

# TPC-1251T(B) SR

## 12.1" SVGA Sunlight Readable LCD Intel® Atom™ Thin Client Terminal



### Features

- 12.1" SVGA High Brightness LED backlight with optical bonding solution
- Intel® Atom™ E3845 1.91GHz Quad-core Processor with 4GB DDR3L SDRAM
- Built-in light sensor for auto LCD brightness adjustment
- Supports wide operating temperatures -20~60°C (-4~140 °F)
- True-flat with IP66 front panel protection
- Front LED indicator shows operating status
- Durable 5-wire resistive touch screen
- Full-size mini PCIe expansion support
- Supports iDoor technology for diverse applications (optional accessory required)
- Compact fanless embedded system with chassis grounding protection

\*AC/DC support with optional power adapter



### Introduction

The TPC-1251T(B) SR Sunlight Readable thin client terminal with a 12.1" SVGA LCD, low power embedded Intel® Atom™ E3845 1.91GHz Quad-core Processor and 4GB (8GB optional) DDR3L SDRAM provides computing performance in a compact fanless system. To enhance its durability, the TPC-1251T(B) SR is true-flat touch screen designed with IP66 front protection, die-cast Aluminum Alloy front bezel and 5-wire resistive touch suitable for outdoor environments. It supports wide operating temperatures -20~60°C and includes full size mini-PCIe slot to extend the functionality and meet a variety of automation applications needs. Through the Mini-PCIe slot, Advantech iDoor technology (optional) can provide more I/O connectors, Isolated Digital IO, the Fieldbus Protocol, 3G/4G/GPS/GPRS/Wi-Fi Communication and Battery-backup MRAM. High brightness LCD plus optical bonding increase visibility and reduce reflection under direct/indirect sunlight.

### 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 55.4 mm (12.28 x 9.37 x 2.18 in)
- **Enclosure** Front bezel: Die-cast Aluminum alloy  
Back housing: SECC
- **Mounting** VESA mount, Desktop, wall, panel
- **OS Support** Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB, Android, Advantech Linux
- **Power Consumption** Typical 25W, 43.8W max.
- **Power Input** 24 V<sub>DC</sub> ± 20%
- **Watchdog Timer** 1 ~ 255 sec (system)
- **Weight (Net)** 3.12 kg (6.88 lb)

#### System Hardware

- **CPU** Intel® Atom™ E3845, 1.91 GHz, Quad-core Processor
- **Memory** 1 x SODIMM with 4 GB DDR3L SDRAM (up to 8 GB)
- **LAN** 2 x Intel® I210; 10/100/1000 BASE-T
- **Expansion Slots** 1 x Full-size mini PCIe (USB+PCIe interface)
- **Storage** 1 x 2.5" SATA SSD, 1 x mSATA
- **I/O** 1 x RS-232  
1 x RS-232/422/485  
1 x USB 3.0  
3 x USB 2.0  
1 x iDoor slot

#### LCD

- **Display Type** SVGA TFT LED LCD
- **Display Size** 12.1"
- **Max. Resolution** 800 x 600
- **Max. Colors** 16.2M
- **Luminance cd/m<sup>2</sup>** 1200
- **Viewing Angle (H/V°)** 160/140
- **Backlight Life** 50,000 hrs
- **Contrast Ratio** 700:1

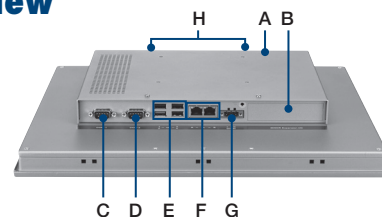
#### Touchscreen

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

#### Environment

- **Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- **Ingress Protection** Front panel: IP66
- **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)

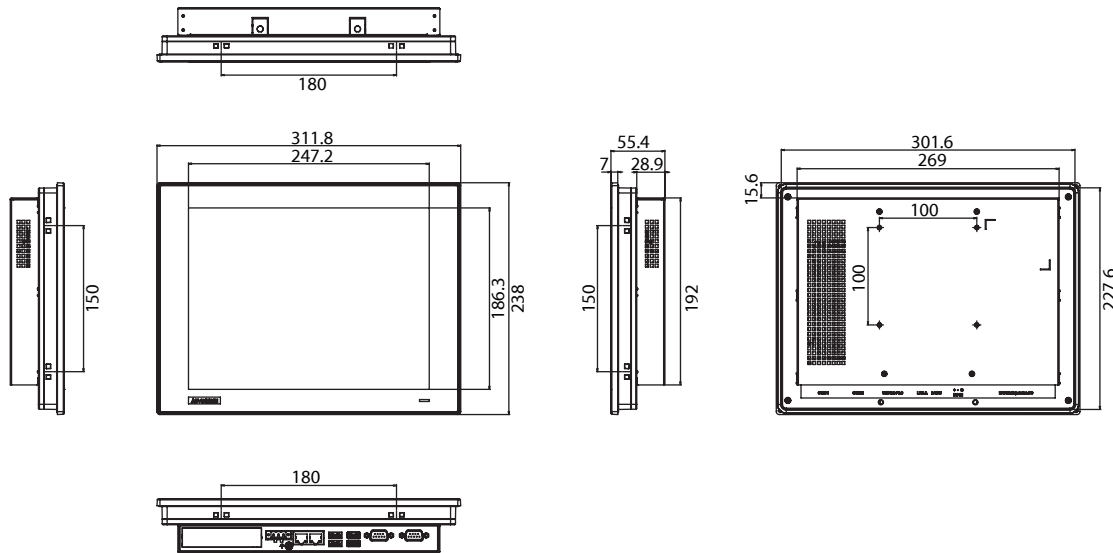
### Rear View



- A. HDD/SSD bay
- B. iDoor slot
- C. RS-232
- D. RS-232/422/485
- E. USB 2.0 and 3.0
- F. LAN (10/100/1000)
- G. Power input
- H. Antenna port

## Dimensions

Unit: mm



Panel Cutout Dimensions: 303 x 229 mm (11.93 x 9.02 in)

## Ordering Information

- **TPC1251TE3BU2001-T** 12" SVGA Sunlight Readable Panel PC, Intel® Atom™ E3845, 1.91 GHz Processor, 4GB DDR3L SDRAM

## Optional Accessories

- **PWR-247-DE** 60W 24 V<sub>DC</sub> /2.5A 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

- **20703WE7PS0027** TPC-xx51T(B) WS7P x86 MUI Image V4.19
- **20703WE7PS0028** TPC-xx51T(B) WS7P x64 MUI Image V4.19
- **20703WX9ES0023** TPC-xx51T(B) Win10 x64 LTSC v6.05 B015 Entry (2020)
- **20703AI0NS0010** TPC-xx51T(B) Android v6.0
- **20701LUB1S0005** TPC-xx51T(B) Advantech Linux Ubuntu 20.04

## 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 Panel
- **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-24R2GL-AE** 2-Port GigaLAN Intel® i350 PCIe mini card
- **PCM-24R1TP-AE** Intel® 82574L, GbE, IEEE 1588 PTP, 1 x RJ45
- **PCM-262R2EC-MAE** Hilscher netX100 fieldbus mPCIe with EtherCAT, 2 x RJ45, Master
- **PCM-27J3AU-AE** 3-Port audio stereo with mPCIe and 3.5-mm jack
- **PCM-29R1TX-AE** 1-Port iLink(TX) long-distance display transmitter with RJ45

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.

## Application Software

<b>WebAccess/SCADA</b>	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IIoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
<b>WebAccess/HMI</b>	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse integrations of factory automation and HMI operation and monitoring requirements.