UPC-12A

12.1” Aluminum UPS Panel PC with Smart Battery Backup

Rugged Aluminum Die-casting Body!

- PCI/PCIe Expansion Capability
- Regular High Brightness/ 1000 nits Sunlight Readable
- 802.11 b/g/n Ready

Waterproof USB Cover

Smart battery backup provides emergency power
(14.8V, 3800 mAH)

Smart Battery | Sunlight Readable | wireless 802.11 b/g/n | Touch Screen | Light Sensor | PCI/PCIe Expansion Capability | IP 65 Front Panel

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UPS Panel PC with Smart Battery Backup Function

UPC-xxA, a revolutionary model featuring smart battery technology, which allows users to monitor and manage battery's status directly through IEI unique user interface. The UPC-12A boasts a 12.1-inch XGA LCD screen with sunlight-readable 1000 nits options. The UPC-xxA series equipped with battery pack provides emergency power when the main power source is not available, eliminating the risk of main power shutdown suddenly, permitting extremely flexible integration into a wide variety of applications:

- Lift Truck System
- ATM Machine
- Medical Cart
- Order Pick Cart
- Warehousing and distribution

UPC-12A

Features:

- **12.1" all-in-one PPC with touch technology**
- **1000 nits sunlight readable panel available**
- **Powerful all-in-one panel PC**
  - Intel® GM45 chipset and 45nm mobile Core™2 Duo processor support
  - An onboard ULV Intel® Celeron® M 1GHz plus 512K with Intel® 910GMLE chipset support
- **Battery backup power protects your productivity from the constant threat of power outages and lost data**
- **Ambient light sensor detects ambient light for automated screen adjustments to optimize viewing.**
  (0%~100% brightness control for sunlight readable version)
- **Dual Gigabit Ethernet to allocate reduce the network collision and crash, or virus infection**
- **Remote power On/Off switch**
- **802.11 b/g/n Wi-Fi support**
- **PCI expansion slot for adding more capacity** (Optional PCI express expansion interface)
- **One Compact Flash® Type II socket**
- **Standard VESA 75/100 mounting**
- **Robust die-casting aluminum chassis**
- **IP 65 compliant aluminum front panel compliant**

UPS Panel PC Applications

Benefits:

- Provides power for certain period of time after a power fail has occurred.
- Continue to provide stable power to equipment during line sags & spikes.
- Absorb power surges & transients.
- Smooth out noisy power sources.

A. Mobile System Solution

Providing backup power for the data sensitive part of movable equipment, allowing charging and battery replacement of the primary power without shutting down the data terminal.

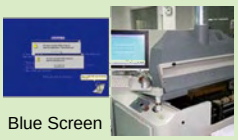
B. Power Bank Solution

Acts as power input regulator to prevent unstable power input damage and avoid protect against unexpected power loss.

C. Other Relative Applications

Production Line

With UPS Protection
The IEI Smart Battery is immediately enabled when power failed, and provides stable power so the operator can save important system parameter.

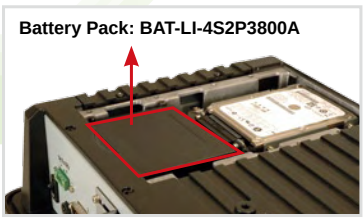


Without UPS Protection
System shuts down or hangs-up suddenly and all data is lost because no backup power is available.

A. Smart Battery Backup

Protect your productivity form power outages and lost data

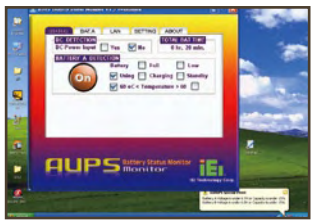
1. Rechargeable Battery



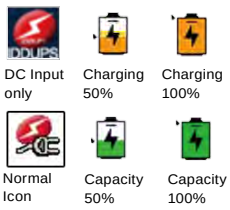
The UPC series is equipped with rechargeable "smart battery" which can supply voltage to systems up to 60 minutes without any external power supply.

Platform	Smart Battery Run-time
Intel®910GMLE	40~60 mins
Intel®GM45	40 mins

2. Battery Monitoring Utility



- Battery detection
- Battery capacity status
- Battery charge
- DC Input Indicator
- Battery Indicator
- Temperature warning
- Low battery alarm
- Connection port status



3. Temporary Mobile System

UPC Battery Mode

BATT / UPS | **AT / ATX**

Under the battery mode, the UPC system can boot by power switch while the UPS battery supplies the main power to the unit as a temporary mobile system.

Protection

Automatic self-test	Battery self-test ensures early detection of a battery that needs to be replaced.
Back Up Power	An Back-UPS instantly switches your computer to emergency battery backup power and allows you to work through brief power outages

Convenience

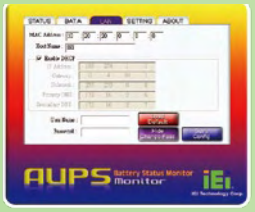
Audible Alarms	Proactively notifies you of changing battery under 10% capacity.
Automatic self-test	User friendly graphical interface.

Manageability

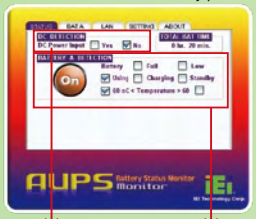
Software	This ensures real time monitoring and networking remote management Network based power management Internet ready monitoring

• Manageability

LAN CONFIGURATION
• LAN shows system IP Address information

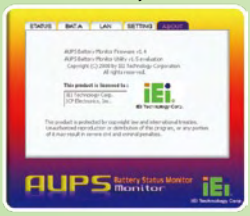


AUPS STATUS
• STATUS shows DC / Battery power input

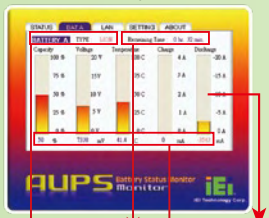


DC Input Detection | Battery Status Detection

ABOUT
• shows AUPS Utility information



BATTERY STATUS
• BAT.A shows Battery status real time monitoring



Battery usage remaining time | Battery capacity bar
Battery Type | Real time information updating

SETTING
• SETTING shows Connection Detection port

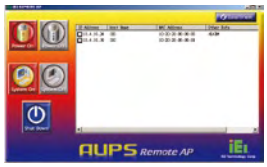
Auto-Scan Connection port | System shuts down condition by battery capacity setting

• Network Based Power Management and Monitoring

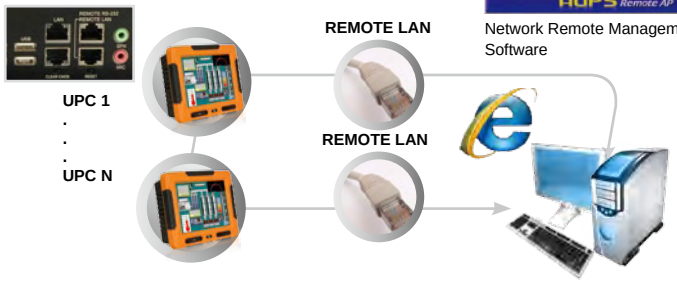
The UPC series carries with smart battery software utility and application program for user to monitor the battery real time status and remotely control system power on/off from anywhere and anytime through network. Remote management software allows users to use static IP or DHCP for remote management.

Multiple Systems Power Control

The remote management software utility and application program allows users to easily get the status of the UPC and to control the UPC power functions form anywhere with an internet connection.

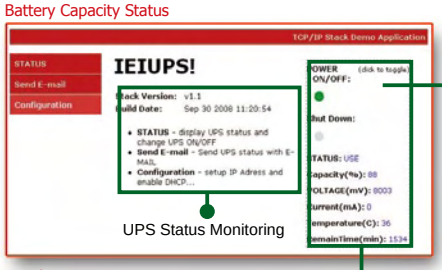


Network Remote Management Software



UPC Network Remote Management

Battery Capacity Status



Email Status Report

Remote control DC output ON/ OFF via web interface.

B. Powerful Computing

The powerful UPC-12A are designed for embedded performance grade applications. Featuring an Intel® GM45/910GMLE provides total compatibility in a wide variety of high performance end lower power industrial control applications.

• Intel® GM45

The UPC-xxA seires integrated with the 45nm next generation Intel® Core™ 2 Duo processor family (Penrym) which extends leadership in performance and energy efficiency for low power embedded applications.

Performance Leadership
- Penryn on 45nm process
- Large L2 Cache and Faster FSB (6M, 1066MHz)

Increased Integration
- Support for High Def decode in H/W

Format	Decoding Stage	GME965	GM45
MPEG2 (DVD)	HW Motion Comp	v	v
	Inverse DC Transform	v	v
	Variable Length Decode	v	v
VC-1 (WMV9)	HW Motion Comp + In Loop Deblocking	v	v
	Inverse Transform		v
	Variable Length Decode		v
AVC (H.264) (HD DVD)	HW Motion Comp + In Loop Deblocking	v	v
	Inverse Transform		v
	Variable Length Decode		v

For performance-oriented users, socket type allows customers to easily upgrade processors from Celeron® M 2.0GHz to Core™2 Extreme 2.53GHz.

Package Type		Brand Name	Code Name	CPU No.	Clock Speed	FSB (MHz)	L2	TDP	Chipset
Socket P	45nm	Core™2 Extreme	Penryn (Montevina)	QX9300	2.53G	1066	12M	45W	GM45
				X9100	3.06G		6M	44W	
		Core™2 Quad		Q9100	2.26G		12M	45W	
				Q9000	2.0G		6M	45W	
		Core™2 Duo		T9900 (PGA/BGA)	3.06G		6M	35W	
				T9800 (PGA/BGA)	2.93G		6M	35W	
				T9600 (PGA/BGA)	2.8G		6M	35W	
				T9550 (PGA/BGA)	2.66G		6M	35W	
				T9400 (PGA/BGA)	2.53G		6M	35W	
				P9600 (PGA/BGA)	2.66G		6M	25W	
				P9500	2.53G		6M	25W	
				P8800 (PGA/BGA)	2.66G		3M	25W	
				P8700 (PGA/BGA)	2.53G		3M	25W	
				P8600 (PGA/BGA)	2.4G		3M	25W	
				P8400 (PGA/BGA)	2.26G		3M	25W	
		Core™2 Extreme	Penryn (Santa Rosa Reflash)	X9000	2.8G	800	6M	44W	
		Core™2 Duo		T9500 (PGA/BGA)	2.6G		6M	35W	
				T9300 (PGA/BGA)	2.5G		6M	35W	
				T8300 (PGA/BGA)	2.4G		3M	35W	
				T8100 (PGA/BGA)	2.1G		3M	35W	
	65nm		Meron (Santa Rosa)	T7500 (PGA/BGA)	2.2G		4M	35W	
		Celeron®	Meron (Montevina)	575	2.0G	667	1M	31W	

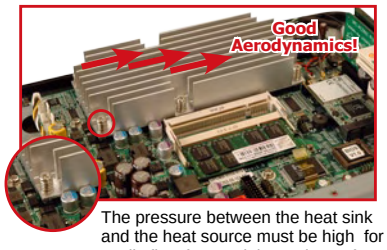

Millitary

Millitary Application:
- Powerful PC with super high brightness LCD Screens for demanding military applications
- Touch Screen Capable
- Integrated Intel® Core 2™ Duo CPU with high performance graphics speeds up to 533 MHz improve graphics and 3D rendering performance, enable high-definition video playback. for graphic intensive applications (i.e. mapping, simulation)

• Intel® 910GMLE

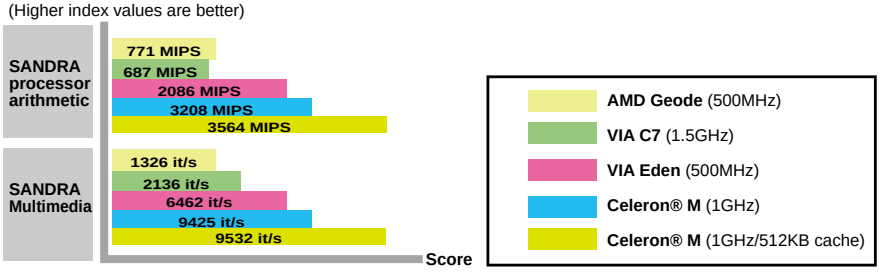
Embedded Low Power

Intel® Celeron® M 1GHz plus 512K cache with Intel® 910GMLE chipset
Offers the best combination of high performance computing features with the lowest power dissipation, ideal for industrial automation applications.



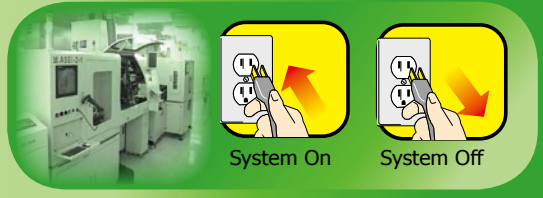
The pressure between the heat sink and the heat source must be high for easily flow for good thermal transfer.

Comparison of CPU Performance Benchmark-SANDRA
(Higher index values are better)



Selectable AT/ATX Power Mode

Convenient External Switch in the Rear



• AT Power Mode

The AT power option allows multiple systems to be powered on directly by turning on the power supply. A room of computers can be controlled by a central power switch, so all systems are turned on and off by a central switch. This power mode is best suited for multiple computers where constant connectivity is not necessary, as the computers cannot be accessed or turned on remotely.

UPC switch settings
BATT / UPS | AT / ATX

Benefits:
- Automatic start when power connected

• ATX Power Mode

The ATX power option allows systems to be powered on and off remotely over a network. Systems must be plugged in all the time, but they can be turned on from a "soft-off" using software that sends the appropriate signal over the network connections. Individual PCs can be turned on at the same time. The always-on ability allows complete remote administration, reducing technician visits to only when there are hardware issues.

UPC switch settings
BATT / UPS | AT / ATX

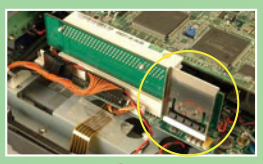
Benefits:
- Power Management: Turn the system to standby mode to save power when the PPC is not used.
- Remote Control: The standby function on the ATX mode power supply allows the PPC to be turned on/off remotely via network.

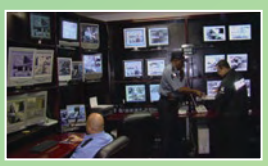
C. Flexible Expansion Interface
(PCI/PCIe/PCIe mini expansion Interface)

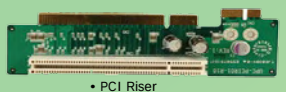
UPC series provide many expansion interfaces including one standard 32-bit PCI slot for various PCI add-on card, and one PCIe mini card socket for a small form factor extender such as wireless module.

1. PCI/Optional PCIex1 Expansion Slot

Anti-vibration Riser
Tightly secured riser card design.





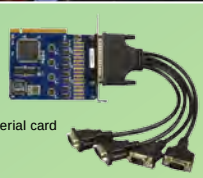


• PCI Riser

• PCI e x 1 Riser (Optional)

• PCI-E x 1 card

• PCI interface Capture Card



• PCI serial card

2. PCIe mini slot for 802.11b/g/n wireless module

The UPC series featuring high speed WiFi IEEE 802.11 n protocol which builds on previous 802.11 standards by adding multiple-input multiple-output (MIMO) and 40 MHz operation to the physical (PHY) layer. MIMO uses multiple transmitter and receiver antennas to improve the system performance. The 40 MHz operation uses wider bands, compared to 20 MHz bands in previous 802.11 operation, to support higher data rates. Wider bandwidth channels are cost effective and easily accomplished with moderate increases in digital signal processing.

27 times faster data transfer rate compare 802.11b

Protocol	Freq.	Thru.	Data	Range indoor	Range outdoor
802.11	(GHz)	(Mbit/s)	(Mbit/s)	(m)	(m)
a	5 GHz	23	54 Mbit/s	~35	~120
b	2.4 GHz	4.3	11 Mbit/s	~38	~140
g	2.4 GHz	19	54 Mbit/s	~38	~140
n	5 GHz and/ or 2.4 GHz	74	300 Mbit/s (2 streams)	~70	~250

The UPC System Features
- Invisible antenna delivers 802.11n wirelessnetwork connectivity
- Wireless IEEE 802.11 b/g/n module with PCI Express Mini-Card interface

D. Sunlight Readable

• 800/1000 nits Super High Brightness

The UPC-xxAH series has greatly improved luminance through edge lighting to achieve super high brightness

• Low Reflection through AR (Anti-Reflection) Technology

Outdoor applications in daylight or other bright environments require technology that can suppress surface reflection. The UPC-12AH sunlight readable model offers special AR (anti-reflection) surface treatment to prevent reflection, which ensures excellent visibility in daylight conditions.

Super high brightness: 1000 nits
High contrast: 700:1
Wide viewing angel: 60/60 (R/L) 45/75 (U/D)

E. Ambient Light Sensor

Ambient Light Sensor provides Comfortable Viewing and Power Saving

Atuo-detects the amount of light in the viewing environment and auto-adjusts the brightness of the screen.
- Avoid eye strained and tried, to provide comfortable viewing
- Power consumption saving
- Extend lamp lifetime
- Extends backlight life

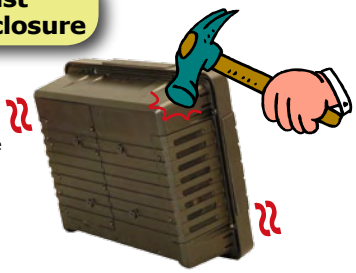
Note: Fully Dimmable Controls (for UPC-xxAH model)

F. Rugged Design

The UPC series ultra-rugged design survives the continuous shocks and jolts of a forklift. Engineered with a tough, anti-vibration and IP65 front panel dust and water rating.

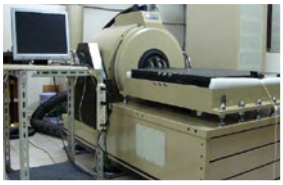
Robust Die-Cast Aluminum Enclosure

A rugged die-cast aluminum enclosure helps the need for using a fan as a heat dissipation device to minimize the troublesome overheating problem.



Rigorous Shock/ Vibration Test

Compliant with MIL-STD-810F shock and vibration protection, as well as offering IP65 water and dust proof front panel protection.



HDD install with Anti-shock buffer rubber enhances protection performance.

Dismantleable Fan Moduyle for Easy Maintenance

Applications

1. Lift Truck PPC

Lift truck mounted with UPC-12A, just as with barcode scanners, enable real-time data collection which allows operators to accomplish traditional warehouse tasks – faster – thus reducing labor costs.

We Offer:

- **9~28V DC Input for Mobile Application.**
- **WiFi 802.11 b/g/n**
  802.11b/g Wi-Fi, which gives you up to broadband-speed browsing and connectivity while moving, compared to traditional wired LAN. Without hinders worker movement and lessens man-hour productivity.

2. Power Bank

We Offer:

- **Redundant Power Protection**
  As the redundant power supply, in the event of the main power source failing or running out, the UPC unit is able to power the load to provide greater reliability.
- **Wide Range 9V~28VDC Input**
  The UPC series provides wide range +9~+28VDC power input for regulator function to prevent unstable power input damage, also avoid unexpectedly power lost.
- Rechargeable temporary battery pack
- Providing up to 60 minuets uninterrupted operation time for external battery change or relocation data back up.
- **Reduce Risk of Losing Valuable Data as Continuous System Operation**
- **VESA Compliance Easy to Employ**

• Fully I/O and User Friendly Interface

• LED Indicator

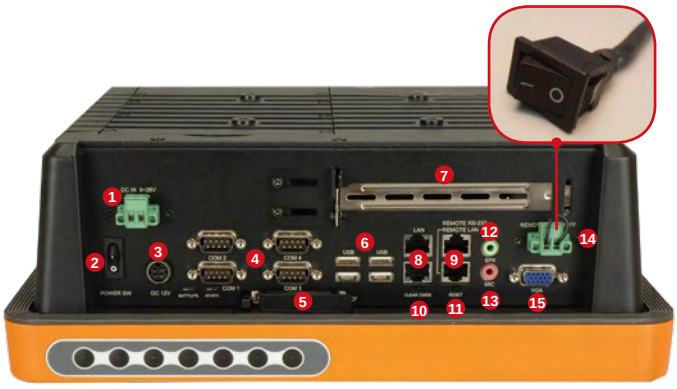
(Power LED/HDD Status/Charging/ Discharging/Light Sensor)

• Membrane Keypad Control

LCD On/Off; Brightness Up/Down; Volume Up/Down; Auto Dimming On/Off; Battery Low Beeper (under 10% batter capacity beeper on/off)

• Waterproof front USB

Designed for industrial use, UPC waterproof front USB cover is based around the standard USB interface, with USB Ver.2 performance offering data transfer up to 480Mbs.



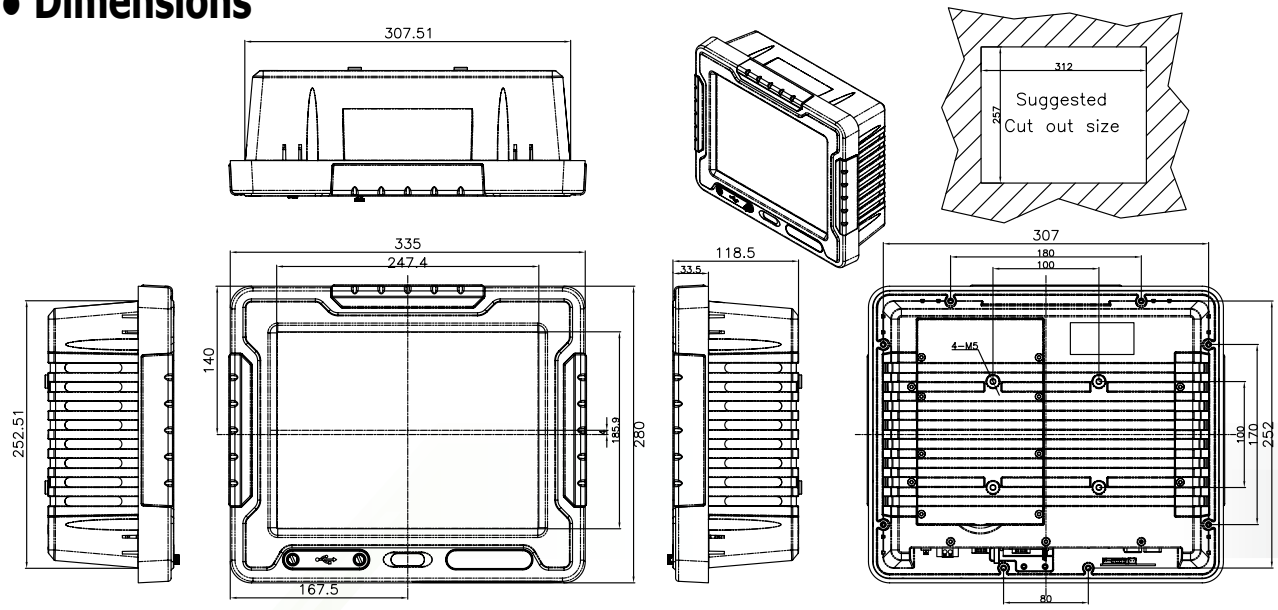
1. 9~28VDC Input
2. Power Switch
3. DC 12V Power Jack
4. 3 x RS-232 COM, 1 x RS-232/422/485 COM
5. User-accessible CF
6. 4 x USB2.0
7. 1 x PCI Expansion Slot (Optional PCIex1 expansion)
8. 2 x RJ-45 Giga LAN
9. Remote LAN
10. Clear cmos
11. Reset
12. SPK
13. MIC
14. Remote DC On/Off
15. VGA Output

• Specifications

Model		12.1" Regular Brightness		12.1" Sunlight Readable	
		UPC-12A/910	UPC-12A/GM45	UPC-12AH/910	UPC-12AH/GM45
Display	LCD Size	12.1"		12.1"	
	Max Resolution	1024 x 768		1024 x 768	
	Brightness (cd/m²)	450		1000	
	Contrast Ratio	700:1		500:1	
	LCD Color	262k		262k	
	Pixel Pitch (mm)	0.240(H) x 0.240(V)		0.240(H) x 0.240(V)	
	Viewing Angle (H-V)	150°/150°		120°/120°	
	Backlight MTBF	50000hrs		50000hrs	
Motherboard	CPU	Intel® Celeron® M processor 1.0GHz with 512KBL2 Cache	Intel® Core™2 Duo T7500 2.2GHz Intel® Celeron® M 575 2.0GHz Intel® Core™2 Duo T9400 2.53GHz	Intel® Celeron® M processor 1.0GHz with 512KBL2 Cache	Intel® Core™2 Duo T7500 2.2GHz Intel® Celeron® M 575 2.0GHz Intel® Core™2 Duo T9400 2.53GHz
	Chipset	Intel® 910GMLE + ICH6M	Intel® GM45 Chipset + ICH9M	Intel® 910GMLE + ICH6M	Intel® GM45 Chipset + ICH9M
	RAM	two DDRII SO-DIMM Up to 4GB			
I/O		3 x RS-232 COM 1 x RS-232/422/485 COM 2 x RJ-45 Giga LAN 6 x USB 2.0 (2 waterproof USBs in front of the panel) 1 x VGA 1 x Power Switch 2 x Audio Jack (Lin-out, Mic-in) 1 x Reset Button		1 x COMS Clear Button 1 x 9~28VDC Power Jack 1 x Power Mode Switch (Battery or DC input) 1 x 9~28VDC Power Input Terminal Block 1 x Networking UPS Management Port by RJ-45 Ethernet 1 x Remote COM port by RJ-45 connector 1 x UPS Remote Power Switch (2 pin terminal block)	
Expansion		1 x PCI 1 x PCIex1 (Optional) 1 x PCIe mini (Wireless LAN Module)			
LED Indicator		Power LED / HDD Status / Charging / Discharging / Light Sensor			
Membrane Keypad		LCD On/Off; Brightness Up/Down; Volume Up/Down; Auto Dimming On/Off; Battery Low Beeper (under 10% batter capacity beeper on/off)			
Drive Bay	SSD	CF Type II			
	HDD	1 x 2.5" SATA HDD bay			
Battery	Capacity	14.8V, 3800 mAH			
	UPS run-time	60 mins	40 mins 50 mins 40 mins	50 mins	40 mins 40 mins 30 mins
Physical	Construction Material	Aluminum Die-casting			
	Mounting	VESA 100 mm x100 mm			
	Front Panel Color	Orange			
	Dimension (WxHxD) (mm)	335 x 280 x 119			
Environment	Operation Temperature (℃)	10°C~55°C			
	Storage Temperature (℃)	-20°C~70°C			
	Net/Gross Weight	5.8 Kg / 6.9 Kg			
	IP Level	IP65 Front Panel Compliant			
	Safety & EMC	CE / FCC / CCC / CB			
Touch Screen		Resistive Type 5-Wire (Touch controller IC is on board)			
Power Requirement		9~28VDC			
Power Consumption		56W	63W 60W 65W	64W	73W 70W 74W

*note: Battery normal operating temperature 0°C~45°C

• Dimensions



• Ordering Information

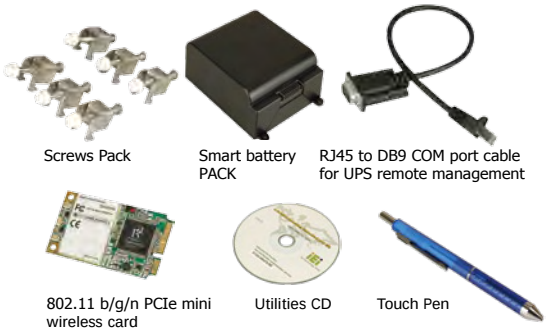
Part Number			Description
12.1"	Regular Brightness	UPC-12A/910-CM373/WT-R/1GB-R10	12.1" 450 cd/m² XGA panel PC with Intel® Celeron® M 1.0GHz/512KB CPU, 100W UPS with 14.8V, 3800mAH, 1GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12A/GM45-CM575/WT-R/1GB-R10	12.1" 450cd/m² XGA panel PC with Intel® Celeron® M 575 2GHz CPU , 100W UPS with 14.8V, 3800mAH, 1GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12A/GM45-T7500/WT-R/2GB-R10	12.1" 450cd/m² XGA panel PC with Intel® Core™2 Duo T7500 2.2GHz CPU, 100W UPS with 14.8V, 3800mAH, 2GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12A/GM45-T9400/WT-R/2GB-R10	12.1" 450cd/m² XGA panel PC with Intel® Core™2 Duo T9400 2.53GHz CPU, 100W UPS with 14.8V, 3800mAH, 2GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
	Sunlight Readable	UPC-12AH/910-CM373/WT-R/1GB-R10	12.1" 1000 cd/m² XGA panel PC with Intel® Celeron® M 1.0GHz/512KB CPU, 100W UPS with 14.8V, 3800mAH, 1GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12AH/GM45-CM575/WT-R/1GB-R10	12.1" 1000 cd/m² XGA panel PC with Intel® Celeron® M 575 2GHz CPU , 100W UPS with 14.8V, 3800mAH, 1GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12AH/GM45-T7500/WT-R/2GB-R10	12.1" 1000 cd/m² XGA panel PC with Intel® Core™2 Duo T7500 2.2GHz CPU, 100W UPS with 14.8V, 3800mAH, 2GB DDR2 RAM and touch screen, 802.11 b/g/n wireless
		UPC-12AH/GM45-T9400/WT-R/2GB-R10	12.1" 1000 cd/m² XGA panel PC with Intel® Core™2 Duo T7500 2.2GHz CPU, 100W UPS with 14.8V, 3800mAH, 2GB DDR2 RAM and touch screen, 802.11 b/g/n wireless

• Options

Model	UPC-12A-910	UPC-12A-GM45	UPC-12AH-GM45
Panel mounting kit	UPCPK-12		
Wall mounting kit	AFLWK-19		
Rack mounting kit	UPCRK-12		
ARM	ARM-11-RS / ARM-31-RS		
Stand	STAND-A19 / STAND-B19 / STAND-210-RS		
OS: Win CE 5.0	UPCCF-12-910-CE-R10	UPCCF-12-GM45-CE-R10	UPCCF-12-GM45-CE-R10
OS: Win CE 6.0	UPCCF-12-910-CE060-R10	UPCCF-12-GM45-CE060-R10	UPCCF-12-GM45-CE060-R10
OS: Win XPE	UPCCF-12-910-XPE-R10	UPCCF-12-GM45-XPE-R10	UPCCF-12-GM45-XPE-R10
Battery Pack	BAT-LI-4S2P3800 (14.8V, 3800mAH)		
PCIe x 1 Riser Card	034D335-00-100-RS		

• Packing List

Item	Part Number	Q'ty	Specification
Screws Pack	44013-030041-RS	4	M3; 5mm
RJ45 to DB9 COM port cable	32000-089201-RS	1	
Power Adpater	63000-FSP096AHB-RS	1	90~264V AC; 12V DC; 96W
Power Cord	32000-000002-RS	1	1750mm; European Standard
Utilities CD	7B000-000087-RS	1	
Touch Pen	XTR104-0002-RS	1	-



Screws Pack | Smart battery PACK | RJ45 to DB9 COM port cable for UPS remote management

802.11 b/g/n PCIe mini wireless card | Utilities CD | Touch Pen

Note: Suggest to connect DC input constantly. Battery will be drained after 14 hours.