD

MVS-100-Q170

- High-Performance 6th Generation Intel® Core™ Processor
- Ruggedized PoE Embedded Computer

Preliminary

Features

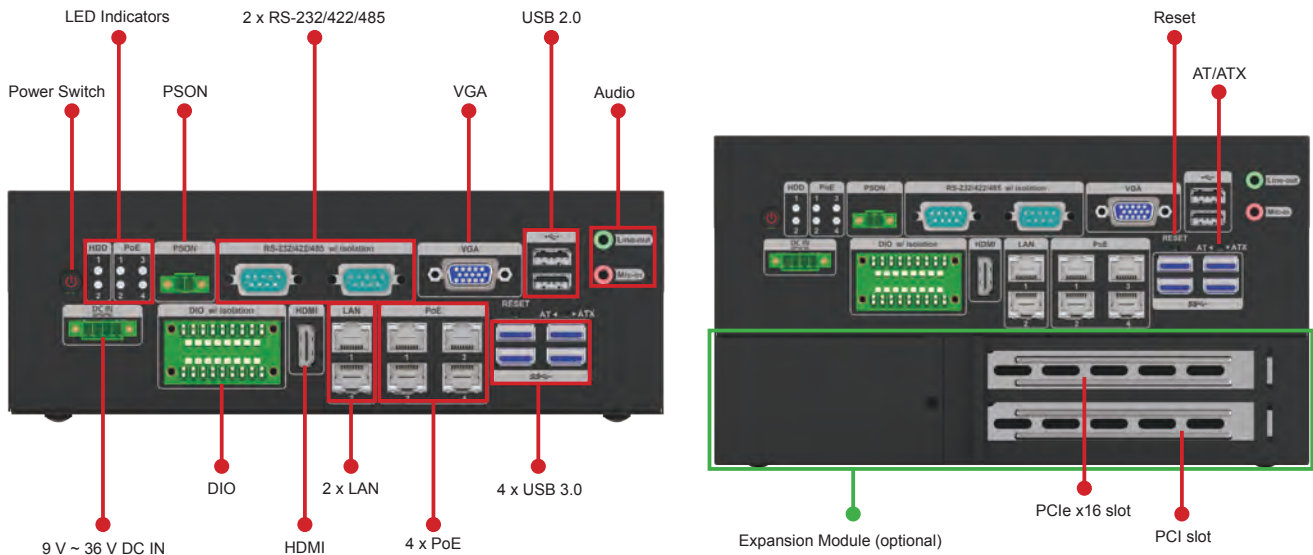
- 6th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- 4 x PoE ports (IEEE 802.3 af & IEEE 1588 compliant)
- Support dual display VGA+HDMI
- Rich high-speed I/O interfaces on one side for easy installation
- Great flexibility for hardware expansion



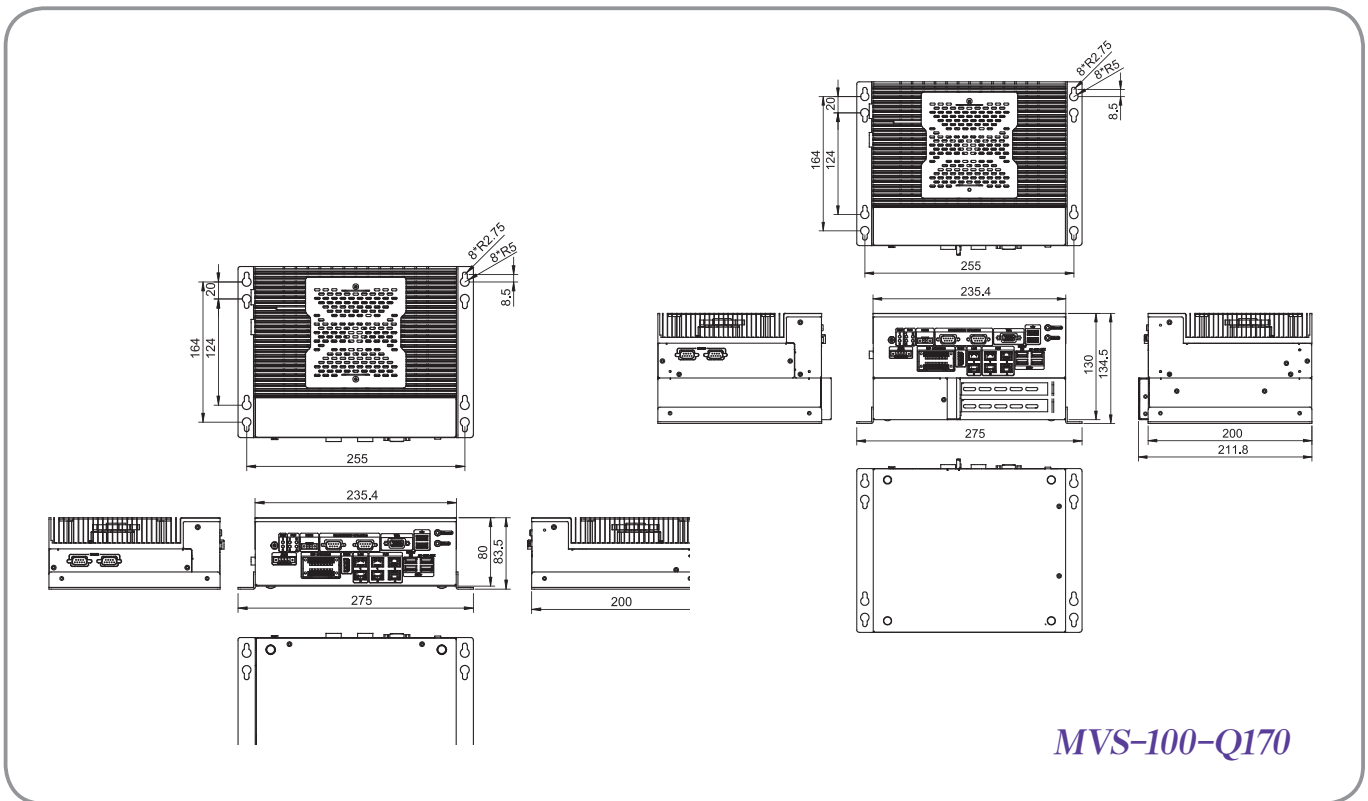
Specifications

Model Name	MVS-100-Q170	
Chassis	Color	TBD
	Dimensions (WxDxH) (mm)	86 x 200 x 235.4
	System Fan	Fanless (CPU TDP: 35W) / Fan (CPU TDP: 65W)
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i7-6700TE (2.4GHz, quad-core, TDP 35W) Intel® Core™ i5-6500TE (2.3GHz, quad-core, TDP 35W) Intel® Core™ i7-6700 (3.4GHz, quad-core, TDP 65W) Intel® Core™ i5-6500 (3.2GHz, quad-core, TDP 65W)
	Chipset	Intel® Q170
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 64GB)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bays support RAID 0/1
	mSATA	1
I/O Interfaces	USB 3.0	4
	USB 2.0	3 (1 x internal type A)
	PoE	4 x RJ-45 4 x PCIe GbE by Intel® I210 controller support PoE IEEE802.3af (each port max 15.4W)
	Ethernet	2 x RJ-45 LAN1: Intel® I219LM controller LAN2: Intel® I210 controller
	COM Port	2 x RS-232/422/485 (DB-9 w/2.5kV isolation protection)
	Digital I/O	1 x Terminal block w/ 2.5kV npn/pnp type isolation protection 16-bit digital I/O, 8-bit input/8-bit output
	Display	1 x VGA, 1 x HDMI
	Resolution	HDMI: up to 4096x2304@24Hz
	Audio	1 x Line-out, 1 x Mic-in
	TPM 2.0	1 (optional)
	Expansions	PCIe Mini
Expansion Module		1 x PCIe x16, 1 x PCI (optional)
Power	Power Input	3-pin terminal block: 9 V ~ 36 V DC
	Remote PWR	PSON
	Power Consumption	TBD
Reliability	Mounting	DIN Rail, Wall mount
	Operating Temperature/Humidity	-20°C~ 60°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Storage Temperature/Humidity	-40°C~+85°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operation Vibration	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	TBD
	Safety / EMC	CE/FCC class A
OS	Watchdog Timer	Programmable 1~255 sec/min
	Supported OS	Microsoft® Windows 10, Microsoft® Windows® Embedded Standard 7 E

Fully Integrated I/O



Dimensions (Unit: mm)



MVS-100-Q170

Ordering Information

Part No.	Description
MVS-100-Q170-i5TE/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, four PoE, 16-bit DIO, VGA/HDMI, 9~36V DC, RoHS
MVS-100-Q170-i7TE/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, four PoE, 16-bit DIO, VGA/HDMI, 9~36V DC, RoHS
MVS-100-Q170-i5/4G-R10	Ruggedized fan embedded system with Intel® Core™ i5-6500 3.2 GHz (up to 3.6 GHz, quad core, TDP 65W), 4GB DDR4 pre-installed memory, four PoE, 16-bit DIO, VGA/HDMI, 9~36V DC, RoHS
MVS-100-Q170-i7/4G-R10	Ruggedized fan embedded system with Intel® Core™ i7-6700 3.4 GHz (up to 4 GHz, quad core, TDP 65W), 4GB DDR4 pre-installed memory, four PoE, 16-bit DIO, VGA/HDMI, 9~36V DC, RoHS

DIN-Rail Embedded System




Model Name	DRPC-130-AL	DRPC-120-BT	DRPC-100-CV	
Chassis	Color	Black	Black	
	Dimensions (WxDxH) (mm)	154 x 123 x 56	74.08 x 140 x 171.5	59.4 x 140 x 171.5
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Atom™ E3930 1.8 GHz	Intel® Atom™ E3845 1.91 GHz	Intel® Atom™ N2800 1.86 GHz
	Chipset	SoC	SoC	Intel® NM10
	System Memory	1 x 204-pin DDR3L SO-DIMM 4 GB pre-installed (system max: 8GB)	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)	1 x 204-pin DDR3 SO-DIMM 2 GB pre-installed (system max: 4GB)
IPMI	iRIS Solution	N/A	1 x iRIS-2400 (optional)	N/A
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	N/A
	eMMC	1 x 8GB eMMC 5.0 support (optional)	N/A	N/A
	CF Card/CFast	N/A	N/A	N/A
I/O Interfaces	USB 3.0	4	2	N/A
	USB 2.0	1 by pin header	2	4
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211 controller	2 x RJ-45 1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller	2 x RJ-45 Realtek 8111E PCIe GbE
	COM Port	4 x RS-232/422/485 (DB-9)	2 x RS-232 (DB-9 w/ 3kV isolation protection*) 2 x RS-422/485 (DB-9 w/ 3kV isolation protection*)	2 x RS-232 (DB-9 w/ 3kV isolation protection*) 2 x RS-422/485 (DB-9 w/ 3kV isolation protection*)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output (DB-9)	8-bit digital I/O, 4-bit input/4-bit output	1 x Phoenix terminal block w/ 3kV isolation protection 8-bit digital I/O, 4-bit input/4-bit output
	CAN-bus	1 x DB-9 w/ 2.5kV isolation protection supporting 2-port CAN-bus	N/A	1 x Phoenix terminal block w/ 3kV isolation protection, supporting 2-port CAN-bus
	Display	2 x HDMI 1.4b	1 x VGA, 1 x HDMI	1 x VGA
	Resolution	Up to 3840 x 2160 @ 30Hz	Up to 1920 x 1200 @ 60Hz	Up to 1920 x 1200 @ 60Hz
	SIM	1 x internal On-board SIM slot	N/A	N/A
	Audio	N/A	N/A	N/A
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2x10 pin, optional)	N/A	N/A
	Other	1 x Power Button, 1 x LED for HDD (Green), 1 x Reset Button, 1 x LEXD for Power (Red), 1 x AT/ATX Switch	N/A	SATA DOM support
	Expansions	PCIe Mini	1 x Full-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)	1 x Half-size PCIe Mini slot (w/o USB signal) 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
M.2		N/A	N/A	N/A
Power	Power Input	3-pin terminal block: 12 V ~ 24 V DC	3-pin terminal block: 9 V ~ 30 V DC	3-pin terminal block: 9 V ~ 28 V DC
	Power Consumption	TBD	12 V@ 2.1 A (Intel® Atom™ E3845 with 2 GB memory)	12 V@ 1.85 A (Intel® Atom™ N2800 with 2 GB DDR3 memory)
	Remote PWR	PSON 2-pin terminal block	N/A	N/A
Reliability	Mounting	DIN-rail / Wall mounting	DIN-rail	DIN-rail
	Operating Temperature	-20°C ~70°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~ 60°C with air flow (mSATA), 5% ~ 95%, non-condensing	-25°C ~65°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	1.4Kg/2.5Kg	1.4 kg/2.5 kg	1 kg/2 kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC
	Watchdog Timer	Programmable 1~255 sec/min	N/A	N/A
	IP Level	IP40	N/A	N/A
OS	Supported OS	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded	

DRPC-130-AL

■ Fanless DIN-Rail Embedded System

■ Intel® Atom™ E3930 1.8GHz Solution

Preliminary



Features

- Intel® Atom™ E3930 1.8GHz
- DDR3L 1.35V SO-DIMM supported
- Serial, CAN bus and digital I/O interface

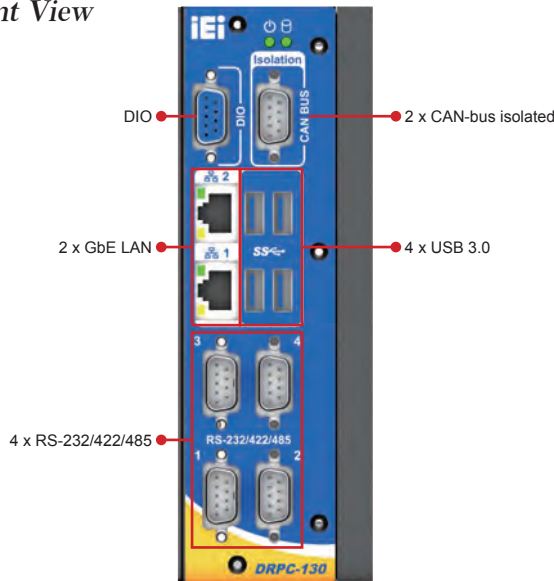


Specifications

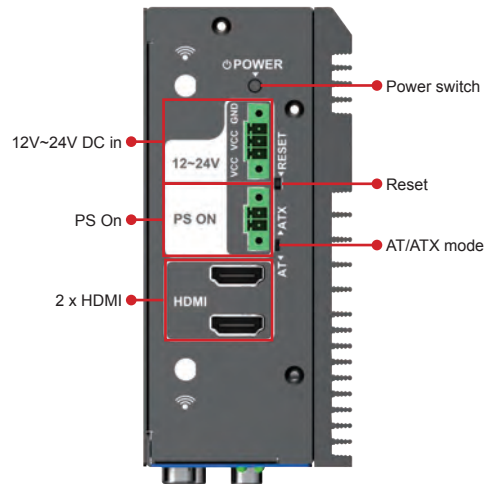
Model Name		DRPC-130-AL
Chassis	Color	Black
	Dimensions (WxDxH)	154 x 123 x 56
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ E3930 1.8GHz
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM 4 GB pre-installed (system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	eMMC	1 x 8GB eMMC 5.0 support (optional)
I/O Interfaces	USB 3.0	4
	USB 2.0	1 by pin header
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211 controller
	COM Port	4 x RS-232/422/485 (DB-9)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output (DB-9)
	CAN Bus	1 x DB-9 w/ 2.5kV Isolation protection, supporting 2-port CAN-bus
	Display	2 x HDMI 1.4b
	Resolution	Up to 3840 x 2160@30Hz
	SIM	1 x Internal on-board SIM slot
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2x10 pin) (optional)
Others	1 x Power Button	1 x LED for HDD (Green)
	1 x Reset Button 1 x AT/ATX Switch	1 x LED for Power (Red)
Expansions	PCIe Mini	1 x Full-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	3-pin terminal block: 12 V ~ 24 V DC
	Remote PWR	PSON 2-pin terminal block
	Power Consumption	TBD
Reliability	Mounting	DIN-rail / Wall mounting
	Operating Temperature	-20°C ~ 70°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	1.4Kg/2.5Kg
	Safety / EMC	CE/FCC
	Watchdog Timer	Programmable 1~255 sec/min
	IP Level	IP40
OS	Supported OS	Microsoft® Windows 10

Fully Integrated I/O

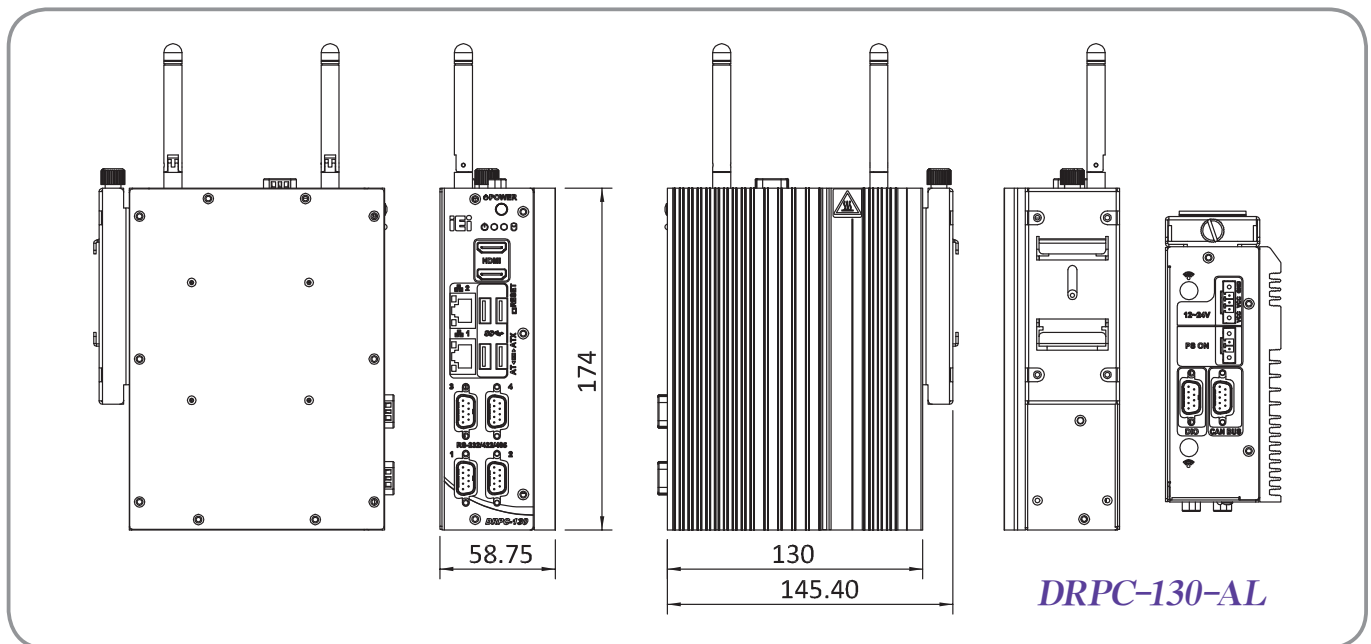
Front View



Top View



Dimensions (Unit: mm)



Packing List

1 x Mounting bracket	1 x Screw kit
1 x SATA cable & SATA power cable	1 x Utility CD

Ordering Information

Part No.	Description
DRPC-130-AL-E1/4GB-R10	Fanless embedded system, Intel® Apollo Lake E3930 1.8GHz, TDP 6.5W, 4GB DDR3L pre-installed memory, two HDMI, 8 CH DIO, 12V ~ 24V DC and RoHS

Options

Item	Part No.	Description
DIN-Rail Mounting Kit	DK-DRPC-R10	Rugged DIN-rail mounting kit for DPRC series only
Adapter	63040-010036-121-RS	Power adapter, FSP036-RBBN2, Vin: 90~264VAC, 36W, Erp (NO LOAD 0.1W), Vout:12VDC, Φ2.5/Φ5.5/lock, CCL, RoHS
Power Cable	32102-026500-100-RS	Power cable 200mm, (A) DC jack to (B) 3-pin terminal block P=3.5
Power Cord	32702-000400-200-RS	European power cord
Wireless Kit	EMB-WIFI-KIT01-R20	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
OS:Windows Embedded 10	DRPC-130-WES10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit for DRPC-130-AL Series, with DVD-ROM, RoHS

DRPC-100-CV DRPC-120-BT

- Fanless DIN-Rail Embedded System
- Intel® E3845 1.91GHz/Intel® N2800 1.86GHz Solution

Features

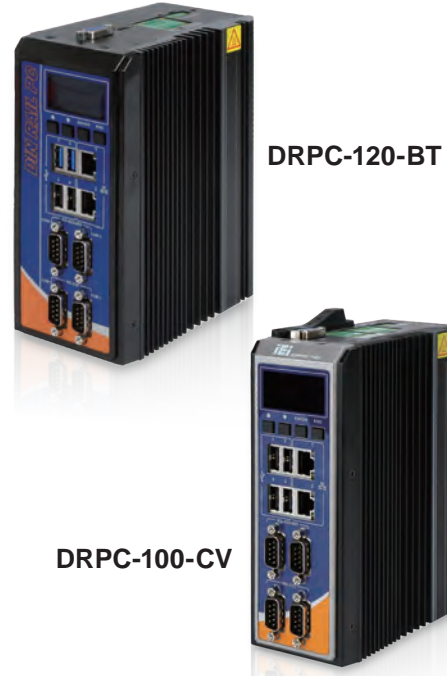
DRPC-120-BT

- Intel® Atom™ E3845 1.91GHz
- 1 x 2.5" SATA HDD/SSD drive bay
- DDR3L 1.35V SO-DIMM support
- Programmable OLED display
- 8-bit digital I/O (4-bit inputs/outputs)
- IEI iRIS-2400 solution



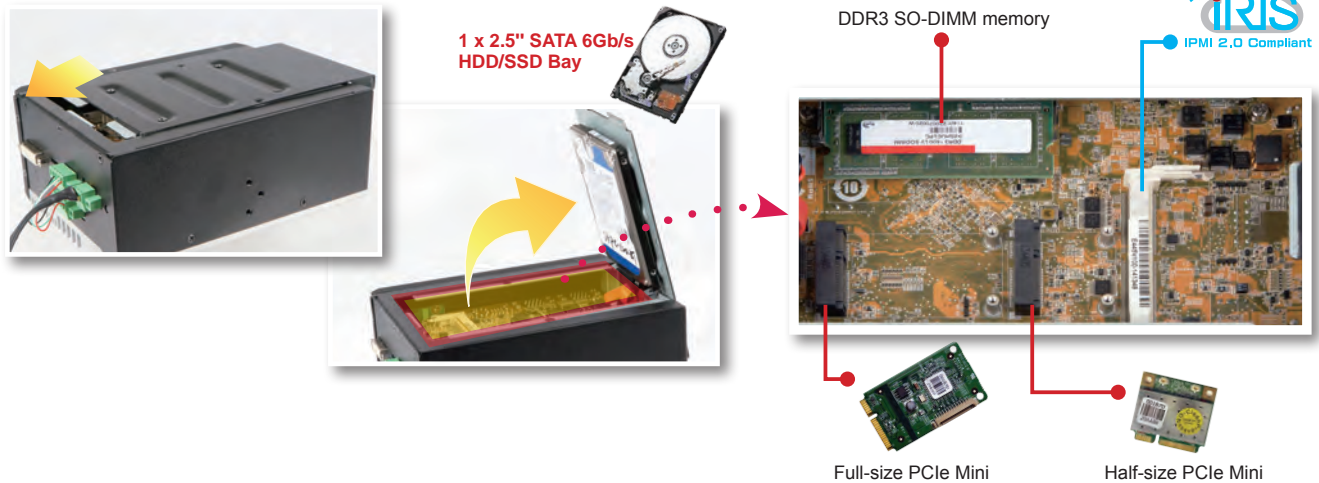
DRPC-100-CV

- Intel® Atom™ N2800 1.86GHz
- Serial, CAN-bus and digital I/O interfaces with isolation protection
- 1 x PCIe Mini expansion slot for add-on function purpose
- Programmable OLED display



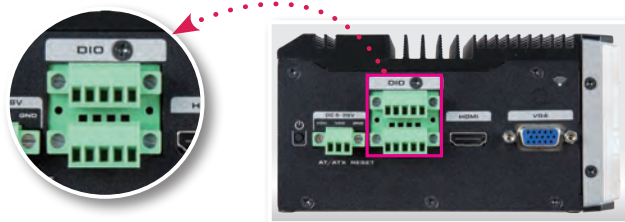
User Friendly Installation

The DRPC-120 is designed with an easy removable back cover for users to install SATA HDD, PCIe Mini cards, DDR3 memory modules or iRIS-2400 modules conveniently.



8-Channel Digital I/O

The DRPC-120 is outfitted with 8-channel (4-bit input and 4-bit output) digital I/O to provide digital input and output signals for control of industrial devices.



Fanless

The DRPC-100/120 series provides the best components for generating less heat, while maintaining high system performance. With the fanless design, the DRPC-100/120 reduces system failure caused by fans and extends the lifetime of the device.



iRIS Solution



IPMI 2.0 Compliant

By installing the IEI iRIS-2400 module, the DRPC-120 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

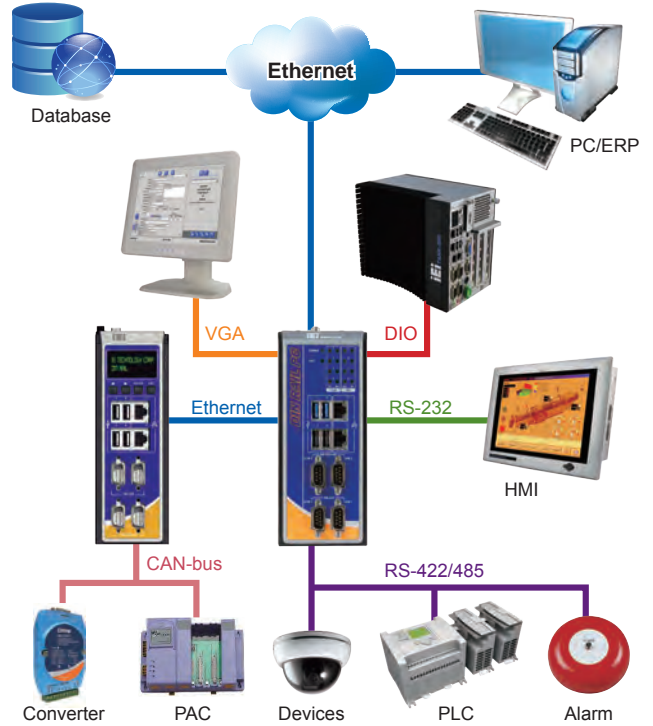
DIN Rail Standard

A DIN rail is a metal rail of a standard type widely used for mounting circuit breakers and industrial control equipment inside equipment racks. These products are typically made from cold rolled carbon steel sheet with a zinc-plated and chromated bright surface finish. The term derives from the original specifications having been published by Deutsches Institut für Normung (DIN) in Germany, which have since been adopted as European (EN) and international (ISO) standards.



Communication Gateway

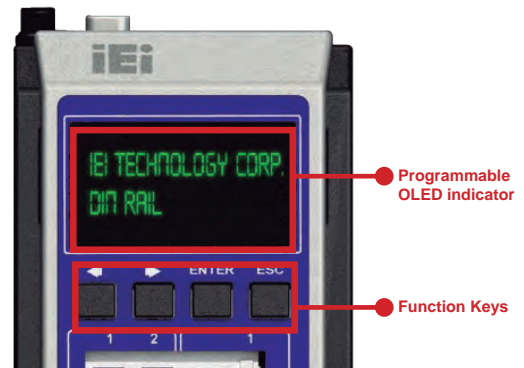
For high surge ESD automation environments, the DRPC-100 provides isolated digital IO, CAN-bus and serial communication ports.



OLED Indicator Function

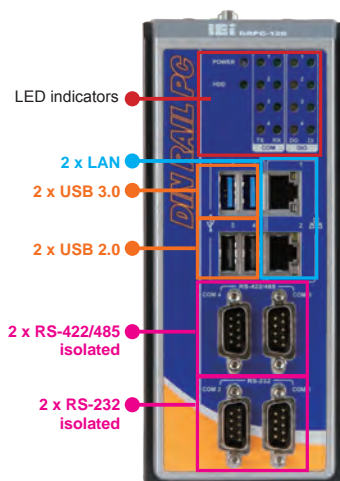
- Programmable OLED Display**
 Users can program their own APIs to show any information by the OLED display.
- Programmable Function Keys**
 Users can program the four keys to control DRPC-100 & OLED display.
- Terminal Screen & Status Display**
 It supports both text format and graphic format.
- Protocol & Demo Source Code Open**
 IEI provides the protocol & demo source code for users to program their own usage.

DRPC-100/120 OLED indicator

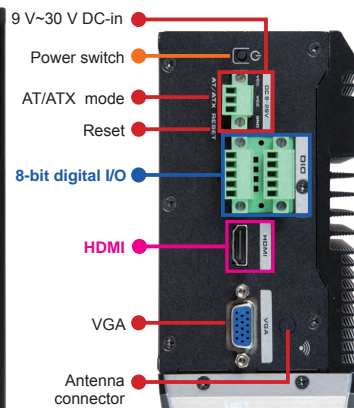


Fully Integrated I/O

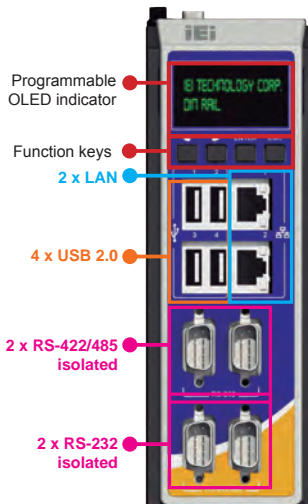
DRPC-120 Front View



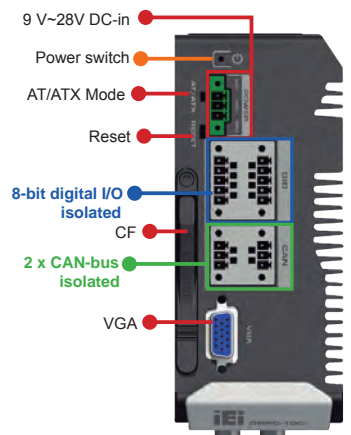
DRPC-120 Top Side View



DRPC-100 Front View



DRPC-100 Top Side View



Specifications

Model Name		DRPC-120-BT	DRPC-100-CV
Chassis	Color	Black	Black
	Dimensions (WxDxH) (mm)	74.08 x 140 x 171.5	59.4 x 140 x 171.5
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Atom™ E3845 1.91 GHz	Intel® Atom™ N2800 1.86 GHz
	Chipset	SoC	Intel® NM10
	System Memory	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)	1 x 204-pin DDR3 SO-DIMM 2 GB pre-installed (system max: 4GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	N/A
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	N/A
	CF card	N/A	1
I/O Interfaces	USB 3.0	2	N/A
	USB 2.0	2	4
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller	2 x RJ-45 Realtek 8111E PCIe GbE
	COM Port	2 x RS-232 (DB-9 w/3KV isolation protection*) 2 x RS-422/485 (DB-9 w/3KV isolation protection*)	2 x RS-232 (DB-9 w/3KV isolation protection*) 2 x RS-422/485 (DB-9 w/3KV isolation protection*)
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	1 x Phoenix terminal block w/ 3KV isolation protection 8-bit digital I/O, 4-bit input/4-bit output
	CAN-bus	N/A	1 x Phoenix terminal block w/ 3KV isolation protection, supporting 2-port CAN-bus
	Display	1 x VGA, 1 x HDMI	1 x VGA
	Resolution	Up to 1920 x 1200 @ 60Hz	Up to 1920 x 1200 @ 60Hz
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	Other	N/A	SATA DOM support
Expansions	PCIe Mini	1 x Half-size PCIe Mini slot (w/o USB signal) 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)**	1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power	Power Input	3-pin terminal block: 9 V ~ 28 V DC	3-pin terminal block: 9 V ~ 28 V DC
	Power Consumption	12 V@ 2.1 A (Intel® Atom™ E3845 with 2 GB memory)	12 V@1.85 A (Intel® Atom™ N2800 with 2 GB DDR3 memory)
Reliability	Mounting	DIN-rail	DIN-rail
	Operating Temperature	-20°C ~ 60°C with air flow (mSATA), 5% ~ 95%, non-condensing	-25°C ~ 65°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 3G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	1.4 kg/2.5 kg	1 kg/2 kg
Safety/EMC	CE/FCC	CE/FCC	
OS	Supported OS	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded

* COM port isolation: 3 kV for 1 sec, 2.5 kV for 1 minute

** DRPC-120-QGW-E5-LED/4G-R10 has only one Half-size PCIe Mini slot

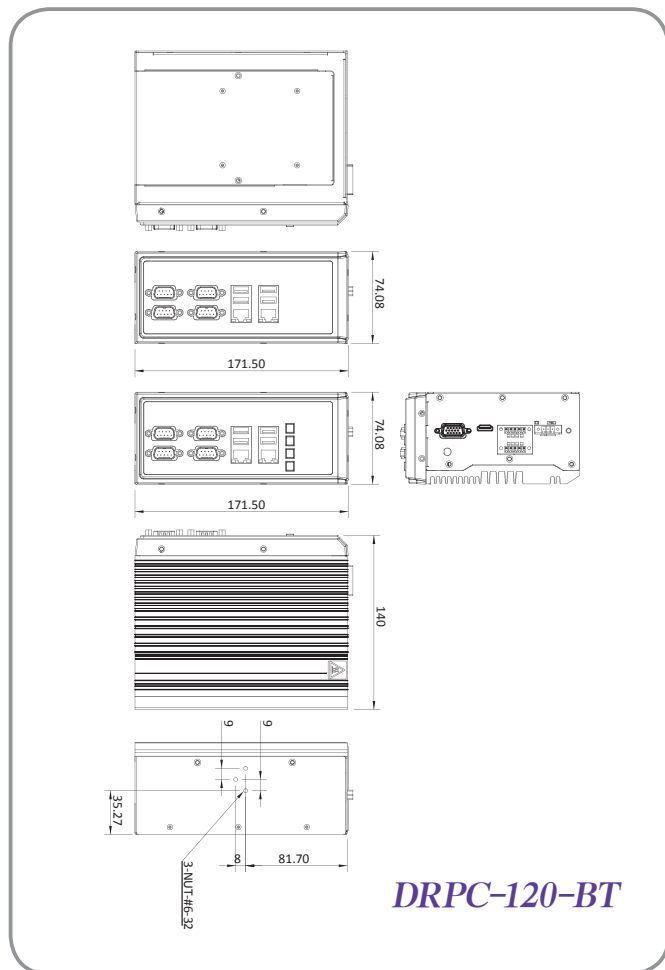
Ordering Information

Part No.	Description
DRPC-120-BTi-E5-OLED/2G-R10	Fanless embedded system, Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 2GB DDR3L pre-installed memory, one VGA, one HDMI, 8 CH DIO, iRIS-2400 optional, 9 V~28 V DC, OLED indicators, R10, RoHS
DRPC-120-BTi-E5-LED/2G-R10	Fanless embedded system, Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 2GB DDR3L pre-installed memory, one VGA, one HDMI, 8 CH DIO, iRIS-2400 optional, 9 V~28 V DC, LED indicators, R10, RoHS
DRPC-120-QGW-E5-LED/4G-R10	Fanless embedded system with Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 4 GB DDR3L pre-installed memory, with QTS-Gateway, 1 x VGA, 1 x HDMI, 8 CH DIO, iRIS-2400 optional, 9 V~28 V DC, LED indicators, RoHS
DRPC-100-CV-LED-R10	Extended temperature fanless embedded system with Intel® Atom™ N2800, with 2 GB DDR3 memory, two GbE, four USB 2.0, two RS-232, two RS-422/485, two CAN-bus, one 8-bit DIO, 9 V~28V DC, -20°C to 65°C, LED indicators, RoHS
DRPC-100-CV-OLED-R11	Extended temperature fanless embedded system with Intel® Atom™ N2800, with 2 GB DDR3 memory, two GbE, four USB 2.0, two RS-232, two RS-422/485, two CAN-bus, one 8-bit DIO, 9 V~28V DC, -20°C to 65°C, OLED indicators, RoHS

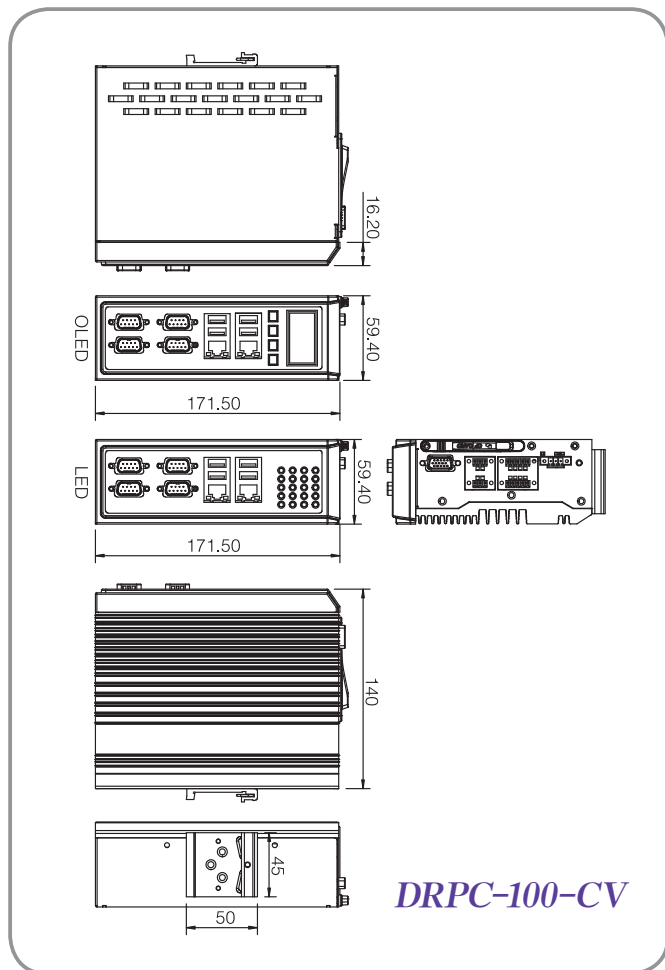
Packing List

1 x Utility CD	1 x Screw kit	1 x Mounting bracket
1 x One Key Recovery CD	1 x SATA cable & SATA power cable	

Dimensions (Unit: mm)



Dimensions (Unit: mm)



Options

DRPC-120-BT series

Item	Part No.	Description
OS: Windows Embedded 7	DRPCCF-120-WES7E-R10 (CD-ROM)	OS Image with Windows® Embedded Standard 7 E for DRPC-120 Series, CD-ROM, RoHS
Wireless kit	EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
Adapter	63040-010036-121-RS	Adapter Power, FSP, FSP036-RBBN2, Vin: 90V~264VAC, 36W, Erp(NO LOAD 0.1W), Vout:12VDC, Φ2.5/Φ5.5/lock, CCL, RoHS
Power Cable	32102-026500-100-RS	Power cable 200mm, (A) DC jack to (B) 3-pin terminal block P=3.5
Power Cord	32702-000400-200-RS	European power cord
DIN-Rail mounting kit	DK-DRPC-R10	Rugged DIN-Rail mounting kit only for DRPC series

DRPC-100-CV series

Item	Part No.	Description
OS: Win XPE (4GB CF card)	DRPCCF-100-CV-XPE-R10	OS Image with XPE, for DPRC-100-CV Series, W/CompactFlash® Memory Card 4GB
OS: Windows Embedded 7 (4GB CF card)	DRPCCF-100-CV-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for DPRC-100-CV Series, in 4 GB CompactFlash® card
Wi-Fi module	27310-000012-RS	Wireless LAN module, Wi-Fi with Bluetooth 4.0/3.0+HS, AzureWave, AW-CB161H, IEEE802.11a/b/g/n/ac, 2.412 GHz~2.472 GHz, 5.15 GHz~5.85 GHz, PCIe Mini, a(13dBm), b(16dBm), g(13dBm), n(12dBm), ac(10dBm), 3.3 V, Realtek RTL8821AE, 1T1R, RoHS
Antenna	32505-000900-100-RS	External antenna, WLAN, RG 178, 108MM, peak gain 2.0DBI, Exceltek, 2.4 GHz~2.5 GHz/5.15 GHz~5.85 GHz, reverse SMA plug, RoHS
RF cable	32501-000600-100-RS	Antenna, RF cable, RF cable, outside diameter:1.13 mm, 500 mm, 0 GHz~6 GHz, (A) Reverse SMA jack, one nut + two washer, (B) I-PEX, RoHS
Adapter	63040-010036-121-RS	Adapter Power, FSP, FSP036-RBBN2, Vin:90~264VAC, 36W, Erp(NO LOAD 0.1W), Vout:12VDC, Φ2.5/Φ5.5/lock, CCL, RoHS
Power cable	32102-026500-100-RS	Power cable 200mm, (A) DC jack to (B) 3-pin terminal block P=3.5
Power cord	32702-000400-200-RS	European power cord
DIN-rail mounting kit	DK-DRPC-R10	Rugged DIN-Rail mounting kit only for DRPC series

Compact Size Embedded System



New

Model Name		uIBX-250-BW	uIBX-230-BT	uIBX-210-CV-N2600
Chassis	Color	Black	Silver	Silver
	Dimensions (WxDxH) (mm)	136.6 x 102.4 x 52	137 x 102.8 x 57	146.6 x 132 x 45.2
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloys	Aluminum alloys
Motherboard	CPU	Intel® Celeron® N3160 (up to 2.24 GHz, quad-core, 2 MB cache, TDP=6W)	Intel® Celeron® N2930 1.83 GHz	Intel® Atom™ N2600 1.6 GHz
	Chipset	SoC	SoC	Intel® NM10
	System Memory	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)	1 x 204-pin DDR3 SO-DIMM 2 GB pre-installed (system max: 2GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA HDD bay
	CF Card/CFast	N/A	N/A	N/A
I/O Interfaces	USB 3.0	4	1	N/A
	USB 2.0	N/A	3	4
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211 controller	1 x RJ-45 PCIe GbE by Intel® I210 controller	1 x RJ-45 PCIe GbE by Realtek 8111E controller
	COM Port	2 x RS-232/422/485 (RJ-45)	1 x RS-232 (DB-9)	2 x RS-232 (DB-9) 1 x RS-422/485 (RJ-45)
	Button	1 x Power button 1 x AT/ATX switch 1 x Reset button	1 x Power button 1 x AT/ATX switch 1 x Reset button	1 x Power button 1 x AT/ATX switch 1 x Reset button
	Display	1 x HDMI, 1 x VGA	VGA	1 x VGA, 1 x HDMI
	Resolution	HDMI: 3840 x 2160@30MHz VGA: 1920 x 1200@60Hz	Up to 2560 x 1600@60Hz	VGA: Up to 1920 x 1200 HDMI: Up to 1920 x 1080
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
Expansions	Wireless	1x 802.11a/b/g/n/ac (optional)	N/A	1x 802.11a/b/g/n/ac (optional)
	PCIe Mini	1 x Full-size PCIe Mini card (supports mSATA)	N/A	1 x Full-size PCIe Mini (reserved for Wi-Fi module)
Power	Power Input	DC Jack: 12 V DC	DC Jack: 12 V DC	DC Jack: 12 V DC
	Power Consumption	12V @ 2A (Intel® Celeron® N3160 with 2 GB memory)	12 V@1.8 A (Intel® Celeron® N2930 with 2 GB memory)	12 V@1.57 A (Intel® Atom™ N2600 with 2 GB DDR3 memory)
Reliability	Mounting	Wall mount, VESA 75	Wall mount	VESA 75/100
	Operating Temperature	-20°C ~60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~60°C with air flow (SSD), 5% ~ 95%, non-condensing	0°C ~50°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave shock 3G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5 C-1(HDD), MIL-STD-810F 514.5 C-2(SSD)	MIL-STD-810F 514.5-1 (HDD), MIL-STD-810F 514.5 C-2 (SSD)	Meet MIL-STD-810F 514.5C-1
	Weight (Net/Gross)	470 g/1.4 kg	470 g/1.4 kg	980 g/1.8 kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E	Microsoft® Embedded Standard 7 E, Microsoft® Windows® XP Embedded, Microsoft® Windows® CE 6.0

uIBX-250-BW

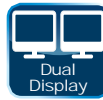
Ultra Compact Size



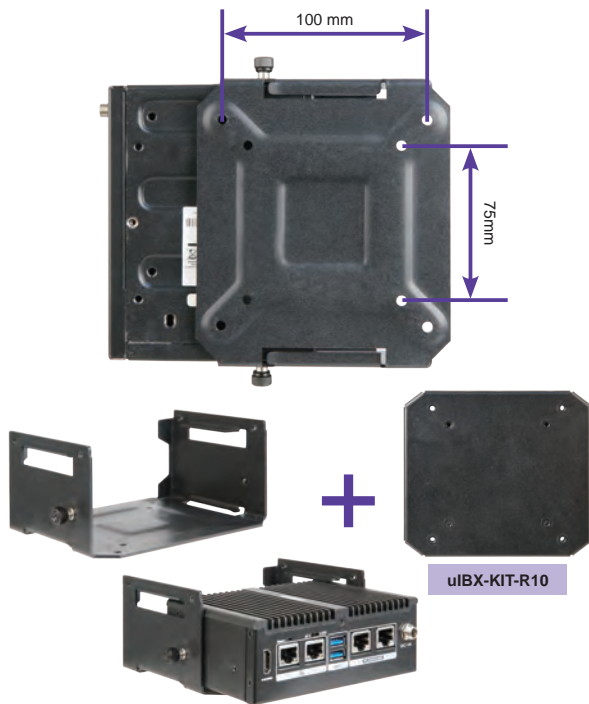
New

Features

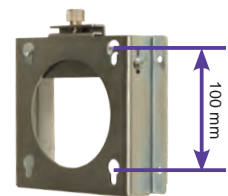
- Fanless system with Intel® Celeron® N3160 processor
- Dual display
- Two RS-232/422/485
- Full-size PCIe Mini slot for expansion
- Four USB 3.0 ports
- Two GbE LAN ports



Smart Mounting Design

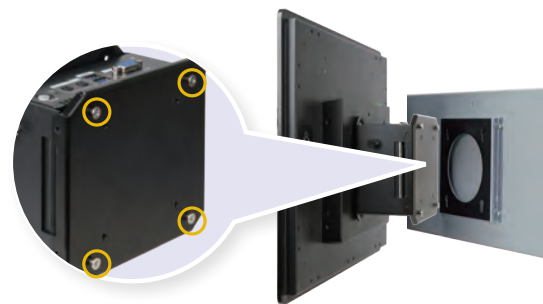


A. Wall mount



Assemble the uIBX-250 with the uIBX-KIT-R10 on the back of monitor.

AFLWK-12/AFLWK-19



The monitor with the uIBX-250 can be mounted on the wall easily and support VESA 75/100.

B. VESA mount 75/100

Step.1



Install the uIBX-KIT-R10 which supports VESA 75/100 on the back of the monitor.

Step.2



Assemble the uIBX-250, stand and monitor.

Step.3

screw to fix uIBX-250

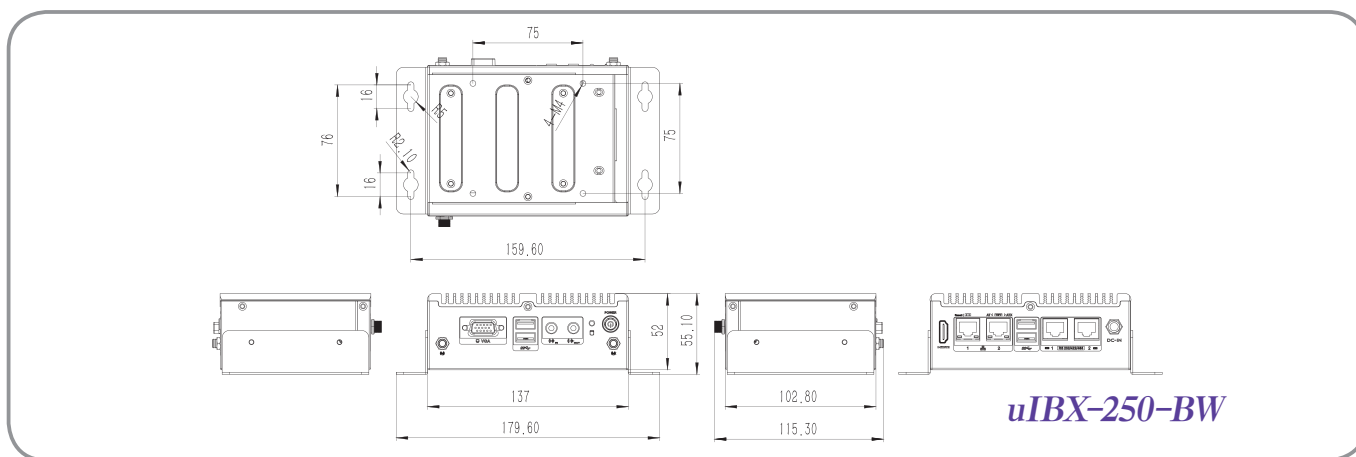


Mount it on the back of monitor to save even more space, the location the uIBX-250 could be adjusted by user for different applications.

Specifications

Model Name		uIBX-250-BW
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	136.6 x 102.4 x 52
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® N3160 (up to 2.24 GHz, quad-core, 2 MB cache, TDP=6W)
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM slot (2 GB pre-installed, system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	USB 3.0	4
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211 controller
	COM Port	2 x RS-232/422/485 (RJ-45)
	Button	1 x Power button, 1 x AT/ATX switch, 1 x Reset button
	Display	1 x HDMI, 1 x VGA
	Resolution	HDMI: 3840 x 2160@30MHz, VGA: 1920 x1200@60Hz
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini (supports mSATA)
Power	Power Input	DC Jack: 12 V DC
	Power Consumption	12V @ 2A (Intel® Celeron® N3160 with 2 GB memory)
Reliability	Mounting	Wall mount, VESA 75
	Operating Temperature	-20°C ~60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5 C-1 (HDD), MIL-STD-810F 514.5 C-2 (SSD)
	Weight (Net/Gross)	470 g/1.4 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
uIBX-250-BW-N3/2G-R20	Fanless embedded system with Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad core, TDP 6 W), 2 GB DDR3L pre-installed memory, 12 V DC, with RS-232/422/485, USB 3.0, VGA/HDMI, dual Intel® PCIe GbE, RoHS

Options

Part No.	Description
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
DK-75-R10	VESA 75 to DIN-Rail mounting kit
uIBX-KIT-R10	uIBX smart mounting kit for monitor and stand
uIBX-250-BW-WES7E64-R10	OS image with Windows® Embedded Standard 7 E 64-bit for uIBX-250, DVD-ROM, RoHS

Packing List

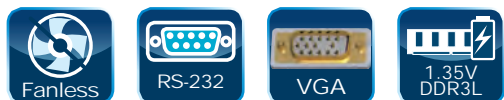
1 x Utility CD	1 x Power Adapter	1 x Mounting Bracket	2x RS-232/422/485 round cable
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uIBX-230-BT

- Ultra Compact Size
- Intel® Celeron® Processor N2930 1.83 GHz

Features

- Ultra compact size embedded system
- Intel® Celeron® processor N2930 1.83 GHz 7.5W on-board
- 1 x 2.5" SATA 6Gb/s HDD/SSD drive bay
- DDR3L SO-DIMM for low power consumption



Specifications

Model Name		uIBX-230-BT
Chassis	Color	Silver
	Dimensions (WxDxH) (mm)	137 x 102.8 x 57
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Celeron® N2930 1.83 GHz
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay
I/O Interfaces	USB 3.0	1
	USB 2.0	3
	Ethernet	1 x RJ-45 PCIe GbE by Intel® I210 controller
	COM Port	1 x RS-232 (DB-9)
	Display	1 x VGA
	Resolution	Up to 2560 x 1600@60Hz
	Audio	1 x Line-out, 1 x Mic-in
Power	Power Input	DC Jack: 12 V DC
	Power Consumption	12 V @ 1.8 A (Intel® Celeron® N2930 with 2 GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~60°C with air flow (SSD), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5-1 (HDD), MIL-STD-810F 514.5 C-2 (SSD)
	Weight (Net/Gross)	470 g/1.4 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8, Microsoft® Windows® Embedded Standard 7 E

Ordering Information

Part No.	Description
uIBX-230-BT-N2/2G-R11	Fanless embedded system, Intel® Bay-Trail N2930 1.83 GHz, TDP 7.5W, 2GB DDR3L pre-installed memory, one VGA, one RS-232, 12 V DC, R11, RoHS

Options

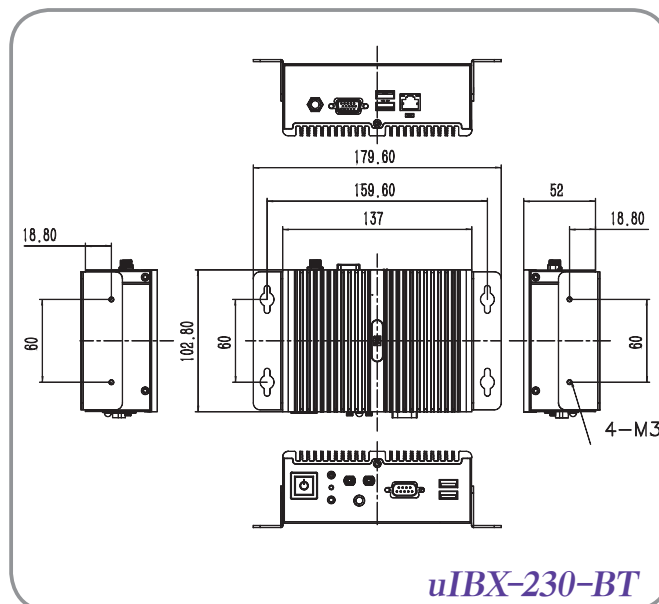
Part No.	Description
uIBX-KIT-R10	uIBX smart mounting kit for monitor and stand
uIBX-230-BT-WES7E-R10	OS Image with Windows® Embedded Standard 7 E for uIBX-230-BT, DVD-ROM, RoHS

Ultra Compact Size

Space-saving demand in industrial environment is very common in nowadays. Many applications require a small space for system installation. With the palm-size embedded box design plus its basic IO interface, the uIBX-230 can definitely meet the space-saving requirement.



Dimensions (Unit: mm)



Packing List

1 x Utility CD	1 x Power Adapter (PSE & ErP certified)
1 x Chassis Screw	1 x Power Cord
1 x Mounting Bracket	

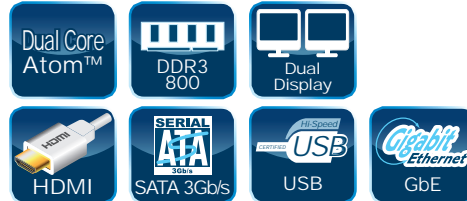
uIBX-210-CV-N2600

Fanless Embedded System with Intel® Atom™ N2600 1.6 GHz, Intel® NM10 Chipset, 2 GB DDR3 Memory



Features

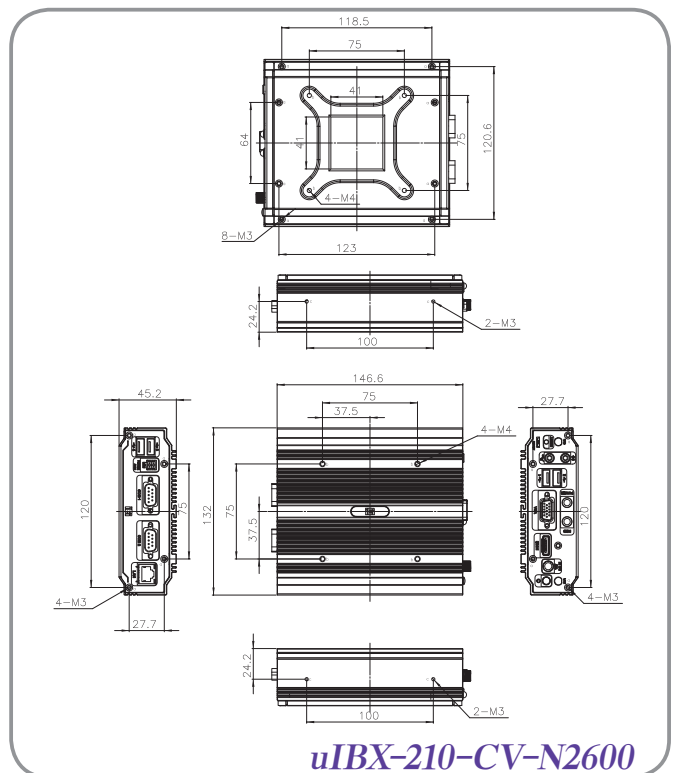
- Slim and compact embedded system design with 3rd Gen Intel® Atom™ N2600 dual-core processor, supports DDR3 memory (system max: 2 GB)
- 12V only single voltage design, supports AT/ATX power mode selection
- Flexible VGA and HDMI with dual-display support
- Supports PCIe Mini card slot
- Fully I/O with four USB, one VGA, one HDMI, three COM and audio



Specifications

Model Name		uIBX-210-CV-N2600
Chassis	Color	Silver
	Dimensions (WxDxH) (mm)	146.6 x 132 x 45.2
	System Fan	Fanless
	Chassis Construction	Aluminum alloys
Motherboard	CPU	Intel® Atom™ N2600 1.6 GHz
	Chipset	Intel® NM10
	System Memory	1 x 204-pin DDR3 SO-DIMM 2 GB pre-installed (system max: 2GB)
Storage	Hard Drive	1 x 2.5" SATA HDD bay
I/O Interfaces	USB 2.0	4
	Ethernet	1 x RJ-45 PCIe GbE by Realtek 8111E controller
	COM Port	2 x RS-232 (DB-9) 1 x RS-422/485 (RJ-45)
	Display	1 x VGA, 1 x HDMI
	Resolution	VGA: Up to 1920 x 1200 HDMI: Up to 1920 x 1080
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini slot (reserved for Wi-Fi module)
Power	Power Input	DC Jack: 12 V DC
	Power Consumption	12 V @ 1.57 A (Intel® Atom™ N2600 with 2 GB DDR3 memory)
Reliability	Mounting	VESA 75/100
	Operating Temperature	0°C ~50°C with air flow (mSATA), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-1
	Weight (Net/Gross)	980 g/1.8 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded,

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
uIBX-210-CV-N2600/2GB-R11	Fanless embedded system with Intel® Atom™ N2600 DC 1.6 GHz, Intel® NM10 chipset, 2 GB DDR3 memory, 12 V DC-In, with 36W power adaptor PSE adaptor, black, RoHS

Options

Part No.	Description
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
UIBXVK-210B	VESA 75 mount kit for uIBX-210, black
VK-75100B	VESA mount 75 to 100 adapter, black

Packing List

1 x UIBX-210-CV-N2600-R10	1 x One Key Recovery CD
1 x Adaptor	1 x Utility CD
1 x Screw set	1 x QIG (Quick Installation Guide)

Digital Signage Solution



Multiple screens can be connected to IEI digital signage series to display information like flight information at airports, in-store advertising, restaurant menu or movie showtimes. These digital signage players are in compact size with high resolution, stable and easy to install. They are equipped with multiple HDMI ports for a variety of video display monitors. It's the best choice for you to implement in digital signage and video wall applications.



IDS-300 Key Features

■ Ultra HD

Display approaching 4K2K resolution. Best for high-definition screen. Triple display port:

- 1 x HDMI 2560 x 1600 @60Hz
- 2 x HDMI 3840 x 2160 @30Hz



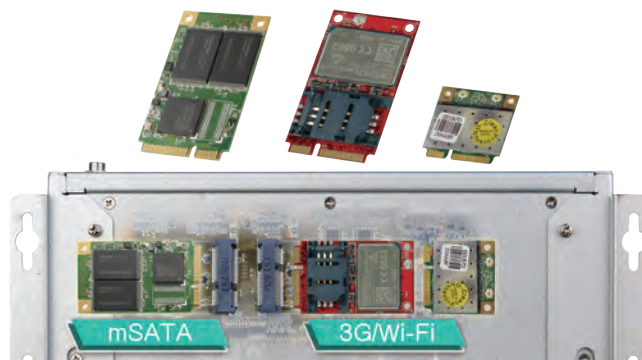
■ Thin Appearance

The IDS-300 is only 39 mm in height which can be installed in a limited space and saves more space.



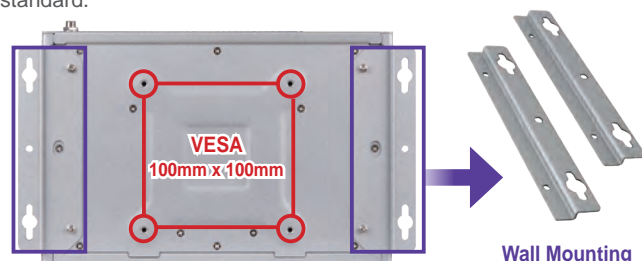
■ Hardware Expansion

Most of the I/O ports are situated on the same side to help users manage the cables conveniently, and two PCIe Mini slots are reserved for Wi-Fi, 3G or mSATA modules to achieve flexible application. Users can quickly replace the modules inside by simply opening the bottom panel of the chassis. Such a design can produce huge benefits for those who need quick response and efficient services.



■ Mounting Method

The IDS series has different mounting ways to choose. The series has passed shock and vibration test based on the MIL-STD-810F standard.



IDS-300-BW

Digital Signage System



Features

- Fanless system with Intel® Celeron® N3160 processor
- Three HDMI ports
- Two full-size PCIe Mini slots for expansion
- Four USB 3.0 ports
- Two GbE LAN ports



Specifications

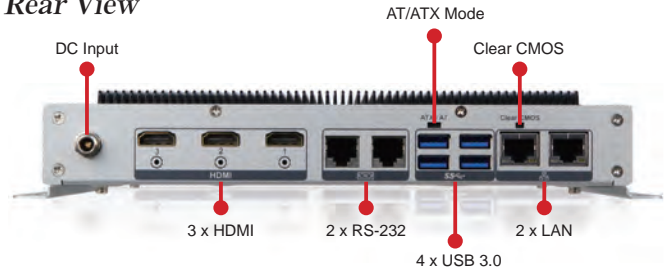
Model Name		IDS-300-BW
Chassis	Color	Silver
	Dimensions (WxDxH) (mm)	241 x 160 x 39
	System Fan	Fanless
	Chassis Construction	Aluminum alloys
Motherboard	CPU	Intel® Celeron® N3160 (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM 4 GB pre-installed (system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
I/O Interfaces	USB 3.0	4
	Ethernet	2 x RJ-45 PCIe GbE by RTL8111E controller
	COM Port	2 x RS-232 (RJ-45)
	Button	1 x Power button 1 x AT/ATX Switch
	Display	3 x HDMI
	Resolution	HDMI 1&2 : up to 3840x2160 @ 30Hz HDMI 3 : up to 2560x1600 @ 60Hz
	Audio	1 x Line-in, 1 x Line-out, 1 x Mic-in
	Wireless	1x 802.11a/b/g/n/ac (optional)
	Expansions	PCIe Mini
Power	Power Input	DC Jack: 12 V DC
	Power Consumption	12 V @2.48 A (Intel® Celeron® N3160 with 4GB memory)
	Mounting	Wall mount, VESA 100
Reliability	Operating Temperature	-10°C ~ 40°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5 C-1(HDD)
	Weight (Net/Gross)	1.8 kg/ 3kg
	Safety/EMC	CE/FCC
	OS	Supported OS

Fully Integrated I/O

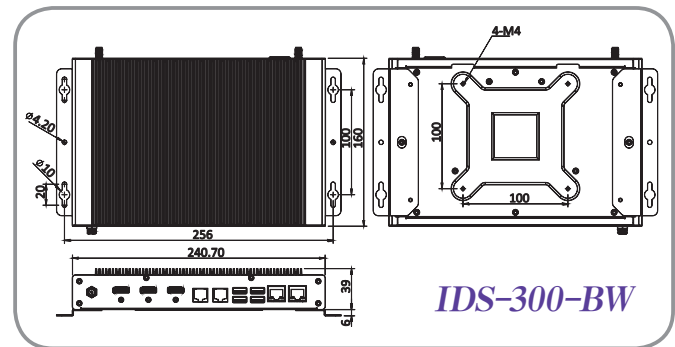
Front View



Rear View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IDS-300-BW-N3/4G-R10	Fanless embedded system with Intel® Celeron N3160 1.6GHz, (up to 2.24 GHz, Quad Core, TDP 6W), pre-installed 4GB DDR3L memory, 12V DC, triple HDMI display, RoHS

Options

Part No.	Description
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
IDS-300-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for IDS-300, DVD-ROM, RoHS
IDS-300-W10E64-E-R10	OS Image with Windows 10 IoT Enterprise Entry 64-bit for IDS-300,W/DVD-ROM, RoHS

Packing List

1 x Utility CD	1 x Power Adapter	1 x Mounting Bracket
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HTB-100-HM170

- Medical Box PC
- Fanless Quad Core Box PC



Features

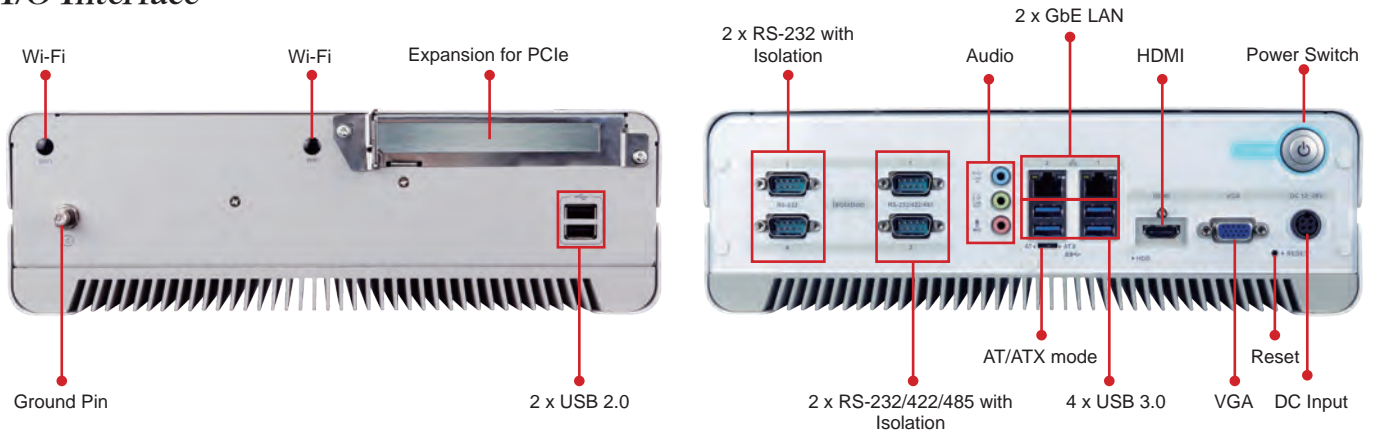
- Medical grade with high performance fanless embedded computing
- 6th Gen Intel® Core™ processor platform with Intel® HM170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Isolated COM ports for enhancing safety among devices
- Optional PCIe x16 expansion slot supports more flexible functions



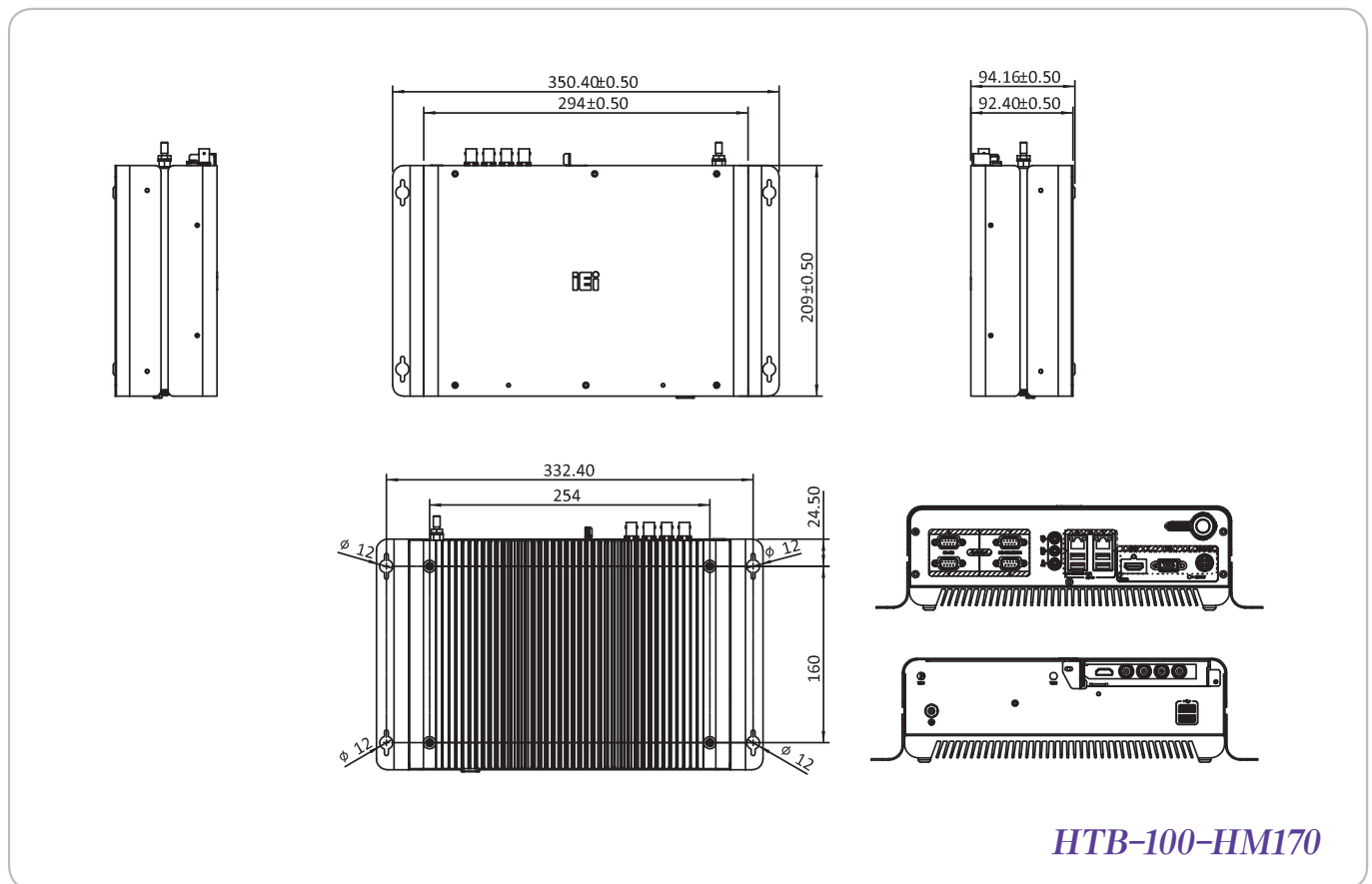
Specifications

Model		HTB-100-HM170
Chassis	Color	Silver+Greyish blue
	Dimensions (WxDxH)	294 x 209 x 90.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Core™ i7-6822EQ (2 GHz, quad-core, TDP=25) Intel® Core™ i5-6442EQ (1.9 GHz, quad-core, TDP=25)
	Chipset	Intel® HM170
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 32GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	USB 3.0	4
	USB 2.0	2
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211 controller
	COM Port	2 x RS-232 (DB-9, with 4 kV isolation) 2 x RS-232/422/485 (DB-9, with 4 kV isolation)
	Display	1 x VGA, 1 x HDMI 2.0, 1 x iDP (optional)
	Resolution	VGA: Up to 1920 x 1200@60HZ HDMI 2.0: Up to 4096 x 2160@60Hz
	Audio	Realtek ALC662, 5.1-channel High Definition Audio (HDA), Line-in, Line-out, Mic-in
	Wireless	1 x 802.11a/b/g/n/ac 2T2R (optional)
Expansions	PCIe	1 x PCIe x16
	PCIe Mini	1 x Half-size PCIe Mini 1 x Full-size PCIe Mini (supports mSATA, colay with SATA)
	M.2	1 x M.2 (A & E key)
Power	Power Input	DC Jack: 12~28V DC
	Power Consumption	19W@4.4A (Intel® Core™ i7-6822EQ with 4 GB memory)
Reliability	Mounting	Wall mounting
	Operating Temperature	0°C ~ 40°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-40°C ~ 70°C with air flow (SSD), 10% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G; 11ms; 100 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6 C-1 (with SSD)
	Safety / EMC	CE, FCC class B part 18, IEC 60601-1 V3.1, IEC 60601-1-2 V4.0, IEC 62304, ISO 14971
OS	Supported OS	Microsoft® Windows 8, Microsoft® Embedded Standard 7

I/O Interface



Dimensions (Unit: mm)



HTB-100-HM170

Ordering Information

Part No.	Description
HTB-100-HM170-i5/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6442EQ 1.9 GHz (up to 2.7 GHz, quad core, TDP 25W), 4GB DDR4 pre-installed memory, one PCIe x16 expansion, VGA/HDMI/iDP, COM port, 12~28V DC, RoHS
HTB-100-HM170-i7/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6822EQ 2.0 GHz (up to 2.8 GHz, quad core, TDP 25W), 4GB DDR4 pre-installed memory, one PCIe x16 expansion, VGA/HDMI/iDP, COM port, 12~28V DC, RoHS

Options

Part No.	Description
63040-580120-000-RS	Adapter Power, Darfon, H1120-B0, BK.1HB2J3001, Active PFC, Vin:90~264VAC, 120W, 1200mm, MEDICAL, Vout:19VDC, Din 4Pin/lock, CCL, RoHS
32702-000200-100-RS	POWER CORD;EUROPEAN CODE(VDE)

Packing List

1 x Utility CD	1 x Chassis Screw	1 x One Key Recovery CD	1 x Mounting Bracket
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