TPC-642

StrongARM touch panel computer with 5.7" QVGA STN display

Features

• 5.7" QVGA color STN LCD

• Intel® StrongARM 1110 processor

• Fanless operation

• Built-in flash memory and Windows CE OS inside

• NEMA4/IP65 compliant Al-Mg front panel

• One CompactFlash™ slot

Introduction

The TPC-642 models are miniature and compact platforms that have no redundant functions. They are designed for small-sized operator interface market. They have 5.7" STN LCD display which is a good cost effective choice for limited budget. Its RISC kernel, the Intel StrongARM 1110 processor, is of low power consumption without sacrificing performance. The TPC-642 have 10Base-T Ethernet port offering good communication ability as the world is web-ized. Advantech is offering this OI solution in the way that the TPC-642 are bundled with Windows CE OS. The built-in Windows CE OS platform forms a bridge that lets TPC-642 be an open HMI solution for system integration.

Specifications

• **Construction**: plastic molding housing

• **Display**: 5.7" QVGA color STN/FSTN LCD

• **CPU and core logic**: Intel® StrongARM 1110, 206 MHz

• **VGA**: Controlled by CPU

• **DRAM**: 32 MB on board

• **Storage**: 16 MB flash memory on board, 1 CompactFlash™ card (optional)

• **I/O**: 2 serial ports (one RS-232, one RS-485) , 1 Ethernet port (10Base-T), 2 PS/2 ports, 1 USB client port (TPC-642SE only)

• **Watchdog timer**: programmable as 250ms, 500ms and 1 second

• **Power input**: 24 V_{DC}, 0.5 A maximal

• **Dimension (WxHxD)**: 195 x 148 x 40 mm (7.68" x 5.83" x 1.57")

• **Weight**: 0.8 kg (1.76 lbs)

LCD Display

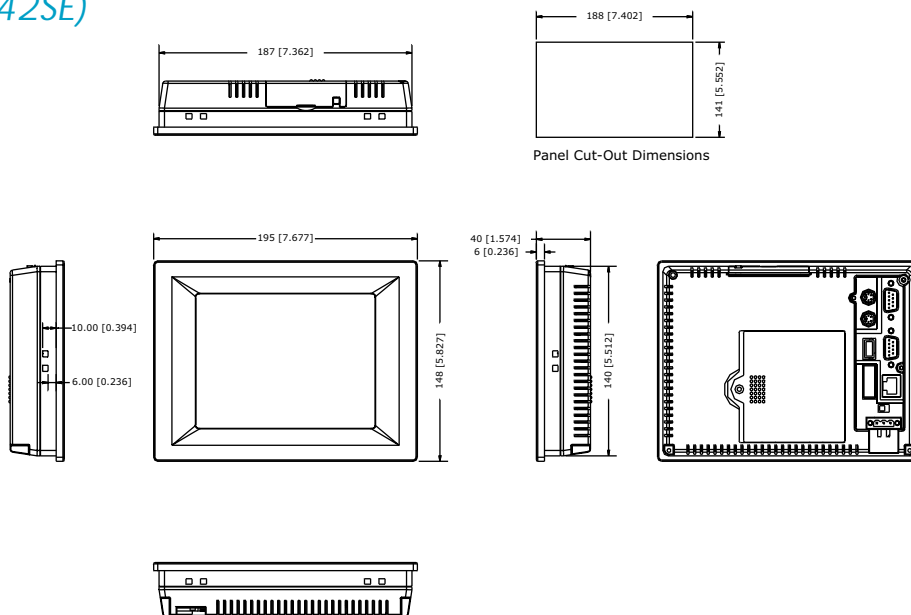| Display type	STN color LCD (TPC-642S)	FSTN color LCD (TPC-642SE)
Display size (diagonal)	5.7"	
Max colors	256	256
Resolution	320 x 240	
Pixel pitch (HxV, mm)	0.36 x 0.36	
Viewing angle (°)	100	90
Luminance (cd/m²)	110	165
Storage temperature (°C)	-20° ~ 60°C (-4° ~ 140°F)	-20° ~ 70°C (-4° ~ 158°F)
Operating temperature (°C)	0° ~ 50°C (32° ~ 122°F)	0° ~ 50°C (32° ~ 122°F)
Backlight	1 CCFL	
Contrast ratio	25	35

Touchscreen

• **Type**: 4-wire, analog resistive

• **Resolution**: continuous

• **Light transmission**: above 75%

• **Life**: 100 thousand activation minimum

• **Controller**: embedded on board

Environmental Specifications

• **Operating temperature**: 0° ~ 50° C (32° ~ 122° F)

• **Relative humidity**: 10% ~ 95% @ 40° C, non-condensing

• **EMI**: FCC class B certificated

• **CE certificated**
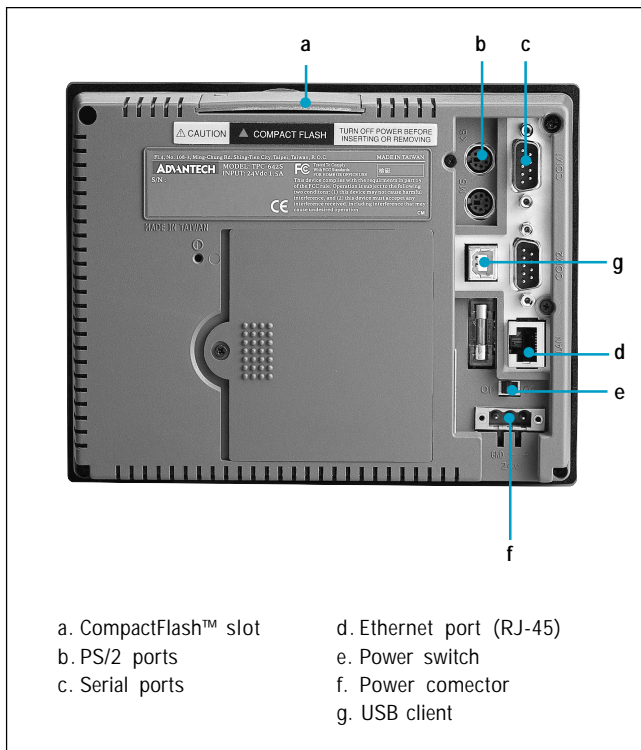
• **Front panel meets NEMA4 / IP65**

$C\epsilon$ FCC

Dimensions Drawing
(TPC-642SE)

187 [7.362]

188 [7.402]

141 [5.552]

Panel Cut-Out Dimensions

195 [7.677]

40 [1.574]
6 [0.236]

10.00 [0.394]

6.00 [0.236]

148 [5.827]

140 [5.512]

Unit: mm

Rear View (TPC-642SE)

a
b
c
g
d
e
f

a. CompactFlash™ slot
b. PS/2 ports
c. Serial ports
d. Ethernet port (RJ-45)
e. Power switch
f. Power comector
g. USB client

Ordering Information

❑ **TPC-642S-CE**:
5.7" color STN LCD display touch panel computer with StrongARM 1110 CPU 32 MB DRAM/16 MB flash memory on board and Windows® CE 3.0 OS

❑ **TPC-642SE-CE:**
5.7" color STN LCD display touch panel computer with StrongARM 1110 CPU 32 MB DRAM/16 MB flash memory on board and Windows® CE 3.0 OS

❑ **TPC-642S-LNX:**
5.7" color STN LCD display touch panel computer with StrongARM 1110 CPU 32 MB DRAM/16 MB flash memory on board and Linux kernel OS

Optional Peripherals

❑ **PS-DC24-50**:
50 watts 24 V_{DC} output, 110/220 V_{AC} 50/60 Hz input power adapter