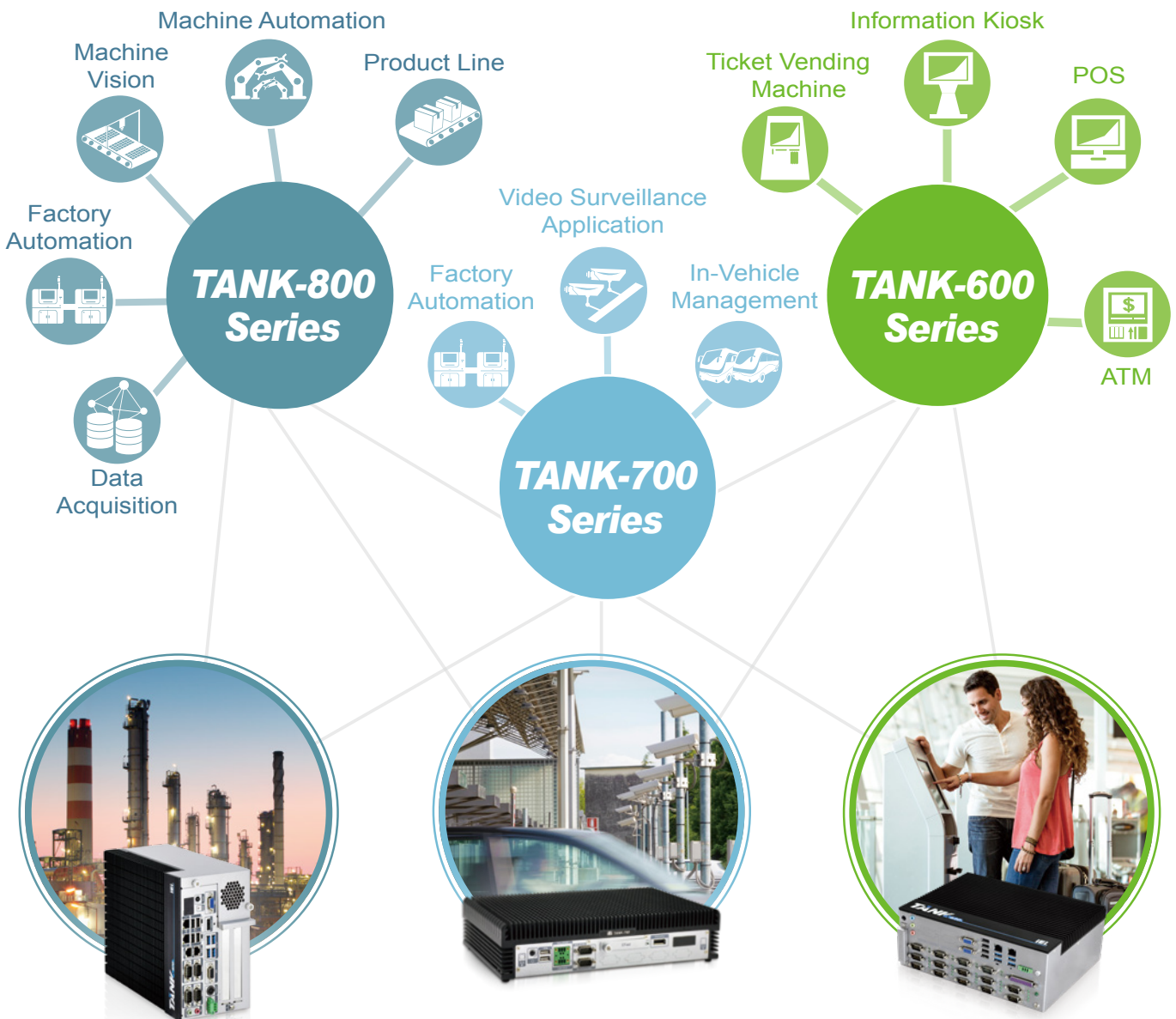


# Industrial Automation Solution

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 up to 14 COM ports
- mSATA and 2.5" SATA storage device
- Wide range temperature
- Low power consumption

## 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	Skylake/Kabylake	TANK-870-Q170 TANK-870e-H110	TANK-871	-
	Skylake-U	-	-	TANK-620-ULT3
Mobile	Haswell	TANK-860-HM86	TANK-760-HM86	-
	Braswell	-	-	TANK-610-BW
Atom™	Bay Trail	TANK-801-BT	-	-

## 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)

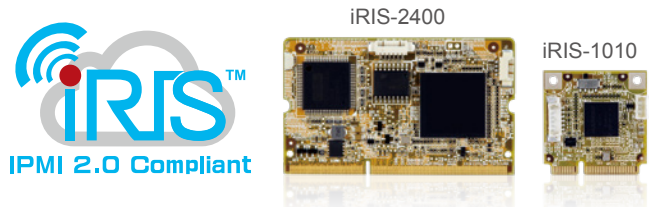
## A Variety of Applications

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.



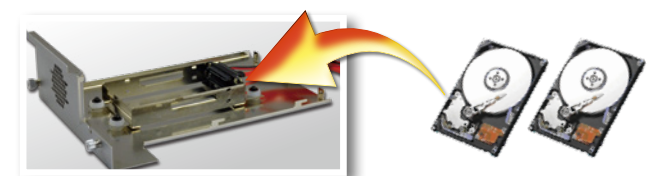
### Remote management

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.



### 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



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 7th Gen Core 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	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
	mSTAT	1 x mSATA	1 x mSATA	N/A
I/O Interfaces	USB 3.1 Gen 1	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	1 x VGA (Up to 1920 x 1200@60Hz) 1 x HDMI/DP (Up to 3840x2160@30Hz / 4096x2304@60Hz)	1 x VGA (Up to 1920 x 1200@60Hz) 1 x HDMI/DP (Up to 3840x2160@30Hz / 4096x2304@60Hz)	VGA: Up to 1920 X 1200@60Hz HDMI: up to 3840x2160@30Hz
	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 Mni 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mni	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 Terminal Block: 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-820-H61	TANK-801-BT
Chassis	Color	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	133 x 269 x 208	136 x 219 x 188
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	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® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)	Intel® Celeron® J1900 2 GHz
	Chipset	Intel® HM86	Intel® H61	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)	1 x 204-pin DDR3L SO-DIMM, 2GB pre-installed (system max: 8 GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	N/A	1 x iRIS-2400 (optional)
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
	CF Card/CFast	1 x CFast	1 x CF Type II	1 x CFast
I/O Interfaces	USB 3.1 Gen 1	4	2	2
	USB 2.0	2	4	2
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM	2 x RJ-45 PCIe GbE by Realtek 8111E controller	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I211
	COM Port	4 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	6 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)
	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	16-bit digital I/O, 8-bit input/8-bit output
	Display	1 x VGA, 1 x DVI-I, 1 x DisplayPort	1 x VGA, 1 x DVI-I	1 x DisplayPort, 1 x DVI-I
	Resolution	VGA: Up to 1920 x 1200@60Hz DVI-I: Up to 2500 x 1600@60Hz Displayport: Up to 2500 x 1600@60Hz	VGA: Up to 2048 x 1536@75Hz DVI-I: Up to 1920 x 1080@60Hz	DisplayPort: Up to 2560 x 1600 MHz DVI-I: Up to 2560 x 1600 MHz
	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 802.11b/g/n (optional)	N/A	1 x 802.11b/g/n (optional)	
	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	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)	3A: One PCIe x1 + Two x PCI 3B: Two PCIe x1 + One x PCI 3C: Three x PCI
PCIe Mini	2A: 1 x Full-size (support mSATA) 4A: 1 x Full-size (support mSATA) + 1 x Full-size (on backplane) 6A: 1 x Full-size (support mSATA) + 1 x Full-size (on backplane)	N/A	1 x Full-size PCIe Mini	
	Power Input	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: 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)	19 V@3.5 A (Intel® Core™ i3-2100 with 6 GB DDR3 memory) w/o add-on card	19 V@1.8 A (Intel® Celeron® J1900 with 2 GB DDR3 memory)	
Reliability	Mounting	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
	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
	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)
	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	4.2 kg/6.3 kg	2.8 kg/4.3 kg
Safety/EMC	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® Windows® 8 Embedded, Microsoft® WES7E, Microsoft® Windows® 10 IoT Enterprise

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

# Industrial Automation System



**New**



Model Name		TANK-760-HM86	TANK-620-ULT3	TANK-610-BW
Chassis	Color	Black C + Silver	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	310 x 200 x 69.8	184 x 200.6 x 58.2	184 x 200.6 x 58.2
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded Aluminum alloy	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® Celeron® 3855U (1.6GHz, TDP=15W)	Intel® Celeron® N3160 processor (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
	Chipset	Intel® HM86	SoC	SoC
	System Memory	2 x 204-pin DDR3 SO-DIMM, one 4GB pre-installed (system max: 16 GB)	1 x 260-pin DDR4 SO-DIMM 1 x on-board DDR4 4GB pre-installed (system max: 32GB)	2 x 204-pin DDR3L SO-DIMM, one 2GB pre-installed (system max: 8 GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)	N/A	N/A
	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	2 x 2.5" SATA 6Gb/s HDD/SSD Bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	CF Card/CFast	1 x CFast	1 x CF card (optional*)	N/A
out/I/O Interfaces	USB 3.1 Gen 1	4	4	4
	USB 2.0	2	4	N/A
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 1 x PCIe GbE by Intel® I217LM	2 x RJ-45 PCIe GbE by Intel® I211-AT controller	2 x RJ-45 PCIe GbE by Intel® I210-IT controller
	Fiber	N/A	N/A	N/A
	COM Port	4 x RS-232 (DB-9, with isolation) 2 x RS-232/422/485 (DB-9, with isolation)	6 x RS-232 (DB-9) 8 x RS-232/422/485 ports with automatic flow control (DB-9)	6 x RS-232 2 x RS-232/422/485
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	1 x 24-bit digital I/O	N/A
	CAN-bus	2 x Phoenix terminal block with isolation	N/A	N/A
	Display	1 x VGA, 1 x HDMI, 1 x DisplayPort	2 x VGA, (1 x LVDS or 1 x VGA optional)	1 x VGA, 1 x HDMI
	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 1920 x 1200 @60Hz LVDS: Up to 1920 x 1200 @60Hz (optional)	VGA: Up to 1920 x 1200@60HZ HDMI: Up to 3840 x 2160@30Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Mic in, 1 x Speaker out, 1 x Line out	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11b/g/n (optional)
	Other	Reserved IO window for PCIe Mini card expansion	1 x Power Button, 1 x System Reset, 1 x AT/ATX Switch	1 x Power Button, 1 x System Reset, 1 x AT/ATX Switch
	Expansions	PCI	N/A	N/A
PCIe		N/A	N/A	N/A
PCIe Mini		3 x Full-size PCIe Mini (1 x support mSATA, co-lay SATA)	2 x Full-size PCIe mini slot (PCIe by1, USB2.0)	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 Terminal Block: 9 V~36 V DC	9 ~ 36 V DC +/- 5%	DC Jack: 9 V~36 V DC
	Power Consumption	19 V@3.2 A (Intel® Core™ i5 i5-4400E with 4 GB memory)	12V@2.73A (Intel® Celeron® 3855U with 8GB memory)	12 V@1.49 A (Intel® Celeron® N3160 with 4 GB DDR3L memory)
Reliability	Mounting	Wall mount	Wall Mount	Wall mount, VESA 100
	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	-30 ~ 70 °C with air flow (SSD), 10% ~ 95%, non-condensing	-40°C ~ 60°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, 100 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-810G 514.6C-1 (with SSD)	MIL-STD-810G 514.6C-1 (with SSD)
	Weight (Net/Gross)	4.2 kg/6.9 kg	4.4 kg/6.5 kg	2.2Kg/3Kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® WESTE, Microsoft® Windows® 10 IoT Enterprise	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10	Microsoft® Windows 8 Embedded, Microsoft® WESTE, Microsoft® Windows® 10 IoT Enterprise

# TANK-871-Q170

- High-Performance 6th/7th Generation Intel® Core™ Processor
- Fanless Embedded Computer



## Features

- 6th/7th 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

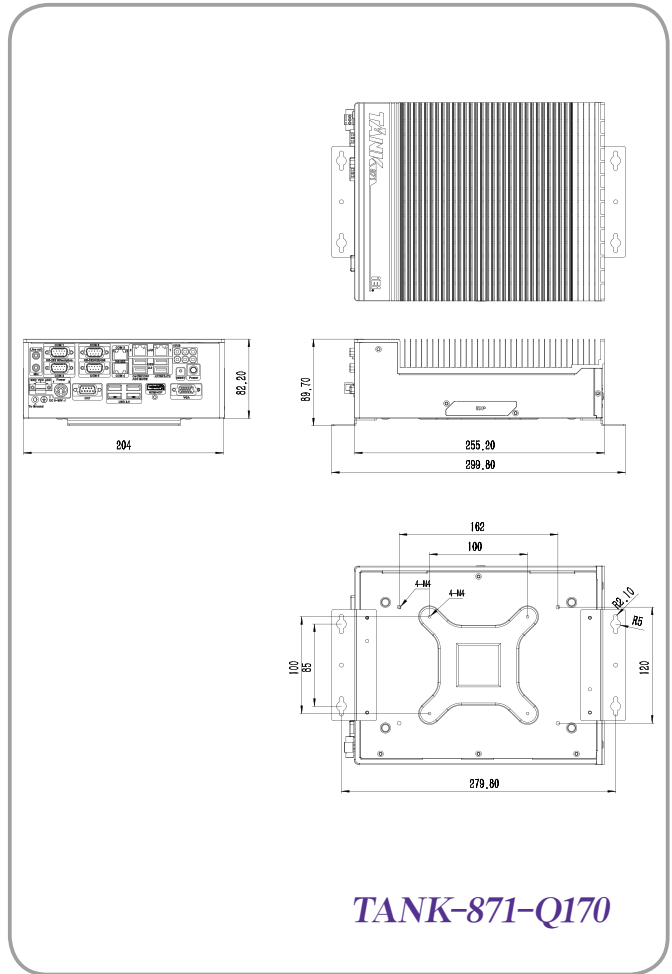
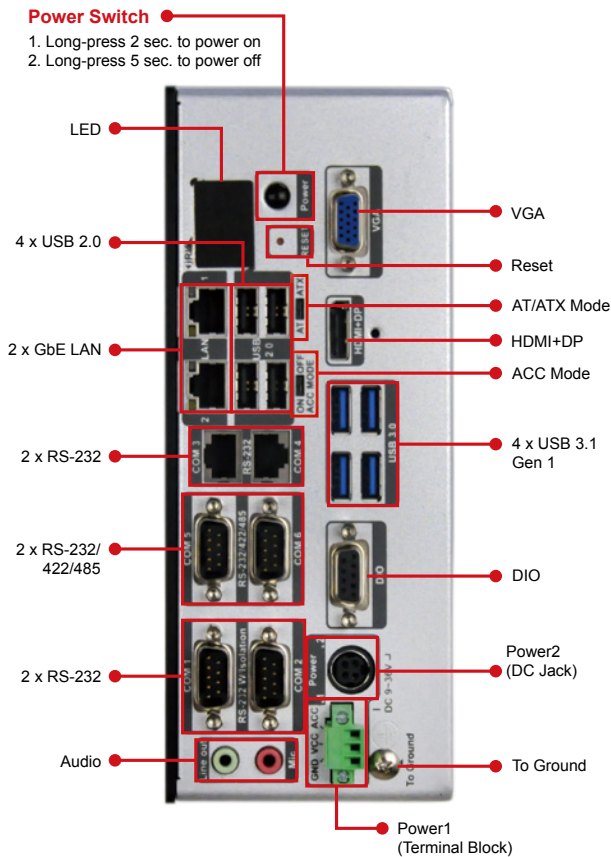


## Specifications

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 7th Gen Core CPU & 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
	System Memory	2 x 260-pin DDR4 SO-DIMM, pre-installed one 4GB (system max: 32GB)
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 3.1 Gen 1 (5Gb/s)	4
	USB 2.0	4
	Ethernet	2 x RJ-45 LAN1 (iRIS): Intel® I210 PCIe controller LAN2: Intel® I219LM 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	1 x VGA (Up to 1920 x 1200@60Hz) 1 x HDMI/DP (Up to 3840x2160@30Hz / 4096x2304@60Hz)
	Audio	1 x Line-out ; 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
	Power Input	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
Power	Power Consumption	19 V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Mounting	Wall mount
Reliability	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)	3.5 kg/4.5 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

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
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
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 xAntenna, 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)
TANK-870-Q170-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-H-R10	OS Image with Windows Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-V-R10	OS Image with Windows Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS

Packing List

1 x Chassis Screw	1 x Mounting Bracket
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# TANK-870-Q170

- High-Performance 6th/7th Generation Intel® Core™ Processor
- Fanless Embedded Computer

**New**

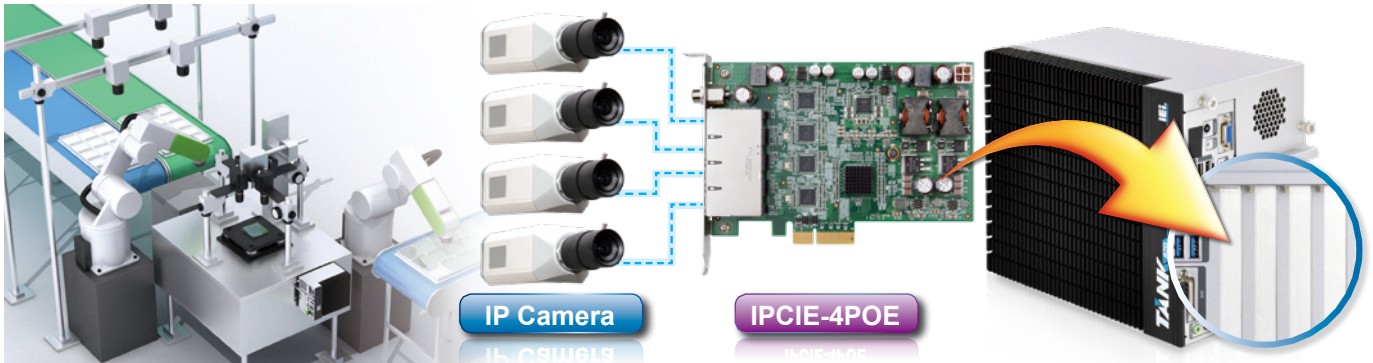
## Features

- 6th/7th 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

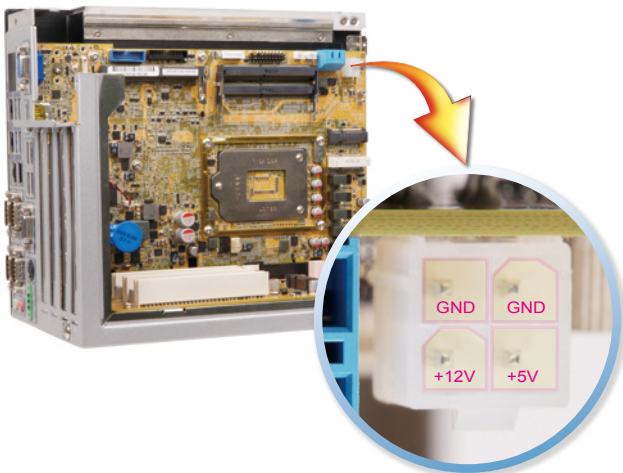
The TANK-870-Q170 integrated with IEI PoE Ethernet port expansion card can be used as a surveillance system for factory and public security. IEI PoE expansion card can support up to four PoE IEEE802.3af ports (max. 15.4 W per port ) by PCIe x4.



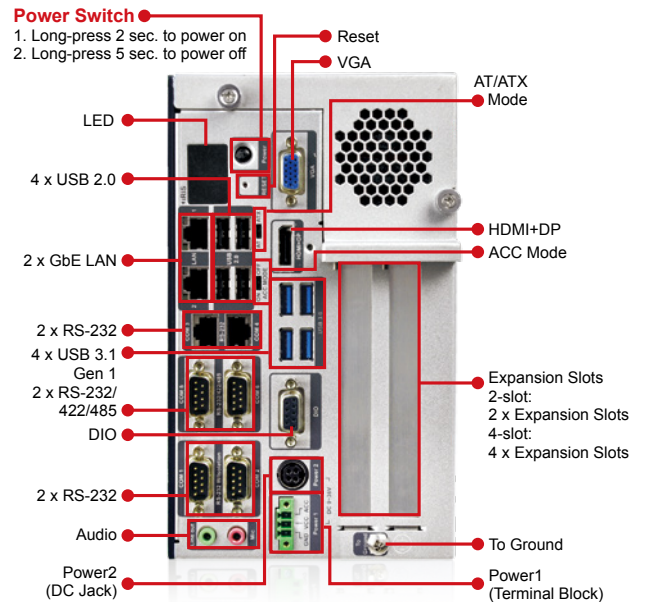
## 5V@3A or 12V@3A

### 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	

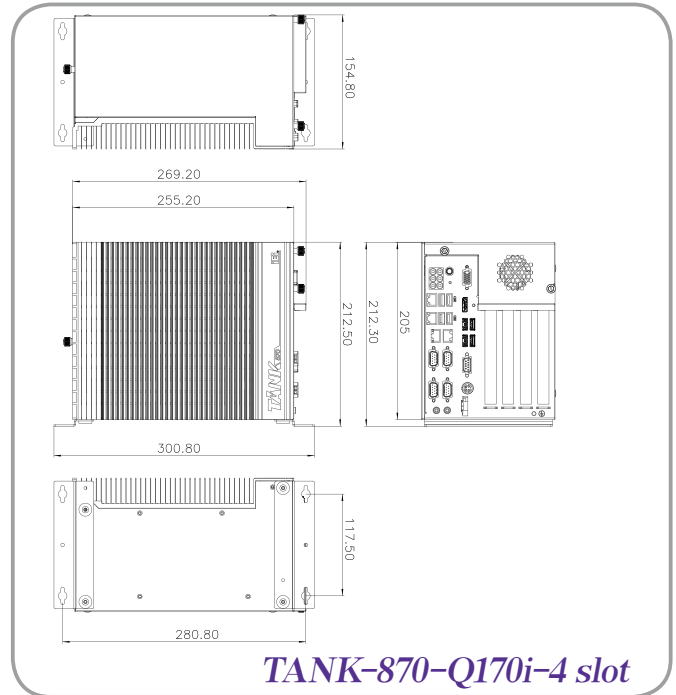
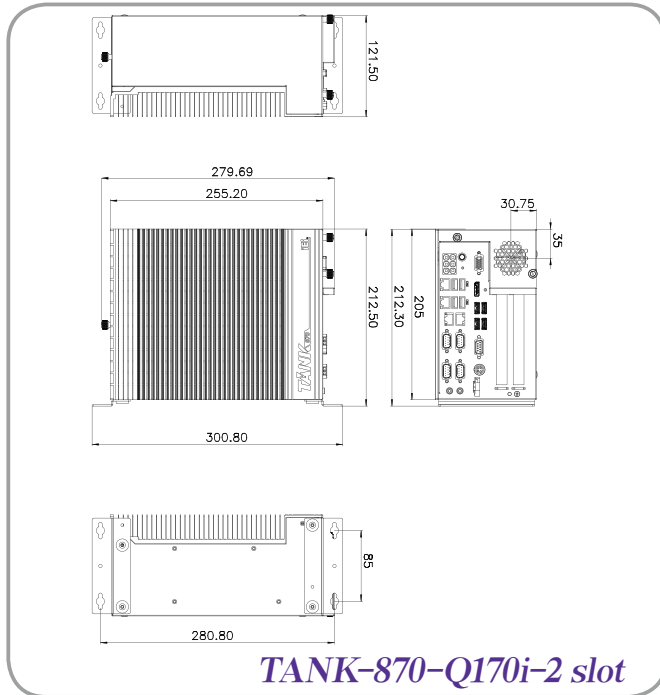
\* The expansions described above are provided by the backplanes

## 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 7th Gen Core CPU & 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
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 32GB)
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 3.1 Gen 1 (5Gb/s)	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	1 x VGA (Up to 1920 x 1200@60Hz) 1 x HDMI/DP (Up to 3840x2160@30Hz / 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

\* TANK-870-Q170-QGW has no Full-size PCIe mini slot

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-870-Q170i-i5/4G/2A-R11	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-R11	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-R11	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-R11	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-R11	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-R11	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-R11	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-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, 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-Q170-QGW-2A-R11	Ruggedized Fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, Quad Core, TDP 35W), 8GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, with QTS-Gateway, 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
IRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS
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
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
TANK-870-Q170-W10E64-H-R10	OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS
TPM-IN02-R20	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5

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

Packing List

1 x Chassis Screw	1 x Mounting Bracket
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# TANK-870e-H110

- High-Performance 6th/7th Generation Intel® Core™ Processor
- Fanless Embedded Computer



## Features

- 6th/7th 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

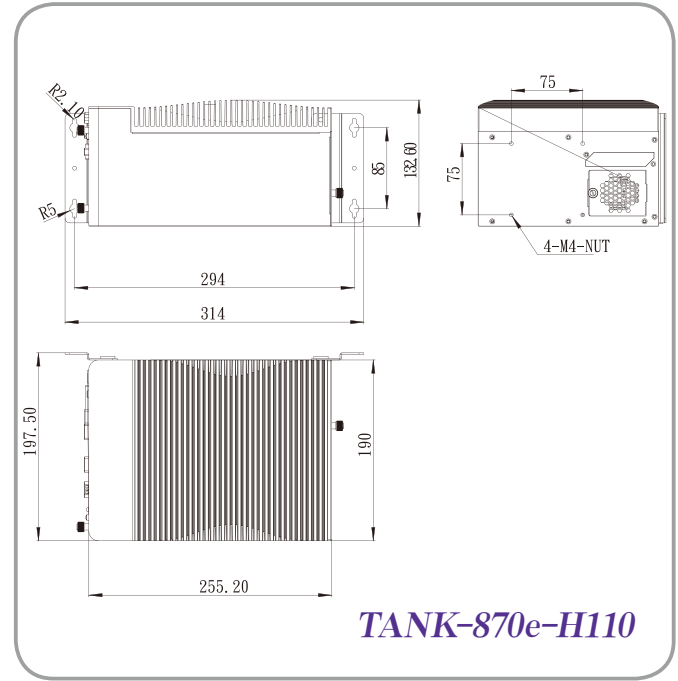
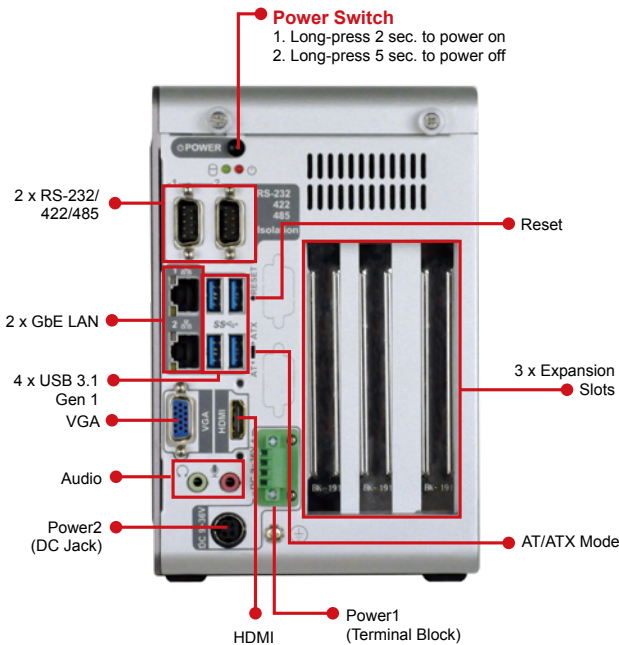
Model Name		TANK-870e-H110
Chassis	Color	Dark silver purple + Silver
	Dimensions (WxDxH) (mm)	132.6 x 255.2 x 190
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel 7th Gen Core CPU & Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35W) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35W)
	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 3.1 Gen 1 (5Gb/s)	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: up to 3840x2160@30Hz
	Audio	1 x Line-out ; 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (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 Terminal Block: 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-sind 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 x16	PCI

### Fully Integrated I/O

### Dimensions (Unit: mm)



**TANK-870e-H110**

### Ordering Information

Part No.	Description
TANK-870e-H110-i5/4G/3A-R10	Ruggedized Fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, Quad Core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCI expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i5/4G/3B-R10	Ruggedized Fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, Quad Core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCIe by 1 & 1 x PCI 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 2.4GHz, (up to 3.4 GHz, Quad Core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCI expansion, VGA/HDMI, 9~36V DC, RoHS
TANK-870e-H110-i7/4G/3B-R10	Ruggedized Fanless embedded system with Intel® Core i7-6700TE 2.4GHz, (up to 3.4 GHz, Quad Core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCIe by 1 & 1 x PCI 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
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L= 400mm 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 400mm RF cable, 2 x Antenna, RoHS
DK-75-R10	DIN mount kit adapter for VESA-75
TANK-870e-H110-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870e-H110 Series, with DVD-ROM, RoHS
TANK-870e-H110-W10E64-H-R10	OS Image with Windows Embedded Standard 10 E High End 64-bit for TANK-870e-H110-i7 Series, with DVD-ROM, RoHS
TANK-870e-H110-W10E64-V-R10	OS Image with Windows Embedded Standard 10 E Value 64-bit for TANK-870e-H110-i5 Series, with DVD-ROM, RoHS

### Packing List

1 x Chassis Screw	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



2-slot



6-slot



4-slot



## 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

Rich I/O

PCI/PCIe Expansion

PCI/PCIe expansion

Ruggedized System

Ruggedized system



Automation

Automation

Machine Vision

Machine Vision

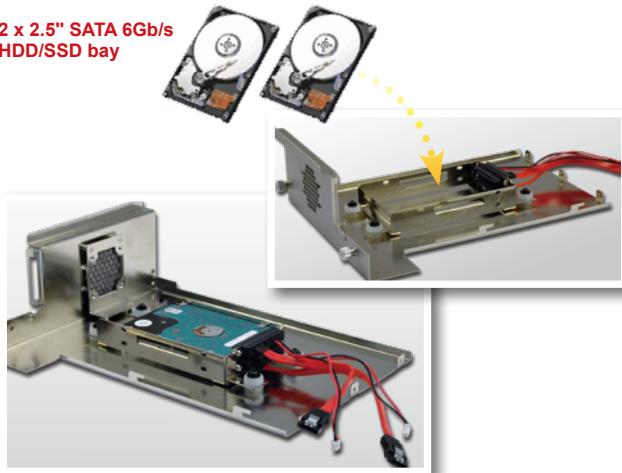
Data Acquisition

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



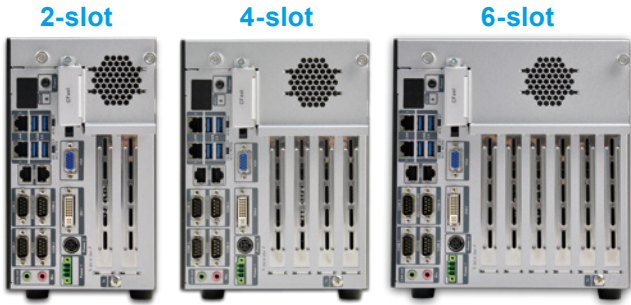
## Swappable CFast Design

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

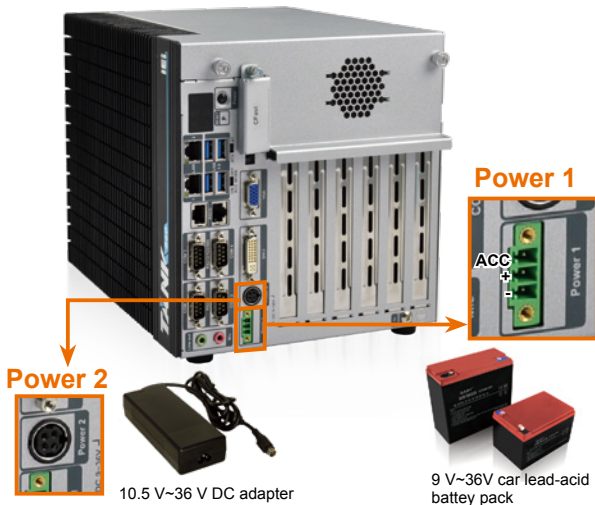
## Wide Range Temperature

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.



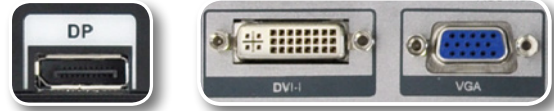
## iRIS Solution



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

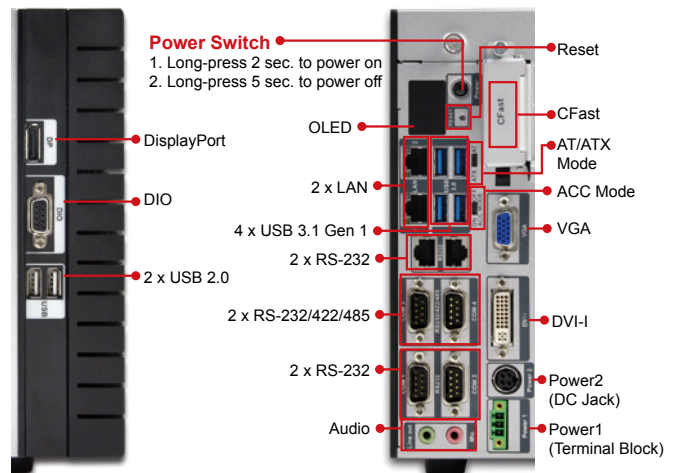
The TANK-860-HM86 series accepts wide range DC power input, allowing it to be powered anywhere, no matter if a 12 V/24 V DC source or a 19 V power adapter is available.



## Fully Integrated I/O

### Front View

### Rear View



## 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 3.1 Gen 1 (5Gb/s)	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	2 A: Two PCIe x8 (physical PCIe x16 slot) 4 A: Two PCIe x8 (physical PCIe x16 slot) + 2 x PCI 6 A: One PCIe x8 (physical PCIe x16 slot) + two PCIe x4 + three PCI
		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- <b>i5/4G/2A-R10</b>	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- <b>i5/4G/4A-R10</b>	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- <b>i5/4G/6A-R10</b>	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- <b>C/4G/2A-R10</b>	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- <b>C/4G/4A-R10</b>	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- <b>C/4G/6A-R10</b>	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- <b>i5/8G/2A-R10</b>	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- <b>i5/8G/4A-R10</b>	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- <b>i5/8G/6A-R10</b>	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

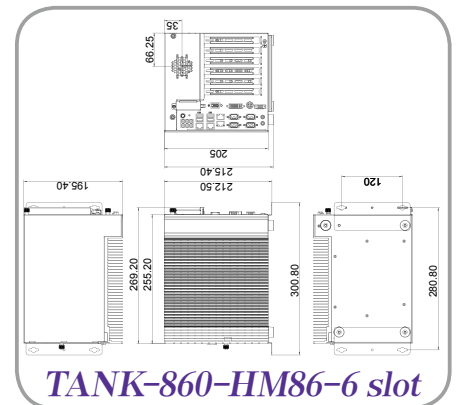
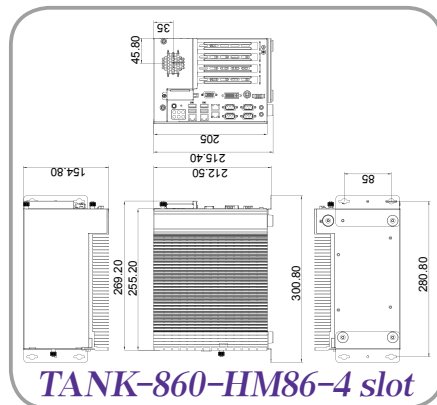
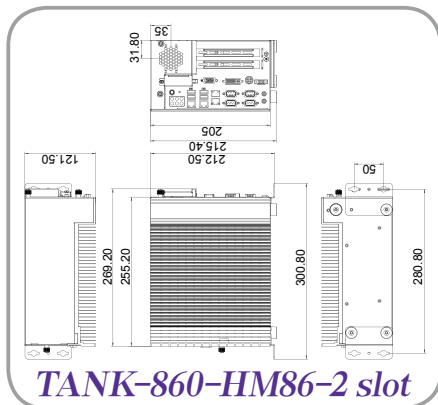
## Options

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
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L=400mm MOLEX 5051-04P P=2.54;CCL;RoHS
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
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
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 Chassis Screw
- 1 x Mounting Bracket

## Dimensions (Unit: mm)



# TANK-820-H61

■ Intel® Sandy Bridge 3-Slot Embedded System

## Features

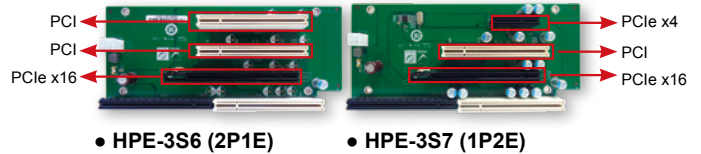
- 2nd/3rd generation Intel® Core™ low power desktop processors (max TDP. 65W)
- On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10GB)
- Dual wide range DC power support



## Versatile Expansion Interface

The TANK-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



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

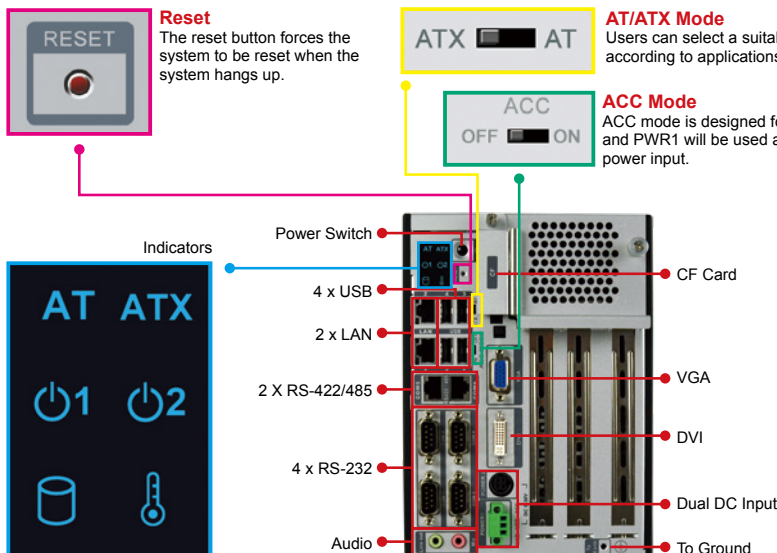
Voltage	Current	Voltage	Current
+5 V	7 A	-12 V	0.1 A
+12 V	3.75 A	+3.3 V	8 A

Max. power supported by the backplane: <45W

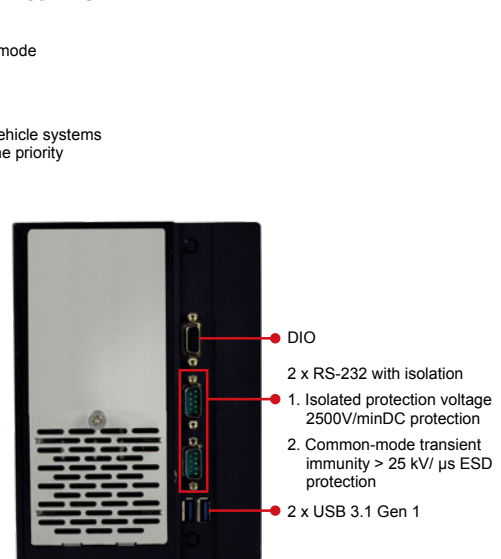
The system default power is 90 W. **The maximum total power of the backplane to support expansion cards is 45 W.** The power of the selected expansion cards can not exceed the max. power (45 W), otherwise, the system may be unstable.

## Fully Integrated I/O

### Front I/O



### Rear I/O





## Specifications

Model Name		TANK-820-H61	
Chassis	Color	Black C + Silver	
	Dimensions (WxDxH) (mm)	133 x 269 x 208	
	System Fan	Fanless	
	Chassis Construction	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)	
	Chipset	Intel® H61	
	System Memory	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	
	CF Card/CFast	1 x CF Type II	
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	2	
	USB 2.0	4	
	Ethernet	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)	
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output	
	Display	1 x VGA, 1 x DVI-I	
	Resolution	VGA: Up to 2048 x 1536@75Hz DVI-I: Up to 1920 x 1080@60Hz	
	Audio	1 x Line-out, 1 x Mic-in	
	Expansions	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)
Power Input		DC Jack: 9 V~24 V DC Terminal Block: 9 V~24 V DC	
Power	Power Consumption	19 V@3.5 A (Intel® Core™ i3-2100 with 6 GB DDR3 memory) w/o add-on card	
	Reliability	Mounting	Wall mount
Operating Temperature		-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	
Storage Temperature		-20°C ~ 70°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)		4.2 kg/6.3 kg	
OS	Safety/EMC	CE/FCC	
	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded	

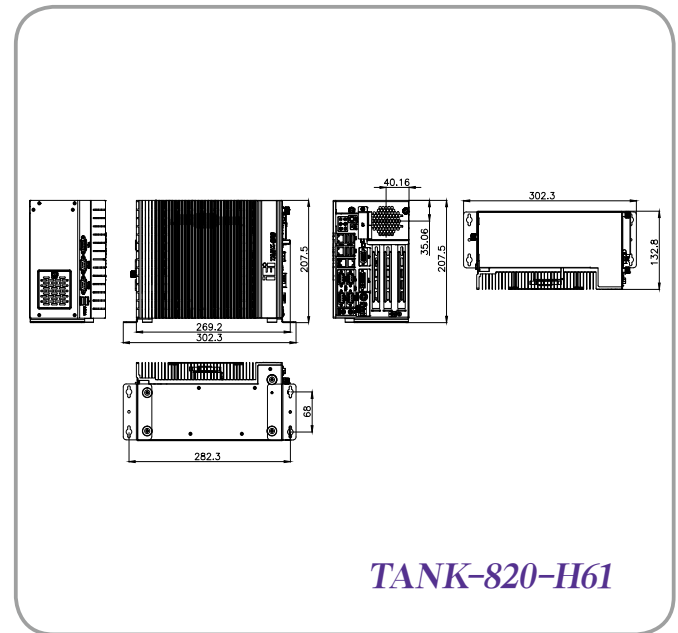
## Options

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	EMB-FAN-KIT02-R10	Fan Module; MODIFY 31100-000272-RS; +12V DC; 4PIN; 40*40*15mm ; STANDARD;; FD124015LB2W3;; L= 400mm MOLEX 5051-04P P=2.54; CCL; RoHS

## Packing List

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	2 x Mounting Bracket
2 x Foot Pad	4 x Mounting Bracket Screw	2 x RJ-45 to DB-9 COM Port Cable
4 x Fan screw		

## Dimensions (Unit: mm)



## Ordering Information

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-801-BT

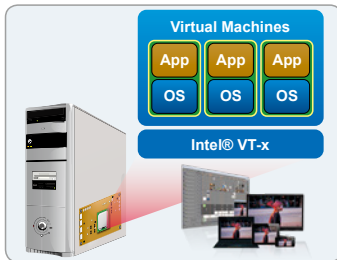
- Intel® Celeron® J1900 2 GHz, 10W
- Versatile three different backplane types

## Features

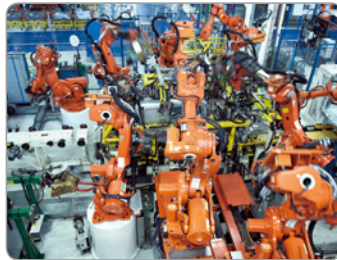
- Intel® Celeron® J1900 2 GHz, 10W
- 16-bit digital I/O, 8-bit input/8-bit output
- 1 x DVI-I  
1 x DisplayPort
- Various expansion type:
  - » 3A: One PCIe x1 + Two x PCI
  - » 3B: Two PCIe x1 + One x PCI
  - » 3C: Three x PCI
- Dual DC power input



## Enhanced Visual Experience



Support Intel® Virtualization Technology



Automation

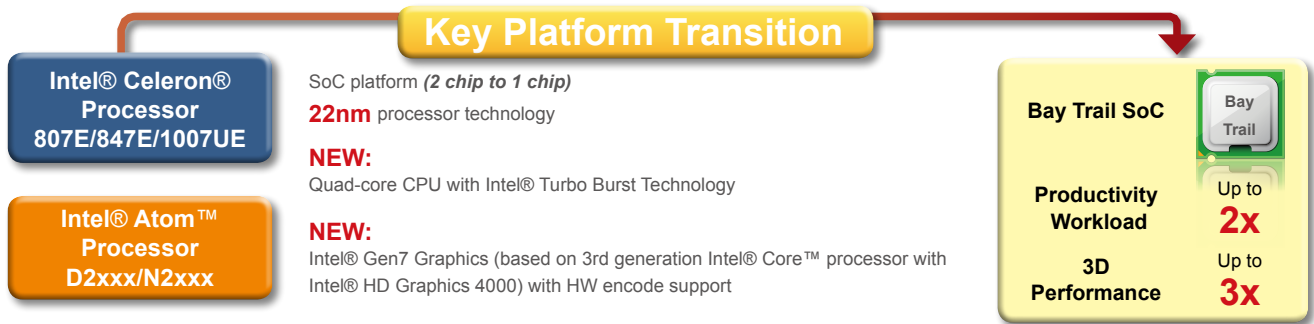


Video HD Technology  
Spectacular HD Playback

## 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

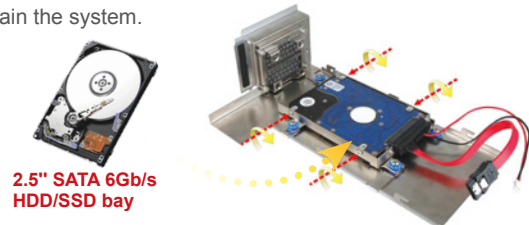
## Diversified Expansion Interfaces

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
	PCIe x16	PCIe x1
HPE-3PCI	PCI	PCI

## Easy of Installation

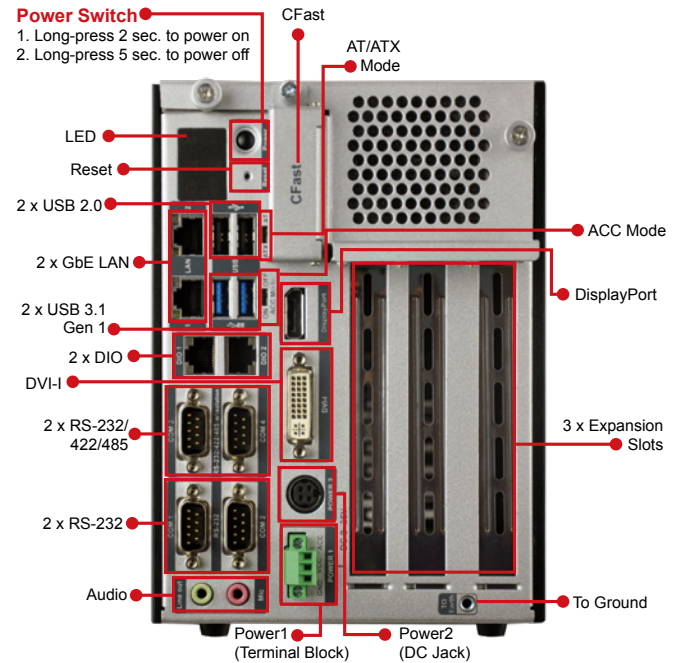
Users can easily install SO-DIMM, PCIe Mini cards and expansion cards by removing the TANK-801's top cover. A 2.5" SATA HDD/SSD bay is located on the top cover, which is very convenient for users to maintain the system.



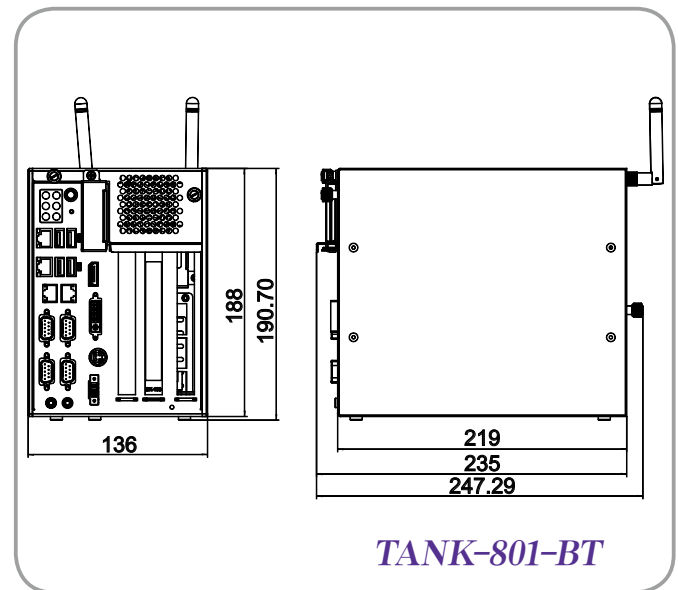
## Specifications

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 3.1 Gen 1 (5Gb/s)	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-BTI-J1/2G/3A-R12	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-BTI-J1/2G/3B-R12	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-BTI-J1/2G/3C-R12	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
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS
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
TPM-IN01-R20	20-pin INFINEON TPM Module,S/W managementTool,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 Power Adapter (With PSE & ErP Certified)	1 x Chassis Screw
1 x Power Cord	1 x Mounting Bracket

# 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 iIRIS-2400 (IPMI 2.0 compliant)



## Vehicle Control Center



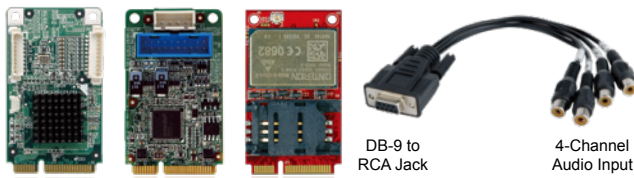
The TANK-760 is a platform based on the 4th generation Intel® Core™ i5 or Celeron® processor (codenamed Haswell) and the Intel® HM86 chipset. The TANK-760 is equipped with an abundant of I/O ports and supports a wide range of operating temperature. The TANK-760 can be used as a control center for in-vehicle 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

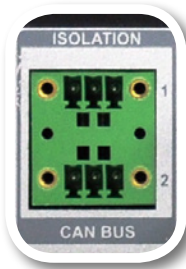


## Dual 2.5" SATA HDD/SSD Bay

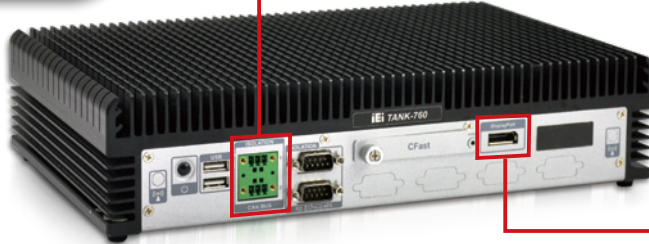
With two 2.5" SATA HDD/SSD bays, users can fulfill large storage requirement and use it as a terminal for data acquisition. The easy-to-assemble design reduces user fatigue in system installation.



**Dual CAN-Bus Port**

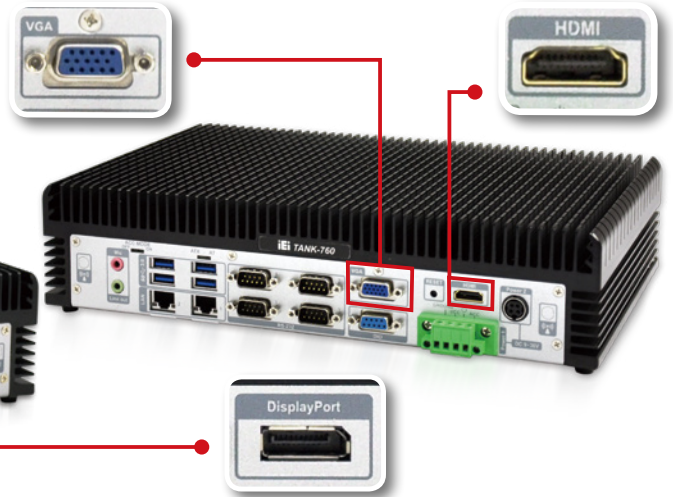


Controller Area Network (CAN or CAN-bus) is a vehicle bus standard designed to communicate or detect errors with each other within a vehicle, industrial automation and medical equipment. The TANK-760 has two CAN-bus interfaces, which allow customers to connect more devices in vehicle application.



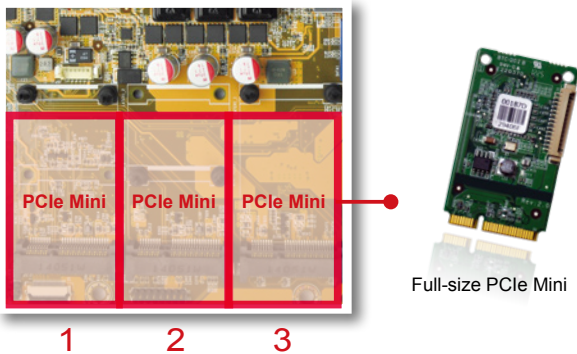
**Triple Display**

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.

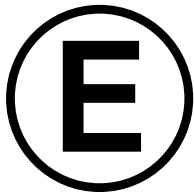


**Military Compliant**

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.

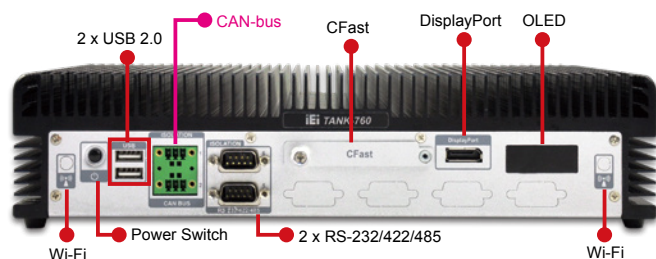
**iRIS Solution**



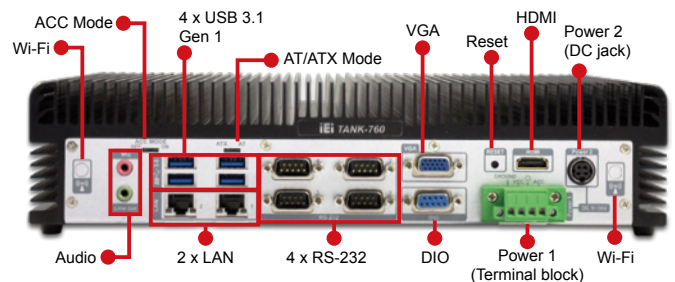
By installing the IIEI iRIS-2400 module, the TANK-760 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

**Fully Integrated I/O**

**Front View**



**Rear View**

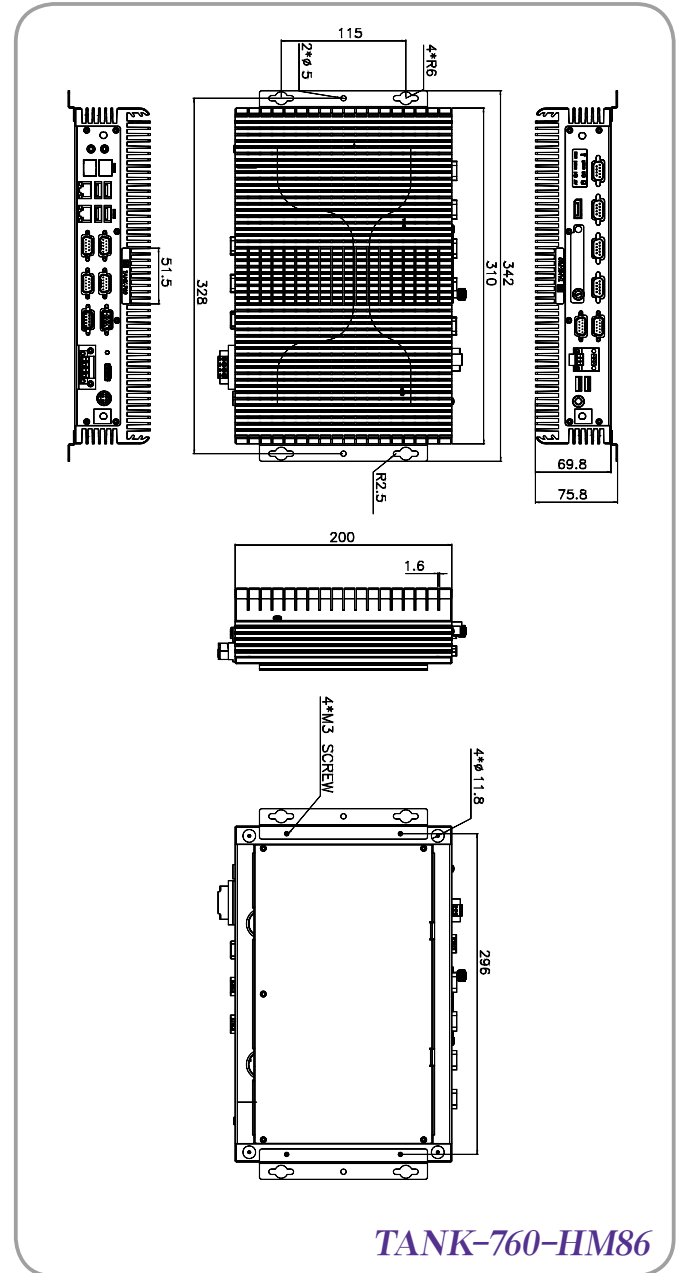


## Specifications

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 3.1 Gen 1 (5Gb/s)	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	DC Jack: 9 V~36 V DC Terminal Block: 9 V~36 V DC
	Reliability	Power Input	19 V@3.2 A (Intel® Core™ i5 i5-4400E with 4 GB memory)
		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	
Safety/EMC	CE/FCC		
OS	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)

## Dimensions (Unit: mm)



## 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 Power Adapter	1 x Chassis Screw
1 x Power Cord	1 x Mounting Bracket

# TANK-620-ULT3

- Intel Skylake ULT CPU
- Fanless Embedded Computer



## Features

- Intel® Celeron® 3855U (1.6GHz, TDP=15W)
- Multiple COM ports (up to 14) with TX/RX signal LED indicator for data transmission indication
- Multiple USB & LAN
- 24-bit DIO control
- M.2 M-key slot and dual full-size PCIe Mini slot for expansion
- Easy accessible storage

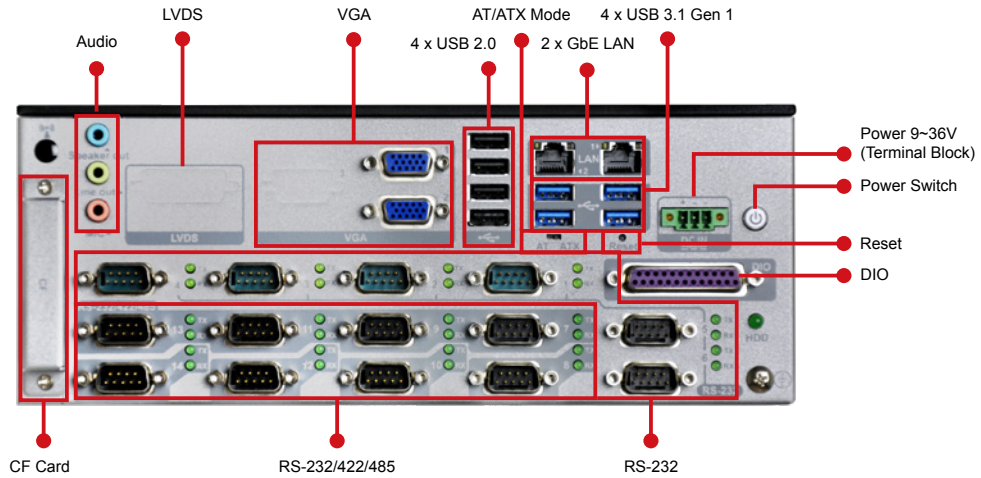


## Specifications

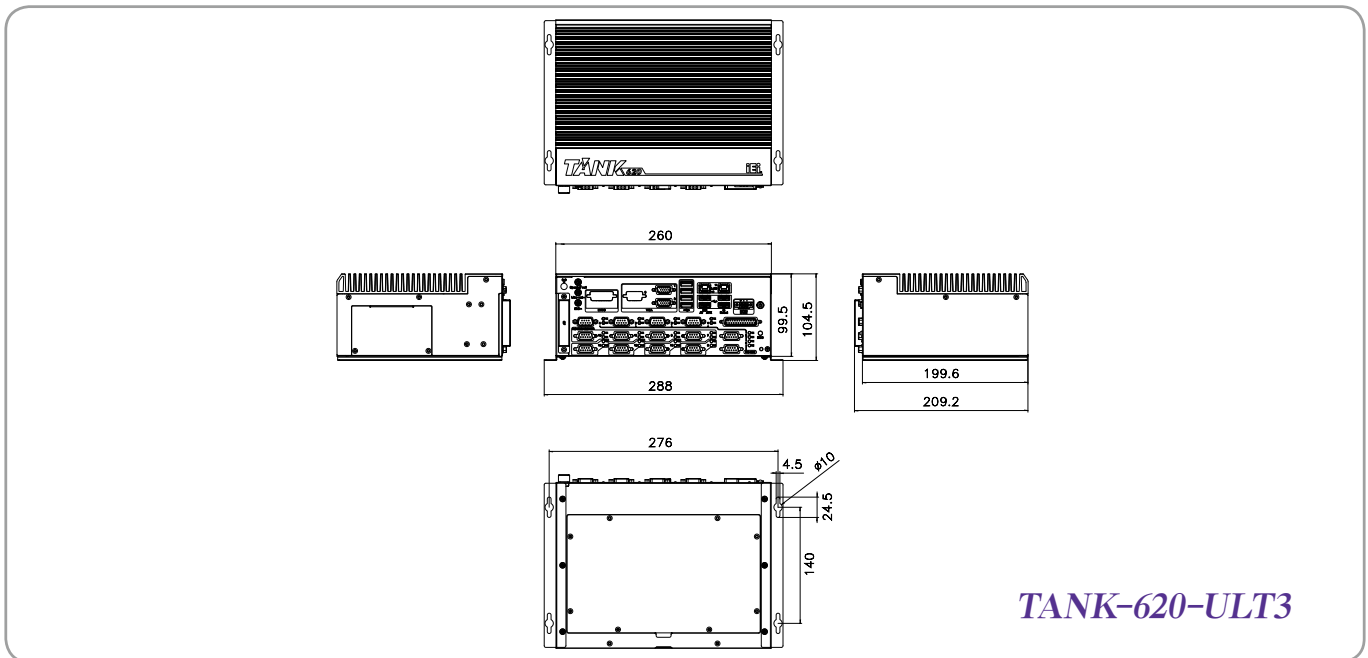
Model Name		TANK-620-ULT3	
Chassis	Color	Black C + Silver	
	Dimensions (WxDxH)(mm)	260 x 200 x 100	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloys	
Motherboard	CPU	Intel® Celeron® 3855U (1.6GHz, TDP=15W)	
	Chipset	SoC	
	System Memory	1 x 260-pin DDR4 SO-DIMM 1 x on-board DDR4 4GB pre-installed (system max: 32GB)	
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD Bay	
	CF	1 x CF card (optional*)	
	NVRAM	1 Mb FRAM	
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	4	
	USB 2.0	4	
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I211-AT controller	
	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 (12-bit input/12-bit output)	
	Display	2 x VGA, (1 x LVDS or 1 x VGA optional)	
	Resolution	VGA: Up to 1920 x 1200 @60Hz LVDS: Up to 1920 x 1200 @60Hz (optional)	
	Audio	1 x Mic in, 1 x Speaker out, 1 x Line out	
	Wireless	1 x 802.11a/b/g/n/ac (optional)	
	LED	Power LED, HDD LED, COM ports	
	Others	1 x Power Button, 1 x System Reset, 1 x AT/ATX Switch	
	Expansions	PCIe Mini	2 x Full-size PCIe mini slot (PCIe by1, USB2.0)
		M.2	1 x M.2 2280 (M key, PCIe by 4, SATA co-lay SATA2)
Power	Power Input	9 ~ 36 V DC +/- 5%	
	Power Consumption	12V@2.73A (Intel® Celeron® 3855U with 8GB memory)	
Reliability	Mounting	Wall Mount	
	Operating Temperature/Humidity	-30 ~ 70 °C with air flow (SSD), 10% ~ 95%, non-condensing	
	Storage Temperature	-40 ~ 80 °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)	4.4 kg/6.5 kg	
	Safety / EMC	CE/FCC	
OS	Watchdog Timer	Programmable 1~255 sec/min	
	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-ULT3

Ordering Information

Part No.	Description
TANK-620-ULT3-CE/4G-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, dual VGA, dual Intel® PCIe GbE, COM, DIO, RoHS

Options

Part No.	Description
034SBM2-00-100-RS	VGA Module for TANK-620 only
034SBM2-01-100-RS	LVDS Module for TANK-620 only
32102-047200-200-RS	WIRE CABLE;POWER CABLE;2;200mm;18AWG;(A)DC JACK 5.5*2.5mm;(B)TERMINAL BLOCK-3P P=3.5;RoHS
63040-010060-210-RS	Adapter Power;FSP;FSP060-DHAN3;9NA0608010;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
32702-000200-100-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
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 Wall mount bracket	1 x Screw set
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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

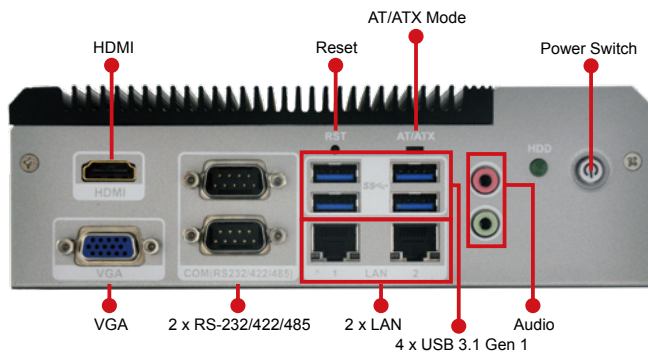
Model Name		TANK-610-BW
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	184 x 200.6 x 58.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® N3160 processor (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
	Chipset	SoC
	System Memory	2 x 204-pin DDR3L 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 3.1 Gen 1 (5Gb/s)	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

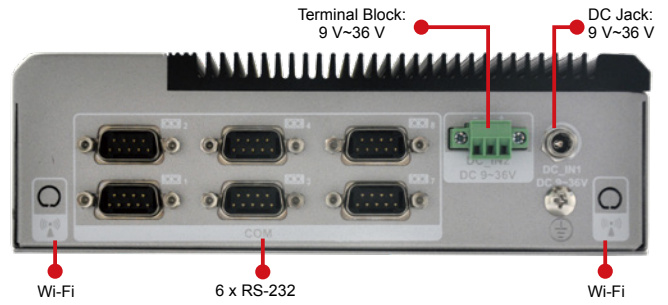


*Fully Integrated I/O*

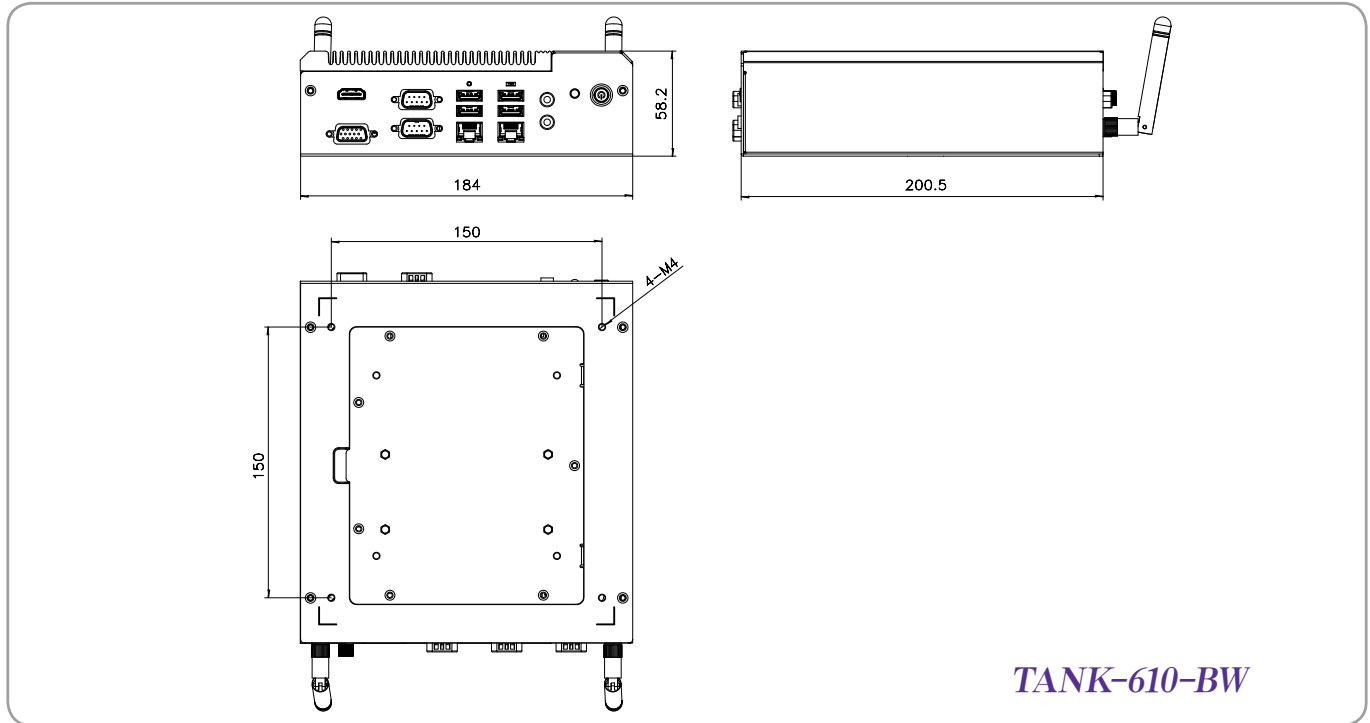
**Front View**



**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 3.1 Gen 1 (5Gb/s), 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	

# DIN-Rail Embedded System



Model Name		DRPC-130-AL	DRPC-120-BT	
Chassis	Color	Black	Black	
	Dimensions (WxDxH) (mm)	58.75 x 130 x 174	74.08 x 140 x 171.5	
	System Fan	Fanless	Fanless	
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz, dual core, TDP=6.5W)	Intel® Atom™ E3845 1.91 GHz	
	Chipset	SoC	SoC	
	System Memory	1x 204-pin DDR3L SO-DIMM slot (system max. 8 GB) (DRPC-130-AL-E1/4GB SKU is pre-installed with 4 GB memory)	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)	
IPMI	iRIS Solution	N/A	1 x iRIS-2400 (optional)	
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay	
	eMMC	1 x eMMC 5.0 support (up to 32GB, optional)	N/A	
	USB 3.1 Gen 1	4	2	
I/O Interfaces	USB 2.0	1 by pin header	2	
	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	
	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*)	
	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	
	CAN-bus	1 x DB-9 w/ 2.5kV Isolation protection, supporting 2-port CAN-bus	N/A	
	Display	2 x HDMI 1.4b	1 x VGA, 1 x HDMI	
	Resolution	Up to 3840 x 2160@30Hz	Up to 1920 x 1200 @ 60Hz	
	SIM	1 x Internal on-board SIM slot (optional)	N/A	
	Audio	N/A	N/A	
	Wireless	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	
	Other	1 x Power Button    1 x LED for HDD (Yellow) 1 x Reset Button    1 x LED for Power (Green) 1 x AT/ATX Switch	N/A	
	Expansions	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 (w/o USB signal) 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
	Power	Power Input	3-pin terminal block: 12 V ~ 24 V DC	3-pin terminal block: 9 V ~ 30 V DC
Power Consumption		12V @ 2.88 A (Intel® Atom™ x5-E3930 CPU with 4GB 1600 MHz DDR3L memory)	12 V@ 2.1 A (Intel® Atom™ E3845 with 2 GB memory)	
Remote PWR		PSON 2-pin terminal block	N/A	
Reliability	Mounting	DIN-rail / Wall mounting	DIN-rail	
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~ 60°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)	
	Weight (Net/Gross)	1.4Kg/2.5Kg	1.4 kg/2.5 kg	
	Safety/EMC	CE/FCC	CE/FCC	
Watchdog Timer	Programmable 1~255 sec/min	N/A		
OS	Supported OS	Microsoft® Windows 10 / Linux	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E	

# DRPC-130-AL

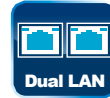
■ Fanless DIN-Rail Embedded System

■ Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz) Solution



## Features

- Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- DDR3L 1.35V SO-DIMM supported
- Serial, CAN bus and digital I/O interface

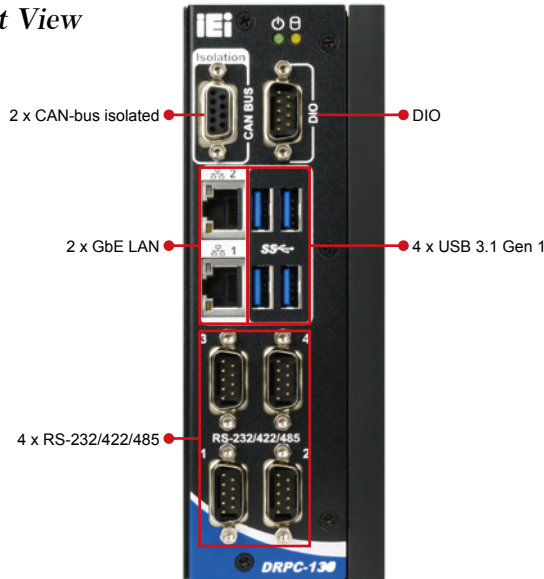


## Specifications

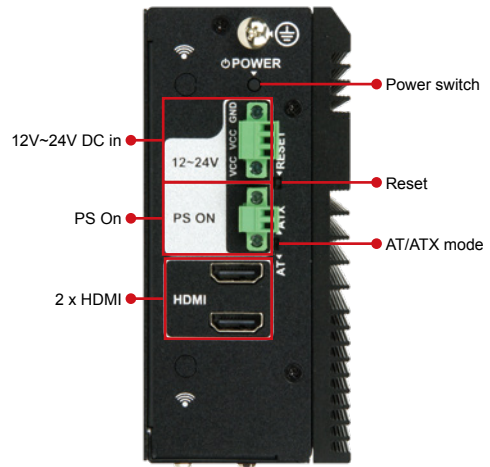
Model Name		DRPC-130-AL	
Chassis	Color	Black	
	Dimensions (WxDxH)	58.75 x 130 x 174	
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloy	
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz, dual core, TDP=6.5W)	
	Chipset	SoC	
	System Memory	1x 204-pin DDR3L SO-DIMM slot (system max. 8 GB) (DRPC-130-AL-E1/4GB SKU is pre-installed with 4 GB memory)	
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	
	eMMC	1 x eMMC 5.0 support (up to 32GB, optional)	
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	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 (optional)	
	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 Reset Button 1 x AT/ATX Switch	1 x LED for HDD (Yellow) 1 x LED for Power (Green)
	Expansions	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)
Power Input		3-pin terminal block: 12 V ~ 24 V DC	
Power	Remote PWR	PSON 2-pin terminal block	
	Power Consumption	12V @ 2.88 A (Intel® Atom™ x5-E3930 CPU with 4GB 1600 MHz DDR3L memory)	
	Mounting	DIN-rail / Wall mounting	
Reliability	Operating Temperature	-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, 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	
	OS	Supported OS	Microsoft® Windows 10 / Linux

Fully Integrated I/O

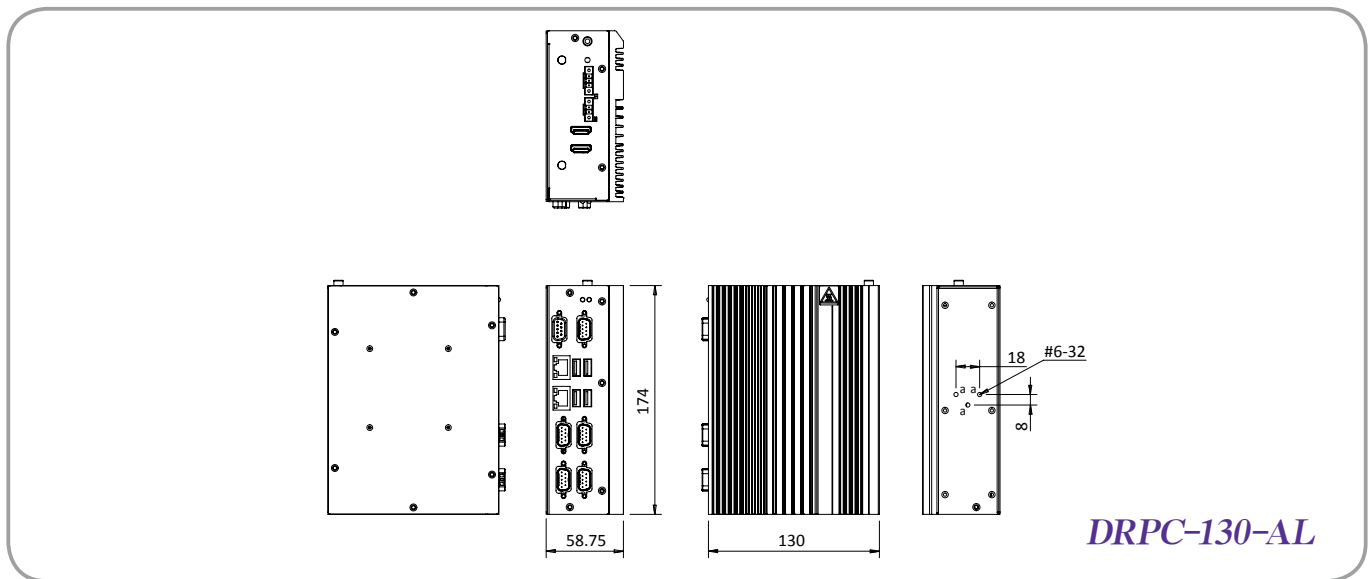
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
DRPC-130-AL-E1-R11	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), two HDMI, 8 CH DIO, CAN-Bus, COM, 12~24V DC and RoHS
DRPC-130-AL-E1/4GB-R11	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 4GB DDR3L pre-installed memory, two HDMI, 8 CH DIO, 12V ~ 24V DC and RoHS

Options

Item	Part No.	Description
Adapter	63040-010036-210-RS	Adapter Power;FSP;FSP036-RHBN3;9NA0362707;;Vin:90~264VAC;36W;Dim:37.8*89.8*27.0mm;Plug=7.5mm;Cable=1500mm;Erp(NO LOAD 0.075W);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	32702-000200-100-RS	POWER CORD; EUROPEAN CODE(VDE); 2; 1830MM; (A)PLUG:SH-005(16A 250V); (B)CONNECTOR:C13(SH-006,10A250V); Self-Man; CCL; RoHS
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
TPM Module	TPM-IN02-R20	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5
DIN-Rail Mounting Kit	DK-DRPC-R10	Rugged DIN-rail mounting kit for DPRC series only
OS:Windows Embedded 10	DRPC-130-W10E64-E-R10	OS Image with Windows® 10 IoT Enterprise Entry 64-bit for DRPC-130-AL Series, with DVD-ROM, RoHS

Packing List

1x Din-rail mounting kit	1 x Screw kit
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# DRPC-120-BT

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



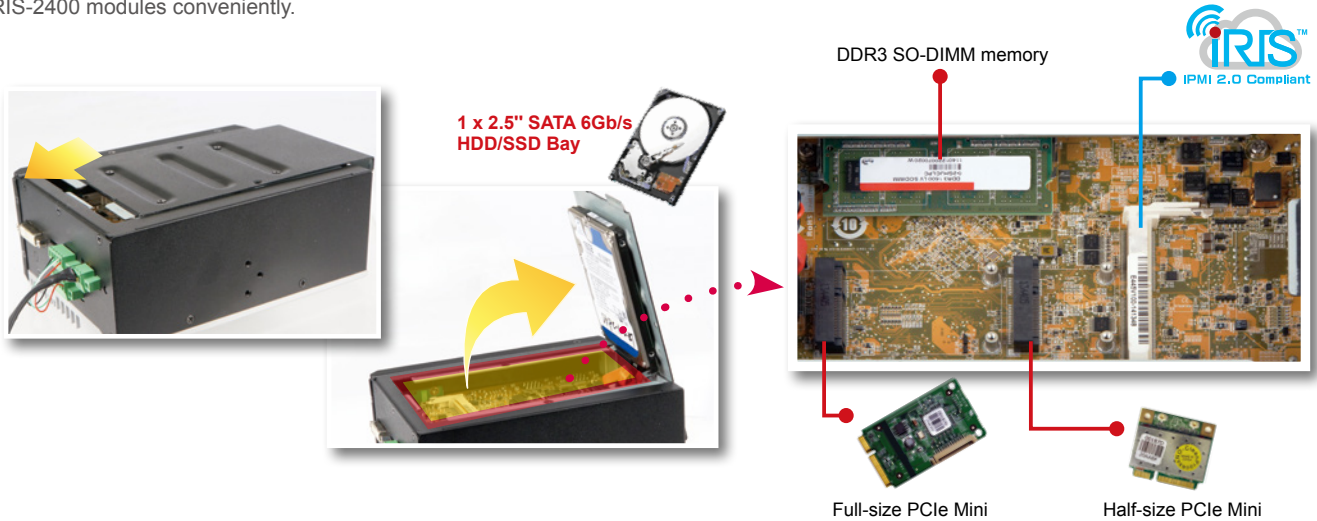
## Features

- 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



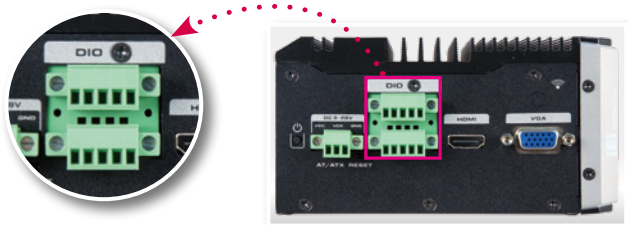
## User Friendly Installation

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



## iRIS Solution

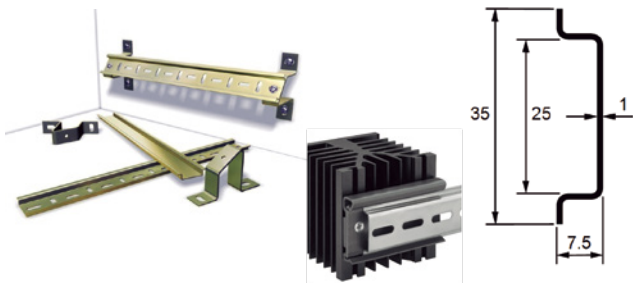


IPMI 2.0 Compliant

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.

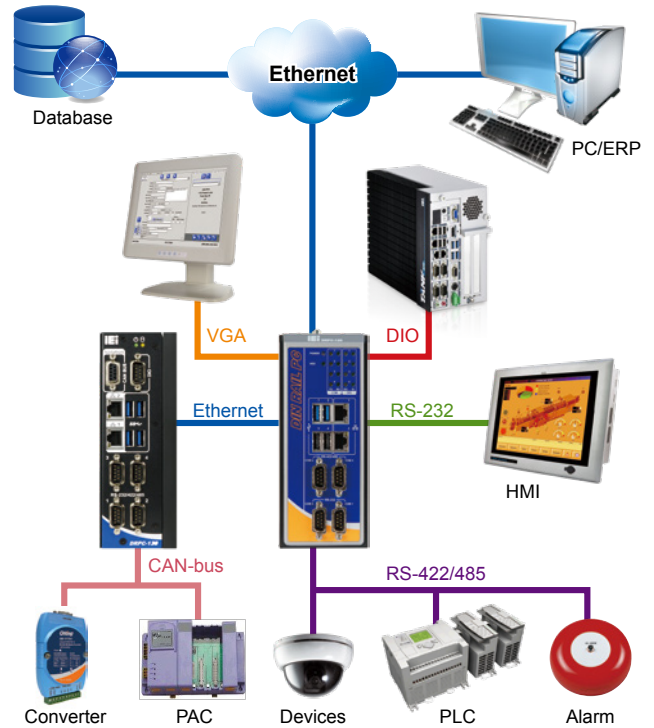
## DIN Rail Standard

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

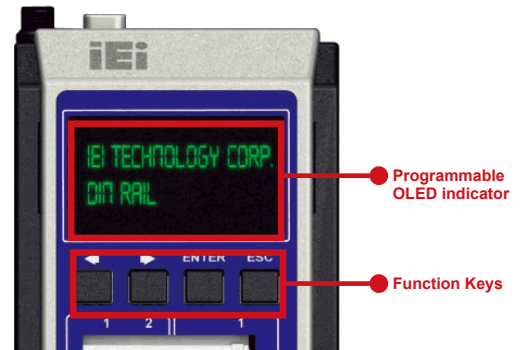
For high surge ESD automation environments, the DRPC series provides isolated digital IO, CAN-bus and serial communication ports.



## OLED Indicator Function

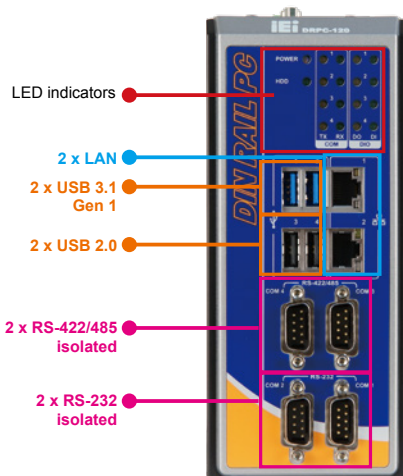
- Programmable OLED Display**  
 Users can program their own APIs to show any information by the OLED display.
- Programmable Function Keys**  
 Users can program the four keys to control OLED display.
- Terminal Screen & Status Display**  
 It supports both text format and graphic format.
- Protocol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

DRPC-120 OLED indicator

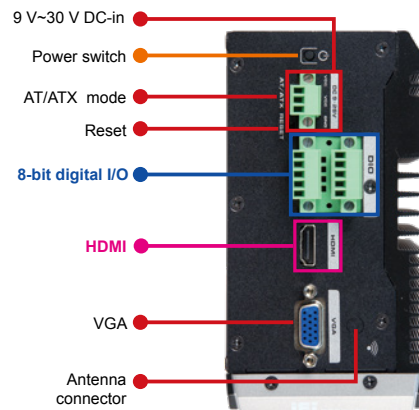


## Fully Integrated I/O

Front View



Top Side View



## Specifications

Model Name		DRPC-120-BT
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	74.08 x 140 x 171.5
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Atom™ E3845 1.91 GHz
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	CF card	N/A
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	2
	USB 2.0	2
	Ethernet	2 x RJ-45 1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller
	COM Port	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
	Display	1 x VGA, 1 x HDMI
	Resolution	Up to 1920 x 1200 @ 60Hz
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button 1 x Reset Button 1 x AT/ATX Switch
	Expansions	PCIe Mini
Power	Power Input	3-pin terminal block: 9 V ~ 28 V DC
	Power Consumption	12 V@ 2.1 A (Intel® Atom™ E3845 with 2 GB memory )
Reliability	Mounting	DIN-rail
	Operating Temperature	-20°C ~ 60°C with air flow (mSATA), 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)	1.4 kg/2.5 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E

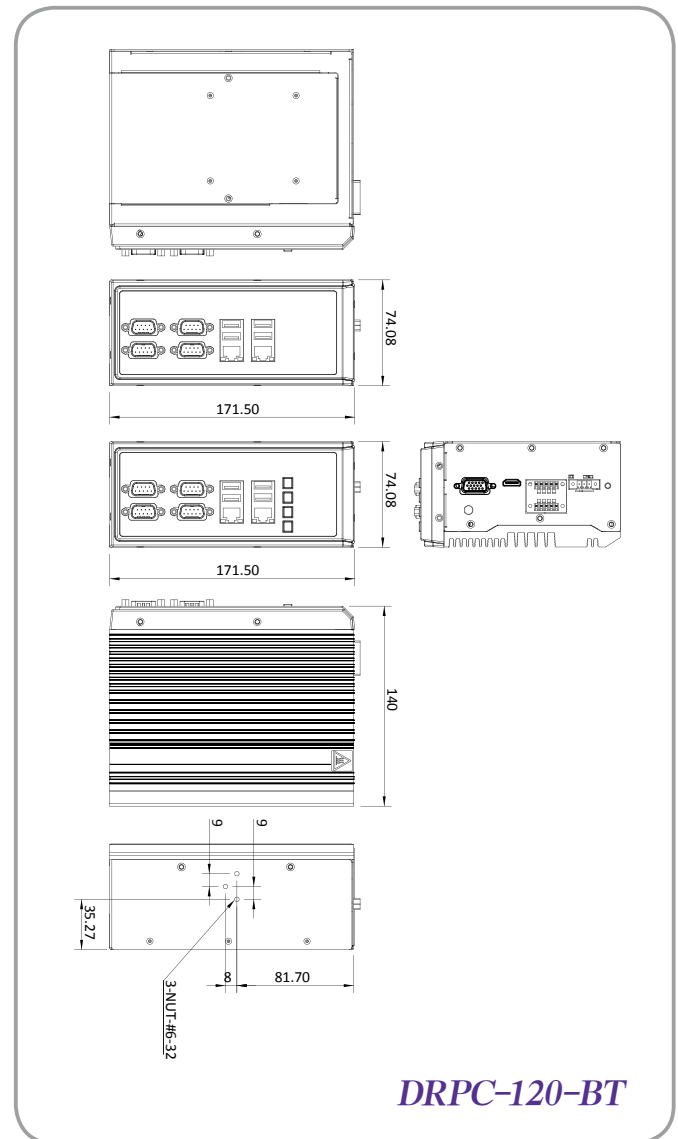
\* COM port isolation: 3 kV for 1 sec, 2.5 kV for 1 minute

\*\* 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

## Dimensions (Unit: mm)



## Options

Item	Part No.	Description
OS: Windows Embedded 7	DRPC-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	63040-010036-210-RS	Adapter Power;FSP;FSP036-RHBN3;9NA 0362707;;Vin:90~264VAC;36W;Dim:37.8*8 9.8*27.0mm;Plug=7.5mm;Cable=1500mm; Erp(NO LOAD 0.075W);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

## Packing List

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



# Compact Size Embedded System



Model Name	ITG-100-AL	uIBX-250-BW	uIBX-230-BT	
Chassis	Color	Blue & Silver	Black	Silver
	Dimensions (WxDxH) (mm)	ITG-100-AL-E1/S: 137 x 102.8 x 36.2 ITG-100-AL-E1: 137 x 102.8 x 56.2	136.6 x 102.4 x 52	137 x 102.8 x 57
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloy	Extruded aluminum alloys
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8GHz, dual-core, TDP=6.5W)	Intel® Celeron® N3160 (up to 2.24 GHz, quad-core, 2 MB cache, TDP=6W)	Intel® Celeron® N2930 1.83 GHz
	Chipset	SoC	SoC	SoC
	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 DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay (for ITG-100-AL-E1 sku only)	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	CF Card/CFast	N/A	N/A	N/A
I/O Interfaces	USB 3.1 Gen 1	2	4	1
	USB 2.0	2 by pin-header (optional)	N/A	3
	Ethernet	2 x RJ-45 PCIe GbE by I211-AT controller	2 x RJ-45 PCIe GbE by Intel® I211 controller	1 x RJ-45 PCIe GbE by Intel® I210 controller
	COM Port	2 x RS-232/422/485 (DB-9/RJ45) 2 x RS-232 by pin-header (optional)	2 x RS-232/422/485 (RJ-45)	1 x RS-232 (DB-9)
	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 VGA	1 x HDMI, 1 x VGA	1 x VGA
	Resolution	Up to 1920x1080@60Hz	HDMI: 3840 x 2160@30MHz VGA: 1920 x 1200@60Hz	Up to 2560 x 1600@60Hz
	Audio	N/A	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1x 802.11a/b/g/n/ac (optional)	N/A
	Expansions	1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA) 1 x M.2 2230 (A key, PCIe by 1, USB2.0)	1 x Full-size PCIe Mini (support mSATA, colay with SATA)*	N/A
Power	Power Input	2-pin terminal block: 12 V DC	DC Jack: 12 V DC	DC Jack: 12 V DC
	Power Consumption	12V @ 1A (Intel® Atom™ E3930 with 2GB memory)	12V @ 2A (Intel® Celeron® N3160 with 2 GB memory)	12 V@1.8 A (Intel® Celeron® N2930 with 2 GB memory)
Reliability	Mounting	DIN-rail / Wall mounting	Wall mount, VESA 75	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C ~60°C with air flow (SSD), 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	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	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)
	Weight (Net/Gross)	ITG-100-AL-E1/S: 0.67 kg/1.03 kg ITG-100-AL-E1: 0.86 kg/1.22 kg	470 g/1.4 kg	470 g/1.4 kg
Safety/EMC	CE/FCC	CE/FCC	CE/FCC	
OS	Supported OS	Microsoft® Windows 10 / Linux	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E

# ITG-100-AL

- Ultra Compact Size
- Fanless DIN-Rail Embedded system
- Intel®Atom x5-E3930 1.3GHz (up to 1.8GHz) solution

**New**



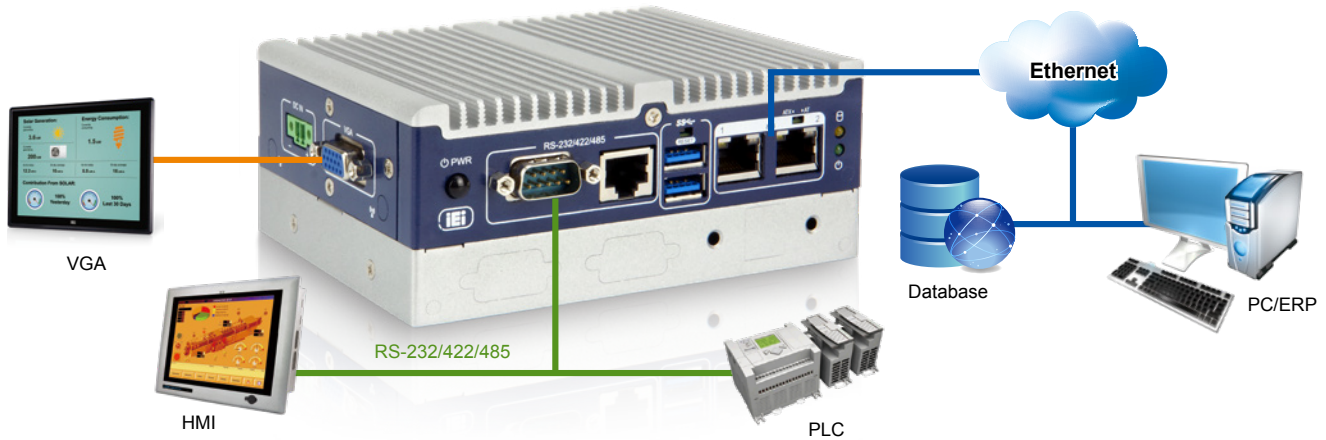
## Features

- Intel®Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- Two GbE LAN ports
- Two RS-232/422/485
- Full-size PCIe Mini slot and M.2 A-key slot for expansion



## Intelligent Gateway

The ITG-100-AL equips with basic I/O ports and supports a wide range of operating temperature, making it suitable for acting the role as a data collection gateway in smart factory environments.



## A Wide Range of Applications

Given its practical features, the ITG-100-AL can be applied to a variety of application fields, such as military, industrial automation, and traffic control.

Military

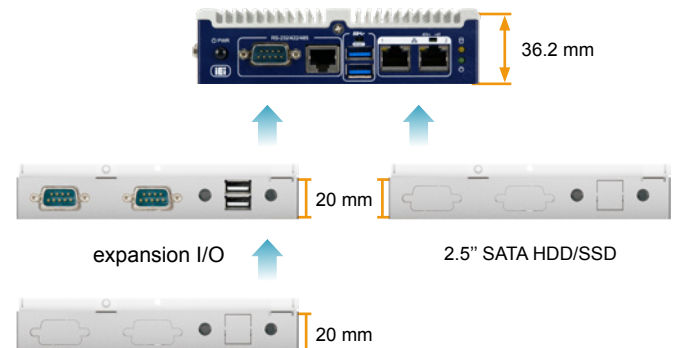
Industrial Automation

Traffic control



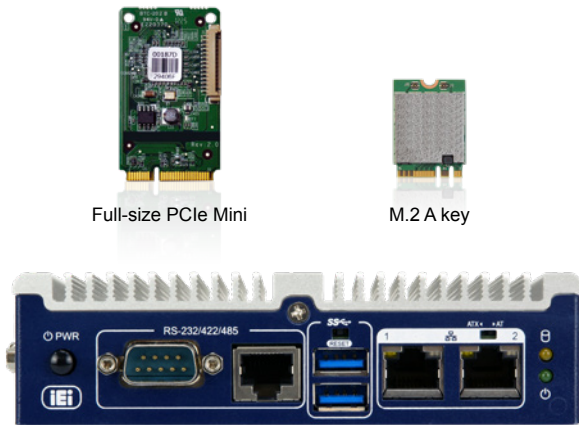
## Multi-layer Feature

Additional block layers can be assembled to achieve I/O interface expansion and data storage requirement. With choices of adding a 2.5" SATA HDD/SSD bay, a knockout-hole layer with selectable I/O interface, or both of above-mentioned options, the ITG-100-AL could be modularized to what best fit users' preferences and still remaining its compact size.



## Functionality Expansions

In order to respond the demand of adding more functions to the system, the ITG-100-AL is designed with a full-size PCIe Mini slot reserved for 3G/4G and a M.2 A-key slot reserved for Wi-Fi to provide function expansions with easy access.



## Ultra-compact Size

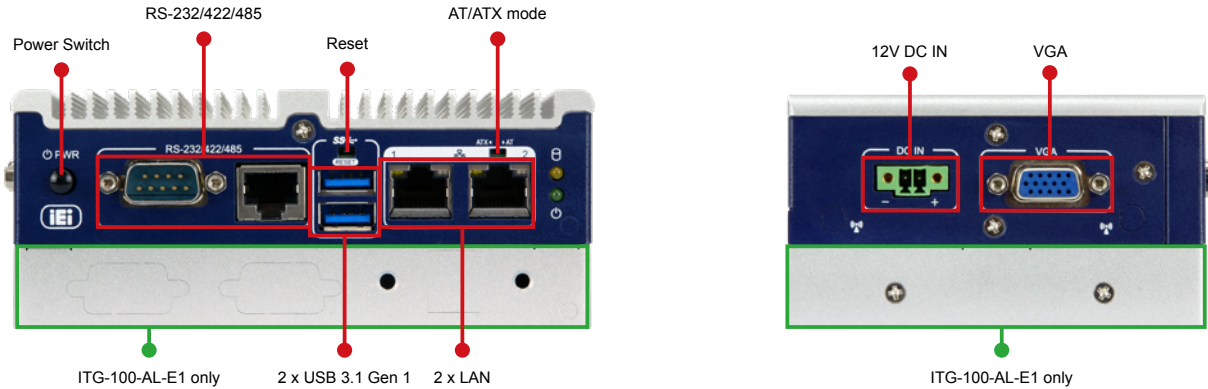
Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the ITG-100-AL not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.



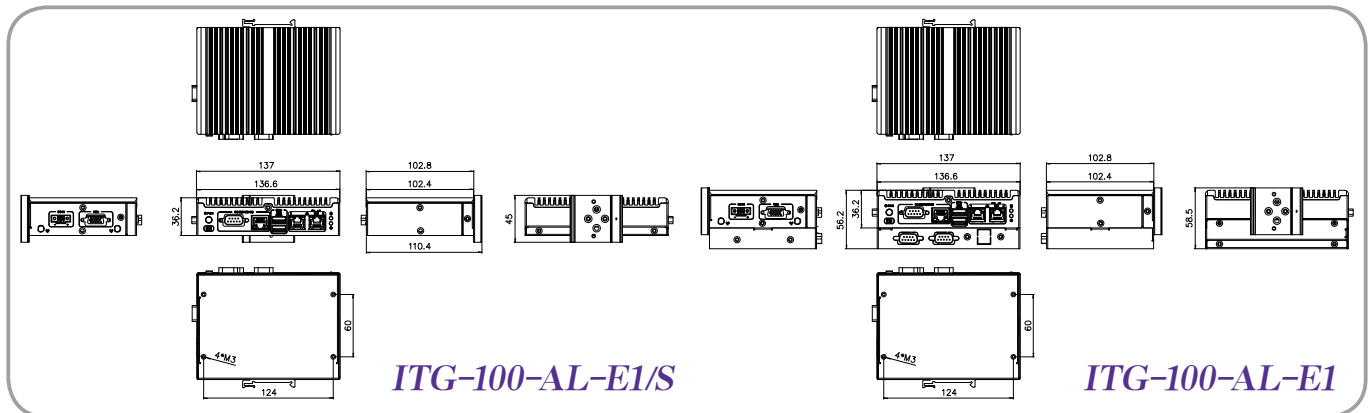
## Specifications

Model Name		ITG-100-AL-E1/S	ITG-100-AL-E1
Chassis	Color	Blue & Silver	
	Dimensions (WxDxH)(mm)	137 x 102.8 x 36.2	137 x 102.8 x 56.2
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloy	
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8GHz, dual-core, TDP=6.5W)	
	Chipset	SoC	
	System Memory	1x 204-pin DDR3L SO-DIMM slot (system max. 8 GB) (ITG-100-AL-E1/2GB/S-R10 sku is pre-installed with 2 GB memory)	1x 204-pin DDR3L SO-DIMM slot (system max. 8 GB) (ITG-100-AL-E1/2GB-R10 sku is pre-installed with 2 GB memory)
Storage	Hard Drive	N/A	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	eMMC	1 x eMMC 5.0 support (up to 32GB optional)	
	Micro SD	1 x Micro SD Slot(optional)	
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	2	
	USB 2.0	2 by pin-header (optional)	
	Ethernet	2 x RJ-45 PCIe GbE by I211-AT controller	
	COM Port	2 x RS-232/422/485 (DB-9/RJ45) 2 x RS-232 by pin-header (optional)	
	Digital I/O	8-bit digital I/O, 4-bit input/4-bit output by pin-header (optional)	
	Display	1 x VGA	
	Resolution	Up to 1920x1080@60Hz	
	Wireless	1 x 802.11a/b/g/n/ac (optional)	
	Others	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for HDD (Yellow), 1 x LED for Power (Green)	
	Expansions	M.2	1 x M.2 2230 (A key, PCIe by 1, USB2.0)
PCIe Mini		1 x Full-size PCIe Mini slot (supports mSATA, colay with SATA)	
Power	Power Input	2-pin terminal block: 12 V DC	
	power consumption	12V @ 1A (Intel® Atom™ E3930 with 2GB memory)	
Reliability	Mounting	DIN-rail / Wall mounting	
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95%, non-condensing	
	Storage Temperature	-30°C ~ 70°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)	0.67 kg/1.03 kg	0.86 kg/1.22 kg
	Safety / EMC	CE/FCC	
OS	Watchdog Timer	Programmable 1~255 sec/min	
	Supported OS	Microsoft® Windows 10 / Linux	

## Fully Integrated I/O



## Dimensions (Unit: mm)



## Ordering Information

Part No.	Description
ITG-100-AL-E1/S-R10	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), VGA, M.2, COM, 12V DC and RoHS
ITG-100-AL-E1/2GB/S-R10	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC and RoHS
ITG-100-AL-E1-R10	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), VGA, M.2, COM, 12V DC, Flexible I/O Expansion and RoHS
ITG-100-AL-E1/2GB-R10	Fanless embedded system, Intel®Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC, Flexible I/O Expansion and RoHS

## Options

Item	Part No.	Description
4GB Memory	79B00-G004-XXX-RS*	DDR3L (204 PIN);4GB;1.35V;0°~85°;RoHS
8GB Memory	79B00-G008-XXX-RS*	DDR3L (204 PIN);8GB;1.35V;0°~85°;RoHS
Wi-Fi Module	27319-000007-RS**	Wireless Lan Module;WiFi+Bluetooth;Sparklan;R970181001;IEEE802.11a/b/g/n/ac;2.400GHz~2.484GHz,5.15GHz~5.85GHz;M.2 2230;3.3V;22°30'±2.0mm;Qualcomm Atheros QCA6174A-5;2x2 MIMO;Dual Band;WNFQ-258ACN(BT) [W];CCL;RoHS
Antenna	32505-000900-100-RS**	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Excelltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	32501-004000-100-RS**	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT*1;WASHER*1;;RoHS
DIO Cable	32231-000300-100-RS	FLAT CABLE;DIO CABLE;;2;50MM;28AWG;(A)D-SUB 9P FEMALE;(B)DU PONT 2*5P P=2.0 FEMALE,RoHS
COM Cable	32205-007500-200-RS	FLAT CABLE;RS-232/422/485;COM CABLE;2;50mm;28AWG;(A)D-SUB 9P MALE;(B)DU PONT 2*5P P=2.0 FEMALE,RoHS
USB Cable	32001-000800-200-RS***	ROUND CABLE;USB CABLE;;2;150MM;28AWG;(A)DOUBLE LAYER USB A TYPE FEMALE(WITH EAR);(B)DU PONT 2*4P P=2.0 FEMALE,RoHS
Adapter	63040-010036-210-RS	Adapter Power;FSP;FSP036-RHBN3;9NA0362707;;Vin:90~264VAC;36W;Dim:37.8*89.8*27.0mm;Plug=7.5mm;Cable=1500mm;Erp( NO LOAD 0.075W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power Cable	32102-045700-100-RS	WIRE CABLE;POWER CABLE;;2;200mm;18AWG;(A)DC JACK 5.5*2.5;(B)TERMINAL BLOCK 2P P=3.5 180°,RoHS
Power Cord	32702-000400-200-RS	European power cord
OS:Windows Embedded 10	ITG-100-W10E64-E-R10	OS Image with Windows® 10 IoT Enterprise Entry 64-bit for ITG-100-AL Series, with DVD-ROM, RoHS

\* It is just a general P/N. Please contact your sales representatives to assist you in ordering.

\*\* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

\*\*\* This USB cable cannot be used at the layer where the HDD drive bay is located.

## Packing List

1 x SATA cable & SATA power cable(for ITG-100-AL-E1 only)

1 x Screw kit

1 x Mounting bracket

# uIBX-250-BW

Ultra Compact Size

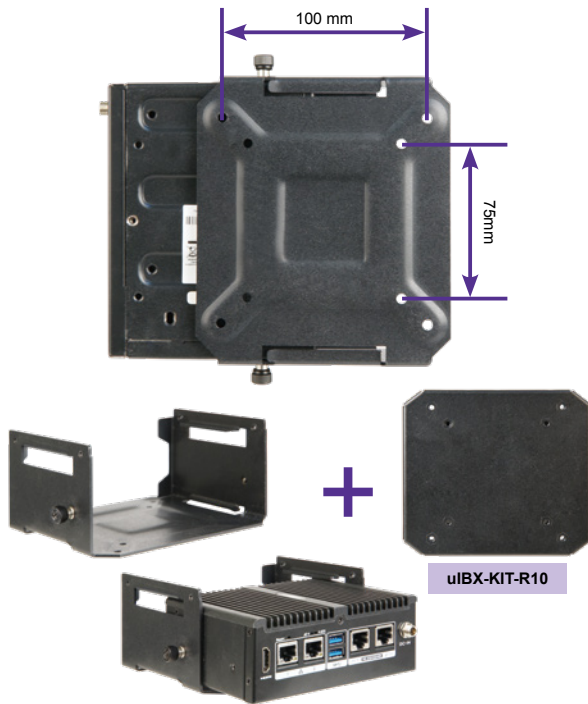


## Features

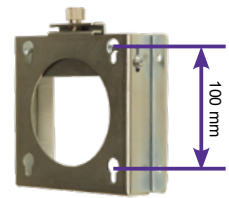
- Fanless system with Intel® Celeron® N3160 processor
- Dual display
- Two RS-232/422/485
- Full-size PCIe Mini slot for expansion
- Four USB 3.1 Gen 1 (5Gb/s) ports
- Two GbE LAN ports



## Smart Mounting Design

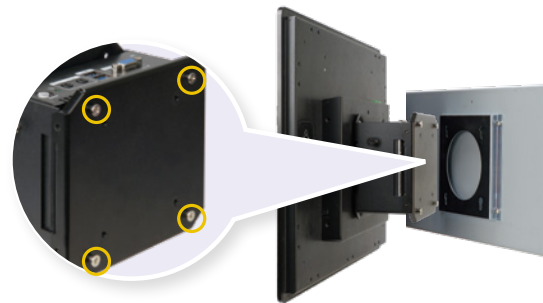


### A. Wall mount



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.

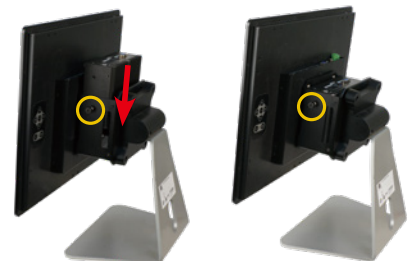
#### Step.2



Assemble the uIBX-250, stand and monitor.

#### Step.3

screw to fix uIBX-250



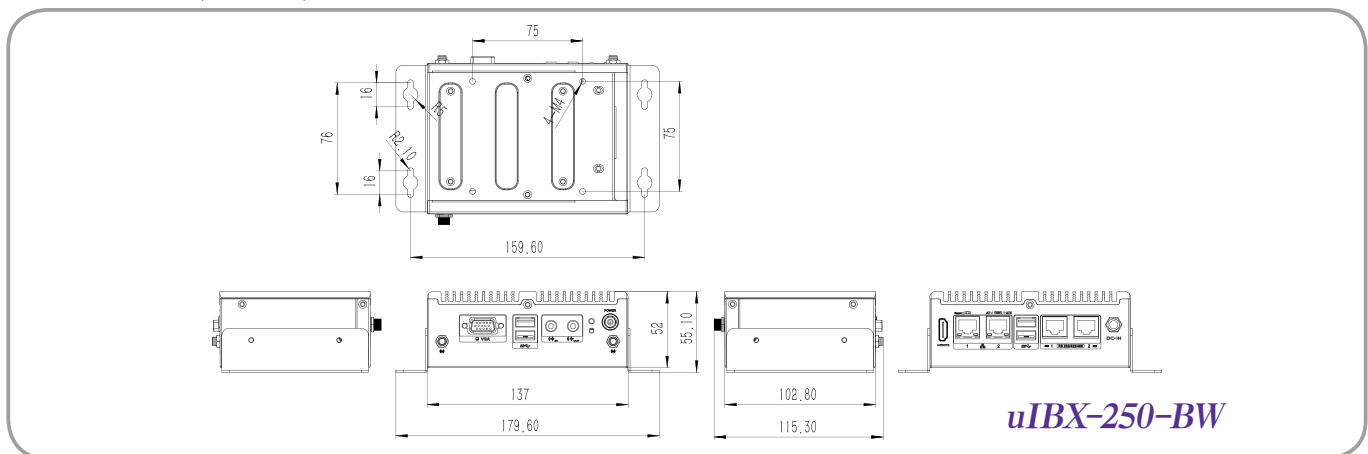
Mount it on the back of monitor to save even more space, the location the uIBX-250 could be adjusted by user for different applications.

## 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 3.1 Gen 1 (5Gb/s)	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 x 1200@60Hz
	Audio	1 x Line-out, 1 x Line-in
	Wireless	1x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini (support mSATA, colay with SATA)*
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

\*uIBX-250-BW-QGW-R20 has no PCIe mini slot

## 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, 12V DC, with RS-232/422/485, USB 3.1 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, RoHS
uIBX-250-BW-QGW-R20	Fanless embedded system with Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad core, TDP 6 W), 4 GB DDR3L pre-installed memory, 12V DC, with RS-232/422/485, USB 3.1 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, with QTS-Gateway, 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 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

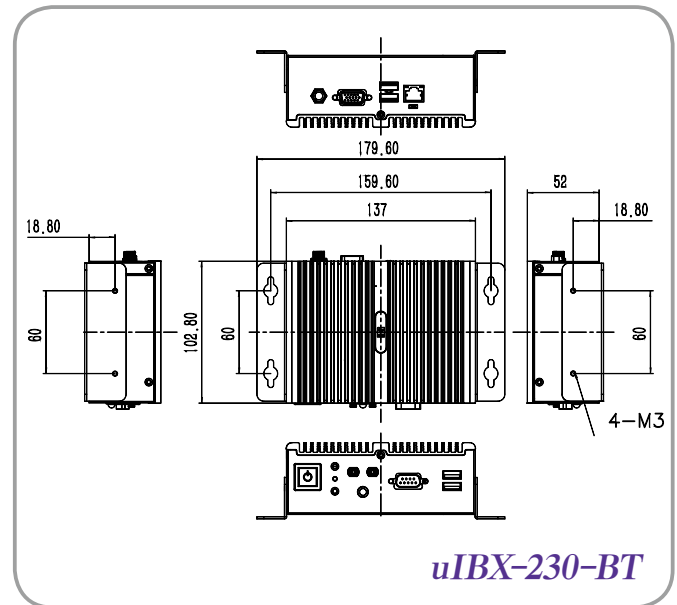
Model Name	uIBX-230-BT	
Chassis	Color	Silver
	Dimensions (WxDxH) (mm)	137 x 102.8 x 57
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	Intel® Celeron® N2930 1.83 GHz
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM 2 GB pre-installed (system max: 8GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay
I/O Interfaces	USB 3.1 Gen 1 (5Gb/s)	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

## 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)



## 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

## Packing List

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

# Digital Signage Solution



## IDS-300

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.

**Slim size**

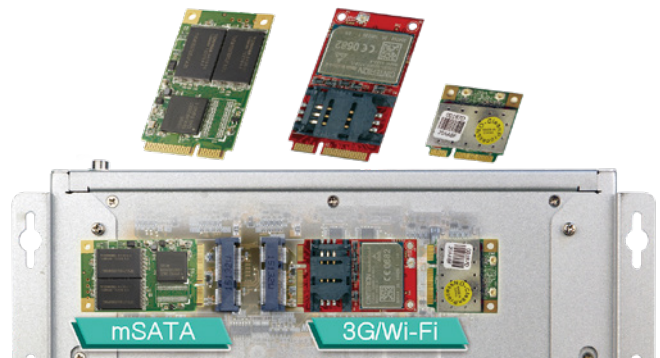
39mm



IDS-300

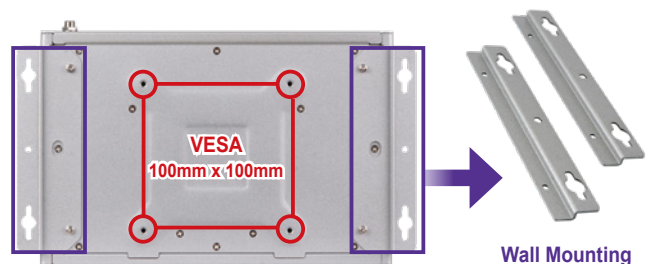
#### ■ Hardware Expansion

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.



Wall Mounting



# 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 3.1 Gen 1 (5Gb/s) 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 3.1 Gen 1 (5Gb/s)	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	1 x Full-size PCIe Mini 1 x Full-size PCIe Mini (supports mSATA, colay with SATA)
Power	Power Input	DC Jack: 12 V DC
	Power Consumption	12 V@2.48 A (Intel® Celeron® N3160 with 4GB memory )
Reliability	Mounting	Wall mount, VESA 100
	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	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

## Ordering Information

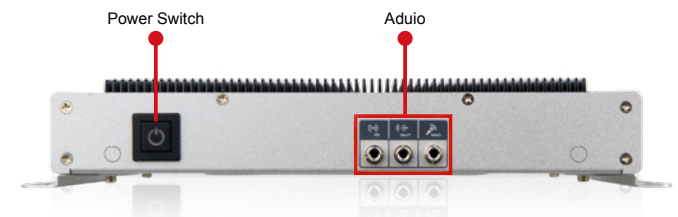
Part No.	Description
IDS-300-BW-N3/4G-R10	Fanless embedded system with Intel® Celeron N3160 1.6GHz, (up to 2.24 GHz, Quad Core, TDP 6W), pre-installed 4GB DDR3L memory, 12V DC, triple HDMI display, RoHS

## Packing List

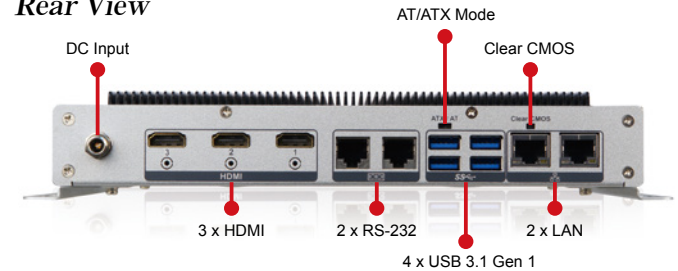
1 x Power Adapter

## Fully Integrated I/O

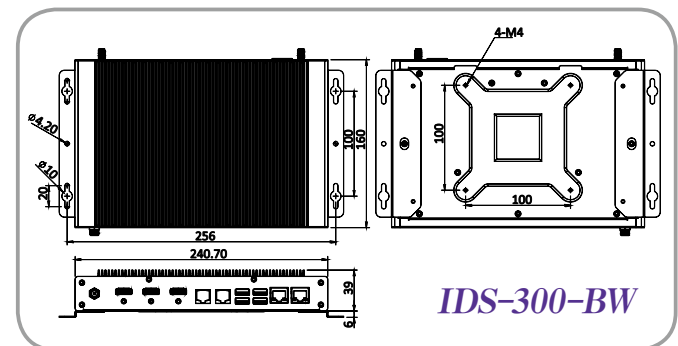
### Front View



### Rear View



## Dimensions (Unit: mm)



## 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

# HTB-100-HM170

- Medical Box PC
- Fanless Quad Core Box PC



## Features

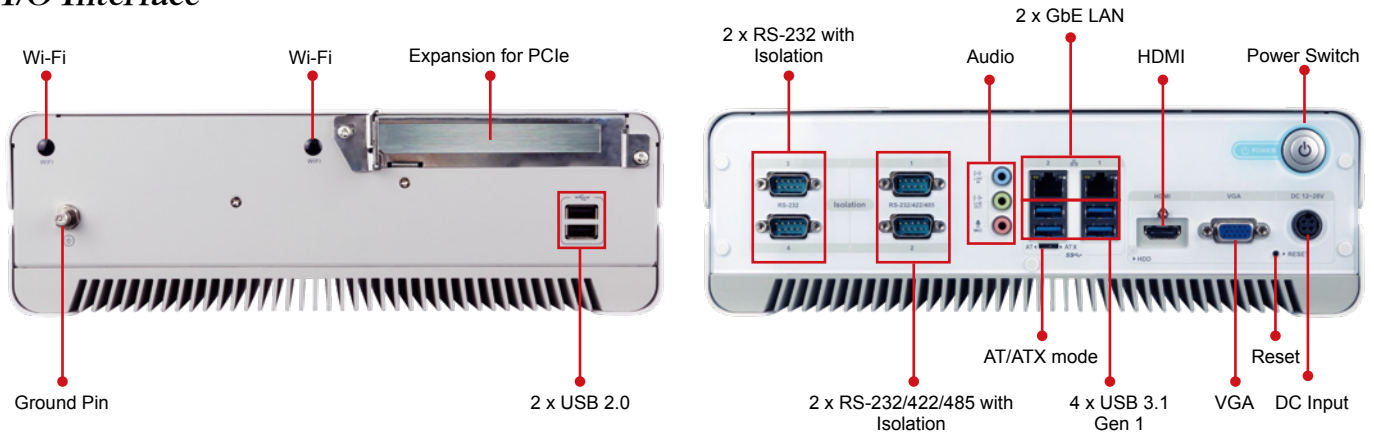
- Medical grade with high performance fanless embedded computing
- 6th Gen Intel® Core™ processor platform with Intel® HM170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Isolated COM ports for enhancing safety among devices
- Optional PCIe x16 expansion slot supports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



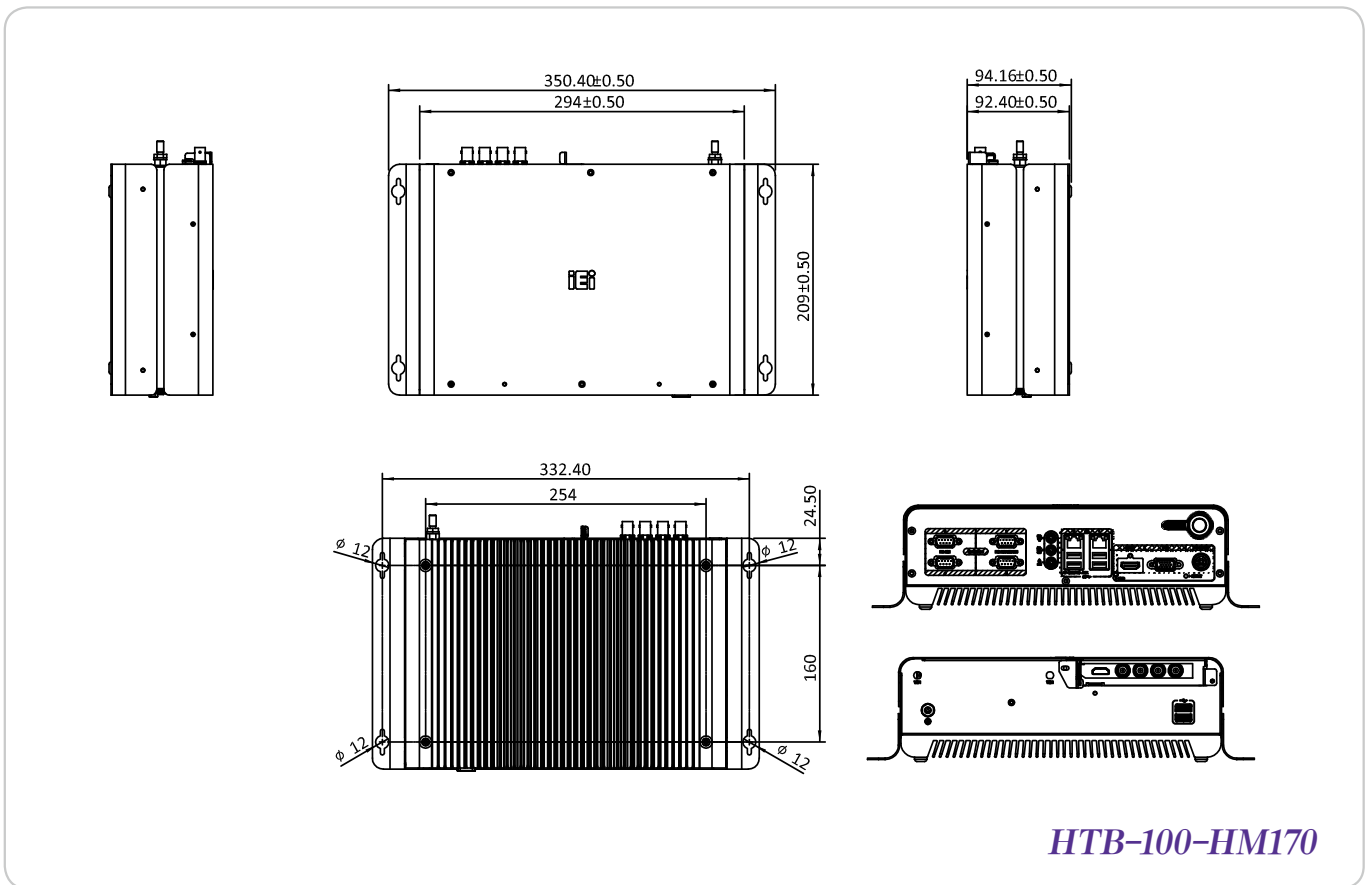
## Specifications

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 3.1 Gen 1 (5Gb/s)	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 2.5 kV isolation) 2 x RS-232/422/485 (DB-9, with 2.5 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 (2230/ USB or PCIe)
Power	Power Input	DC Jack: 12~28V DC
	Power Consumption	19V@4.4A (Intel® Core™ i7-6822EQ with 4 GB memory)
	Adapter	Adapter Power: Vin:90~264VAC; 150W; Dim:85*170*42.5mm; Plug=6.5mm; Cable=1200mm; MEDICAL; Vout:19VDC; Din 4Pin/lock; CCL; R10
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, Adapter Power; Vin:90~264VAC; 150W; Dim:85*170*42.5mm; Plug=6.5mm; Cable=1200mm; MEDICAL; Vout:19VDC; Din 4Pin/lock; CCL; R10
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, Adapter Power; Vin:90~264VAC; 150W; Dim:85*170*42.5mm; Plug=6.5mm; Cable=1200mm; MEDICAL; Vout:19VDC; Din 4Pin/lock; CCL; R10

## Options

Part No.	Description
41008-0803K6-00-RS	Cable COVER; HTB-100ME; White; R10

## Packing List

1 x Chassis Screw	1 x Mounting Bracket
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