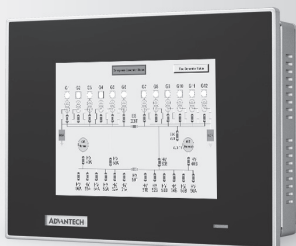# TPC-651T

5.7"/6.5" TFT LED LCD Intel® Atom™ Thin Client Terminals

NEW

Features

- Industrial 5.7"/6.5" VGA TFT LCD with 50K Lifetime LED Backlight
- Intel® Atom™ E3827 1.75 GHz Processor with 4GB DDR3L SDRAM
- Support wide operating temperatures -20~60°C
- Compact Fanless Embedded System with Al Alloy Front Bezel
- True-flat with IP66 certified front panel protection
- Front LED Indicator to Show 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 Al Alloy Front Bezel, Chassis Grounding Protection
- AC/DC support with optional Power adapter)

Introduction

The TPC-651T thin client terminal with a 5.7"/6.5" VGA LCD, low power embedded Intel® Atom™ E3827 1.75 GHz Processor and 4GB DDR3L SDRAM provides computing performance in a compact fanless system. To enhance its durability, the TPC-651T is true-flat touch screen designed with IP66 front protection, die-cast Al Alloy front bezel and 5-wire resistive touch. 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/GPS/GPRS/WiFi Communication and Battery-backup MRAM.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, UL
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 199 x 152 x 58.9 mm (7.83" x 5.98" x 2.32")
- **Enclosure** — Front bezel: Die-cast Aluminum alloy / Back housing: SECC
- **Mounting** — Desktop, Wall or Panel Mount
- **OS Support** — Microsoft® WES7 64bit /WE8S 64bit / Windows 7 32bit/64bit
- **Power Consumption** — 19.2 W (typical)
- **Power Input** — 24V_{DC} +/- 20%
- **Watchdog Timer** — 1 ~ 255 sec (system)
- **Weight (Net)** — 1.5 KG

System Hardware

- **CPU** — Intel® Atom™ E3827 1.75 GHz Processor
- **Memory** — 1 x SO-DIMM with 4GB DDR3L SDRAM (supports up to 8G)
- **LAN** — 10/100/1000 Base-T x 2
- **Expansion Slots** — Full-size Mini PCI-E
- **Storage** — CFast slot x 1 / 2.5" SATA SSD slot x 1 (optional)
- **I/O** — RS-232 x 1, RS-232/422/485 x 1 / USB 3.0 x 1 / USB 2.0 x 1

LCD Display

- **Display Type** — VGA TFT LED LCD
- **Display Size** — 5.7"/6.5"
- **Max. Resolution** — 640 x 480
- **Max. Colors** — 262K
- **Luminance cd/m²** — 550/800
- **Viewing Angle (H/V°)** — 160/140
- **Backlight Life** — 50,000 hrs
- **Contrast Ratio** — 800:1/600:1
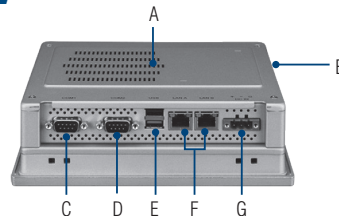
Touchscreen

- **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 CFast: 2 Grms (5~500 Hz) / With HDD: 1 Grms (5 ~ 500 Hz) (Operating, random vibration)

Rear View

A. External HDD/iDoor kit (TPC-1251T-EHKE) (Optional)
B. CFast
C. RS-232
D. RS-232/422/485
E. USB 3.0 & 2.0
F. LAN (10/100/1000)
G. Power Receptor

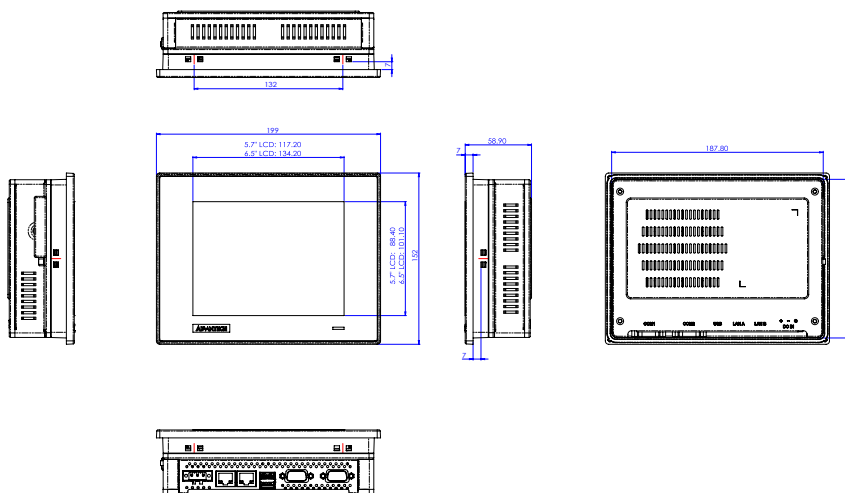**ADVANTECH** | **Automation Panel PCs**

Date updated: 25-Aug-2015

Dimensions

Unit: mm

5.7" LCD: 117.20
6.5" LCD: 134.20

199

132

58.90

187.80

Panel Cut-out Dimensions: 189.1 x 142.1 mm (7.44" x 5.59")

Ordering Information

- **TPC-651T-E3AE** 5.7" VGA Panel PC, Intel® Atom™ E3827 1.75 GHz Processor, 4GB (True-flat touch screen)
- **TPC-651T-6E3AE** 6.5" VGA Panel PC, Intel® Atom™ E3827 1.75 GHz Processor, 4GB (True-flat touch screen)

Accessories

- **PWR-247-BE** 63W DC 24V/2.62A Output Power Supply
- **TPC-1251T-EHKE** HDD and iDoor extension kit
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596** Power Cable China/Australia Plug 1.8 M

Automation S/W & Embedded O/S

- **2070013519** TPC-xx51T/H WS7P x64 MUI Image v4.12
- **2070013613** TPC-xx51T/H WS7P x86 MUI Image v4.12
- **2070013649** TPC-651T/H WEC7 x64 MUI Image V4.00
- **968WEXP003X** PanelExpress V2.0 300 tags S/W license
- **968WEXP015X** PanelExpress V2.0 1500 tags S/W license
- **968WEXP050X** PanelExpress V2.0 5000 tags S/W license
- **968WEXP2USB** PanelExpress V2.0 S/W USB dongle

iDoor Modules (TPC-1251T-EHKE is required for iDoor modules)

- **PCM-26D2CA** SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-26D1PB** Hilscher netX100 FieldBus, ProfiBus, DB9 x 1
- **PCM-27D24DI** Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24D2R4** OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D2R2** OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24R2GL** 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24R1TP** Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1

Application Software

SUSIAccess	Version : V2.1 or above An innovative remote device management software, allowing efficient remote monitoring, quick recovery & backup, and real-time remote configuration, to create a more intelligent and interconnected embedded computing solution.
WebAccess	Version : V7.1 or above WebAccess, as the core of Advantech's IoT solution, is full web browser-based software package for HMI and SCADA software. All HMI and SCADA software features including: Animated Graphics Displays, Real-time Data, Control, Trends, Alarms and Logs, are available in a standard web browser. WebAccess is built around the latest internet technologies. With its open architecture, vertical domain applications can easily be integrated.
PANELEXPRESS Designed for Convenience	Version : V2.0.3.8 or above Panel Express, a windows based HMI mini SCADA, realizes the cross platform flexibility offered by WebOP Designer to switch hardware for the consideration of cost and performance become an easy job. Panel Express software provides the best economic and express solution for data intensive high-end HMI applications.
WebOP Designer	Version : V2.0.3.8 or above An easy to use integrated development tool featuring solution-oriented screen objects, high-end graphics, Windows fonts for multi-language applications. WebOP runtime, a part of WebOP Designer, guarantees reliability and performance because of the minimum system overhead, high communication data rates, and sub-second screen switching.
WebAccess/NMS	Visualizing device and platform network connectivity conditions and offering easier firmware and configuration solutions to ensure stable network connections.