



## Features

- Industrial-grade 12" XGA LCD panel with 50k backlight lifetime
- High precision 5-wires resistive touch, EETI controller
- IP65 grade aluminum alloy front panel
- 8th / 10th Gen Intel® Whiskey Lake Core™ i3 / i5 / i7 Processor
- 2 x DDR4 SDRAM, max.64GB, 1 x M.2 2280 / 1 x mSATA SSD
- 2 x Intel® 211 1GbE Ethernet, support WoL and PXE
- 2 x RS232/422/485, RS485 support automatic flow control
- Support TPM2.0 hardware security
- Supports embedded / VESA 100mm x 100mm mounting holes
- 9V to 36V DC Wide Range Power Input, Supporting OVP / OCP / RPP

## Specifications

System			
CPU	8th Gen Intel® Core™ i3-8145U	10th Gen Intel® Core™ i5-10210U	8th Gen Intel® Core™ i7-8565U
L3 Cache	4MB	6MB	8MB
TDP	25W	25W	25W
System Chipset	Integrated with Intel® SoC		
Memory	2 x DDR4L 2400MHz 4GB, Up to 64GB		
Harddisk	1 x M.2 120G SSD ( 250G / 500G / 2TB SSD) / 1 x mSATA		
Graphics	Intel HD Graphics 620		
Network	Intel® I211-AT GbE LAN		
Audio	Realtek ACL897 Audio controller		
TPM	TPM 2.0		
Watchdog Timer	Software Programmable Supports 1~255 sec. System Reset		
Operation System	Windows 10 / 11, Linux, Ubuntu		
I/O			
VIDEO	1 x H-DMI		
Ethernet	2 x LAN (10/100/1000 Mbps)		
USB	3 x USB 3.0 / 1 x USB 2.0		
COM	2 x RS-232 / 422 / 485 ( Adjustable through BIOS )		
Audio	1x Audio_out & Mic_in		
Wireless Network	Optional (WiFi / Bluetooth / 4G / 5G )		
Expansion			
M.2	1*M.2 ( Key-E, 2230, PCIe+USB, Wifi+BT )		
	1*M.2 ( Key-B, 3042/3052, PCIe/ USB 3.0+USB2.0, 4G/5G )		
SIM Socket	1x SIM Socket		
Display			
LCD Size	12.1" ( 4:3 )		
Resolution	800 x 600 / 1024 x 768 (Optional)		
Brightness (cd/m²)	500		
Contrast Ratio	1200:1		
Backlight MTBF	50000 Hr(min.)		
Viewing Angle	88 / 88 / 88 / 88 (CR≥10) ( L / R / U / D )		
Touch screen			
Touch Type	5 Wire Resistive touch		
Surface Hardness	≥3H		

Power	
Power Adapter	1 x Optional AC/DC 12V/5A , 60W
Power Mode	Support AT, ATX Mode
Power Input	2-pin Terminal Block Connector with Power Input 9~36VDC
Power Protection	OVP (Over Voltage Protection)   OCP (Over Current Protection)   RPP (Reverse Polarity Protection)
Power Consumption	≤45W
Physical	
Material	Aluminum alloy panel, anodized treatment
Mounting	Stand / Wall / VESA / Panel
Dimension (W x H x D)	304 x 243 x 62 mm
Cut-out Size	290 x 229 mm
Packing Size	450 x 170 x 350 mm
Weight (Net)	2.6 KG
Environment	
Operating Temperature	-20~70°C ( -4~158°F )
Storage Temperature	-30~80°C (-22~176°F)
Relative Humidity	5%~95%@40°C, non-condensing
Vibration Protection	1.5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis
IP Level	Front Panel IP65
EMC	CE, FCC, KC , Class A, ROHS , IEC / EN 62368-1

### Dimension & I/O

**I / O Definition:**

A: DC 9V~36V	B: COM1:RS-232/422/485
C: COM2:RS-232/422/485	D: 2 x LAN
E: H-DMI	F: 1 x USB 3.0/1 x USB 2.0
G: 2 x USB 3.0	H: Audio
I: Extension Switch	J: Power Button

**Panel Cutout Dimensions: 290 x 229 mm (11.42 x 9.0 in )**

### Ordering info

Available models	Description
PPC-3012SAR	12.1" Fanless Industrial Panel PC 8th Gen Intel® Whiskey Lake Core™ i3-8145U 2.1GHz Processor With Resistive touch
PPC-5012SAR	12.1" Fanless Industrial Panel PC 10th Gen Intel® Comet Lake Core™ i5-10210U 1.6GHz Processor With Resistive touch
PPC-7012SAR	12.1" Fanless Industrial Panel PC 8th Gen Intel® Whiskey Lake Core™ i7-8565U 1.8GHz Processor With Resistive touch

### Packing list

1 x Standard product
1 x Utility DVD Driver
1 x 60W PSU (Power Supply)
1 x Power cable & plug
8 x Panel mount metal clips