

# UPC-V312-D525

## 12.1" Aluminum Rugged Panel PC

- 12.1" 600nits 1024 x 768 LCD with LED backlight
- Fanless system with Intel® Atom™ D525 1.8GHz dual-core processor
- Redundant dual DC input 9V ~ 36V
- Dual-band 2.4/5GHz Wi-Fi 802.11 a/b/g/n 3T3R MIMO design
- Reserved space for 3.75G / HSPA USB module
- Optional GPS receiver
- Optional EM or Mifare RFID reader
- Optional Bluetooth module
- Build-in 1.3M pixel webcam with AF, AE and AWB capabilities
- CAN-bus interface with isolation
- Provide two PCIe Mini card slots
- F1 ~ F10 function keys and friendly indicators
- Robust die-casting aluminum chassis
- IP 65 compliant system



Wi-Fi



Fanless



GPS



CAN-bus



3.75G HSPA



RFID



IP 65



Touch Screen



Redundant Dual DC



Speakers



Microphone



Camera



-20°C ~ 60°C



Sunlight Readable

## Applications



## Redundant Dual DC Power Input

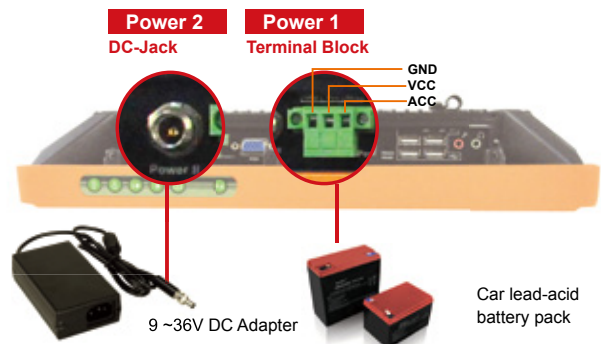
The UPC-V312-D525 is a system that supports redundant power. The redundant power input increases the reliability of the system while preventing data loss and system corruption from sudden power failure. When main power is unavailable or low voltage capacity is present, the system can switch to the second 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



## Variety of Antennas Layout

Dual-Band 2.4G/5G Wi-Fi antennas, RFID, Bluetooth and GPS antenna are located inside the chassis and protected by rubber which can provide waterproof protection and don't prevent wireless signal blocking.



## EM or Mifare RFID Reader

- EM card: also called ID card. Its card information is fixed and can't be written over. The data can only be read through a card reader. Low security. Such as staff badge cards.
- Mifare card: also called IC card. Its card information can be modified and it allows users to set password. High security. Such as bus IC cards.



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 more 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



## Auto Dimming

- Build-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)

## Water-proof Rubber Gasket

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



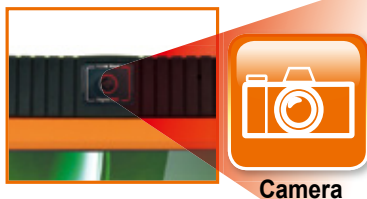
## Robust Chassis

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



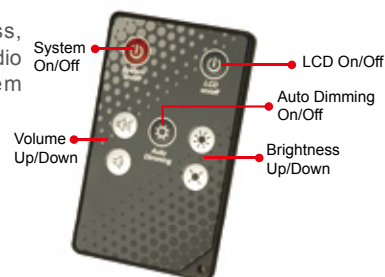
## 1.3 Mega Pixels Camera

Use the built-in 1.3M-pixel camera to capture image in real-time communication and send back to the control center immediately.



## IR Remote Control

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







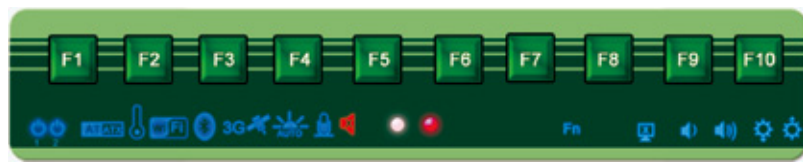
## Function Keys

The UPC-V312-D525 contains several function keys below the screen which make it easy to control the system by just pressing single key or two combination keys.

	Fn		RFID enable / disable
	Backlight On/Off		Audio mute
	Audio -		Camera enable / disable
	Audio +		Mini-USB / MicroSD enable / disable
	Brightness -		Power on / off
	Brightness +		

F1~F10 function keys allow users to launch the specified application by pressing one single key.

Cool blue indicators clearly tell users which function is working or idle. For example, the CPU temperature indicator alerts automatically when CPU temperature is overheated. The Power 1 and Power 2 LED color and lighting status show the system power status.



## Diverse Connectivity

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

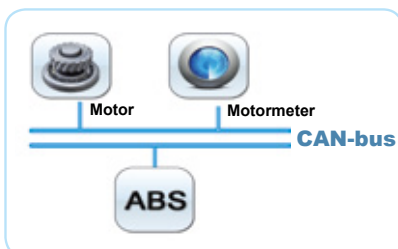
**Bluetooth V2.1+EDR**  
Connect peripheral devices with Bluetooth, such as earphone, scanner, etc.

**GPS (Global Positioning System)**  
Travel navigation, real-time locating and path tracking

## CAN-bus Interface with Isolation

The Control Area Network (CAN) is a serial bus system. The on-board CAN controllers of the UPC-V312 provide bus arbitration and error detection with an automatic transmission repeat function. This drastically reduces the chance of data loss and ensures system reliability and are 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



## Real-Time Video Capture Application

A 4-channel analog video capture card with BNC interface can be installed in the UPC-V312. It can be used by drivers to reduce loss and damage to goods and assets while increasing the safety. The video can also be sent to control center for monitoring dock to stock status.



## Specifications

<b>Model Name</b>	<b>UPC-V312-D525-R10</b>	<b>SSD</b>	IEI MiniDOM (optional)	
LCD Size	12.1"	<b>Expansion Slot</b>	Mini PCIe slot for WiFi Mini PCIe slot for video/audio capture card (Optional) Mini PCIe slot for IEI MiniDOM (Optional)	
Max. Resolution	1024 (W) x 768 (H)	<b>Construction Front Panel</b>	Aluminum Die-casting	
Brightness (cd/m <sup>2</sup> )	600	<b>Construction Material</b>	Extruded Aluminum Alloy	
Contrast Ratio	700:1	<b>Mounting</b>	Wall, Stand, Arm VESA 100 mm x 100 mm and 75 mm x 75 mm with M8 screws	
LCD Color	16.2M	<b>Front Panel Color</b>	Orange (Pantone 151C)	
Pixel Pitch (mm)	0.240 (H) x 0.240 (V)	<b>Dimensions (WxHxD) (mm)</b>	338.5 x 276.25 x 62.86	
Viewing Angle (H-V)	130° / 150°	<b>Cut Out Dimensions (W x H) (mm)</b>	338.5 x 276.25	
LED Backlight MTBF (hr.)	50,000	<b>Net/Gross Weight</b>	4.5 kg/ 6.8 kg	
SBC Model	UPC-12AT-D525-R10	<b>IP Level</b>	IP 65	
CPU	Intel® Atom™ D525 1.8GHz dual core processor	<b>Operating Temperature</b>	-20°C~60°C	
Chipset	Intel® ICH8M	<b>Storage Temperature (°C)</b>	-40°C~85°C	
Ethernet	Realtek RTL8111E PCIe GbE controller supports ASF2.0	<b>Relative Humidity</b>	5% ~90% , non-condensing	
Memory	On-board 1G DDR3 SO-DIMM (System Max. 1GB )	<b>Vibration</b>	MIL-STD-810F 514.5C-2 (with CF card or SSD)	
<b>IO Ports and Switches</b>	RS-422/485 (4-pin box header)	<b>Shock</b>	Half-sine wave shock 3G; 11ms; 3 shocks per axis	
	RS-232 (DB-9 connector)	<b>Touch Screen</b>	5-wire resistive type	
	CAN-bus (3-pin terminal block)	<b>Power Adapter</b>	65W power adapter Input: 90VAC~264VAC, 50/60Hz, Output: 19V DC	
	GbE LAN (RJ-45 connector)	<b>Power Requirement</b>	Redundant dual DC input Power 1: 9 (+/-0.3)~36V Power 2: 10.5 (+/-0.3)~36V	
	4 x USB connector		<b>Max Power Consumption</b>	52W
	Audio jack (Line out, MIC)			
	VGA port (DB-15 connector)			
	GPS module (optional)			
	3.5G USB dongle (optional)			
	Reset button			
AT/ATX switch				
DC-IN 1 (terminal block)				
DC-IN 2 (DC Jack)				
<b>Drive Bay</b>	CF Type II socket			

## Ordering Information

Part No.	Description
UPC-V312-D525/R-EM/1G-R10	12.1" 600cd/m <sup>2</sup> XGA fanless full IP65 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
UPC-V312-D525/R-MF/1G-R10	12.1" 600cd/m <sup>2</sup> XGA fanless full IP65 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
UPC-V312-D525/R/1G-R10	12.1" 600cd/m <sup>2</sup> XGA fanless full IP65 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	P/N
ARM	ARM-11-RS/ARM-31-RS
Stand	STAND-A19/STAND-B19/STAND-210-R11
GPS Module Kit	19Z00-000449-00-RS
Capture Card Kit	UPC-CP-KIT01-R10
Bluetooth Module Kit	AFL2-BT-KIT01-R10
OS: Win CE 6.0 (128MB CF Card)	UPCCF-V312-D525-CE060-128M-R10
OS: Win XPE (2GB CF Card)	UPCCF-V312-D525-XPE-2G-R10
OS: Win XPE (4GB CF Card)	UPCCF-V312-D525-XPE-4G-R10
OS: Linux (2GB CF Card)	UPCCF-V312-D525-LNX-2G-R10
OS: Win 7 Embedded (4GB CF Card)	UPCCF-V312-D525-WES7E-4G-R10

## Packing List

Item	P/N	Q'ty
Utilities CD		1
One Key Recovery CD	IEI-7B000-000478-RS	1
IR Remote Controller	7Z000-SLPCB001-RS	1
RJ-45 to DB-9 COM port cable	32005-000200-200-RS	1
M8 Screw	44325-080081-RS	8
M8 VESA Mounting Bracket	41003-038C2-00-RS	1
Screw Driver	45019-001004-00	1
Power Adapter	63040-010065-010-RS	1
Power Cord (European Standard)	32701-000500-100-RS	1
RS-422 Cable	32205-002400-100-RS	1

## Dimensions (Unit: mm)

