

# PPC-324W-PN4

## 23.8" Fanless Widescreen Panel PC with Intel® Pentium® N4200 Quad-Core Processor



### Features

- 23.8" true-flat TFT LCD with projected capacitive touch control
- Fanless design with low power consumption
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Configurable RS-232/422/485 ports via BIOS
- Automatic data flow control over RS-485
- Wide range DC support (12 ~ 24 V<sub>DC</sub>)
- Supports dual displays
- IP65-rated front panel



### Introduction

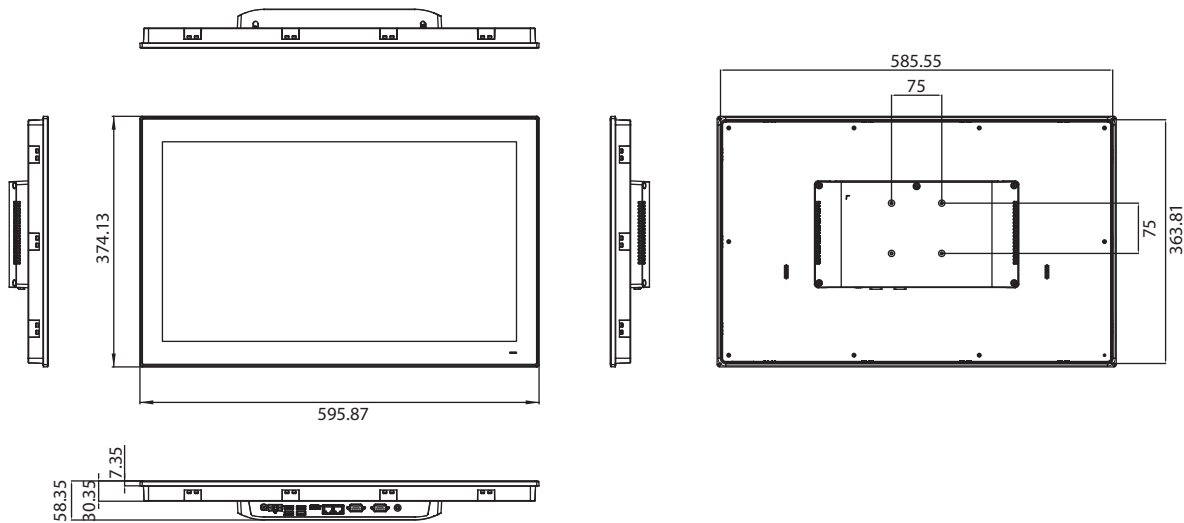
The PPC-324W-PN4 is a high-value, ultra-slim panel PC equipped with a 23.8" industrial-grade LCD, and low-power Intel® Pentium® N4200 quad-core, 1.1 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-324W-PN4 features an IP65-rated front panel, multi-touch projected capacitive touchscreen, die cast aluminum alloy enclosure, two serial ports, four USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.

### Specifications

<b>System</b>	CPU	Intel Pentium® N4200 quad Core
	Frequency	1.1GHz, turbo boot to 2.5GHz.
	L2 Cache	3 MB
	Memory	1 x SODIMM, DDR3L 1600/1866, max. 8 GB
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Line-out 1 x HDMI
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
Speaker	2 x 1W	
<b>Physical Characteristics</b>	Dimensions	595.9 x 374.1 x 58.4 mm (23.5" x 14.7" x 2.3")
	Weight	TBD
<b>OS Support</b>	OS Support	Microsoft® Windows 10(64-bit), Windows 10 IOT LTSC, Linux, Android 8.1
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	70W
<b>LCD</b>	Display Type	23.8" TFT LCD (LED backlight)
	Max. Resolution	1920 x 1080
	Viewing Angle	89 (Left), 89 (Right), 89 (Up), 89 (Down)
	Luminance (cd/m <sup>2</sup> )	350
	Contrast Ratio	1000
	Backlight Lifetime	30,000 hr
<b>Touchscreen</b>	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	≥ 85%
	Controller	USB Interface
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI, EN 60601-1-2
	Safety	CB, UL, CCC
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

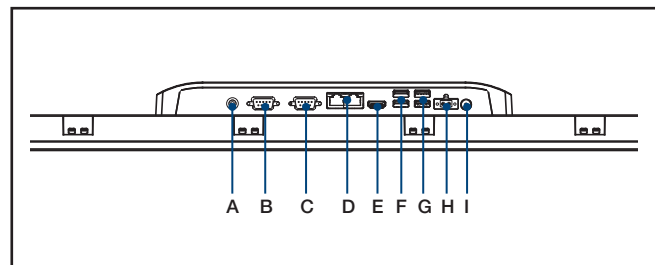


**Panel Cutout Dimensions: 586.5 x 364.8 mm (23.09 x 14.36 in)**

## Ordering Information

Part Number	Description
PPC-324W-PN40A	23.8" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core
PPC-324W-PN40AU	23.8" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core, for U.S. only
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-HDD-N4200	HDD Bracket module for PPC-3150SW and PPC-3180SW and PPC-324W-PN4

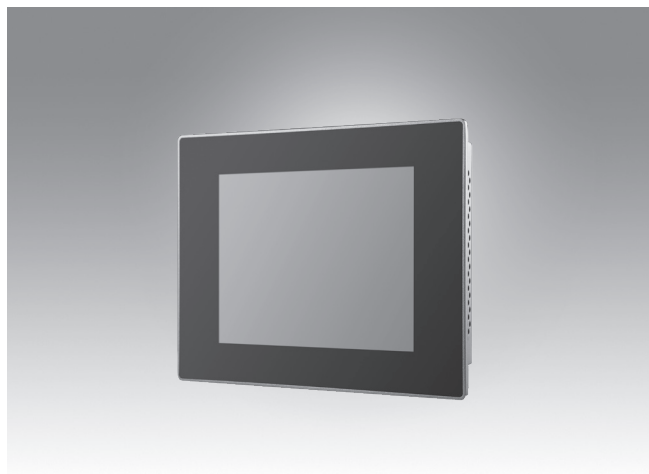
## I/O View



- A. Line out
- B. COM1: RS-232
- C. COM2: RS-232/422/485
- D. 2 x LAN
- E. HDMI
- F. 2 x USB 3.0
- G. 2 x USB 2.0
- H. DC-In
- I. Power Button

# PPC-3060S

## 6.5" Fanless Panel PC with Intel® Celeron® N2807 Processor



### Features

- Industrial-grade 6.5" VGA TFT LCD with LED backlight
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2807 dual-core, 1.58 GHz, processor
- Up to 4 GB DDR3L SDRAM
- Compact, fanless design with IP65-rated front panel
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

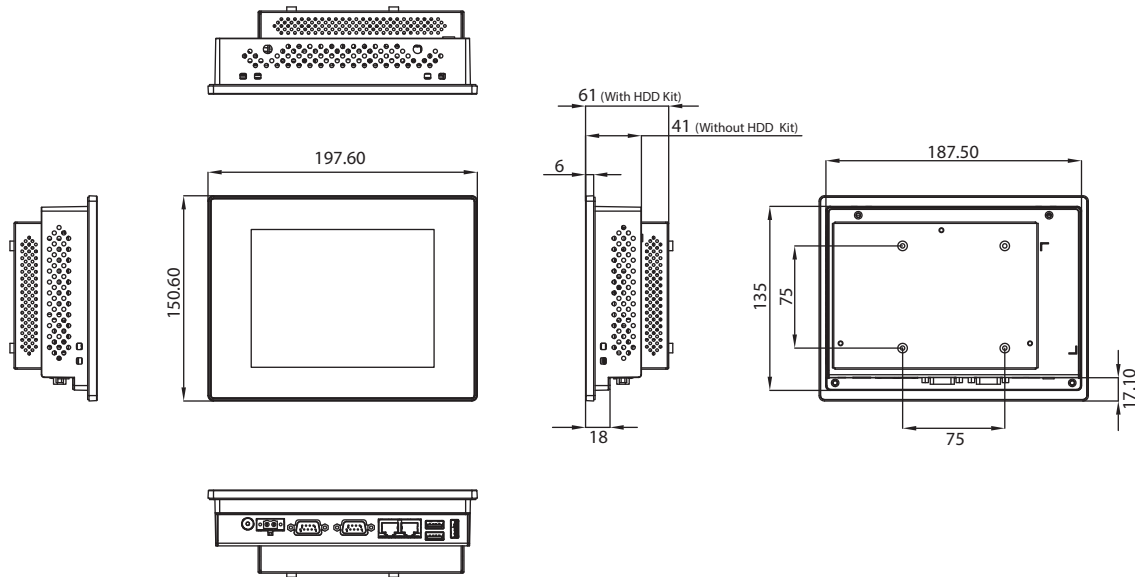
The PPC-3060S is a high-value, ultra-slim panel PC equipped with a 6.5" VGA TFT LCD, and low-power Intel® Celeron® N2807, 1.58 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3060S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.

### Specifications

<b>System</b>	CPU	Intel® Celeron® N2807 dual core
	Frequency	1.58 GHz
	L2 Cache	1 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 4 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA Bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel 211)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
<b>Physical Characteristics</b>	Watchdog Timer	255 timer levels, set up by software
	Dimensions	197.6 x 150.6 x 41 mm (7.8 x 5.9 x 1.6 in)
<b>OS Support</b>	Weight	1.5 kg (3.30 lb)
	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	11 W (Burn-in test 7.0 in Windows 7, 32-bit)
<b>LCD</b>	Display Type	6.5" TFT LCD (LED backlight)
	Resolution	640 x 480
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	800
	Contrast Ratio	600
	Backlight Lifetime	50,000 hr (typical)
<b>Touchscreen</b>	Touch Type	ELO 5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

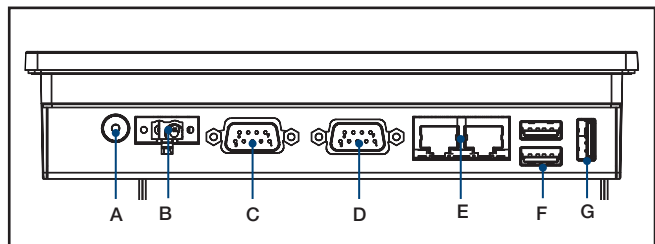


**Panel Cutout Dimensions: 189 x 136.5 mm (7.44 x 5.37 in)**

## Ordering Information

Part Number	Description
PPC-3060S-N80AE	Intel Celeron N2807 Fanless Panel PC with 6.5" LCD LED backlight
PPC-3060S-N80AU	Intel Celeron N2807 Fanless Panel PC with 6.5" LCD LED backlight , for U.S. only
98R3P30600E	Bracket module for 2.5" SSD/HDD installation
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M

## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0
- G. USB 2.0

# PPC-3100

## 10.4" Fanless Panel PC with Intel® Atom™ E3940 Processor



### Features

- 10.4" SVGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3940, 1.6 GHz, processor
- Up to 8 GB DDR3L 1600/1866 SDRAM
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Fanless design with low power consumption
- Wide range DC support (9 ~ 32 V<sub>DC</sub>)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)



### Introduction

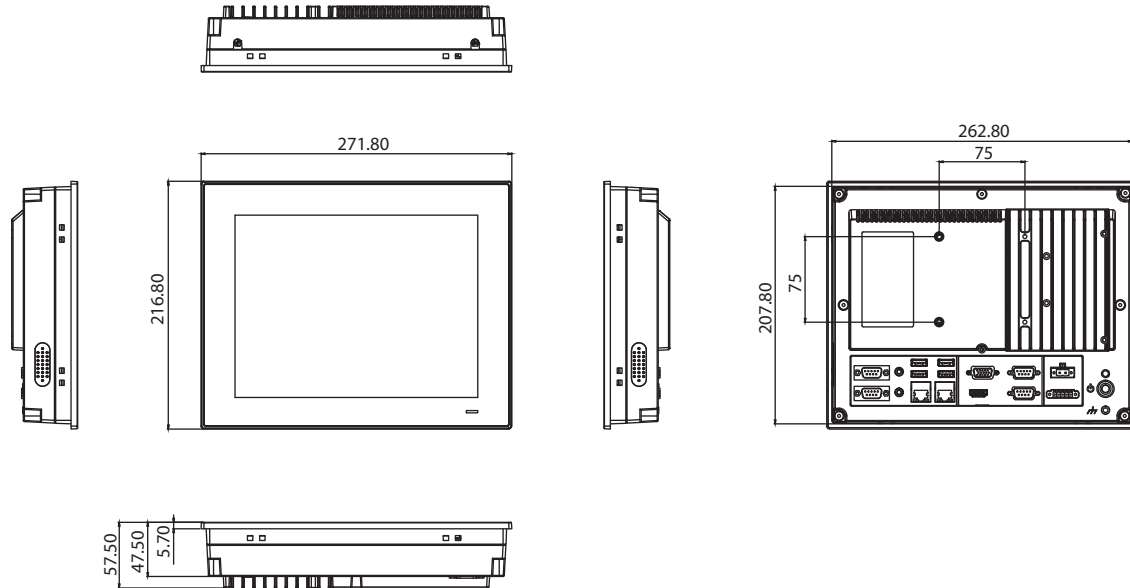
The PPC-3100 is a 10.4" fanless panel PC equipped with a high-performance Intel® Atom™ E3940 quad-core processor that supports wide power input range (9 ~ 32 V<sub>DC</sub>). The provision of multiple I/O, including 4 x COM, 4 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity.

### Specifications

<b>System</b>	CPU	Intel® Atom™ E3940 quad core
	Frequency	1.6 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1600/1866 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel i210)
	I/O	5 x Serial ports: 4 x RS-232, 1 x isolated RS-422/485 (Adjustable through BIOS) 4 x USB 3.0 1 x Line-out, 1 x Mic-in 1 x VGA 1 x HDMI 1 x GPIO (8 channels, TTL level, internal)
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
<b>Physical Characteristics</b>	Dimensions	271.8 x 216.8 x 57.5 mm (10.7 x 8.53 x 2.26 in)
	Weight	2.8 kg (6.17 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 10 (64-bit), Win 10 LTSC, Linux, Android 8.1
<b>Power Consumption</b>	Input Voltage	9 ~ 32 V <sub>DC</sub>
	Power Consumption	30W (Burn-in test 8.0 in Windows 10 64bit)
<b>LCD</b>	Display Type	10.4" TFT LED Panel (LED backlight)
	Max. Resolution	800 x 600
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	400
	Contrast Ratio	700
	Backlight Lifetime	30,000 hr (typical)
	Touch Type	5-wire resistive touch
<b>Touchscreen</b>	Light Transmission	80±5% at 550nm wavelength
	Controller	USB interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)
<b>Environment</b>	Storage Temperature	-30 ~ 60 °C (-22 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

## Dimensions

Unit: mm

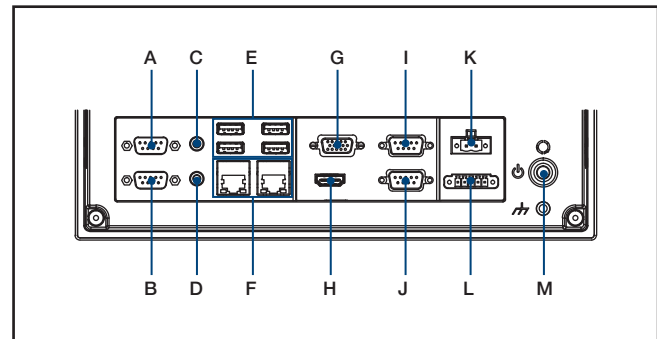


Panel Cutout Dimensions: 265 x 210 mm (10.43 x 8.26 in)

## Ordering Information

Part Number	Description
PPC-3100-RE9A	Atom E3940 Fanless Panel PC with 10.4" SVGA LED backlight, resistive touch
PPC-3100-RE9AU	Atom E3940 Fanless Panel PC with 10.4" SVGA LED backlight, resistive touch, for U.S. only
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
96CB-POWER-B-1.8MB	Power cable 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R

## I/O View



- A. COM4: RS-232
- B. COM5: RS-232
- C. Line Out
- D. Mic In
- E. 4 x USB 3.0
- F. 2 x LAN
- G. VGA
- H. HDMI
- I. COM1: RS-232
- J. COM2: RS-232
- K. DC Inlet and AT/ATX switch
- L. COM3: Isolated RS-422/485
- M. Power Button

# PPC-3100

## 10.4" Fanless Panel PC with Intel® Atom™ D2550 Processor



### Features

- 10.4" TFT SVGA LED Panel with resistive touchscreen
- Embedded Intel® Atom™ processor D2550 1.86 GHz
- System memory up to 4 GB DDR3 1066 SDRAM
- Supports one internal SATA 2.5" HDD and 1 x mSATA socket
- Fanless design and low power consumption
- Automatic data flow control over RS-485
- Adjust RS-232/422/485 through BIOS
- COM1/COM2 pin9 RI/5V/12V adjustable through BIOS



### Introduction

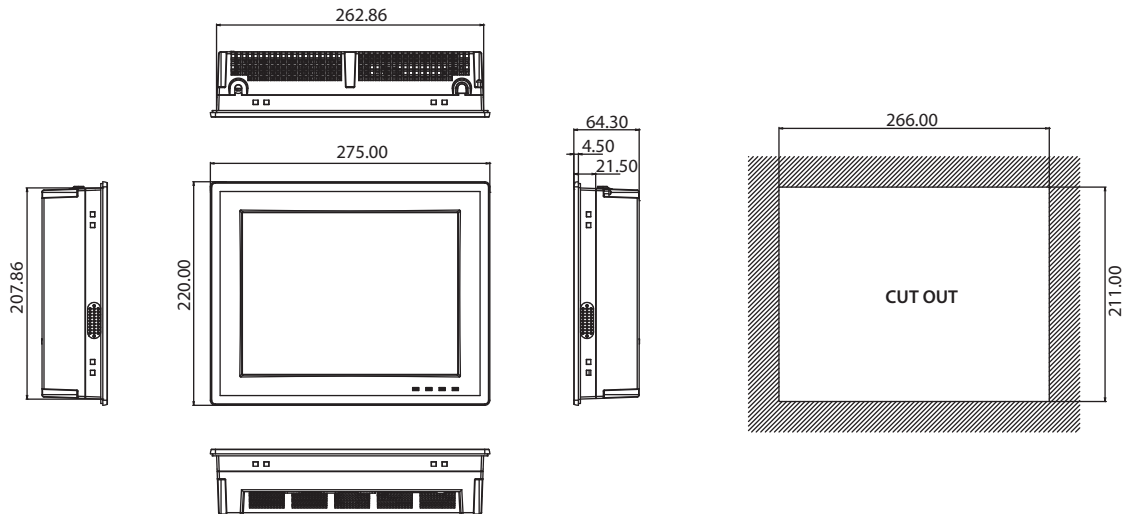
PPC-3100 is a new, 10.4" Panel PC equipped with an Intel® Atom™ processor D2550. Meeting the demands of harsh environments, the fanless design makes the PPC-3100 extra reliable for applications in the machine building industry. In addition, the dual GbE LAN, 4 x serial ports, 4 x USB ports, and GPIO connector make device connection and integration easy. With a user friendly design, it comes with front panel LED indicators that show power on/off, storage access, and LAN activity.

### Specifications

<b>Processor System</b>	CPU	Intel® Atom™ D2550, Dual core
	Frequency	1.86 GHz
	2nd Cache	1 MB
	Chipset	NM10
	Memory	1 x SO-DIMM, DDR3, Max 4 GB
	Storage	1 x 2.5" SATA Bay 1 x mSATA Bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet
	I/O ports	4 x Serial ports: 3 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 4 x USB 2.0 1 x Line-out, 1x MIC-in 1 x DB15 VGA 1 x DB9 GPIO port (8 pin programmable)
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
Speaker	2 x 3W	
<b>Physical Characteristics</b>	Dimensions	275 x 220 x 64.3 mm (10.83" x 8.74" x 2.53")
	Weight	2.5 kg (5.51 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows XPE / Windows XP Pro / WES7 32bit / WEC7 / Windows 7 32bit / Linux
	Input Voltage	12- 30 Vdc
<b>Power Consumption</b>	Power Consumption	25 W (Burn-in test 7.0 in Windows 7 32bit) 22 W (Burn-in test 7.0 in Windows XP 32bit)
	Display Type	10.4" TFT LED Panel (LED Backlight)
<b>LCD Display</b>	Max. Resolution	800 x 600
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	400
	Contrast Ratio	700
	Backlight Lifetime	30,000 hrs (typical)
	Touch Type	Analog Resistive 5-wire
<b>Touchscreen</b>	Light Transmission	81+/-3%
	Controller	RS-232 interface
	Durability (Touches)	36 million

## Dimensions

Unit: mm



Cut-out dimensions: 266 x 211 mm

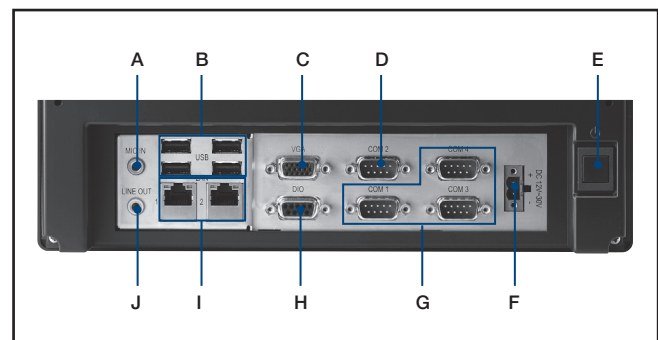
Environment	Operating Temperature	0 ~ 50°C (32 ~ 122°F)
	Storage Temperature	-40 ~ 60°C (-40 ~ 140°F)
	Relative Humidity	10 ~ 95% @ 40°C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

## Ordering Information

Part No.	Description
PPC-3100-RAE	Atom D2550 Fanless Panel PC with 10.4" SVGA LED backlight, touch, without memory
96PSA-A90W190T-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
* PPC-174T-WL-MTE	Wall mount kit for PPC series
* PPC-ARM-A03	PPC ARM VESA Standard
PPC-3100-VESAE	PPC-3100 VESA bracket
PPC-WLAN-A1E	WiFi Module with Antenna Cable 40cm for PPC
2070011747	Image XPE WES2009 PPC-3100 V4.3.1 24 multi-languages with SUSI Access
2070012891	Image WES7P 32-bit Multi V4.12 PPC-3120/3100
2070012470	Image WEC7 PPC-3100 V1.0 Eng
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
* PPC-STAND-A1E	Stand For PPC Series
98R3612000E	mSATA/CFast to USB card reader
98R3415010E	Front USB on cabinet module with Cable 100cm

\* if you order the Wall mount kit / ARM / Desktop stand , please also order PPC-3100-VESAE at the same time.

## I/O



- A. Mic-in
- B. 4 x USB
- C. VGA
- D. RS-232/422/485
- E. Power S/W
- F. DC-in
- G. 3 x RS-232
- H. GPIO
- I. 2 x GbE
- J. Line-out



# PPC-3100S

## 10.4" Fanless Panel PC with Intel® Celeron® N2930 Processor



### Features

- Industrial-grade 10.4" SVGA/XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive/projected capacitive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

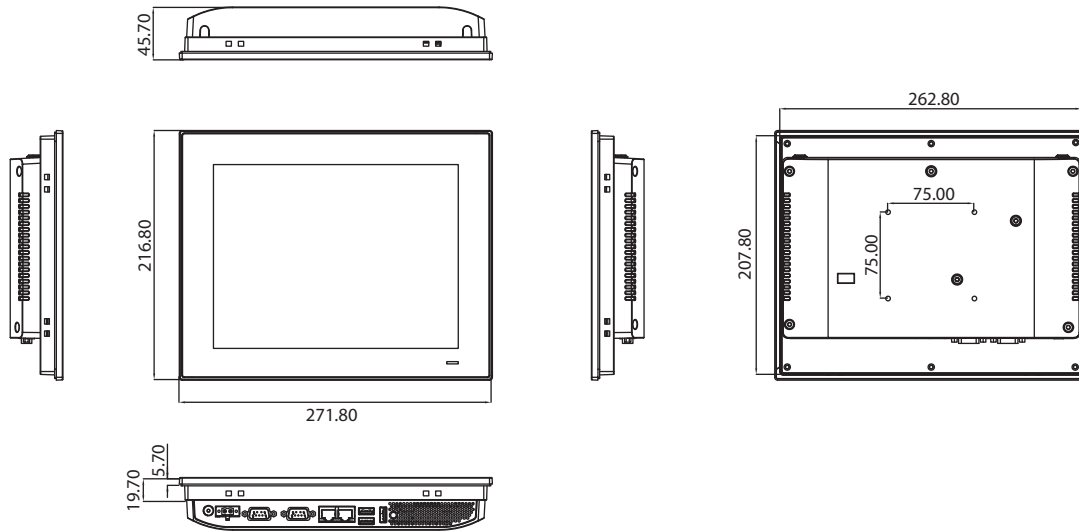
The PPC-3100S is a high-value, ultra-slim panel PC equipped with a 10.4" SVGA/XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3100S features an IP65-rated front panel, true-flat touchscreen with 5-wire resistive/projected capacitive touch, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.

### Specifications

		PPC-3100S-RAE	PPC-3100S-PBE
<b>System</b>	CPU	Intel® Celeron® N2930 quad core	
	Frequency	1.83 GHz	
	L2 Cache	2 MB	
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)	
	Storage	1 x 2.5" SATA Bay bay (optional; requires a bracket module for installation) 1 x mSATA Bay (default)	
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel 211)	
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-RAE) 1 x USB 2.0, 1 x USB 3.0 (for PPC-3100S-PBE)	
	Expansion	1 x Full-size mini PCIe slot	
	Watchdog Timer	255 timer levels, set up by software	
<b>Physical Characteristics</b>	Dimensions	272 x 217 x 46 mm (10.7 x 8.5 x 1.8 in)	
	Weight	1.9 kg (4.18 lb)	
<b>OS Support</b>	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0	
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>	
	Power Consumption	16W (Burn-in test 7.0 in Windows 7, 32-bit)	
<b>LCD</b>	Display Type	10.4" TFT LCD (LED backlight)	10.4" TFT LCD (LED backlight)
	Resolution	800 x 600	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)	88 (left), 88 (right), 88 (up), 88 (down)
	Luminance (cd/m <sup>2</sup> )	400	350
	Contrast Ratio	700	1200
	Backlight Lifetime	30,000 hr (min.)	30,000 hr (min.)
<b>Touchscreen</b>	Touch Type	ELO 5-wire resistive	5-point multi-touch projected capacitive
	Light Transmission	80±5% at 550nm wavelength	88±2%
	Controller	RS232 interface	USB interface
	Durability/Surface Hardness	Greater than 35million touches in one location without failure	Cover glass > 7H
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD	
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)	
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)	
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27	
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64	
	EMC	CE, FCC Class B, BSMI	
	Safety	CB, CCC, BSMI, UL	
	Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

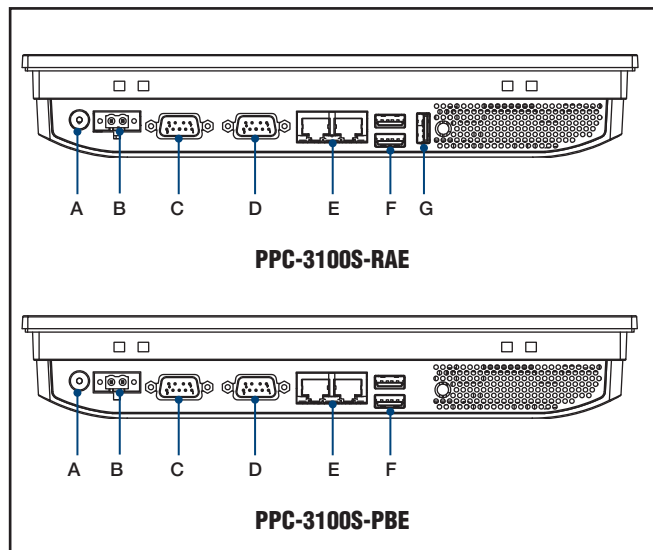


Panel Cutout Dimensions: 265 x 210 mm (10.43 x 8.26 in)

## Ordering Information

Part Number	Description
PPC-3100S-RAE	Intel Celeron N2930 Fanless Panel PC with 10.4" SVGA LED backlight, Resistive 5 wire touch screen
PPC-3100S-RAU	Intel Celeron N2930 Fanless Panel PC with 10.4" SVGA LED backlight, Resistive 5 wire touch screen, for U.S. only
PPC-3100S-PBE	Intel Celeron N2930 Fanless Panel PC with 10.4" XGA LED backlight, Projected Capacitive Multi-touch screen
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M

## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0
- G. USB 2.0

# PPC-3120

## 12.1" Fanless Panel PC with Intel® Atom™ E3940 Processor



### Features

- 12.1" XGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3940, 1.6 GHz, processor
- Up to 8 GB DDR3L 1600/1866 SDRAM
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Fanless design with low power consumption
- Wide range DC support (9 ~ 32 V<sub>DC</sub>)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)
- Optional PCI/PCIe x1 expansion kit



### Introduction

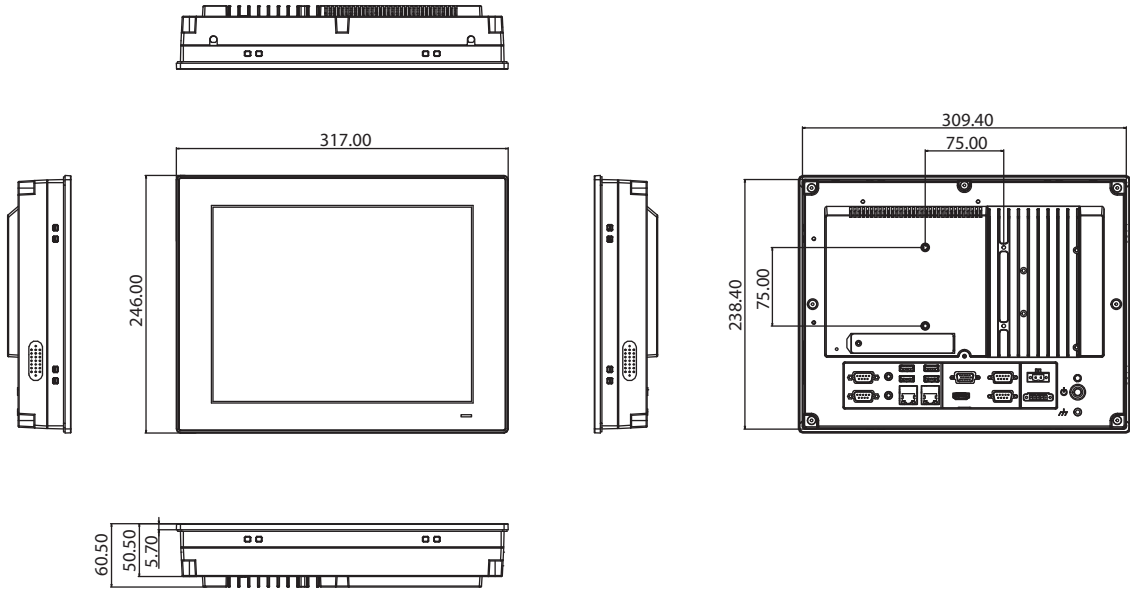
The PPC-3120 is a 12.1" fanless panel PC equipped with a high-performance Intel® Atom™ E3940 quad-core processor that supports wide power input range (9 ~ 32 V<sub>DC</sub>). The provision of multiple I/O, including 4 x COM, 4 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity.

### Specifications

<b>System</b>	CPU	Intel® Atom™ E3940 quad core
	Frequency	1.6 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1600/1866 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel i210)
	I/O	5 x Serial ports: 4 x RS-232, 1 x isolated RS-422/485 (Adjustable through BIOS) 4 x USB 3.0 1 x Line-out, 1 x Mic-in 1 x VGA, 1 x HDMI 1 x GPIO (8 channels, TTL level, internal)
	Expansion	1 x Mini PCIe Optional: 1 x PCIe x1 or 1 x PCI
<b>Physical Characteristics</b>	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
<b>OS Support</b>	Dimensions	317 x 246 x 60.5 mm (12.4 x 9.7 x 2.4 in)
	Weight	3.4 kg (7.5 lb)
<b>Power Consumption</b>	OS Support	Microsoft® Windows 10 (64-bit), Win 10 LTSC, Linux, Android 8.1
	Input Voltage	9 ~ 32 V <sub>DC</sub>
<b>LCD</b>	Power Consumption	32W (Burn-in test 8.0 in Windows 10 64bit)
	Display Type	12.1" TFT LED panel with LED backlight
	Max. Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	600
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr (typical)
	Touch Type	5-wire resistive touch
<b>Touchscreen</b>	Light Transmission	80±5% at 550nm wavelength
	Controller	USB interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
Front Panel Protection	IP65 compliant	

**Dimensions**

Unit: mm

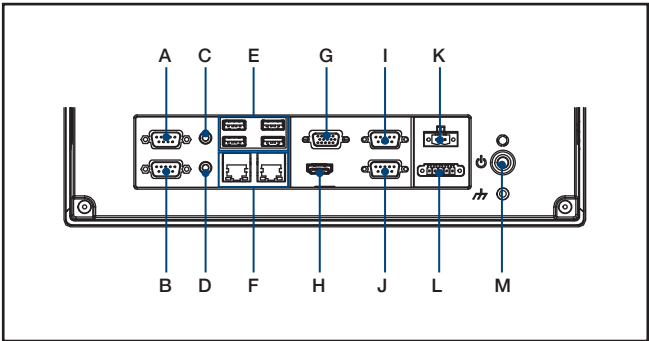


**Panel Cutout Dimensions: 311 x 240 mm (12.24 x 9.44 in)**

**Ordering Information**

Part Number	Description
PPC-3120-RE9A	Atom E3940 Fanless PPC with 12.1" XGA LED backlight, resistive touch
PPC-3120-RE9AU	Atom E3940 Fanless PPC with 12.1" XGA LED backlight, resistive touch , for U.S. only
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-STAND-A1E	Stand For PPC Series
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M
98R3P312000	Add-on box for PCI or PCIe expansion (include PCI / PCIe riser card)
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R

**I/O**



- A. COM4: RS-232
- B. COM5: RS-232
- C. Line Out
- D. Mic In
- E. 4 x USB 3.0
- F. 2 x LAN
- G. VGA
- H. HDMI
- I. COM1: RS-232
- J. COM2: RS-232
- K. DC Inlet and AT/ATX switch
- L. COM3: Isolated RS-422/485
- M. Power Button

# PPC-3120

## 12.1" Fanless Panel PC with Intel® Atom™ D2550 Processor



### Features

- 12.1" TFT XGA LED Panel with resistive touchscreen
- Embedded Intel® Atom™ processor D2550 1.86 GHz
- System memory up to 4 GB DDR3 1066 SDRAM
- Supports one internal SATA 2.5" HDD and 1 x mSATA socket
- Optional PCI/PCIe x1 expansion kit
- Fanless design and low power consumption
- Automatic data flow control over RS-485
- Adjust RS-232/422/485 through BIOS
- COM1/COM2 pin9 RI/5V/12V adjustable through BIOS



### Introduction

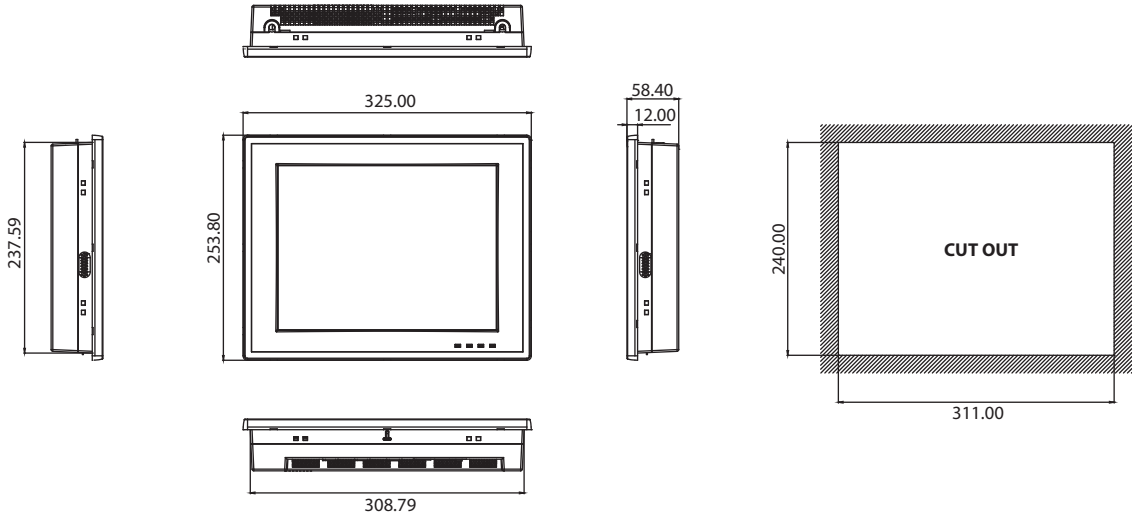
The PPC-3120 is a new, 12.1" Panel PC equipped with an Intel® Atom™ processor D2550. Meeting the demands of harsh environments, the fanless design makes PPC-3120 extra reliable for applications in the machine building industry. In addition, the dual GbE LAN, 4 x serial ports, 4 x USB ports, and GPIO connector make device connection and integration easy. With a user friendly design it comes with front panel LED indicators that show power on/off, storage access, and LAN activity.

### Specifications

<b>Processor System</b>	CPU	Intel® Atom™ D2550, Dual core
	Frequency	1.86 GHz
	2nd Cache	1 MB
	Chipset	NM10
	Memory	1 x SO-DIMM, DDR3, Max 4 GB
	Storage	1 x 2.5" SATA Bay 1 x mSATA Bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet
	I/O ports	4 x Serial ports: 3 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 4 x USB 2.0 1 x Line-out, 1x MIC-in 1 x DB15 VGA 1 x DB9 GPIO port (8 pin programmable)
	Expansion	1 x Mini PCIe 1 x PCIe x1; 1 x PCI
	Watchdog Timer	255 timer levels, set up by software
Speaker	2 x 3W	
<b>Physical Characteristics</b>	Dimensions	325 x 253.8 x 58.4 mm (12.79" x 10" x 2.3")
	Weight	3.3 kg (7.27 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows XPE / Windows XP Pro / WES7 32bit / WEC7 / Windows 7 32bit / Linux
<b>Power Consumption</b>	Input Voltage	12- 30 Vdc
	Power Consumption	36 W (Burn-in test 7.0 in Windows 7 32bit) 34 W (Burn-in test 7.0 in Windows XP 32bit)
<b>LCD Display</b>	Display Type	12.1" TFT LED Panel (LED Backlight)
	Max. Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	600
	Contrast Ratio	700
<b>Touchscreen</b>	Backlight Lifetime	50,000 hrs (typical)
	Touch Type	Analog Resistive 5-wire
	Light Transmission	81+/-3%
	Controller	RS-232 interface
	Durability (Touches)	36 million

**Dimensions**

Unit: mm



**Cut-out dimensions: 311 x 240 mm**

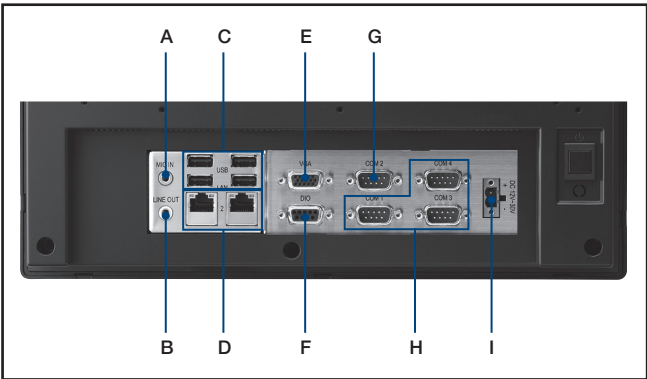
<b>Environment</b>	Operating Temperature	0 ~ 50°C (32 ~ 122°F)
	Storage Temperature	-40 ~ 60°C (-40 ~ 140°F)
	Relative Humidity	10 ~ 95% @ 40°C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

**Ordering Information**

Part No.	Description
PPC-3120-RAE	Atom D2550 Fanless PPC with 12.1" XGA LED backlight, touch, without memory
96PSA-A90W190T-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8m
170203183C	Power cord 3P Europe (WS-010+083)183cm
1700008921	Power cord 3P/3P Power supply 1.8M PSE
* PPC-174T-WL-MTE	Wall mount kit for PPC series
* PPC-ARM-A03	PPC ARM VESA Standard
* PPC-STAND-A1E	Stand For PPC Series
PPC-3100-VESAE	PPC-3100 VESA bracket module
PPC-WLAN-A1E	WiFi Module with Antenna Cable 40cm for PPC
PPC-3120-EXPE	Add-on box for PCI or PCIe expansion (include PCI / PCIe riser card)
2070012891	Image WES7P 32-bit Multi V4.12 PPC-3120/3100
2070011967	Image windows XPE WES2009 PPC-3120 V4.3 MUI SA
2070012979	Image WEC7 PPC-3120 V4.00 Eng
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
98R3612000E	mSATA/CFast to USB card reader
98R3415010E	Front USB on cabinet module with Cable 100cm

\* If you order Wall mount kit / ARM / Desktop stand, please also order PPC-3100-VESAE at the same time.

**I/O**



- A. Mic-in
- B. Line-out
- C. USB 2.0 x 4
- D. 10/100/1000 Mbps Ethernet x 2
- E. VGA Port
- F. DIO Port
- G. RS-232/422/485 x 1
- H. RS-232 x 3
- I. DC Inlet

# PPC-3120S

## 12.1" Fanless Panel PC with Intel® Celeron® N2930 Processor



### Features

- Industrial-grade 12.1" XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

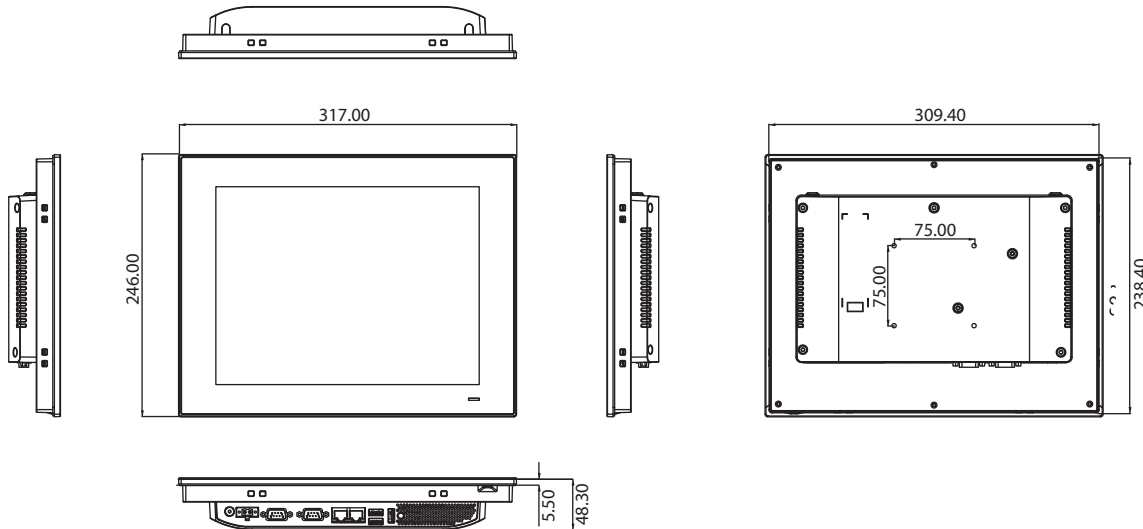
The PPC-3120S is a high-value, ultra-slim panel PC equipped with a 12.1" XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3120S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.

### Specifications

<b>System</b>	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
<b>Physical Characteristics</b>	Dimensions	317 x 246 x 49 mm (12.5 x 9.7 x 1.9 in)
	Weight	2.1 kg (4.63 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	18W (Burn-in test 7.0 in Windows 7, 32-bit)
<b>LCD</b>	Display Type	12.1" TFT LCD (LED backlight)
	Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	500
	Contrast Ratio	700
	Backlight Lifetime	30,000 hr (min.)
<b>Touchscreen</b>	Touch Type	ELO 5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	Greater than 35 million touches in one location without failure
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

## Dimensions

Unit: mm

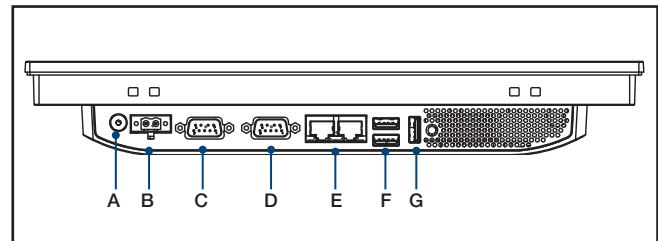


**Panel Cutout Dimensions: 311 x 240 mm (12.24 x 9.44 in)**

## Ordering Information

Part Number	Description
PPC-3120S-RAE	Intel Celeron N2930 Fanless Panel PC with 12.1" XGA LED backlight
PPC-3120S-RAU	Intel Celeron N2930 Fanless Panel PC with 12.1" XGA LED backlight, for U.S. only
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power cord 3P CCC(China) 1.8M

## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0
- G. USB 2.0



# PPC-3150

## 15" Fanless Panel PC with Intel® Atom™ Quad-Core Processor



### Features

- 15" XGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3845 quad-core, 1.91 GHz, processor
- Fanless, slim design
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- 1 x PCI/PCIe x1 expansion slot
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V<sub>DC</sub>)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)



### Introduction

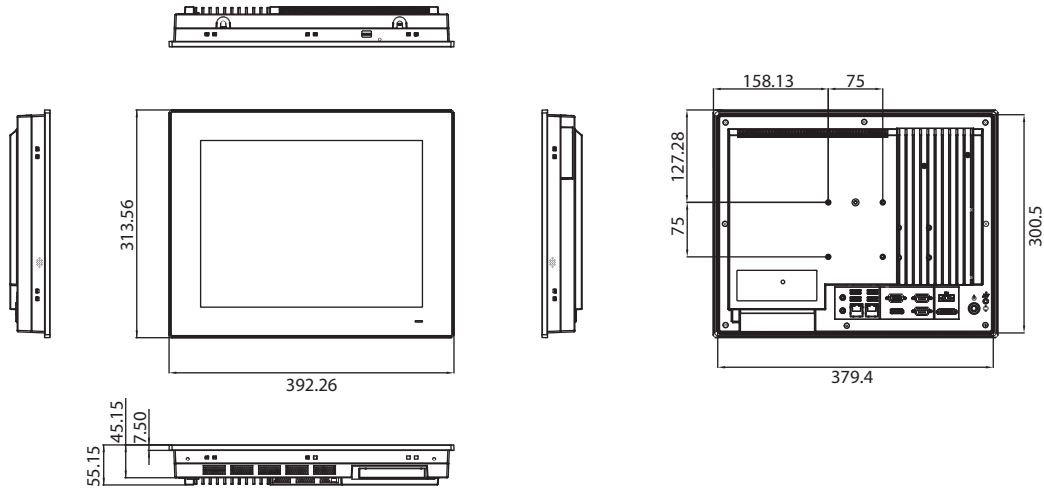
The PPC-3150 is a 15" fanless panel PC equipped with a high-performance Intel® Atom™ E3845 quad-core, 1.91 GHz, processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V<sub>DC</sub>). The provision of multiple I/O, including 4 x COM, 1 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, PPC-3150 can be integrated with fieldbus protocols or proprietary cards for increased application potential.

### Specifications

		PPC-3150-RE4BE
<b>System</b>	CPU	Intel® Atom™ E3845 quad core
	Frequency	1.91 GHz
	L3 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I210)
	I/O	1 x isolated RS-422/485 (terminal block) 4 x RS-232, two external and two by internal pin header (need optional module) 1 x GPIO (8 channels, TTL level) by internal pin header (need optional module) 1 x USB 3.0, 3 x USB 2.0 1 x VGA 1 x DP1.1a 1 x Line-out, 1 x Mic-in
	Expansion	1 x Mini PCIe 1 x PCI (default); 1 x PCIe x1 (in the accessory box) Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
<b>Physical Characteristics</b>	Dimensions	392.2 x 313.5 x 55.1 (15.4 x 12.3 x 2.1 in)
	Weight	5.3 kg (11.68 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Win10 LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	9 ~ 32 V <sub>DC</sub>
	Power Consumption	30W (Burn-in test 7.0 in Windows 7 32 bit)
<b>LCD</b>	Display Type	15" TFT LED panel
	Max. Resolution	1024 x 768
	Viewing Angle	88 (left), 88 (right), 88 (up), 88 (down)
	Luminance (cd/m <sup>2</sup> )	500
	Contrast Ratio	2500
	Backlight Lifetime	70,000 (typ.)
<b>Touchscreen</b>	Touch Type	5-wire analog resistive
	Light Transmission	80+/-3%
	Controller	USB interface
	Durability (Touches)	36 million

## Dimensions

Unit: mm



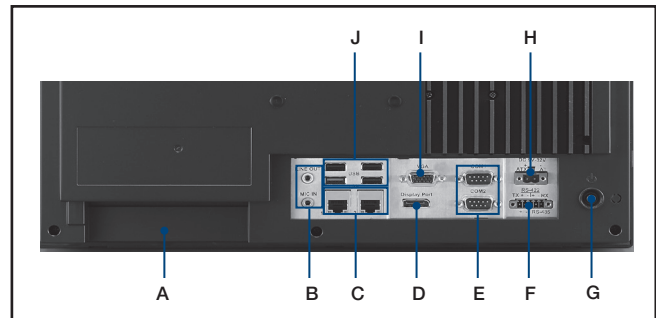
**Panel Cutout Dimensions: 381 x 302 mm (15 x 11.88 in)**

<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	BSMI, CE, FCC Class A
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

## Ordering Information

Part Number	Description
PPC-3150-RE4BE	True flat, Intel Atom E3845 Panel PC with 15" XGA panel, 5-wire resistive T/S
PPC-3150-RE4BU	True flat, Intel Atom E3845 Panel PC with 15" XGA panel, 5-wire resistive T/S, for U.S. only
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-3150-COME	Module to install either two additional RS-232 port or one additional RS-232 and one GPIO for PPC-3150/PPC-3170
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
98R3C31500E	PPC-315/317/319 internal USB dongle kits
98R3C31510E	PPC-3150/3170 install CF card kits
98R3C31520E	PPC-3150/PPC-3170 CFast card kits

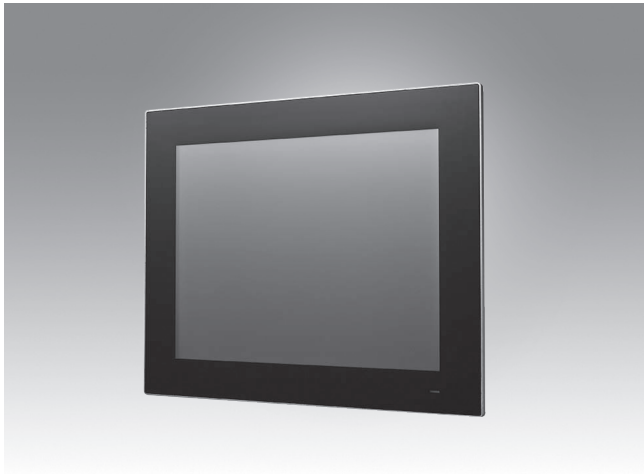
## I/O View



- A. 1 x Expansion slot (PCI or PCIe x1)
- B. Mic-in/Line-out
- C. 2 x Intel Gigabit Ethernet
- D. 1 x DisplayPort
- E. 2 x RS-232
- F. 1 x Isolated RS-422/485
- G. Power Button
- H. DC inlet and AT/ATX switch
- I. 1 x VGA
- J. 1 x USB3.0, 3 x USB2.0

# PPC-3150S

## 15" Fanless Panel PC with Intel® Celeron® N2930 Processor



### Features

- Industrial-grade 15" XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

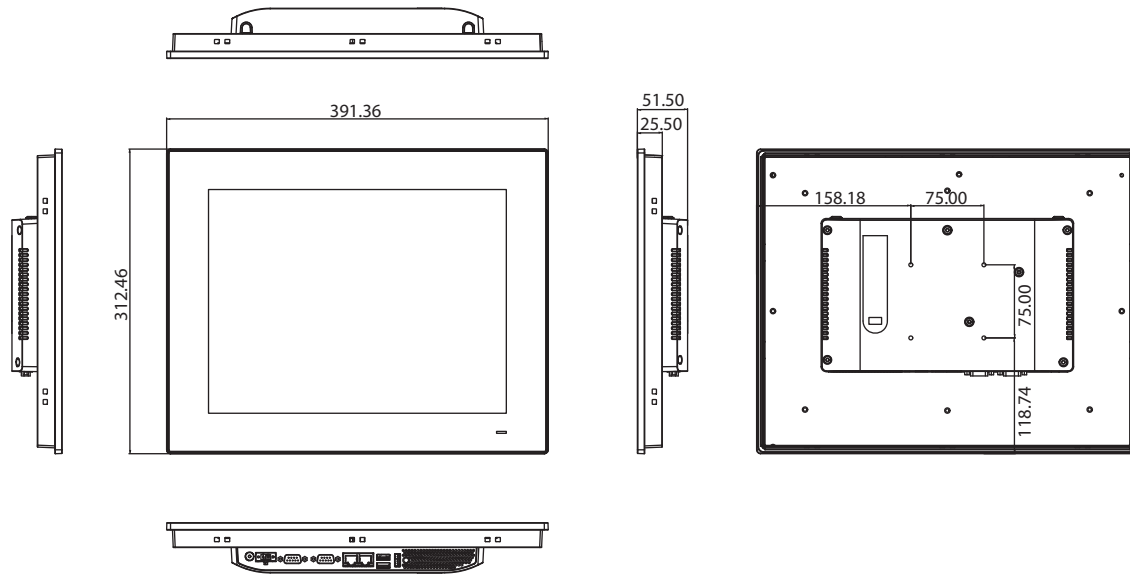
The PPC-3150S is a high-value, ultra-slim panel PC equipped with a 15" XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3150S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.

### Specifications

<b>System</b>	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
<b>Physical Characteristics</b>	Dimensions	391.36 x 312.46 x 51.5 mm (15.4 x 12.3 x 2.0 in)
	Weight	4 kg (8.8lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	20W (Burn-in test 7.0 in Windows 7, 32-bit)
<b>LCD</b>	Display Type	15" TFT LCD (LED backlight)
	Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	400
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr
<b>Touchscreen</b>	Touch Type	5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	36 million
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD (with the HDD temperature more than or equal to 65 °C)
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

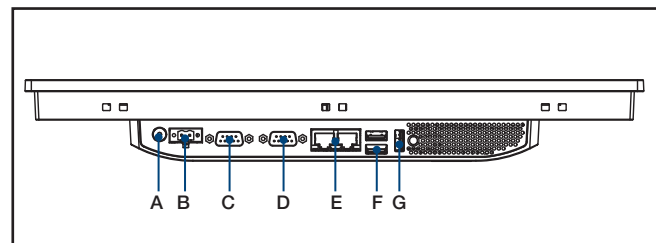


**Panel Cutout Dimensions: 382 x 303 mm (15.03 x 11.92 in)**

## Ordering Information

Part Number	Description
PPC-3150S-RAE	Intel Celeron N2930 Fanless Panel PC with 15" XGA LED backlight
PPC-3150S-RAU	Intel Celeron N2930 Fanless Panel PC with 15" XGA LED backlight, for U.S. only
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power cord 3P CCC(China) 1.8M

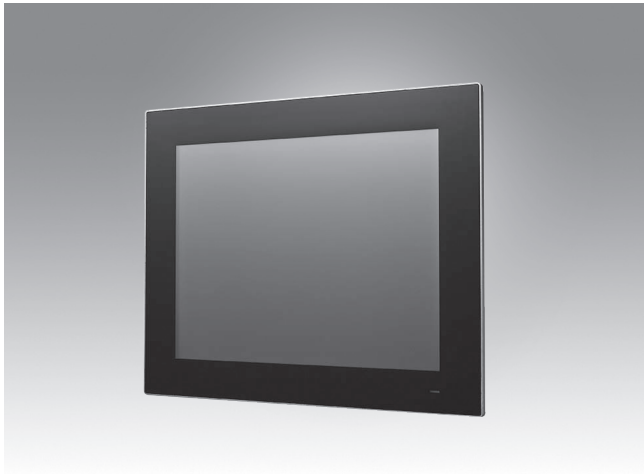
## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0
- G. USB 2.0

# PPC-3150S

## 15" Fanless Panel PC with Intel® Celeron® N2930 Processor



### Features

- Industrial-grade 15" XGA TFT LCD with 30K backlight lifetime
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 2 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

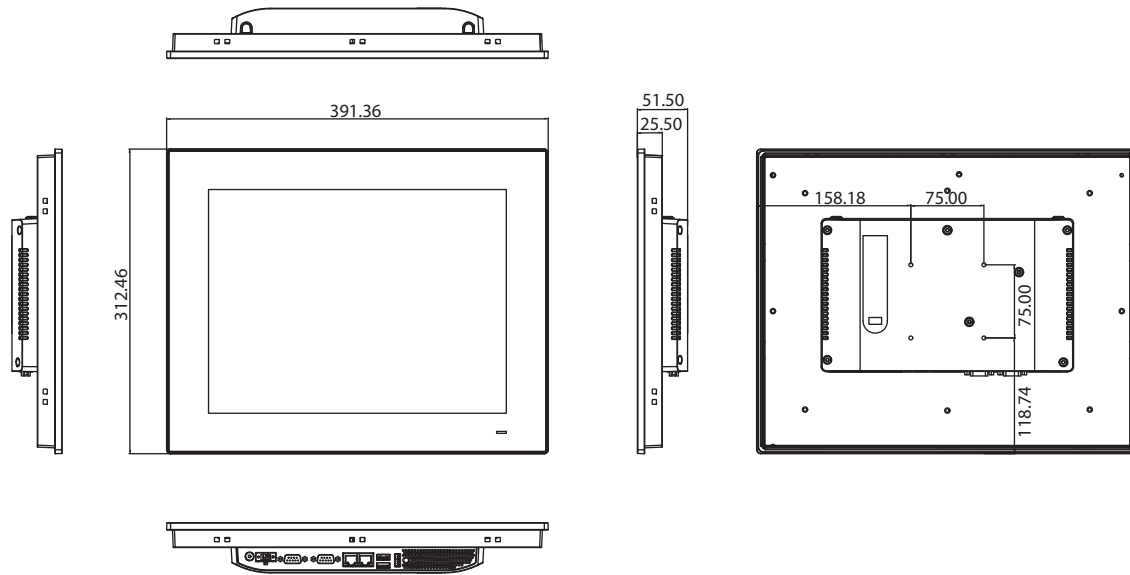
The PPC-3150S is a high-value, ultra-slim panel PC equipped with a 15" XGA TFT LCD, and low-power Intel® Celeron® N2930, 1.83 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3150S features an IP65-rated front panel, true-flat 5-wire resistive touchscreen, two serial ports, three USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.

### Specifications

<b>System</b>	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 2 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
	Watchdog Timer	255 timer levels, set up by software
<b>Physical Characteristics</b>	Dimensions	391.36 x 312.46 x 51.5 mm (15.4 x 12.3 x 2.0 in)
	Weight	4 kg (8.8lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	20W (Burn-in test 7.0 in Windows 7, 32-bit)
<b>LCD</b>	Display Type	15" TFT LCD (LED backlight)
	Resolution	1024 x 768
	Viewing Angle	80 (left), 80 (right), 70 (up), 70 (down)
	Luminance (cd/m <sup>2</sup> )	400
	Contrast Ratio	700
	Backlight Lifetime	50,000 hr
<b>Touchscreen</b>	Touch Type	5-wire resistive touch
	Light Transmission	80±5% at 550 nm wavelength
	Controller	RS232 interface
	Durability (Touches)	36 million
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD (with the HDD temperature more than or equal to 65 °C)
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

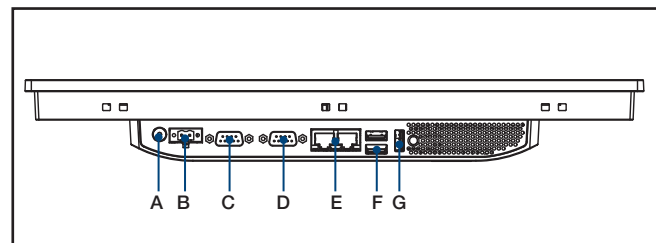


**Panel Cutout Dimensions: 382 x 303 mm (15.03 x 11.92 in)**

## Ordering Information

Part Number	Description
PPC-3150S-RAE	Intel Celeron N2930 Fanless Panel PC with 15" XGA LED backlight
PPC-3150S-RAU	Intel Celeron N2930 Fanless Panel PC with 15" XGA LED backlight, for U.S. only
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power cord 3P CCC(China) 1.8M

## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0
- G. USB 2.0

# PPC-3150SW

## 15.6" Fanless Widescreen Panel PC with Intel® Pentium® N4200 Quad-Core Processor



### Features

- 15.6" true-flat WXGA TFT LCD with projected capacitive touch control
- Fanless design with low power consumption
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Configurable RS-232/422/485 ports via BIOS
- Automatic data flow control over RS-485
- Wide range DC support (12 ~ 24 V<sub>DC</sub>)
- Supports dual displays
- IP65-rated front panel



### Introduction

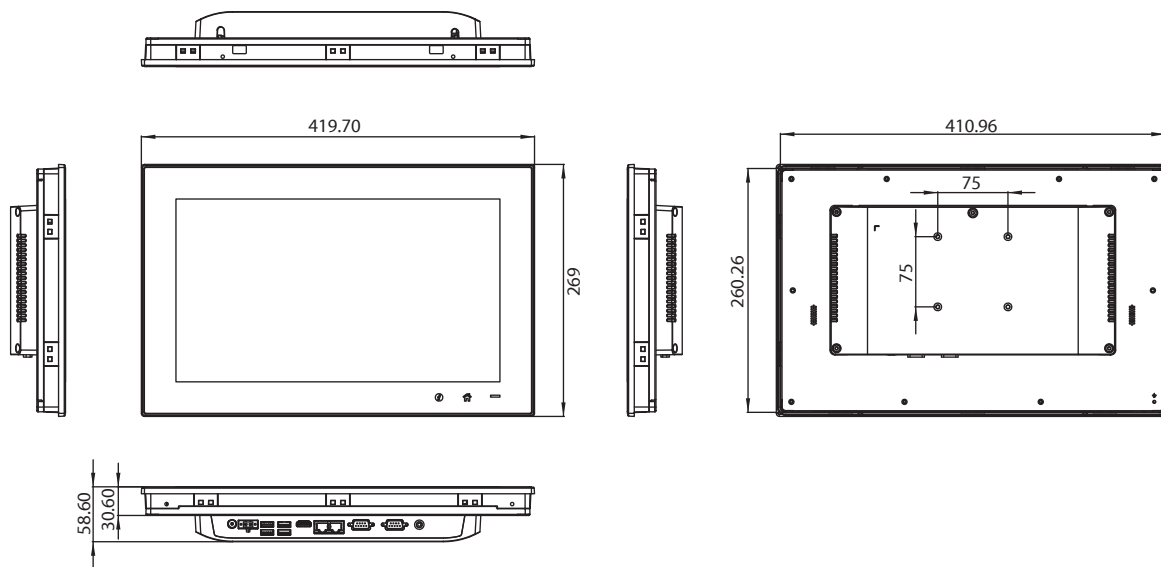
The PPC-3150SW is a high-value, ultra-slim panel PC equipped with a 15.6" WXGA TFT LCD, and low-power Intel® Pentium® N4200 quad-core, 1.1 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3150SW features an IP65-rated front panel, multi-touch projected capacitive touchscreen, die cast aluminum alloy enclosure, two serial ports, four USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.

### Specifications

<b>System</b>	CPU	Intel® Pentium® N4200 quad core
	Frequency	1.1GHz, turbo boot to 2.5GHz.
	L2 Cache	3 MB
	Memory	1 x SODIMM, DDR3L 1600/1866, max. 8 GB
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Line-out 1 x HDMI
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
<b>Physical Characteristics</b>	Dimensions	419.7 x 269 x 58.6 mm (16.52 x 10.59 x 2.3 in)
	Weight	4.7 kg (10.36 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 10(64-bit), Windows 10 IOT LTSC, Linux, Android 8.1
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	33W
<b>LCD</b>	Display Type	15.6" TFT LCD (LED backlight)
	Max. Resolution	1366 x 768
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)
	Luminance (cd/m <sup>2</sup> )	400
	Contrast Ratio	500
	Backlight Lifetime	50,000 hr (min.)
<b>Touchscreen</b>	Touch Type	Multi-touch projected capacitive
	Light Transmission	90% ± 2%
	Controller	USB Interface
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI, EN 60601-1-2
	Safety	CE, UL, CCC, BSMI
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

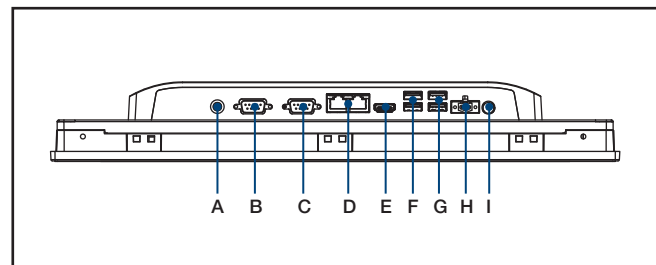


Panel Cutout Dimensions: 413 x 262 mm (16.25 x 10.31 in)

## Ordering Information

Part Number	Description
PPC-3150SW-PN4A	15.6" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core
PPC-3150SW-PN4AU	15.6" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core, for U.S. only
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-HDD-N4200	HDD Bracket module for PPC-3150SW and PPC-3180SW

## I/O View



- A. Line out
- B. COM1: RS-232
- C. COM2: RS-232/422/485
- D. 2 x LAN
- E. HDMI
- F. 2 x USB 3.0
- G. 2 x USB 2.0
- H. DC-In
- I. Power Switch



# PPC-3180SW

## 18.5" Fanless Widescreen Panel PC with Intel® Pentium® N4200 Quad-Core Processor



### Features

- 18.5" true-flat TFT LCD with projected capacitive touch control
- Fanless design with low power consumption
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- Configurable RS-232/422/485 ports via BIOS
- Automatic data flow control over RS-485
- Wide range DC support (12 ~ 24 V<sub>DC</sub>)
- Supports dual displays
- IP65-rated front panel



### Introduction

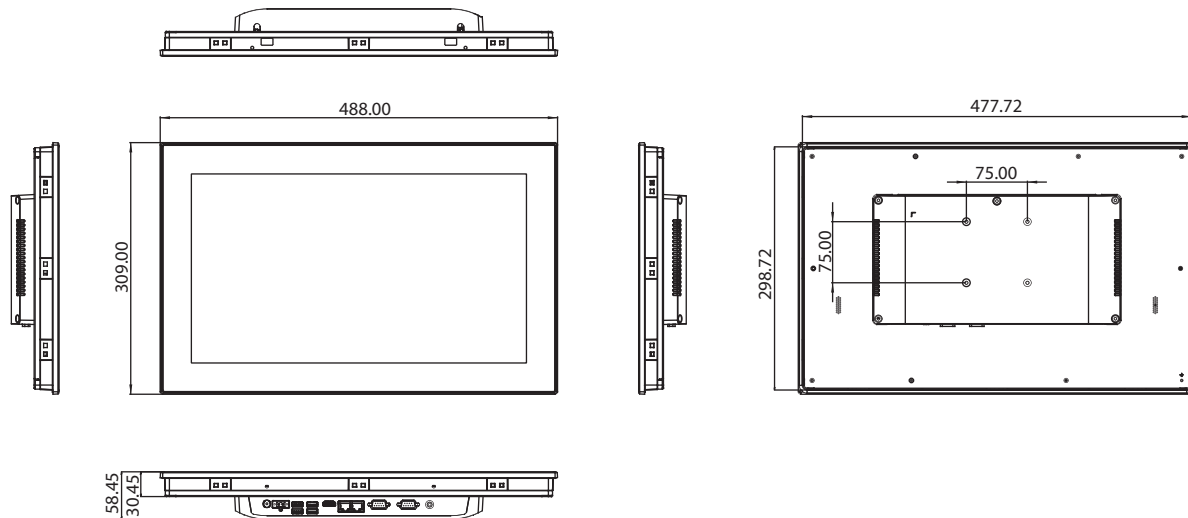
The PPC-3180SW is a high-value, ultra-slim panel PC equipped with a 18.5" WXGA TFT LCD, and low-power Intel® Pentium® N4200 quad-core, 1.1 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3180SW features an IP65-rated front panel, multi-touch projected capacitive touchscreen, die cast aluminum alloy enclosure, two serial ports, four USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications.

### Specifications

<b>System</b>	CPU	Intel Pentium® N4200 quad Core
	Frequency	1.1GHz, turbo boot to 2.5GHz.
	L2 Cache	3 MB
	Memory	1 x SODIMM, DDR3L 1600/1866, max. 8 GB
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I211-AT)
	I/O	2 x Serial ports: 1 x RS-232, 1 x RS-232/422/485 2 x USB 3.0, 2 x USB 2.0 1 x Line-out 1 x HDMI
	Expansion	1 x Mini PCIe
	Watchdog Timer	255 timer levels, set up by software
	Speaker	2 x 1W
<b>Physical Characteristics</b>	Dimensions	488 x 309 x 58.45 mm (19.21 x 12.16 x 2.3 in)
	Weight	5.4 kg (11.90 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 10(64-bit), Windows 10 IOT LTSC, Linux, Android 8.1
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	35 W
<b>LCD</b>	Display Type	18.5" TFT LCD (LED backlight)
	Max. Resolution	1366 x 768
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)
	Luminance (cd/m <sup>2</sup> )	450
	Contrast Ratio	1000
	Backlight Lifetime	50,000 hr (min.)
<b>Touchscreen</b>	Touch Type	Multi-touch projected capacitive
	Light Transmission	90% ± 2%
	Controller	USB Interface
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5~500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI, EN 60601-1-2
	Safety	CE, UL, CCC, BSMI
Front Panel Protection	IP65 compliant	

## Dimensions

Unit: mm

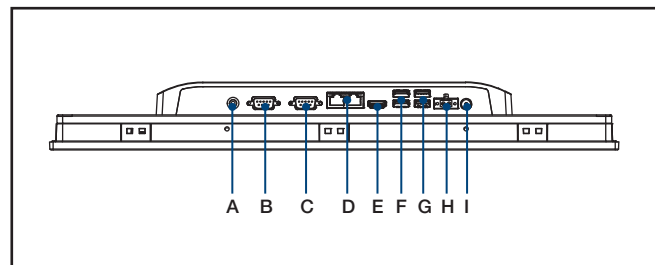


**Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87 x 11.82 in)**

## Ordering Information

Part Number	Description
PPC-3180SW-PN4A	18.5" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core
PPC-3180SW-PN4AU	18.5" Wide screen PPC with PCT Multi-touch, Intel Pentium® N4200 Quad-Core, for U.S. only
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8MB	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-HDD-N4200	HDD Bracket module for PPC-3150SW and PPC-3180SW

## I/O View



- A. Line out
- B. COM1: RS-232
- C. COM2: RS-232/422/485
- D. 2 x LAN
- E. HDMI
- F. 2 x USB 3.0
- G. 2 x USB 2.0
- H. DC-In
- I. Power Button

# PPC-3190

## 19" Fanless Panel PC with Intel® Atom™ Quad-Core Processor



### Features

- 19" SXGA TFT LCD with resistive touchscreen
- Intel® Atom™ E3845 quad-core, 1.91 GHz, processor
- Fanless, slim design
- Supports 1 x internal 2.5" SATA HDD and 1 x mSATA
- 1 x PCI/PCIe x1 expansion slot
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Wide range DC support (9 ~ 32 V<sub>DC</sub>)
- 1 x isolated RS-422/485 with automatic flow control and dual Intel GbE
- Optional GPIO (8 channels, TTL level)



### Introduction

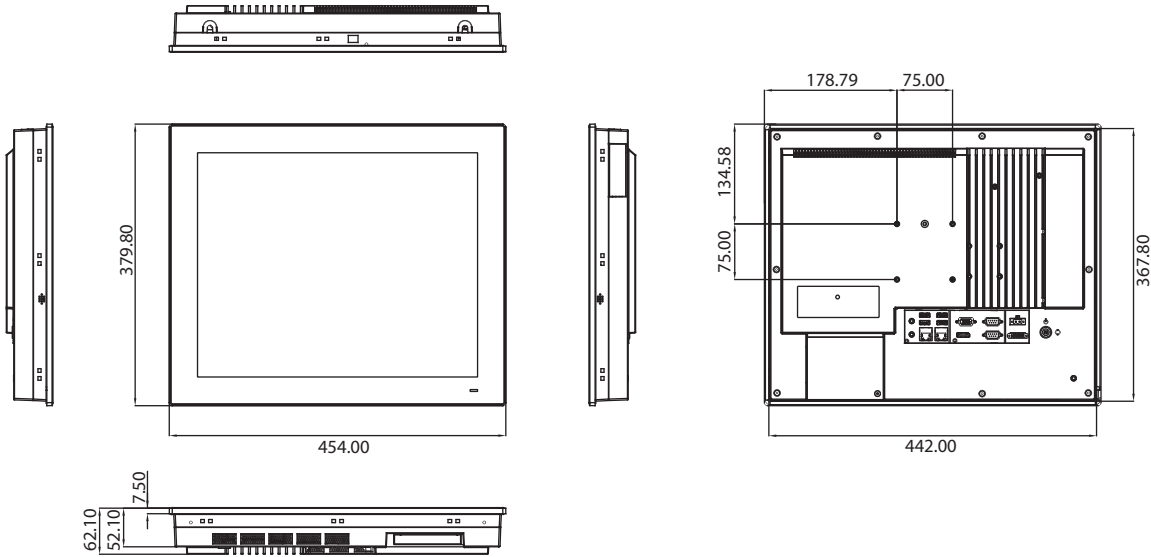
The PPC-3190 is a 19" fanless panel PC equipped with a high-performance Intel® Atom™ E3845 quad-core, 1.91 GHz, processor that supports both a wide operating temperature range (-20 ~ 60 °C) and wide power input range (9 ~ 32 V<sub>DC</sub>). The provision of multiple I/O, including 4 x COM, 1 x USB 3.0, 1 x isolated RS-422/485, and dual Intel® Gigabit Ethernet, ensures easy integration and connectivity. With the inclusion of 1 x PCI/PCIe expansion slot, the PPC-3190 can be integrated with fieldbus protocols or proprietary cards for increased application potential.

### Specifications

		PPC-3190-RE4AE	PPC-3190-RE4BE
<b>System</b>	CPU	Intel® Atom™ E3845 quad core	
	Frequency	1.91 GHz	
	L3 Cache	2 MB	
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)	
	Storage	1 x 2.5" SATA bay 1 x mSATA bay	
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet (Intel I210)	
	I/O	1 x isolated RS-422/485 (terminal block) 4 x RS-232, two external and two by internal pin header (need optional module) 1 x GPIO (8 channels, TTL level) by internal pin header (need optional module) 1 x USB 3.0, 3 x USB 2.0 1 x VGA 1 x DP1.1a 1 x Line-out, 1 x Mic-in	
	Expansion	1 x Mini PCIe 1 x PCI (default); 1 x PCIe x1 (in the accessory box) Optional: 1 x Cfast; 1 x CF card; 1 x Internal USB dongle; 2 x RS-232 or 1 x RS-232 + 1 x GPIO	
	Watchdog Timer	255 timer levels, set up by software	
	Speaker	2 x 1W	
<b>Physical Characteristics</b>	Dimensions	458.2 x 384 x 67.3 mm (18 x 15 x 2.6 in)	454.0 x 379.8 x 62.1 mm (17.8 x 14.9 x 2.4 in)
	Weight	7.9 kg (17.3 lb)	7.0 kg (15.4 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows 7/8.1/10 (32/64-bit), WES7, WEC7, Linux	
<b>Power Consumption</b>	Input Voltage	9 ~ 32 V <sub>DC</sub>	
	Power Consumption	27W (Burn-in test 7.0 in Windows 7 32 bit)	
<b>LCD</b>	Display Type	19" TFT LED panel	
	Max. Resolution	1280 x 1024	
	Viewing Angle	85 (left), 85 (right), 80 (up), 80 (down)	
	Luminance (cd/m <sup>2</sup> )	350	
	Contrast Ratio	1000	
	Backlight Lifetime	50,000 hr (min.)	
<b>Touchscreen</b>	Touch Type	5-wire analog resistive	
	Light Transmission	81+/-3%	
	Controller	USB interface	
	Durability (Touches)	36 million	

**Dimensions**

Unit: mm



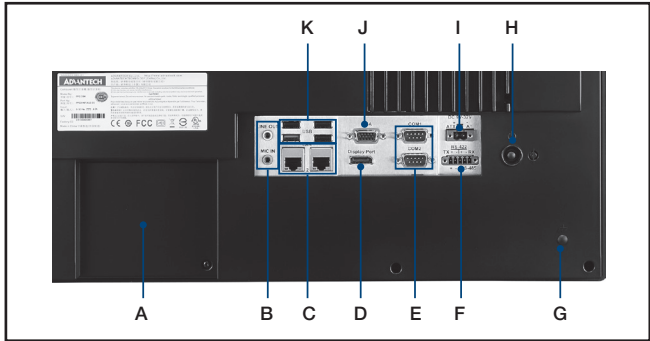
**Panel Cutout Dimensions: 444 x 370 mm (17.48 x 14.56 in)**

<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with 2.5" SATA SSD -20 ~ 60 °C (-4 ~ 140 °F) with -40 ~ 85 °C mSATA or 2.5" SATA SSD
	Storage Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD, follow IEC 60068-2-64
	EMC	BSMI, CE, FCC Class A
	Safety	CB, CCC, BSMI, UL
Front Panel Protection	IP65 compliant	

**Ordering Information**

Part Number	Description
PPC-3190-RE4AE	Black front bezel, Intel Atom E3845 with 19" LED, 5-wire resistive touch
PPC-3190-RE4BE	True flat, Intel Atom E3845 with 19" LED, 5-wire resistive touch
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-ARM-A03	PPC ARM VESA Standard
PPC-3150-COME	Kit to install extra COMx2/DIOx1 for PPC-3150/3190
96PSA-A90W190T-1	ADP A/D 100-240V 90W 19V W/PFC
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-STAND-A1E	Stand For PPC Series
98R3C31500E	PPC-315/317/319 internal USB dongle kits

**I/O View**



- A. 1 x Expansion slot (PCI or PCIe x1)
- B. Mic-in/Line-out
- C. 2 x Intel Gigabit Ethernet
- D. 1 x DisplayPort
- E. 2 x RS-232
- F. 1 x Isolated RS-422/485
- G. Ground Line
- H. Power Button
- I. DC inlet and AT/ATX switch
- J. VGA x1
- K. 1 x USB 3.0, 3 x USB 2.0

# PPC-3210SW

## 21.5" Fanless Panel PC with Intel® Celeron® N2930 Processor



### Features

- Industrial-grade 21.5" Full HD TFT LCD with 50K backlight lifetime
- True-flat touchscreen with projected capacitive multi-touch control
- Intel® Celeron® N2930 quad-core, 1.83 GHz, processor
- Up to 8 GB DDR3L SDRAM
- 1 x RS-232, 1 x RS-232/422/485, 1 x USB 2.0, and 1 x USB 3.0
- Compact, fanless design with solid aluminum alloy enclosure and IP65-rated front panel
- Supports E-Eye monitoring and protection
- Supports expansion via full-size mini PCIe
- Supports Windows Embedded and Android OS
- Supports VESA 75 x 75 mounting holes



### Introduction

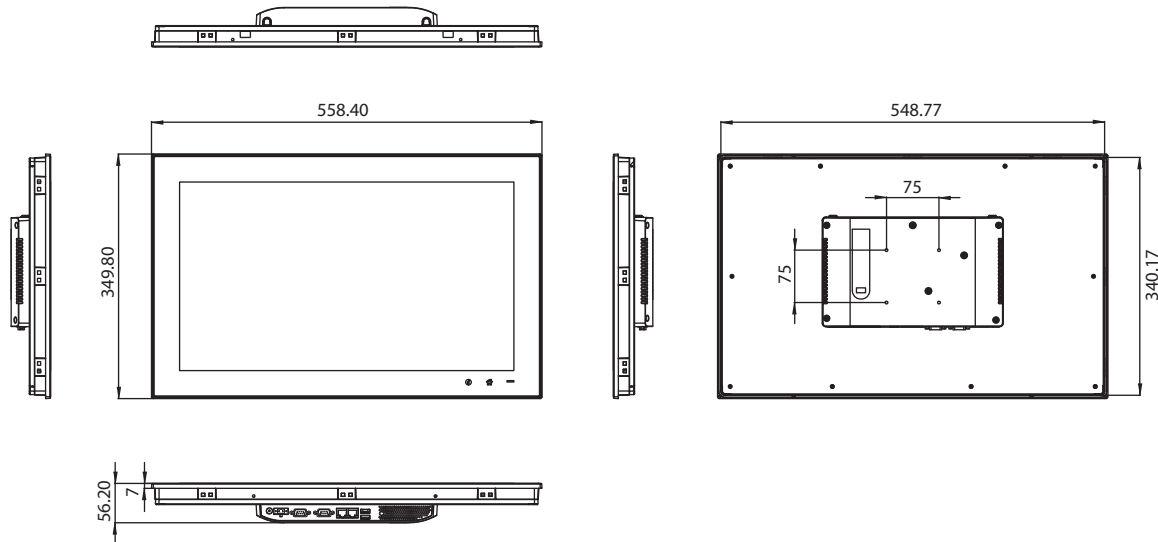
The PPC-3210SW is a high-value, ultra-slim panel PC equipped with a 21.5" Full HD TFT LCD, and low-power Intel® Celeron® N2930 quad-core, 1.86 GHz, processor to provide high-performance computing in a compact and fanless system. For high durability and functionality, the PPC-3210SW features an IP65-rated front panel, true-flat projected capacitive touchscreen, die cast aluminum alloy enclosure, two serial ports, two USB ports, and two GbE LAN ports, making it suitable for diverse industrial applications. To provide further system monitoring and protection capabilities, e-Eye technology is provided at the rear of the panel PC for indicating the system operating status to facilitate detection and analysis.

### Specifications

<b>System</b>	CPU	Intel® Celeron® N2930 quad core
	Frequency	1.83 GHz
	L2 Cache	2 MB
	Memory	1 x SODIMM DDR3L 1333 MHz (max. 8 GB)
	Storage	1 x 2.5" SATA bay (optional; requires a bracket module for installation) 1 x mSATA bay (default)
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet
	I/O	2 x Serial ports: 1 x RS-232, 1x RS-232/422/485 (Adjustable through BIOS) 1 x USB 2.0, 1 x USB 3.0
	Expansion	1 x Full-size mini PCIe slot
<b>Physical Characteristics</b>	Watchdog Timer	255 timer levels, set up by software
	Dimensions	558.4 x 349.8 x 56.2 mm (219.8 x 137.7 x 22.1 in)
<b>OS Support</b>	Weight	7.5 kg (16.5 lb)
	OS Support	Microsoft® Windows 7(32/64-bit)/10(64-bit), WES7P, WEC7, Windows 10 IOT LTSC, Linux, Android 6.0
<b>Power Consumption</b>	Input Voltage	12 ~ 24 V <sub>DC</sub>
	Power Consumption	25W (Burn-in test 7.0 in Windows 7, 32-bit)
<b>LCD</b>	Display Type	21.5" TFT LCD (LED backlight)
	Resolution	1920 x 1080
	Viewing Angle	89 (left), 89 (right), 89 (up), 89 (down)
	Luminance (cd/m <sup>2</sup> )	300
	Contrast Ratio	5000
	Backlight Lifetime	50,000 hr
<b>Touchscreen</b>	Touch Type	10-point multi-touch projected capacitive
	Light Transmission	90 % ± 3 %
	Controller	USB interface
<b>Environment</b>	Operating Temperature	0 ~ 50 °C (32 ~ 122 °F) with SSD 0 ~ 40 °C (32 ~ 104 °F) with HDD (with the HDD temperature more than or equal to 65 °C)
	Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
	Relative Humidity	10 ~ 95% @ 40 °C (non-condensing)
	Shock	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5 ~ 500Hz, 1Grms @with HDD; 2Grms @with SSD, follow IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CB, CCC, BSMI, UL
	Front Panel Protection	IP65 compliant

## Dimensions

Unit: mm

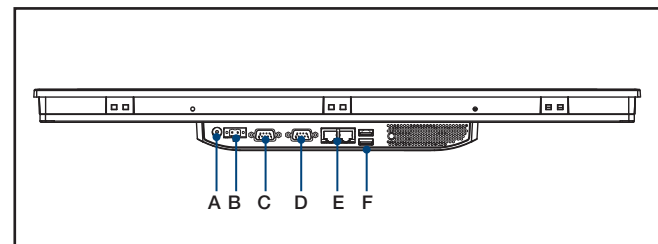


**Panel Cutout Dimensions: 550.3 x 341.8 mm (21.66 x 13.45 in)**

## Ordering Information

Part Number	Description
PPC-3210SW-PAE	Intel Celeron N2930 Fanless Panel PC with 21.5" Full HD LED backlight
PPC-3100S-HDDE	Bracket module for 2.5" SSD/HDD installation
96PSA-A90W190T-3	A/D 100-240V 90W 19V C6 TERMINAL 2 PIN 62368
PPC-WLAN-C1E	M.2 Wi-Fi Module with Antenna cable support 2T2R
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-Stand-A1E	Stand for PPC series
1700001524	Power cord 3P UL 10A 125V 1.8M
170203183C	Power cord 3P Europe (WS-010+083) 183cm
1700008921	Power cord 3P/3P 1.8M PSE
96CB-POWER-B-1.8MB	Power cord 3P CCC(China) 1.8M

## I/O View



- A. Power Switch
- B. DC-In
- C. RS-232
- D. RS-232/422/485
- E. 2 x RJ45 LAN
- F. 1 x USB 2.0, 1 x USB 3.0

# PPC-4150W

## 15.6" Fanless Wide Screen Panel PC with Intel® Atom™ D2550 Dual-Core Processor



### Features

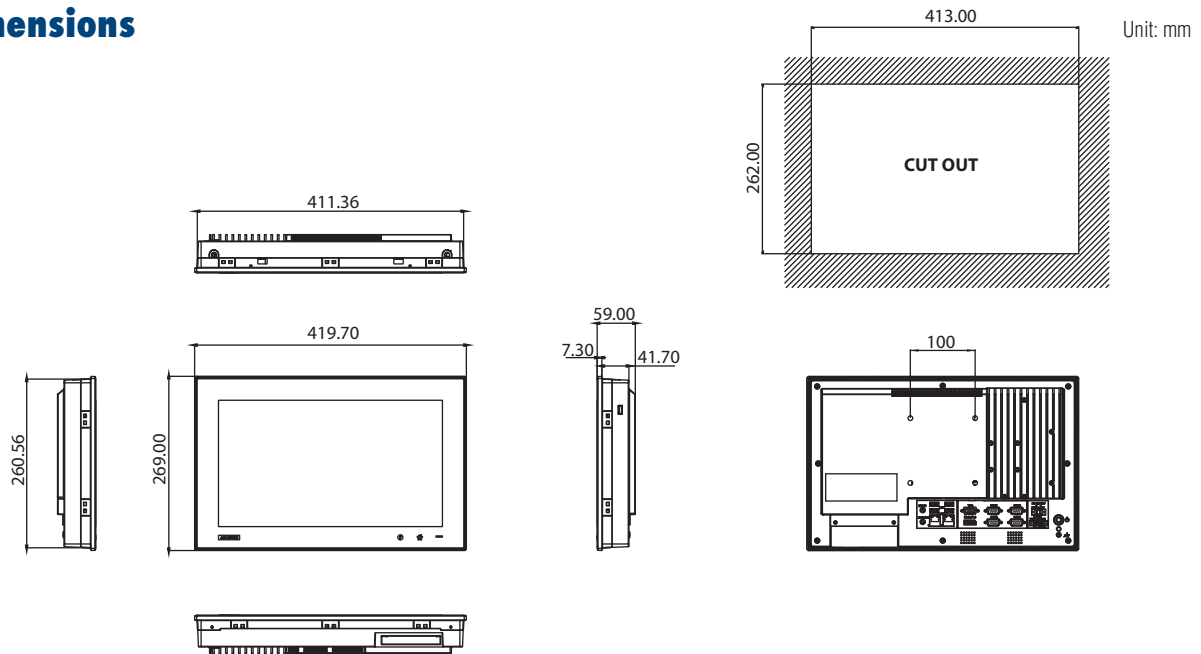
- 15.6" TFT WXGA LED entirely flat panel with projected capacitive or resistive touch touchscreens
- Fanless design and low power consumption
- Supports one internal SATA 2.5" HDD and 1 x mSATA socket
- PCI or PCIe x 1 expansion support
- Adjust RS-232/422/485 through BIOS
- Automatic data flow control over RS-485
- Wide Range DC 12-30V support
- One right side USB port
- Front panel compliant with IP65



### Specifications

<b>Processor System</b>	CPU	Intel Atom D2550, Dual Core
	Frequency	1.86GHz
	2nd Cache	1MB
	Chipset	Intel NM10
	Memory	1 x SODIMM, DDR3 1066, Max 4 GB
	Storage	1 x 2.5" SATA Bay 1 x mSATA Bay
	Network (LAN)	2 x 10/100/1000 Mbps Ethernet
	I/O ports	4 x Serial ports: 3 x RS-232, 1 x RS-232/422/485 (Adjustable through BIOS) 5 x USB 2.0 ports (4 in Rear, 1 from right side) 1 x Line-out, 1 x Mic-in 1 x DB15 VGA 1 x DB9 GPIO port (8 pin programmable)
	Expansion	1 x Mini PCIe 1 x PCIe x 1 (Default); 1 x PCI (in the accessory box)
	Watchdog Timer	255 timer levels, set up by software
Speaker	2 x 1W	
<b>Physical Characteristics</b>	Dimensions	419.7 x 269 x 59 mm (16.5" x 10.6" x 2.3")
	Weight	5.5 kg (12.13 lb)
<b>OS Support</b>	OS Support	Microsoft® Windows XP/Windows XPE/Windows 7 32bit/WES 7 32bit/Win CE/Linux
<b>Power Consumption</b>	Input Voltage	12 - 30 Vdc
	Power Consumption	36W (Burn-in test 7.0 in Windows 7 32 bit)
<b>LCD Display</b>	Display Type	15.6" TFT LCD (LED Backlight)
	Max. Resolution	1366 x 768
	Viewing Angle	85 (Left), 85 (Right), 80 (Up), 80 (Down)
	Luminance(cd/m <sup>2</sup> )	400
	Contrast Ratio	500
	Backlight Lifetime	50,000 hrs min.
<b>Touchscreen</b>	Touch Type	Projected Capacitive Multi-Touch 10 Point
	Light Transmission	88 % ± 2 %
	Controller	USB Interface
<b>Environment</b>	Operating Temperature	0 ~ 50°C (32 ~ 122°F)
	Storage Temperature	-40 ~ 60°C (-40 ~ 140°F)
	Relative Humidity	10 ~ 95% @ 40°C (Non-Condensing)
	Shock	Operating 10 G Peak Acceleration (11 ms Duration), Follows IEC 60068-2-27
	Vibration	Operating Random Vibration Test 5-500Hz, 1Grms @with HDD; 2Grms @with SSD, Follows IEC 60068-2-64
	EMC	CE, FCC Class B, BSMI
	Safety	CE, UL, CCC, BSMI
Front Panel Protection	IP65 Compliant	

## Dimensions

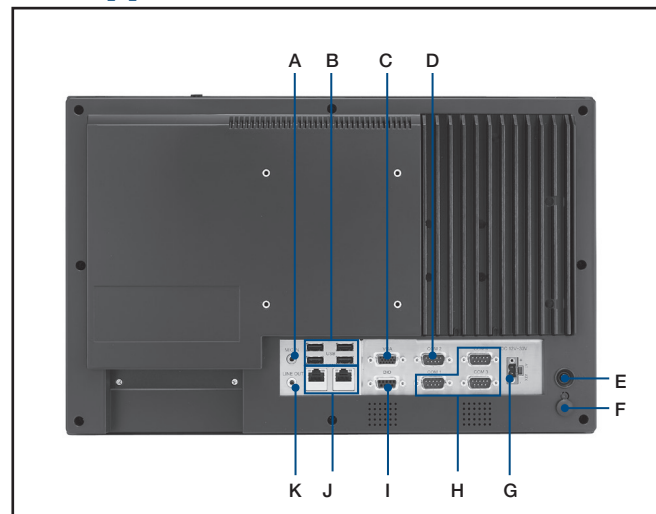


Cut-out dimensions: 413 x 262 mm

## Ordering Information

Part NO	Description
PPC-4150W-P4GAE	15.6 Wide screen PPC with PCT Multi-touch, Intel Atom D2550 1.86 GHz ,4G SO-DDR3-1600
96PSA-A90W190T-1	Adapter AC100-240V 90W 19V
1700001524	POWER Cord 3P UL 10A 125V 180cm
170203183C	POWER Code 3P Europe (WS-010+083)183 cm
1700008921	POWER CORD 3P/3P POWER SUPPLY 1.8 M PSE
96CB-POWER-B-1.8M	Power code 3P CCC(China) 1.8M
PPC-174T-WL-MTE	Wall mount kit for PPC series
PPC-STAND-A1E	Stand for PPC series
PPC-ARM-A03	ARM VESA Standard (A-CLEVER) for PPC series
PPC-WLAN-B1E	Wi-Fi Module with Antenna Cable 40cm for PPC
2070012524	Image Win XPE 32-bit Multi PPC-4150W-P
2070012374	Image WES7P 32-bit Multi PPC-4150W-P
98R3415010E	Front USB on cabinet module with Cable 100cm
98R3612000E	mSata/CFast To USB Card Reader

## I/O Appearance



- A. Mic-in
- B. 4 x USB 2.0
- C. VGA Port
- D. 1 x RS232/422/485
- E. Power Button
- F. Ground Line
- G. DC Inlet
- H. 3 x RS232
- I. DIO Port
- J. 2 x 10/100/1000 Mbps Ethernet
- K. Line Out