SPC-612E

12" XGA TFT LED LCD Touch Panel Computer with Intel® Alder Lake-N Platform with IECEx/ATEX and Class I Division II Explosion-Proof certification



Features

- Powered by Alder Lake-N Intel® Core™ i3-N305 octa-core processor
- Industrial-grade 12" XGA TFT LCD with 50K lifetime and LED backlight
- Built in single DDR5 5600 RAM with 16GB capacity
- Built in Explosion-Proof certified SSD
- Compact, fanless embedded system with aluminum alloy front bezel and IP66-rated front panel
- Support TPM2.0 hardware security
- IECEx/ATEX explosion proof certification for Zone 2/22
- Class I Division II explosion proof certification

Introduction

Advantech's SPC-612E Explosion-Protected Touch panel computer, is powered by Intel Alder Lake-N Intel Core processors. With its fan-less design, SPC-612E delivers high performance that not simply meets customer demands for a daily-operation control panel, but a genuine Industry 4.0-era-tailored Industrial PC that features bountiful I/Os including two USB 3.2 ports, one USB Type-C port, expansions with explosion proof certified Solid State Drive and WiFi module that support for ultra speed data transmission. The system was IP66 and IECEx/ATEX/Class I Division Explosion-Protected certified, therefore is suitable for hazardous environment.

Specifications

General

- **BIOS** AMI UEFI
- **Certification** CE, FCC Class A
  IECEx/ATEX Zone 2/22 explosion proof certification
  Class I Division II explosion proof certification
- **Cooling System** Fanless design
- **Dimensions (W x H x D)** 303 x 229 x 77 mm
- **Enclosure** Front bezel: Die cast aluminum alloy
  Back housing: Die cast aluminum alloy
- **Mounting** Panel Mount
- **OS Support** Windows 11 LTSC
- **Security** TPM 2.0 (built-in)
- **Power Consumption** Typ. 43W; Max. 79W
- **Power Input** 19 - 24 V_{DC} ± 15%
- **Watchdog Timer** 15-255 sec (system)
- **Weight (Net)** 3KG

System Hardware

- **CPU** Intel® Alder Lake-N Core™ i3-N305 Octa-core processor
- **Memory** Single DDR5 5600 SO-DIMM RAM 16GB
- **LAN** 2 x 2.5 GbE with Intel® i226
- **Storage** 1 x M.2 M key 2280 for SATA Solid State Drive
  1 x 2.5" Storage Bay for SATA SSD (Optional)
- **I/O** 1 x Displayport 1.4a (Video output)
  1 x Type C (USB 3.2 Gen.2, DP 1.4a, 5V w/ 3A max)
  2 x USB 3.2 (Gen.1)
  2 x USB 2.0
  2 x RS-232/422/485

LCD Display

- **Display Type** XGA TFT LED LCD
- **Display Size** 12"
- **Max. Resoltuion** 1024 x 768
- **Max Colour** 16.7M
- **Luminance (cd/m²)** 1000 cd/m²
- **Viewing Angle (H/V°)** 178°/178°
- **Backlight Life** 50,000 hrs
- **Contrast Ratio** 1000:1

Touchscreen

- **Light Transmission** Above 85%
- **Resolution** Linearity
- **Type** PCAP touch screen

Environment

- **Humidity** 95% RH @ 40°C, non-condensing
- **Ingress Protection** IP66-rated front panel
- **Operating Temperature** -10~60 °C (-14~140 °F)
- **Storage Temperature** -30~70 °C (-22~158 °F)
- **Vibration Protection** With SSD: Operating, IEC 60068-2-6, 1G, 5-500 Hz, random vibration

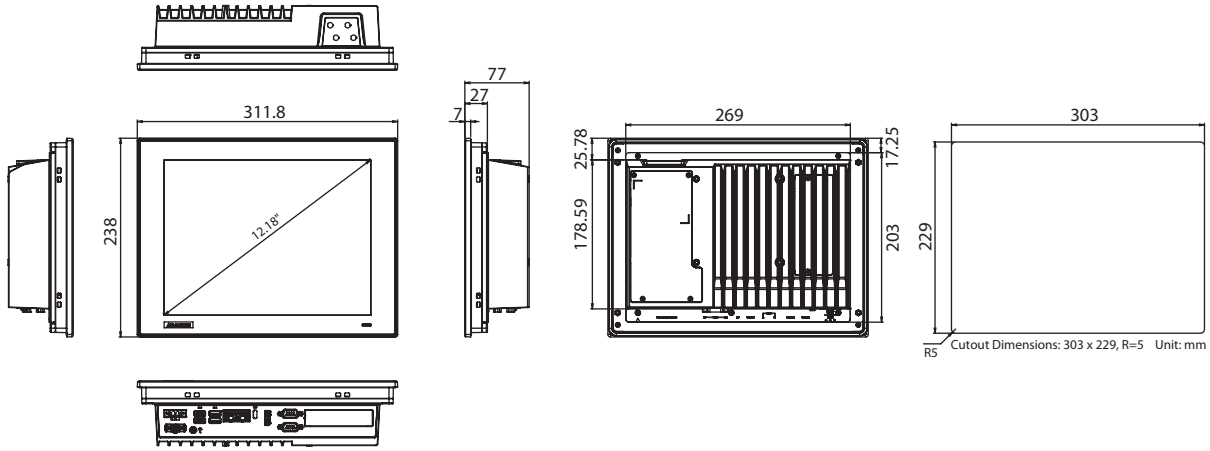
Ordering Information (Expected)

- **SPC-612E-PUC34C** 12" XGA Panel PC, ATEX Explosion-Protected, Intel® Core i3-N305, DDR5 16GB, TLC 256GB
- **SPC-612E-PUC34D** 12" XGA Panel PC, ATEX Explosion-Protected, Intel® Core i3-N305, DDR5 16GB, TLC 512GB

All product specifications are subject to change without notice.

Dimensions

Unit: mm



Panel Cut-out Dimensions: 303 x 229 mm (11.93 x 9.02 in)

Packing List

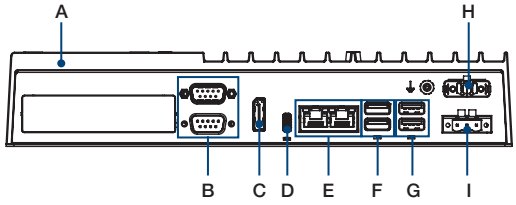
Item	Part No.	Depiction	Qty
Grounding cable	1703011001-11	A Cable G-TEM 4.3 100CM C=GR/Y	1
Power Connector	1652007930-01	Plug-In Block 1x3P/5.08mm/PA66/F/VA/Sn/G	1
Warranty	2190000902	CARDBOARD-WARRANTY REV. A2	1
VESA Screw	1930006175-01	Screw M4x10L R/S DH=6.8x2.50 + ST ZBK PL	4

Explosion Proof Certified Component*

Item	Part Number	Description	Note
Memory	SQR-SD5I8G5K6HNGAG	SODIMM DDR5 5600 8GB 1Gx16 (-40-95°C) Hynix	
	SQR-SD5I16G5K6HNAG	SODIMM DDR5 5600 16GB 2Gx8 (-40-95°C) Hynix	
	AQD-SD5V8GN56-SCH	8GB SO-DDR5-5600 1GX16 1.1V SAM (-20~85°C)	
	AQD-SD5V16GN56-SBH	16GB SO-DDR5-5600 2GX8 1.1V SAM (-20~85°C)	
Storage	SQF-S8BZ4-256GDSDE	SQF SATA M.2 2280 650-D 256G 3D sTLC BiCS5 (-40~85°C)	sTLC
	SQF-S8BZ4-512GDSDE	SQF SATA M.2 2280 650-D 512G 3D sTLC BiCS5 (-40~85°C)	sTLC
	SQF-S8BV1-256GDSDM	SQF SATA M.2 2280 650-D 256G 3D TLC BiCS5 (-20~85°C)	TLC
	SQF-S8BV2-512GDSDM	SQF SATA M.2 2280 650-D 512G 3D TLC BiCS5 (-20~85°C)	TLC
	SQF-S25Z4-256GDSDE	SQF 2.5" SATA SSD 650-D 256G 3D sTLC (BiCS5) (-40~85°C)	sTLC
	SQF-S25Z4-512GDSDE	SQF 2.5" SATA SSD 650-D 512G 3D sTLC (BiCS5) (-40~85°C)	sTLC
	SQF-S25V1-256GDSDM	SQF 2.5" SATA SSD 650-D 256G 3D TLC (BiCS5) (-20~85°C)	TLC
	SQF-S25V2-512GDSDM	SQF 2.5" SATA SSD 650-D 512G 3D TLC (BiCS5) (-20~85°C)	TLC
	SQF-S8BV4-1TDSDM	SQF SATA M.2 2280 650-D 1T 3D TLC BiCS5 (-20~85°C)	TLC
	SQF-S8BV4-2TDSDM	SQF SATA M.2 2280 650-D 2T 3D TLC BiCS5 (-20~85°C)	TLC
	SQF-S25V4-1TDSDM	SQF 2.5" SATA SSD 650-D 1T 3D TLC (BiCS5) (-20~85°C)	TLC
	SQF-S25V4-2TDSDM	SQF 2.5" SATA SSD 650-D 2T 3D TLC (BiCS5) (-20~85°C)	TLC
	96FD80-P256-TS1	SSSTC M.2 2280 256GB NVME G4x4 DRAMLESS SSD (-25°C ~85°C)	TLC
	96FD80-P512-TS1	SSSTC M.2 2280 512GB NVME G4x4 DRAMLESS SSD (-25°C ~85°C)	TLC
	96FD80-P1TB-TS1	SSSTC M.2 2280 1TB NVME G4x4 DRAMLESS SSD (-25°C ~85°C)	TLC
	96FD80-P2TB-TS1	SSSTC M.2 2280 2TB NVME G4x4 DRAMLESS SSD (-25°C ~85°C)	TLC
WI-FI**	EWM-W165M203E	Wi-Fi 6E + BT Module 2.4/5/6GHz M.2 2230 noVpro	802.11ax

* Explosion-Proof certification requires all customization to be performed at Advantech Taiwan production site, please contact sales for additional information
** Wi-Fi customization will requires NRE for local RED / RF Certification

Rear View



A. Chassis
B. RS-232/422/485
C. Display Port
D. USB Type-C
E. 2.5GbE LAN
F. USB 3.2
G. USB 2.0
H. Remote Button
I. Power DC IN

Please contact Advantech for certificate compliance.

Optional Accessories

- **96PSA-A150W24T2-4** 150W 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