# TPC-318WH

## 18.5" WXGA TFT LED LCD Touch Panel Computer with 8th Gen. Intel® Core™ i5 Processor, built-in 8G DDR4 RAM and UL Class 1 Division 2

## Features

- Industrial-grade 18.5" WXGA TFT LCD with 50K lifetime and LED backlight
- 8th Gen. Intel® Core™ i5-8365UE quad-core processor with built-in 8 GB DDR4 SO-DIMM
- Dual channel memory slots support up to 64G in total
- Compact, fanless embedded system with aluminum alloy front bezel and chassis grounding protection
- True-flat touchscreen with 5-wire resistive touch control and IP66-rated front panel
- Support expansion via Full-size Mini PCIe and two M.2 slots (NVMe, 5G)
- Diverse system I/O and isolated digital I/O via iDoor technology
- Support fieldbus protocols/GPS/GPRS/Wi-Fi capabilities via iDoor technology
- Support TPM2.0 hardware security

iD**r  R33138  CCC  CE FCC  c(UL)us LISTED E180081 I.T.E.

## Introduction

TPC-318WH touch panel computer is C1D2 certification model  equipped with 18.5" WXGA TFT LED LCD, low-power 8th Gen. Intel® Core™ i5-8365UE quad-core processor, and built-in 8 GB DDR4 SO-DIMM  delivering high performance yet compact and fanless computing system. To provide enhanced durability and satisfy diverse applications of industrial automation, TPC-318WH features IP66-rated front panel protecting against dust and water ingress, and two extra expansion M.2 M Key, B Key slots supporting NVMe, SATA or 5G application. Moreover, TPC-318WH has been C1D2 certified for the application in hazardous environments.

## Specifications

### General

- **BIOS** — AMI UEFI
- **Certification** — BSMI, CCC, CE, FCC Class A, CB/UL C1D2
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 477.72 x 298.72 x 70 mm (18.81 x 13.52 x 2.68 in)
- **Enclosure** — Front bezel: Die cast aluminum alloy
  Back housing: Die cast aluminum alloy
- **Mounting** — VESA Mount, Desktop, Wall or Panel Mount
- **OS Support** — Win 10, Linux
- **Power Consumption** — 45.48W (Typical)
- **Power Input** — 24 $V_{DC}$ ± 20%
- **Watchdog Timer** — 15-255 sec (system)
- **Weight (Net)** — 6.3kg (13.89lbs)

### System Hardware

- **CPU** — 8th Gen. Intel® Core™ i5-8365UE 1.60 GHz Quad-core processor
- **Memory** — Dual channel DDR4 SO-DIMM (Each channel supports up to 32G)
  1 x 8G DDR4 SO-DIMM (Built-in)
- **LAN** — 2 x 10/100/1000BASE-T
- **Expansion Slot** — 1 x Full-size mini PCIe
  1 x SIM (M.2 B Key 4G/5G module)
- **Storage Slot** — 1 x M.2 M key 2280 (SATA or NVMe PCIe x4)
  1 x M.2 B key  2242 (SATA / PCIe)
  3042, 3052 (5G)
  1 x 2.5" SSD/ HDD (SATA, Max. 7mm)
- **I/O** — 2 x RS-232/422/485
  1 x USB 2.0
  4 x USB 3.2 (Gen 2)
  1 x iDoor slot
  1 x Displayport (Video output)
  1 x Audio line out/ mic in

### LCD Display

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 18.5"
- **Max. Resoltuion** — 1366 x 768
- **Max Colour** — 16.7M
- **Luminance cd/m²** — 450 cd/m²
- **Viewing Angle (H/V°)** — 170°/160°
- **Backlight Life** — 50,000 hrs
- **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** — -10~55°C (14~131°F) (w/o air flow)
- **Storage Temperature** — -20~70°C (-4~158°F)
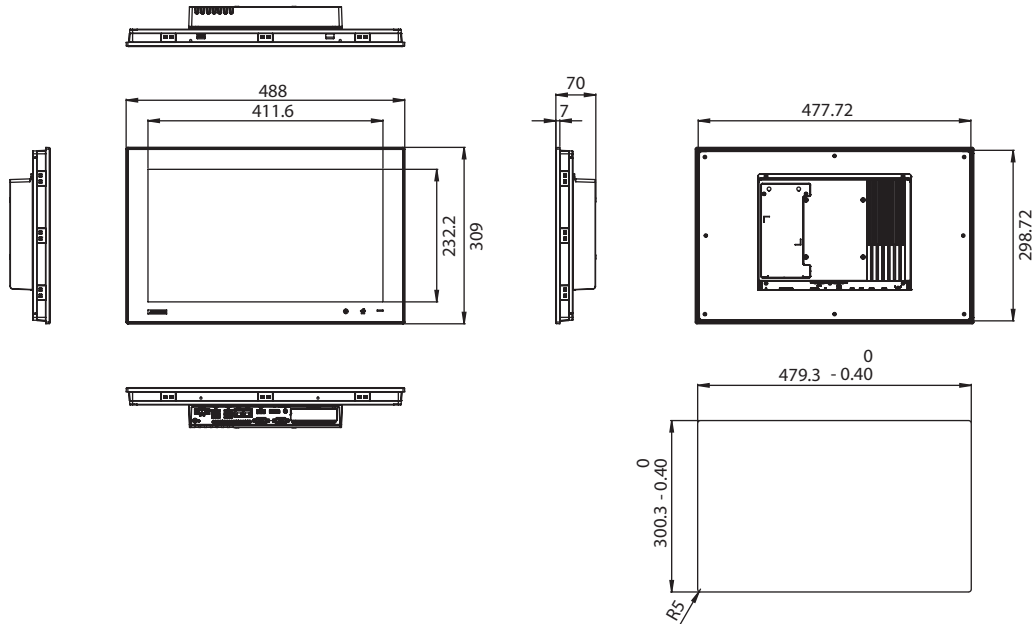- **Vibration Protection** — With SSD: 1 Grms (5 ~ 500 Hz)
  (Operating, random vibration)

## Rear View
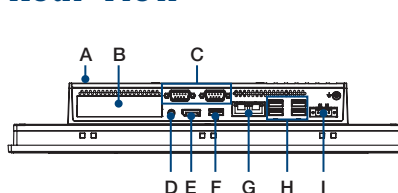


A. Default HDD/SSD Bay
B. iDoor slot
C. RS-232/422/485
D. Audio line out/ mic in
E. Display Port
F. USB 2.0
G. LAN (10/100/1000)
H. USB 3.2 (Gen 2)
I. Power Receptor

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**ADVANTECH** | **Industrial IoT Gateways**

## Dimensions

Unit: mm

488
411.6
232.2
309
70
7
477.72
298.72
479.3 - 0.40 / 0
300.3 - 0.40 / 0
R5

**TPC-318WH Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87 x 11.82 in)**

## Ordering Information

- **TPC-318WH-P853A** — 18.5" WXGA Panel PC, C1D2 certification,Intel® Core™ i5 8365UE 1.6GHz Quad-core processor, 8G DDR4 RAM

## Optional Accessories

- **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

## iDoor Modules

- **PCM-24D2R4-BE** — Isolated RS-422/485, DB9 x 2, (USB type)
- **PCM-24D2R2-BE** — Isolated RS-232, DB9 x 2, (USB type)
- **PCM-24R1TP-AE** — 1-Port Gigabit Ethernet, Intel® 82574L, mPCIe, RJ45
- **PCM-27D24DI-AE** — Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1
- **PCM-24S2WF-BE** — 802.11 a/b/g/n/ac 2T2R w/BT4.1, Atheros QCA6174A
- **PCM-26D2CA-AE** — 2-Port Isolated CANBus mPCIe, CANOpen, DB9
- **PCM-23U1DG-CE** — Internal locked USB Slot for USB Dongle, mPCIe
- **PCM-24R2GL-AE** — 2 Port Giga LAN Intel i350 PCIe mini card
- **PCM-24S34G-ABE** — TOBY-L200 LTE/HSPA+/GPRS, mPCIe, Ant, America (US)
- **PCM-24S34G-EBE** — TOBY-L210 LTE/HSPA+/GPRS, mPCIe, Ant, EMEA/APAC (AU.EU)

## Embedded OS

- **20703WX9VS0035** — Img WIN10LTSC v6.06 B014 TPC-300/TPC-B510 Value
- **20703WX9HS0031** — Img WIN10LTSC v6.06 B014 TPC-300/TPC-B510 High
- **20703LEB1S0091** — Image AdvLinuxTu V2.0.6 for UNO/TPC series

## Application Software

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|---|---|
| **WebAccess/SCADA** | 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 IoT 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. |
| **WebAccess/HMI** | 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. |

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.