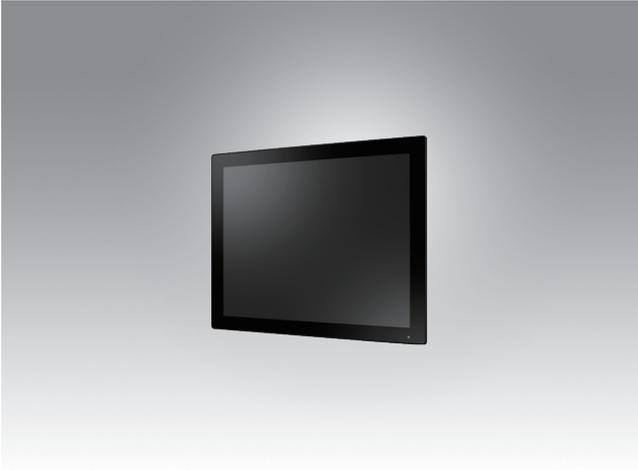# PPC-310S RPL
# PPC-312S RPL
# PPC-312SW RPL

## 10.4"/12.1" Fanless Panel PC with Intel® 13th Gen Core™ i7/i5/i3 Processor

## Features

- True-flat touchscreen with Industrial-grade LCD panel
- High-performance, fanless 13th generation Intel® Core™ i processor
- Slim Compact, fanless design with aluminum alloy enclosure
- IP66-rated front panel
- Supports dual displays (1 x external DP)
- 1 x M.2 M Key 2280 (SATA or NVME PCIe x 4) for storage, support SATA RAID 0,1
- 2 x 2500BASE-T Ethernet Supports Time-Sensitive Network(TSN) technology
- Supports VESA 75
- Support TPM2.0 hardware security (on board as default)
- Support iDoor
- Support PCI or PCIe

## Introduction

PPC-300S RPL equipped Intel 13th Gen Core i7/i5/i3, providing high computing performance with a slim & compact design and robust aluminum alloy enclosure. It also leverages M.2 M key NVMe PCIe to accommodate extremely high date rate and low latency advantage. PPC-300S RPL features 4 x USB, 2 x series ports and 1 x DP for flexible access and connection. The addition optional of PCIe/PCI slots or idoor for fieldbus or proprietary card extensions increases the compatibility of the system for various applications. The PPC-300S RPL series is an excellent solution to enable quick date capture, processing and data digitalization in various industrial applications.
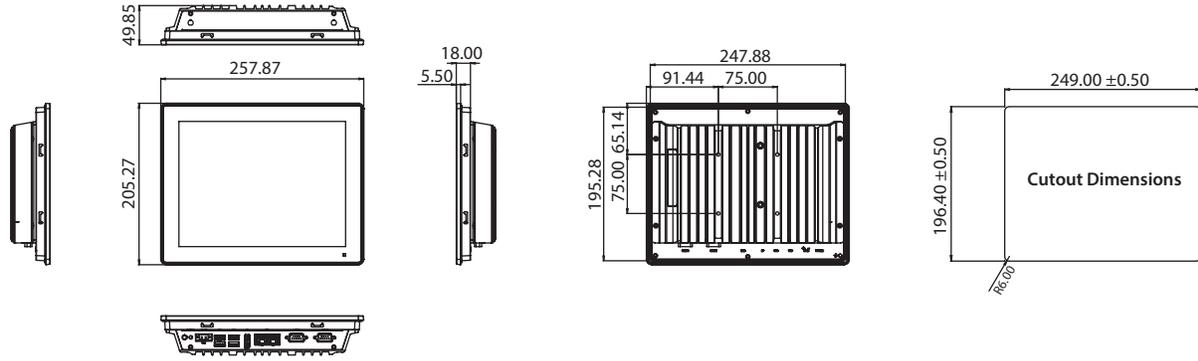
## Specifications

| System | | |
|---|---|---|
| | CPU | i3-1315UE/i5-1335UE/i7-1365UE |
| | Core | 6/10/10 |
| | Frequency | 1.20 GHz upto 4.5GHz with Turbo/1.30 GHz upto 4.5GHz with Turbo/1.70 GHz upto 4.9GHz with Turbo |
| | Cache | 10 MB/12 MB/12 MB |
| | Memory | 1 x SODIMM, DDR5 4800MHz, max. 32GB |
| | Storage | 1 x 2.5" SATA bay (optional)<br>1 x M.2 M Key 2280 (SATA or NVME PCIe x 4), support SATA RAID 0,1 |
| | Network (LAN) | 2 x 10/100/1000/2500 Mbps Ethernet (Intel I226 LM) |
| | I/O | 2 x RS-232/422/485<br>3 x USB3.2,1 x USB2.0<br>2 x USB2.0 (optional)<br>1 x DP |
| | Expansion | 1 x M.2 B key 2242 or 3042/3052 (PCIe x1, USB 3.0 & SIM slot), support idoor & 4G, and 5G by request<br>1 x M.2 E Key 2230 (PCIe & USB 2.0)<br>1 x iDoor (optional)<br>1 x PCI or PCIe x1 (optional)* |
| | Security | 1 x TPM2.0 (on board as default) |
| | Watchdog Timer | 255 timer levels; setup by software |
| | Speaker | 1 x 2W |

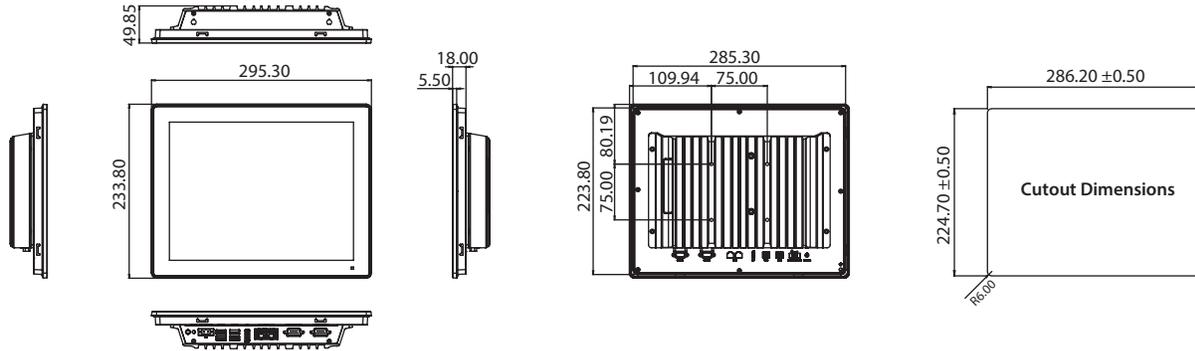| Model | | PPC-310S | PPC-312S | PPC-312SW |
|---|---|---|---|---|
| **LCD** | Display Type | 10.4" TFT LCD (LED backlight) | 12.1" TFT LCD (LED backlight) | |
| | Aspect Ratio | 4:3 | 4:3 | 16:10 |
| | Max. Resolution | 1024 x 768 | 1024 x 768 | 1280 x 800 |
| | Viewing Angle | 88 (left), 88 (right), 88 (up), 88 (down) | 89 (left), 89 (right), 89 (up), 89 (down) | 89 (left), 89 (right), 89 (up), 89 (down) |
| | Luminance (cd/m²) | 500 | 500 | 400 |
| | Contrast Ratio | 1000 | 1000 | 1000 |
| | Backlight Lifetime | 50,000 hr (min.) | 30,000 hr (min.) | 30,000 hr (min.) |
| **Touchscreen** | Touchscreen type | 5 wire resistive touch or P-CAP | 5 wire resistive touch | P-CAP |
| | Light Transmission | 80±5% | 80±5% | >86% |
| | Controller | USB interface | | |
| **Physical Characteristics** | Dimensions | 257.9 x 205.3 x 49.9 mm (10.2 x 8.1 x 2.0 in) | 295.3 x 233.8 x 49.9 mm (11.6 x 9.2 x 2.0 in) | 312.6 x 214.7 x 49.9mm (12.3 x 8.5 x 2.0 in) |
| | Weight | 2.46kg (5.42lb) | 2.79 kg(6.15 lb) | 2.85 kg (6.28 lb) |
| **OS Support** | OS Support | Windows 10 LTSC, Windows 11, Linux | | |
| **Power Comsumption** | Input Voltage | 24V$_{DC}$ ± 30% | | |
| | Power Consumption | 65W | 70W | |
| **Environment** | Operating Temperature | -10 ~ 50 °C (32 ~ 122 °F) | | |
| | Storage Temperature | -20 ~ 60 °C (-4 ~ 140 °F) | -40 ~ 60 °C ( -40 ~ 140 °F) | -20 ~ 70 °C ( -4 ~ 158 °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,; 2Grms @with SSD, Follows IEC 60068-2-64 | | |
| | EMC | CE,FCC Class B, BSMI, EN60601-1-2, UKCA | | |
| | Safety | CB,UL,CCC,UKCA | | |
| | Front Panel Protection | IP66 compliant | | |

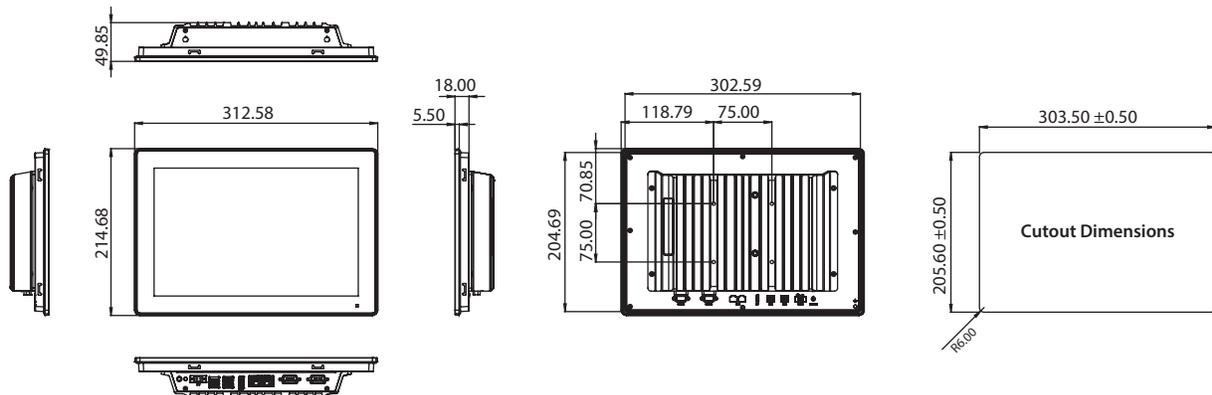# Dimensions

Unit: mm

**PPC-310S**

Panel Cutout Dimensions: 249 x 196.4 mm (9.81 x 7.74 in)

**PPC-312S**

Panel Cutout Dimensions: 286.2 x 224.7 mm (11.27 x 8.85 in)
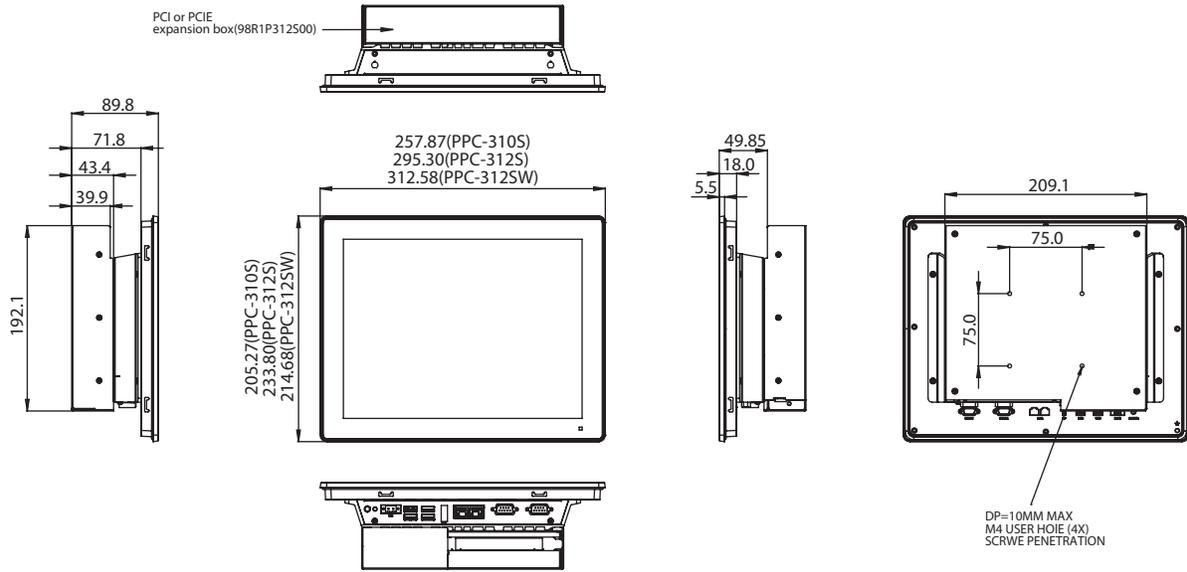
**PPC-312SW**

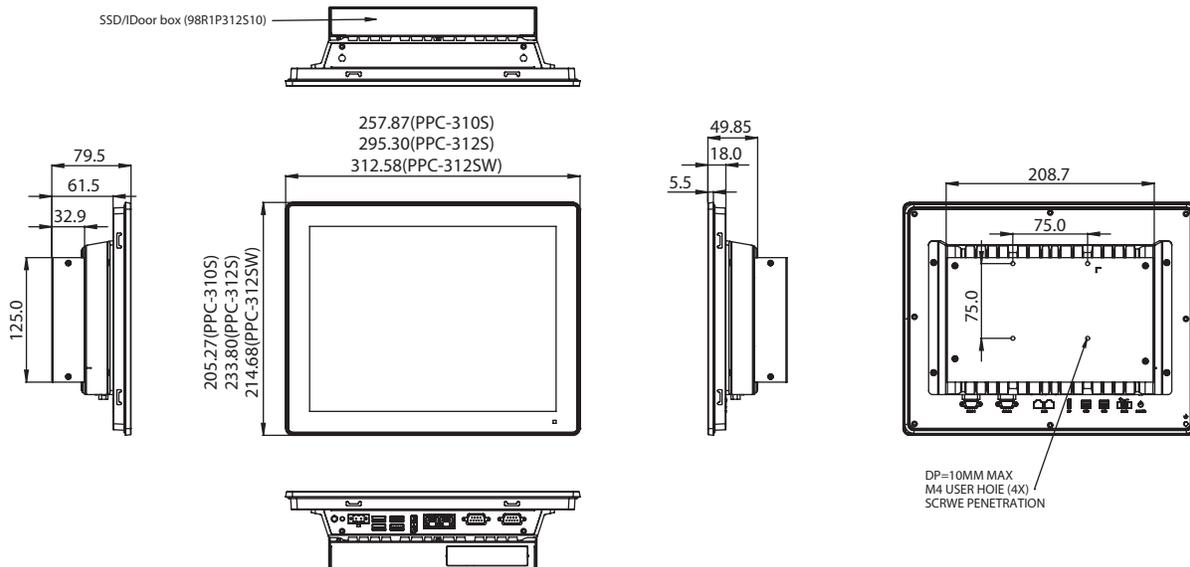Panel Cutout Dimensions: 303.5 x 205.6 mm (12.39 x 8.09 in)

# Dimensions

## PPC-310S/312S(W) with PCI or PCIe Expansion Box (98R1P312S00)

PCI or PCIE
expansion box(98R1P312S00)

89.8
71.8
43.4
39.9

192.1

257.87(PPC-310S)
295.30(PPC-312S)
312.58(PPC-312SW)

205.27(PPC-310S)
233.80(PPC-312S)
214.68(PPC-312SW)

49.85
18.0
5.5

209.1
75.0
75.0

DP=10MM MAX
M4 USER HOIE (4X)
SCRWE PENETRATION

## PPC-310S/312S(W) with SSD&iDoor Expansion Box (98R1P312S10)

SSD/IDoor box (98R1P312S10)

79.5
61.5
32.9

125.0

257.87(PPC-310S)
295.30(PPC-312S)
312.58(PPC-312SW)

205.27(PPC-310S)
233.80(PPC-312S)
214.68(PPC-312SW)

49.85
18.0
5.5

208.7
75.0
75.0

DP=10MM MAX
M4 USER HOIE (4X)
SCRWE PENETRATION

# Ordering Information

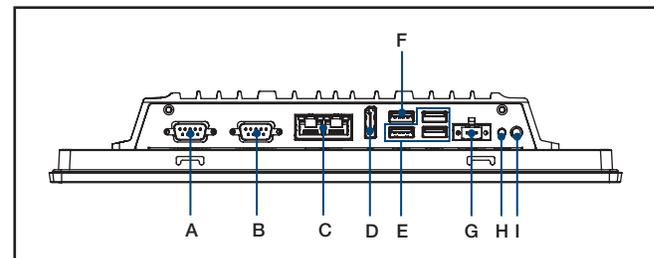| Part Number | Description |
| --- | --- |
| PPC-310S-RDI3A | 10.4" PPC w/Intel i3-1315UE, Res. |
| PPC-310S-RDI5A | 10.4" PPC w/Intel i5-1335UE, Res. |
| PPC-310S-RDI7A | 10.4" PPC w/Intel i7-1365UE, Res. |
| PPC-310S-PDI5A | 10.4" PPC w/Intel i5-1335UE, P-Cap |
| PPC-312S-RDI3A | 12.1" PPC w/Intel i3-1315UE, Res. |
| PPC-312S-RDI5A | 12.1" PPC w/Intel i5-1335UE, Res. |
| PPC-312S-RDI7A | 12.1" PPC w/Intel i7-1365UE, Res. |
| PPC-312SW-PDI5A | 12.1" PPC w/Intel i5-1335UE, P-Cap, wide screen |
| 96PSA-A120W24T2-4 | Power adapter 100-240V 120W 24V |
| 1702002600 | Power Cable UL/CSA (USA) 180D 125V10A 1.83M |
| 1702002605 | Power Cable 90D 220V EUROPEAN 250V/6A 1.8M |
| 1700000237 | Power Cord PSE 3P 12A 125V 183cm |
| 96CB-POWER-B-1.8MA | 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 for PPC series |
| PPC-WLAN-D2 | M.2, WiFi6 +BT5.2, 2T2R, w/Antenna |
| 98R3P300010 | PPC-300 RFID, Read only 13.56MHz&125k |
| 98R1P312S00 | Add-on box for PCI or PCIe expansion (include PCI / PCIe riser card)* |
| 98R1P312S10 | Add-on box for SSD & idoor expansion** |

\* PCIe riser card supports PCIe x1 singal, but the slot is PCIe x4(PCIe x1 compatiable).
\*\* iDOOR, additional ports or 2.5" SATA bay can't be installed in the same time since they share the same space

# Support iDoor Modules

| Part Number | Description |
| --- | --- |
| PCM-34R1TP-AE | 1 port Gigabit Ethernet, Intel® I225, 2.5Gb/s, TSN |
| PCM-34R2GL-AE | 2 ports Gigabit Ethernet, Intel® I350 |
| PCM-34D2R4-AE | 2 ports Isolated RS-422/485, DB9 |
| PCM-34D2R2-AE | 2 ports Isolated RS-232, DB9 |
| PCM-34D4R4-AE | 4 ports non-isolated RS-422/485, DB37 cable |
| PCM-34D4R2-AE | 4 ports non-isolated RS-232, DB37 cable |
| PCM-37D24DI-AE | 24 channels isolated digital I/O with counter, DB37 |
| PCM-23C1CF-BE | 1 slot Cfast iDoor for CFast |

# I/O View



A.  COM1: RS-232/422/485
B.  COM2: RS-232/422/485
C.  2 x LAN
D.  DP
E.  3 x USB 3.2

F.  1 x USB 2.0
G.  DC-In
H.  Power Button
I.  Pre cut hole for power button cable extend

Please note: If some optional modules are offered with the system, additional system certificates may be required in certain regions/countries.
Please contact Advantech for certificate compliance.