

Aluminum Rugged PANEL PC

12.1" 600cd/m² XGA fanless full IP 65 panel PC with Intel® Atom™ D525 dual core 1.8GHz, 802.11a/b/g/n wireless module, resistive touch screen, 1.3M camera, microphone, 1GB DDR3 RAM, R10

Model: IOD1210PC

FEATURES:

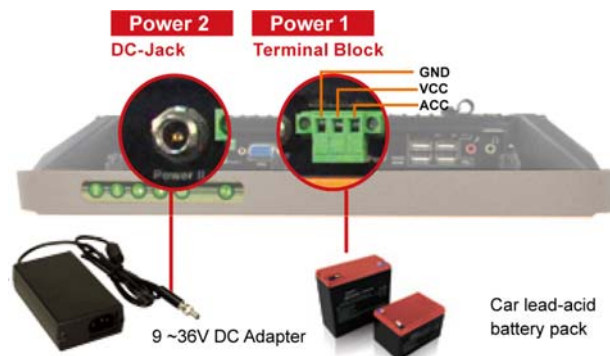
- Fully IP 65 compliant with fanless Intel® Atom™ D525 1.8GHz dual-core processor
- 12.1" 600 nits 1024 x 768 LCD with LED backlight
- TWIN-DC input, 9V ~ 36V and 10.5V ~ 36V, switch automatically
- Dual-band 2.4/5GHz Wi-Fi 802.11 a/b/g/n 3T3R MIMO design
- Reserved space for 3.75G / HSUPA USB module
- Optional GPS receiver
- Optional EM or Mifare RFID reader
- Optional Bluetooth module
- Built-in 1.3M pixels webcam with AF, AE and AWB capabilities
- CAN-bus interface with isolation
- F1 ~ F10 function keys which can be self-defined and user-friendly indicators
- Robust die-casting aluminum chassis



Redundant Dual DC Power Input

The UPC-V312-D525 is a system that supports redundant power. The redundant power input increases the reliability of the system while preventing data loss and system corruption from sudden power failure. When main power is unavailable or low voltage capacity is present, the system can switch to the second power input instantly and without interruption.

- ACC mode
Designed for vehicle systems, use Power 1 as the priority power
- Non ACC mode
Designed for non-vehicle systems, use Power 2 as the priority power



Power 1: Terminal block, voltage range: 9 ~ 36V
Power 2: DC jack, voltage range: 10.5 ~ 36V

Connection Feasibility



Dual-Band 2.4/5GHZ Wi-Fi

Dual-band 2.4G/5G 802.11 a/b/g/n 3T3R MIMO design with up to 450 Mbps speed



3.75G HSUPA (optional)

Compared to Wi-Fi wireless network, 3.75G HSUPA has higher mobility with long-range mobile communication and no hotspot limitation. It is also able to connect to the Internet in real time.



Bluetooth V2.1+EDR (optional)

Connect peripheral devices with Bluetooth, such as earphone, scanner, etc.

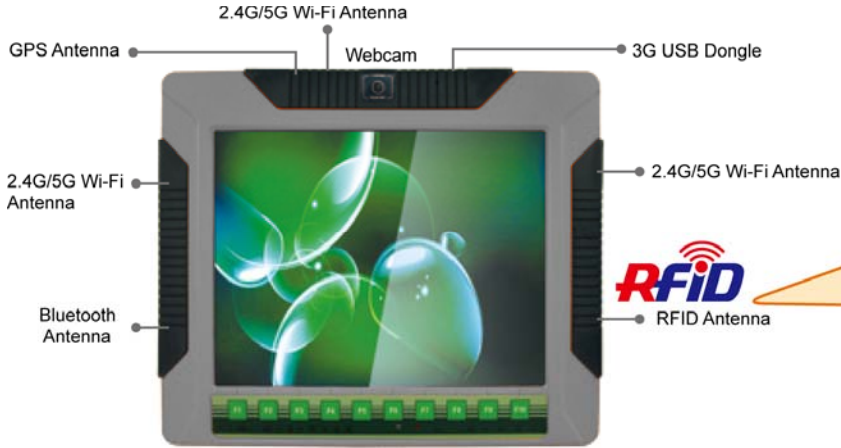


GPS (optional)

Travel navigation, real-time locating and path tracking

Variety of Antenna Layout

For the feasibility of wireless connection, we designed and installed almost all kinds of antenna without any signal interference and blocking. With the variety of use cases, we can still keep the IP 65 protection for the whole UPC set.



EM or Mifare RFID Reader (Optional)

RFID Specifications:
 Frequency: 125KHz or 13.56 MHz
 Reading distance: 5~7 cm
 Supports ISO1443A Mifare® or EM standard

Rugged Design

- Enhanced VESA mount using M8 screws instead of standard M4 screws to ensure reliability.
- The ultra rugged metal chassis and the built-in SSD survive the continuous shocks and jolts of a forklift.
- Dust and water protection grade: IP 65 compliant
- Operating Temperature: -20°C~60°C



Robust Chassis

The robust die-casting aluminum chassis can fully seal and protect the product.



Water-proof Rubber Gaskets

The rubber gaskets fit perfectly to the cable size to provide waterproof protection.



Auto Dimming

Built-in ambient light sensor provides comfortable viewing and power saving

- Auto detects the amount of light in the viewing environment and auto-adjusts the screen brightness
- Low power consumption
- Extend lamp and backlight lifetime



Super high brightness: 600
 High contrast : 700:1
 Wide viewing angle : 150(H)/130(V)

1.3 Megapixels Camera

Use the built-in 1.3 megapixels camera to capture image in realtime and send back to the control center immediately.



IR Remote Control

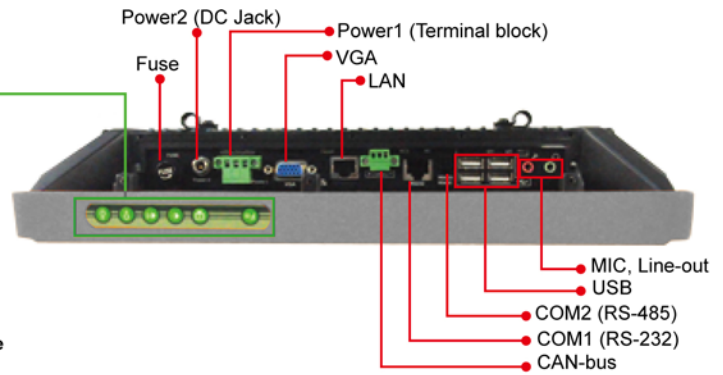
Control screen brightness, auto-dimming function, audio volume, LCD and system power remotely



Function Keys



Fn	Fn	Fn + [Backlight]	RFID enable / disable
[Backlight]	Backlight On/Off	Fn + [Mute]	Audio mute
[Mute]	Audio -	Fn + [Camera]	Camera enable / disable
[Speaker]	Audio +	Fn + [USB]	Right side USB enable / disable
[Brightness -]	Brightness -	Fn + [Power]	Power on / off
[Brightness +]	Brightness +		

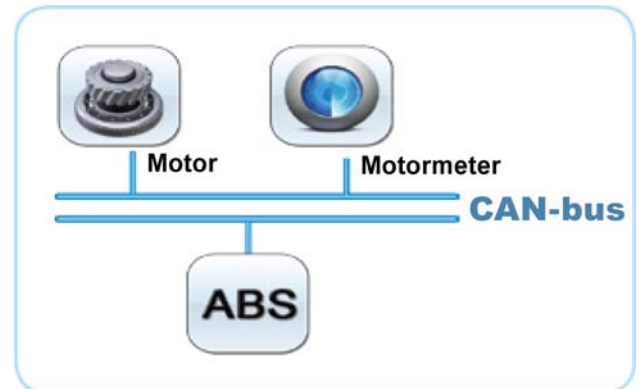


- F1 ~ F10 physical function keys launch a specific application.
- Cold blue LED shows the status of the system and other statuses such as CPU temperature alert and wireless connection. There is also Power1 and Power2 which display online power input status.

CAN-bus Interface with Isolation

The Control Area Network (CAN) is a serial bus system. The UPC-V312 on-board CAN controllers provide bus arbitration and error detection with an automatic transmission repeat function. This drastically reduces the chance of data loss, ensures system reliability, and is suitable for networking intelligent I/O devices such as sensors or actuator of machines or plants

1. Isolated protection voltage 2500V/min DC protection
2. Typical transient immunity 50 kV/ms ESD protection



Applications



Specifications

Model Name		IOD1210PC	
Display	LCD Size	12.1"	
	Max Resolution	1024(W) x 768(H)	
	Brightness (cd/m ²)	600	
	Contrast Ratio	700:1	
	LCD Color	16.2M	
	Pixel Pitch (mm) (HxV)	0.24(H) x 0.24(V)	
	Viewing Angle (V/H)	150° / 130°	
	Backlight MTBF (hrs)	50000	
Motherboard	SBC	UPC-12AT-D525-R10	
	CPU	Intel® Atom™ D525 1.8GHz dual-core processor	
	Chipset	Intel® ICH8M	
	RAM	On-board 1G DDR3 SO-DIMM (System Max. 1GB)	
I/O Ports and Switches	RS-422/485 (4-pin box header)		
	RS-232 (DB-9 connector)		
	CAN-bus (3-pin terminal block)		
	GbE LAN (RJ-45 connector)		
	4 x USB connector		
	Audio jack (Line-out, Mic)		
	VGA port (DB-15 connector)		
	DC-IN 1 (terminal block) / DC-IN 2 (DC Jack)		
	Reset button		
	AT/ATX switch		
Driver Bay	HDD Drive Bay	N/A	
	SSD	CF Type II socket	
	CD-ROM Drive Bay	N/A	
Physical	Construction Front Panel	Aluminum Die-Casting	
	Chassis Construction	Extruded Aluminum Alloy	
	Mounting	VESA 100mm x 100mm and 75mm x 75mm with M8 screws	
	Front Panel Color	Orange (Pantone 151C)	
	Dimensions (WxHxD) (mm)	338.5 x 276.25 x 62.86	
	Cut Out Dimensions (WxH) (mm)	338.5 x 276.25	
	Net / Gross Weight	4.5 kg / 6.8 kg	
Expansion Slot		PCIe Mini slot for Wi-Fi PCIe Mini slot for mSATA (optional)	
System Cooling		Fanless	
Environment	Operating Temperature	-20°C~60°C	
	Storage Temperature	-40°C~85°C	
	Vibration	MIL-STD-810F 514.5C-2 (with CF card or SSD)	
	Shock	Half-sine wave shock 3G; 11ms; 3 shocks per axis	
	IP Level	Full IP 65	
	Safety & EMC	CE / FCC	
Power	Adapter	65W power adapter Input: 90VAC~264VAC, 50/60Hz, Output: 19V DC	
	Requirement	Power 1: 9 (+/-0.3)~36V Power 2: 10.5 (+/-0.3)~36V	
	Consumption	52W	

Order Information

Part No.	Description
IOD1210PC-EM	12.1" 600cd/m ² XGA fanless full IP 65 panel PC with Intel® Atom™ D525 dual core 1.8GHz, 802.11a/b/g/n wireless module, resistive touch screen, 1.3M camera, microphone, 1GB DDR3 RAM, EM card reader, R10
IOD1210PC-MF	12.1" 600cd/m ² XGA fanless full IP 65 panel PC with Intel® Atom™ D525 dual core 1.8GHz, 802.11a/b/g/n wireless module, resistive touch screen, 1.3M camera, microphone, 1GB DDR3 RAM, Mifare card reader, R10
IOD1210PC	12.1" 600cd/m ² XGA fanless full IP 65 panel PC with Intel® Atom™ D525 dual core 1.8GHz, 802.11a/b/g/n wireless module, resistive touch screen, 1.3M camera, microphone, 1GB DDR3 RAM, R10

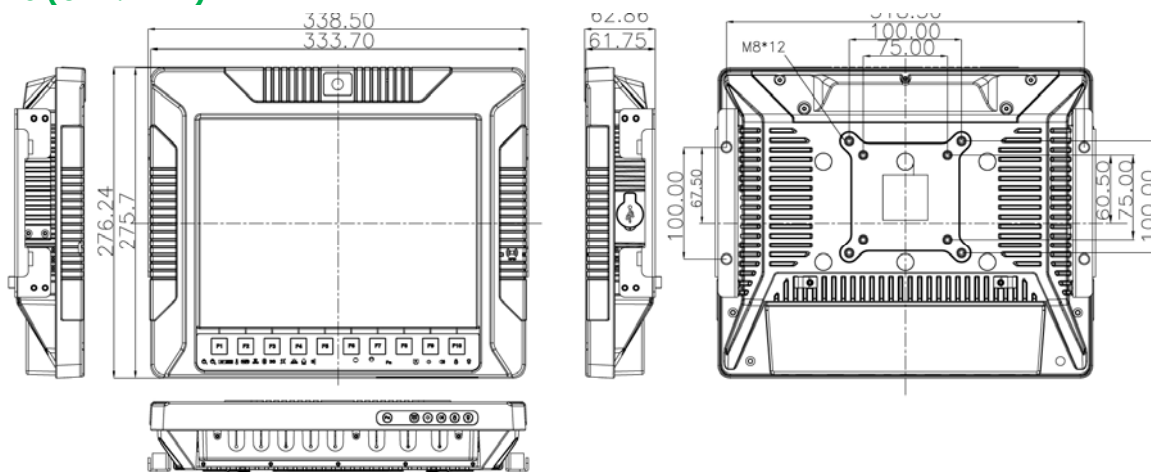
Options

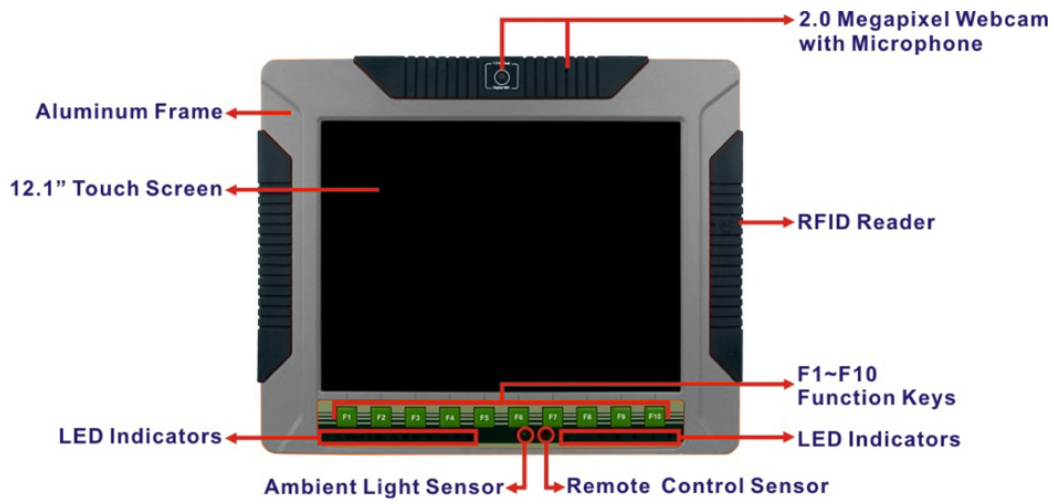
Item
ARM
Wall Mounting Kit
Stand
GPS Module Kit
Bluetooth Module Kit
OS: Win CE 6.0 (128MB CF Card)
OS: Win XPE (2GB CF Card)
OS: Win XPE (4GB CF Card)
OS: Linux (2GB CF Card)
OS: Win 7 Embedded (4GB CF Card)

Packing list

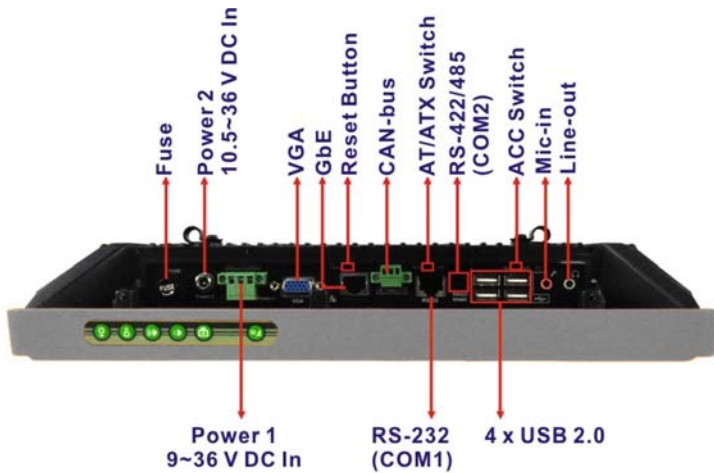
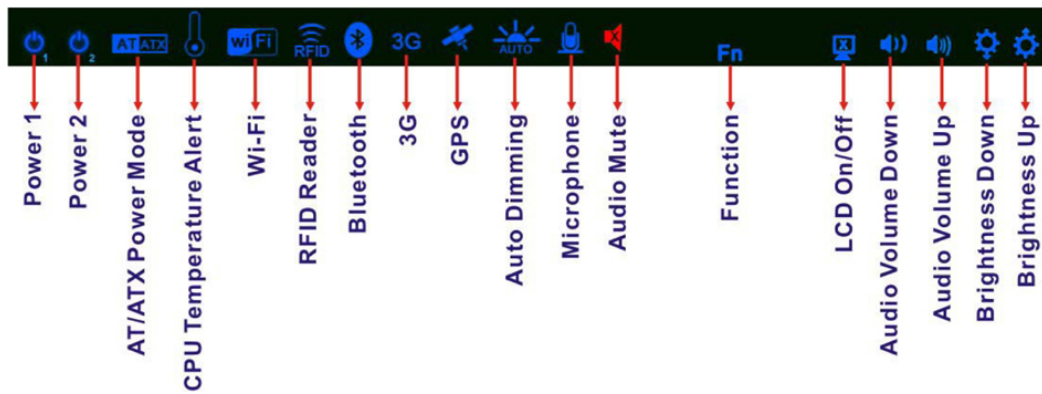
Item	Q'ty
Utility CD	1
One Key Recovery CD	1
IR Remote Controller	1
RJ-45 to DB-9 COM Port Cable	1
M8 Screw	8
M4 Screw	8
Mounting Bracket	2
Screw Driver	1
Power Adapter	1
Power Cord (European Standard)	1
RS-422 Cable	1
Power Transfer Cord	1
M8 to M4 Screw	8

Dimensions (Unit: mm)





The LED indicators on the front panel of the IOD1210PC are shown below.



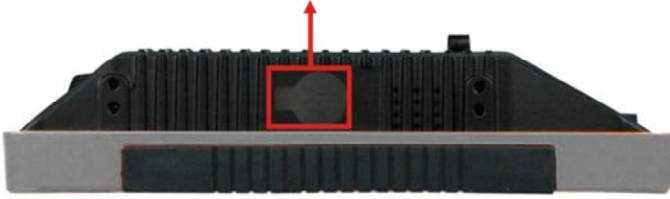
Bottom View

The left side panel of the panel PC provides access to the CF card slot.



Left Side View

1 x USB 2.0 Port

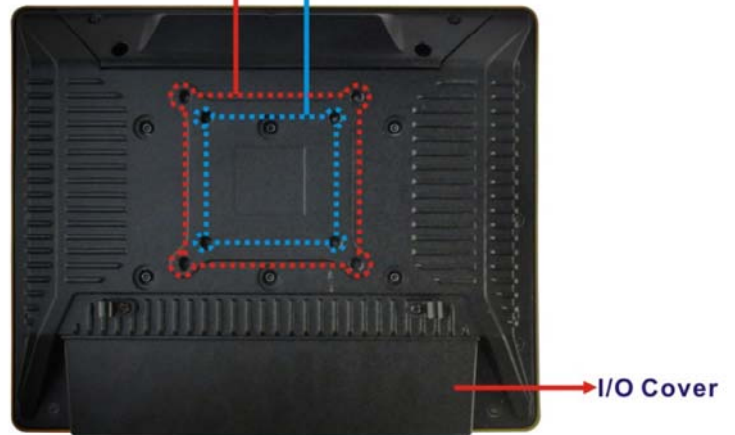


Left Side View

The rear panel has retention screw holes that support a wall-mounting bracket.

100 mm x 100mm VESA Mount

75 mm x 75mm VESA Mount



Rear View

An aluminum frame surrounds the TFT LCD screen. The aluminum frame of the IOD1210PC contains several function keys that control audio volume, LCD brightness and some other system components.



Function Key Locations

The following table describes the function of these function keys.

Buttons	Function	Buttons	Function
	Function		
	LCD on/off		Enable/Disable RFID
	Audio volume down		Mute audio
	Audio volume up		Enable/Disable webcam
	Brightness up		Enable/Disable right side USB port
	Brightness down		Power on/off (Turn on: press 3 seconds Turn off: press 6 seconds)

External Peripheral Device Connection

Step 1: Remove the I/O cover by removing the eight retention screws



I/O Cover Retention Screws

Step 2: Connect the cable from the external peripheral device to the corresponding connector of the IOD1210PC



External Peripheral Device Connection

Step 3: Take out a rubber gasket from the I/O cover



Rubber Gasket Removal

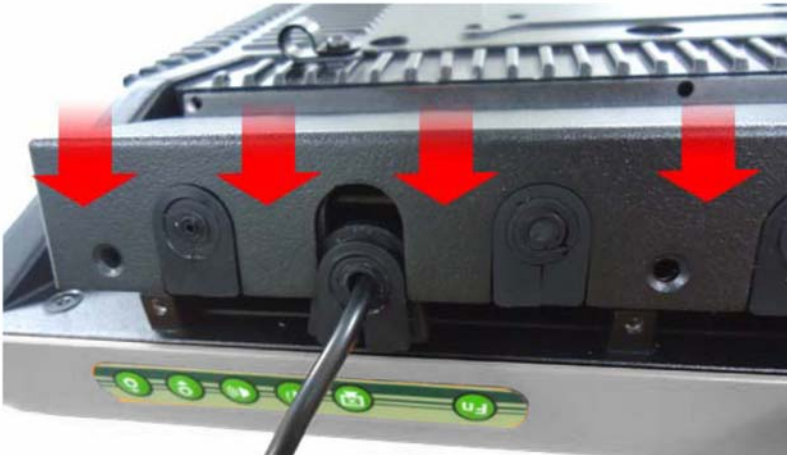
Step 4: Remove some rubber rings from the gasket to make the gasket fit perfectly to the size of the cable



Rubber Gasket and Cable

Step 5: Repeat steps to other connected cables.

Step 6: Install the I/O cover and make sure each rubber gasket snaps into place tightly.



Reinstall the I/O Cover

Step 7: Secure the I/O cover by the previously removed retention screws.