

TPC-312 EHL

12.1" XGA Elkhart Lake Thin-Client Terminal with Intel® Atom™/ Celeron® Processor



Features

- Industrial-grade 12.1" XGA TFT LCD with 50K lifetime and LED backlight
- Intel® Elkhart Lake (EHL) Atom™ 6425E 2.00 GHz quad-core / Celeron® J6412 2.00 GHz quad-core processor with 4 GB DDR4 SDRAM
- True-flat touchscreen with 5-wire resistive touch control and IP66-rated front panel
- Wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F)
- Front-facing LED indicators to show operating status
- Built-in Advantech iDoor technology, SSD/HDD bay and VESA mount
- Compact, fanless system with aluminum alloy front bezel and chassis grounding protection
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software



Introduction

TPC-312 EHL thin-client terminal is a industrial panel PC model equipped with 12.1" XGA TFT LED LCD, low-power Intel® Atom™ 6425E 2.00 GHz quad-core / Celeron® J6412 2.00 GHz quad-core processor, and 4 GB of DDR4 SDRAM. TPC-312 EHL delivers high-performance computing in a compact, fanless system. For enhanced durability to satisfy diverse industrial automation applications, TPC-312 EHL supports a wide operating temperature range (-20 ~ 60 °C/-4 ~ 140 °F) and features a true-flat 5-wire resistive touchscreen with IP66-rated front panel, die-cast aluminum alloy front bezel, and built-in 100 x 100 VESA mount. Moreover, with the provision of one full-size mini PCIe slot, which supports USB/PCIe interface for Advantech's iDoor technology, TPC-312 EHL can be easily expanded to provide additional I/O ports, isolated digital I/O, fieldbus protocols, MRAM, and 5G/GPS/GPRS/Wi-Fi communication capabilities.

Specifications

General

- **BIOS** AMI UEFI
- **Certification** BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** Fanless design
- **Dimensions (W x H x D)** 311.8 x 238 x 67 mm (12.28 x 9.37 x 2.64 in)
- **Enclosure** Front bezel: Die cast aluminum alloy
Back housing: Die cast aluminum alloy
- **Mount Options** VESA mount, Desktop/wall/panel
- **OS Support** Windows 10 Enterprise LTSC, Advantech Linux, Android
- **Power Consumption** TBD
- **Power Input** 24 V_{DC} +/- 20%
- **Watchdog Timer** 15 ~ 255 sec (system)
- **Weight (Net)** 4.2kg (9.26lbs)

System Hardware

- **CPU** Intel® Atom™ 6425E 2.00 GHz, quad core / Celeron® J6412 2.00 GHz, quad core processor
- **Memory** 1 x SODIMM with 4 GB DDR4 SDRAM (up to 32 GB)
- **LAN** 2 x Intel® I211; 10/100/1000 BASE-T
- **Expansion Slots** 1 x Full-size mini PCIe
- **Storage** 1 x M.2 B key 2242/ 2280 (SATA/ USB3.0)
3042/ 3052 (5G)
- **I/O** 1 x 2.5" SSD/ HDD (SATA, Max. 7mm)
1 x RS-232
1 x RS-232/422/485
3 x USB 3.2
1 x USB 2.0
1 x iDoor slot
1 x Displayport (Video output)
1 x Audio line out/ mic in
1 x Remote Power Button

LCD

- **Display Type** XGA TFT LED LCD
- **Display Size** 12.1" (4:3)
- **Max. Resolution** 1024 x 768
- **Max. Colors** 16.2M
- **Luminance cd/m²** 600
- **Viewing Angle (H/V°)** 178°/178°
- **Backlight Life** 50,000 hr
- **Contrast Ratio** 1000:1

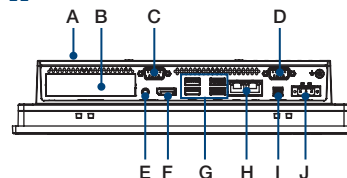
Touchscreen

- **Lifespan** 36 million touches at a single point
- **Light Transmission** Above 75%
- **Resolution** Linearity
- **Type** 5-wire analog resistive

Environment

- **Humidity** 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** IP66-rated front panel
- **Operating Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** -30 ~ 70 °C (-22 ~ 158 °F)
- **Vibration Protection** With SSD: 1 Grms (5 ~ 500 Hz) (operating, random vibration)

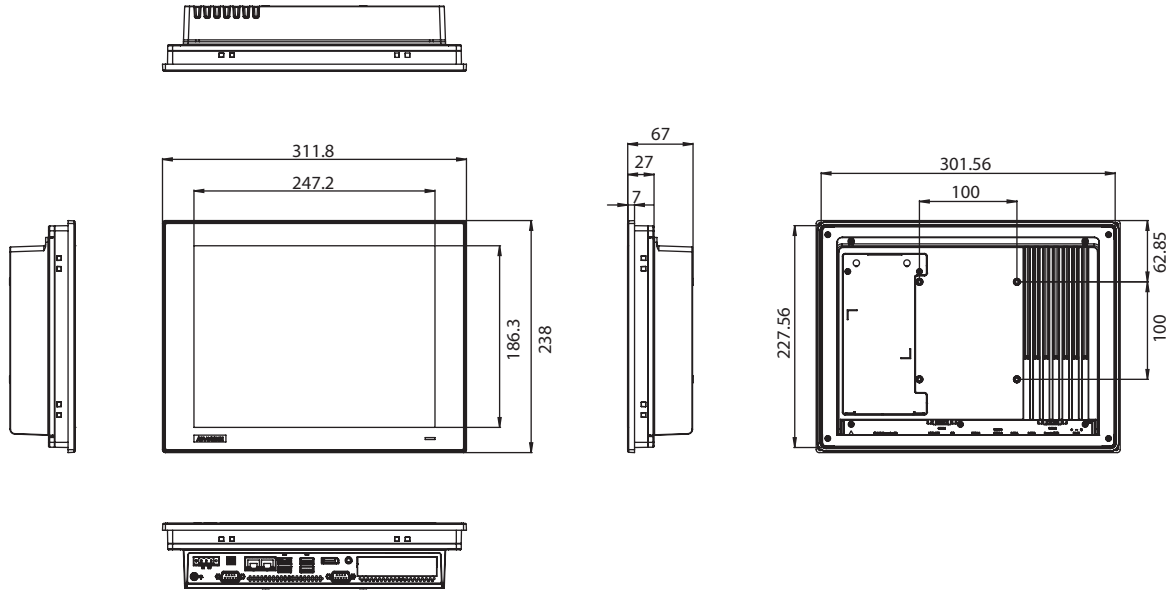
Rear View



- A. Default HDD/SSD Bay
- B. iDoor slot
- C. RS-232/422/485
- D. RS-232
- E. Audio line out/ mic in
- F. Display Port
- G. USB 3.2/2.0
- H. LAN (10/100/1000)
- I. Remote Power Button
- J. Power Receptor

Dimensions

Unit: mm



TPC-312 EHL Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)

Ordering Information

- **TPC-312-RE22A** 12.1" XGA panel PC with Intel® Atom™ 6425E 2.00 GHz quad-core CPU, 4 GB DDR4 SDRAM
- **TPC-312-RJ22A** 12.1" XGA panel PC with Intel® Celeron® J6412 2.00 GHz quad-core CPU, 4 GB DDR4 SDRAM

Optional Accessories

- **PWR-247-DE** 60W 24 V_{DC} /2.5A power supply
- **96PSA-A120W24T2-3** 120W 24V_{DC} power supply
- **1702002600** Power cable (US) 1.8 M
- **1702002605** Power cable (EU) 1.8 M
- **1702031801** Power cable (UK) 1.8 M
- **1700000596-11** Power cable (China/Australia) 1.8 M

Embedded OS

- **Windows 10 Enterprise LTSC**
- **Advantech Linux**
- **Android**

iDoor Modules

- **PCM-26D2CA-AE** SJA1000 CANbus module with CANopen and 2 x DB9
- **PCM-26D1DB-MAE** Hilscher netX100 fieldbus module with PROFIBUS and 1 x DB9
- **PCM-27D24DI-AE** Digital I/O module with 16 DI/8 DO, isolation protection, and 1 x DB37
- **PCM-24D2R4-BE** OXPcLe-952 UART with isolated RS-422/485 and 2 x DB9
- **PCM-24D2R2-BE** OXPcLe-952 UART with isolated RS-232 and 2 x DB9
- **PCM-26R2EC-MAE** 2-Port Hilscher netX100 FieldBus mPCle, EtherCAT, RJ45
- **PCM-27J3AU-AE** 3-Port audio stereo with mPCle and 3.5-mm jack
- **PCM-24S2WF-BE** WiFi 802.11 ac/a/b/g/n 2T2R w/Bluetooth 4.1, M.2/ Full-size mPCle, Antennas
- **PCM-24R1TP-BE** Intel I225, 2.5Gb/s, IEEE 1588, TSN, RJ45 x 1
- **PCM-24D4R2-BE** 2-Port Isolated RS-232 mPCle, DB9 x 2
- **PCM-24D4R4-BE** 4-Port Non-Isolated RS-422/485 mPCle, DB37 x 1
- **PCM-23U1DG-CE** USB Slot w/ Lock for USB Dongle, Half-size mPCle
- **PCM-24U2U3-BE** USB 3.0, mPCle, USB-A type x 2
- **PCM-2300MR-AE** MR4A16B, MRAM, 2MByte
- **PCM-24S34G-ABE** U-blox TOBY-L200 LTE/HSPA+/GPRS, mPCle, antennas, for America
- **PCM-24S34G-EBE** U-blox TOBY-L210 LTE/HSPA+/GPRS, mPCle, antennas, for EMEA/APAC

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.