

TPC-100W

7"/10.1"/15.6" Touch Panel Computer with ARM Cortex™-A53 Processor

NEW



Introduction

TPC-100W series is a compact touch panel computer equipped with an NXP® Cortex™-A53 i.MX 8M Mini quad-core processor, 7"/10.1"/15.6" TFT LCD display, multi-touch glass sensor, 2 GB of DDR4 RAM, and 16 GB of eMMC storage. To ensure stable operation in harsh industrial environments, TPC-100W supports a wide operating temperature range (-20 ~ 60 °C /-4 ~ 140 °F) and Panel/VESA mounting and features an IP66-rated front panel that protects against water and dust ingress.

For web-based operations, TPC-100W offers two 10/100/1000 LANs that one supports the IEEE 802.3 PoE-PD standard. The inclusion of VNC and browsers enable rapid Web application development and easy configuration. Finally, TPC-100W supports various OS including Linux Yocto with full QT graphics and Android to ensure easy deployment for diverse applications.

Specifications

General

- **Certification** CE, BSMI, CCC, UL, FCC Class A
- **Dimensions (W x H x D)** TPC-107W: 205 x 146.92 x 52 mm
TPC-115W: 283.1 x 202.3 x 52 mm
TPC-110W: 419.7 x 269 x 52 mm
- **Cutout Dimensions** TPC-107W: 192.4 x 139.0 mm
TPC-110W: 274.1 x 193.3 mm
TPC-115W: 411.9 x 261.2 mm
- **OS Support** Linux Yocto 3.0, Android 10
- **Power Input** 24V_{DC} ±20
- **Power Consumption** 9W (typ.); 21W (max.)
- **Unit Enclosure** Die-cast aluminum alloy front bezel
Metal Shell
- **Mount Options** Panel and VESA
- **Weight (Net)** 7": 2kg (4.44lb)
10.1": 3.9kg (8.63lb)
15.6": 6.9kg (15.19lb)

System Kernel

- **CPU** NXP® ARM® Cortex™-A53 i.MX 8M Mini quad-core
1.6 GHz processor
- **Backup Memory** FRAM 1 MB
- **Memory** Quad core: 2 GB DDR4 RAM
- **Storage** 16 GB eMMC onboard

Communication Interface

- **Serial Port** 1 x RS-232/422/485 (COM 1)
1 x selectable mode for RS-485 and CAN 2.0B (COM 2)
- **LAN** 2 x RJ45 (10/100/1000 Mbps)
Optional module is required to support PoE PD (LAN A)
IEEE802.3at PoE-PD standard
- **Others** 1 x USB 2.0 Type-B Client (Internal)
2 x USB 2.0 Type-A Host
1 x Micro SD (Internal)
1 x M.2 Key-E 2230 (Wi-Fi/BT)

*PoE-PD is not supported on TPC-115W.

Features

- NXP® ARM® Cortex™-A53 i.MX 8M Mini quad-core processor
- 7", 10.1" and 15.6" 16:9 LCD with multi-touch P-CAP and true-flat IP66-rated front panel
- Up to 2 GB DDR4 RAM and 16 GB eMMC storage onboard
- 2 x 10/100/1000 Mbps LANs with optional IEEE 802.3at/af PoE-PD module support (7", 10.1")
- 1 mb FRAM backup memory for unexpected power interruptions
- 2 x Serial port with 120Ω termination resistor that one supports the CAN 2.0B protocol and offers a programmable bit rate of up to 1 Mb/sec
- Embedded browser and for rapid Web App development
- Supports Linux Yocto and Android
- Optional and mPCIe expansion modules
- Compatible with VESA and panel mounting
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)

LCD Panel

	TPC-107W	TPC-110W	TPC-115W
Panel Size	7"	10.1"	15.6"
Panel Type	WSVGA TFT LCD	WXGA TFT LCD	FHD TFT LCD
Aspect Ratio	16:9	16:10	16:9
Max. Resolution	1024 x 600	1280 x 800	1920 x 1080
Max. Colors	16M	16M	16.2M
Luminance (nits)	425	500	450
Viewing Angle (H/V)	150/145	170/170	170/170
Backlight Life	50000	50000	50000
Treatment	Anti-glare	Anti-glare	Anti-glare
Contrast Ratio	700:1	800:1	800:1
LED Indicator	Yes	Yes	Yes

Touchscreen

- **Touch Points** 10 Points
- **Light** Transmission above 85%
- **Pencil Hardness** ≥7H
- **Type** Projected capacitive (P-CAP) touch

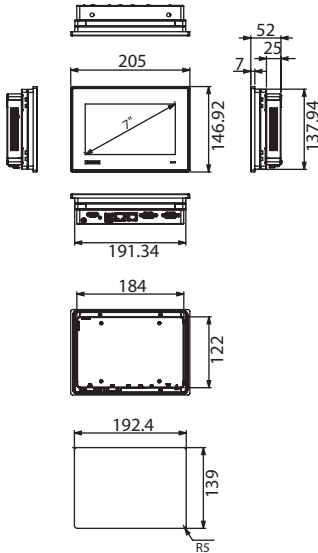
Environment

- **Operating Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** -30 ~ 70 °C (-22 ~ 158 °F)
- **Humidity** 10 ~ 90% RH @ 40 °C, non-condensing
- **Ingress Protection** IP66-rated front panel
- **Vibration Protection** 2 Grms random vibration (5 ~ 500 Hz) during operation (compliant with IEC60068-2-64)
- **Shock Protection** 10 G shock under 11 ms operation (compliant with IEC60068-2-27)

Dimensions

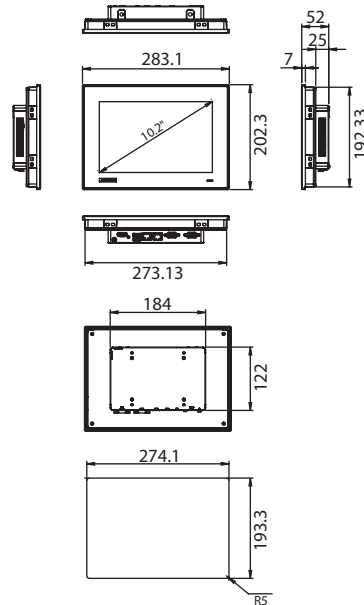
Unit: mm

TPC-107W



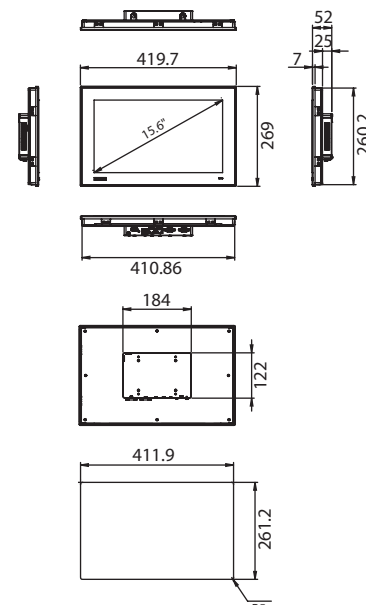
Panel Cutout Dimensions:
192.4mm x 139.0mm

TPC-110W



Panel Cutout Dimensions:
274.1mm x 193.3mm

TPC-115W



Panel Cutout Dimensions:
411.9mm x 261.2mm

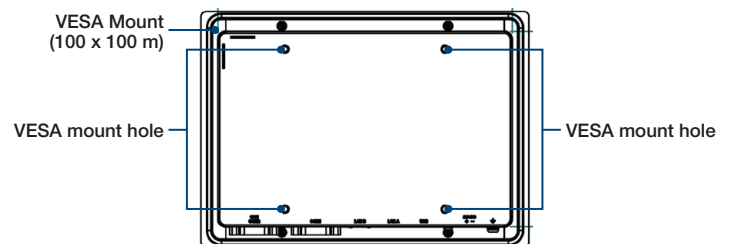
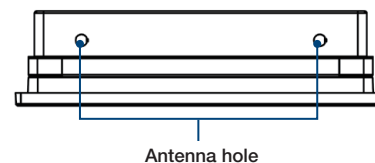
Ordering Information

- TPC-107W-N31YA 7" Touch Panel Computer, Cortex™-A53 Quad Core CPU, 2GB DDR4, 16G eMMC, Linux Yocto 3.0 with QT Browser
- TPC-107W-N31AA 7" Touch Panel Computer, Cortex™-A53 Quad Core CPU, 2GB DDR4, 16G eMMC, Android 10 with Chromium
- TPC-110W-N31YA 10.1" Touch Panel Computer, Cortex™-A53 Quad Core CPU, 2GB DDR4, 16G eMMC, Linux Yocto 3.0 with QT Browser
- TPC-110W-N31AA 10.1" Touch Panel Computer, Cortex™-A53 Quad Core CPU, 2GB DDR4, 16G eMMC, Android 10 with Chromium
- TPC-115W-N31YA 15.6" Touch Panel Computer, Cortex™-A53 Quad Core CPU, 2GB DDR4, 16G eMMC, Linux Yocto 3.0 with QT Browser

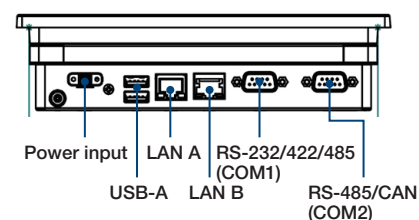
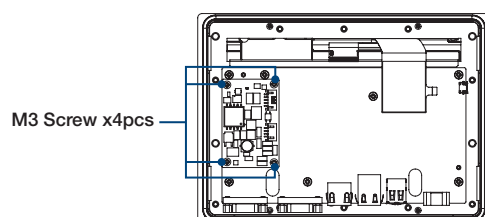
Optional Accessories

- 96PSA-A60W24T2 Adaptor A/D 100 ~ 240V 60W 24V C14 cord-end terminal
- 1702002600 Power cable with US plug, 1.8 M
- 1702002605 Power cable with EU plug, 1.8 M
- 1702031801 Power cable with UK plug, 1.8 M
- 1702031836 Power cable with China/Australia plug, 1.8 M
- 968DD00086 M.2 Key-E 2230 Express Module, support Yocto 3.0(WiFi/BT)
- EW/M-W194M201E M.2 Key-E 2230 Express Module, support Android 10(Only WiFi)
- 98R4T100W00 TPC-100W, PoE Module (7" and 10.1" only)

External I/O



PoE Module Expansion



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.