AMC

Advantech Automation Panel

Next-Generation Human Machine Interface with True Flat Touch and Intelligent Keys

- ✎ Introduction
- ✎ Features & Functions
- ✎ Intelligent Software
- ✎ Selection Guide

iF product design award 2013

ADVANTECH

Enabling an Intelligent Planet

Advantech Automation Panels

Next-Generation Human Machine Interface
with True Flat Touch and iKeys

16:9 Wide Screen Format with Multi Touch

The 16:9 widescreen format increases the viewing area by 40% compared to traditional 4:3 displays, thereby enhancing the management and display of information. The integration of multi-touch functionality enhances operational safety by enabling two-point key confirmation.

Magnesium Alloy Front Panel

Advantech's 18.5/21.5" automation panel computers that feature a magnesium alloy front panel weigh 35% less than the aluminum alloy models.

IP66-Rated True Flat Touchscreen

In addition to IP66 certification for dust and water resistance, Advantech's automation panel computers feature a true flat P-CAP/resistive touch screen with an anti-scratch surface of 7H hardness to prevent accidental scratches due to extreme handling.

Easy Installation

Equipped with a unique snap design, Advantech's automation panel computers can be installed by a single person, thereby speeding up the installation process.

Intelligent Keys and Customizable UI

With the inclusion of intelligent keys, Advantech's TPCs provide an intuitive GUI that saves time by simplifying operations. Customers can easily customize their UI using the updated SDK and APIs available on Advantech's website.

Boot on Touch Capability

Advantech's touch panel PCs support boot-on-touch functionality for easy and convenient operation.
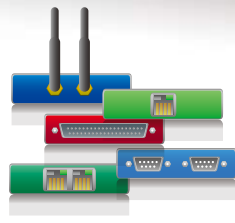
Supports VESA Arm Mount

With support for a standard 100 x100 mm VESA arm mount, Advantech's SPC are suitable for diverse applications, such as automobile production operations.

Advantech's new Automation Panel Computer include several new models in the Touch Panel Computer(TPC), Stationary Panel Computer(SPC) and Industrial Monitor(FPM) range of devices, all of which come with true flat style by 16:9 multi-touch displays or 4:3 5W resistive touch, high-performance Multi-core processors and IP66 certified front panels making them more elegant and fit for smart factory. Furthermore, Automation Panels integrated several S/W solution to empower applications and fit to the IIoT era, make the solutions with high efficiency, reduce the cost of production and provide factory workers with more intuitive management of the production line.

Multiple I/Os with M12 Connector

Advantech's SPC computers offer diverse I/O, including COM, USB, 1000 Base-T LAN, HDMI, Audio In, and M12 connection ports.

Supports iDoor Technology

With Advantech's iDoor technology, customers can integrated peripherals and expand the system functions via the diverse I/O. The iDoor modules available include a Fieldbus protocol, memory expansion and storage, digital and analog I/O, WAN, Wi-Fi-based MAN and LAN communication, GPS, GPRS, and LTE modules.

Stainless Steel Unit with IP69K Rating

The stainless steel unit housing with IP69K certification ensures ease of maintenance and cleaning, making the device suitable for use in hospitality, clinical, and pharmaceutical laboratory applications.
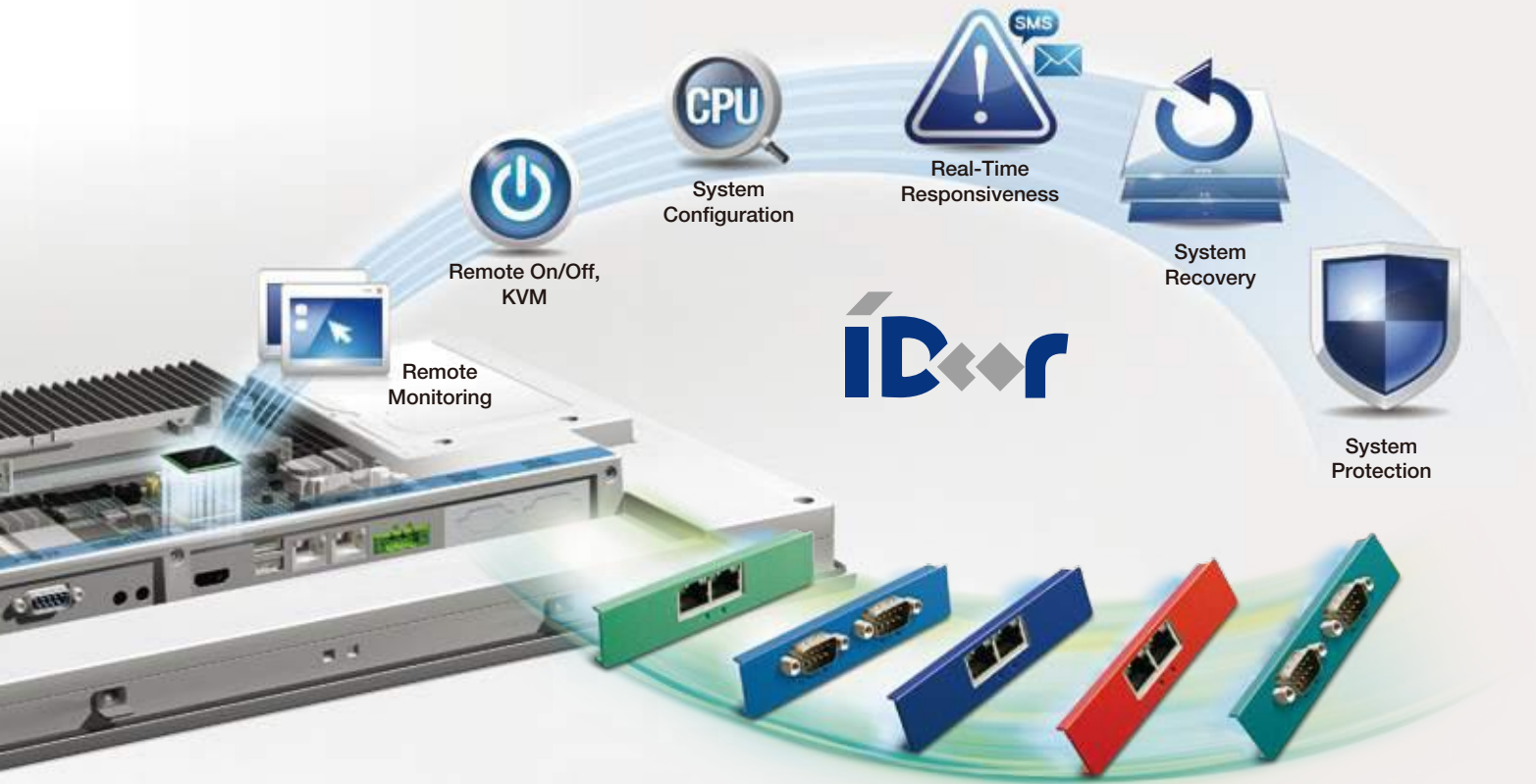
Fanless Intel® Core™ i CPU

Equipped with a powerful CPU processor, Advantech's automation panel computers offer advanced computing and graphics performance for computationally intensive processes.

Intelligent Software

Advantech WebAccess

WebAccess/SCADA

Advantech WebAccess is a 100% web-based SCADA software platform that provides open interfaces for developing IIoT applications aimed at various vertical markets. WebAccess features an intelligent dashboard that offers cross-platform, cross-browser data analysis and an intelligent UI using HTML5 technology. WebAccess also supports Widget Builder, which allows customers to build their own widgets.

Remote On/Off, KVM

System Configuration

Real-Time Responsiveness

System Recovery

Remote Monitoring

System Protection

IDoor

Wise-PaaS/RMM

WISE-PaaS/RMM

As part of Advantech's WISE-PaaS cloud solution, WISE-PaaS/RMM enables remote device management and monitoring by providing centralized management features, including HW/SW status monitoring and remote device control. WISE-PaaS/RMM utilizes the standard IoT protocol (MQTT) to communicate with IPCs, IoT gateways, and sensors to thereby provide the WISE Agent framework for data acquisition. Additionally, WISE-PaaS/RMM supports RESTful API web service, allowing users to integrate RMM functions with other applications.

WebAccess/HMI

WebAccess/HMI

WebAccess/HMI is a powerful and intuitive software platform for creating total HMI solutions for diverse application fields. As an easily integrated development tool, WebAccess/HMI guarantees reliability and open access due to minimal system overheads, high data communication rates, sub-second screen switching capability, and capacity for 24/7 operation.

Data Collection   **Unlimited Internal Points**   **450 Protocols**   **Over 50 Screen Objects**   **Supports 16 Communication Links**

Model	TPC-1251T/1551T	TPC-1051WP/1551WP	TPC-1581WP/1881WP	SPC-1881WP/2140WP	IPPC-5211WS	FPM-7151W/7181W/7211W
Category	Touch Panel Computer	Touch Panel Computer	Touch Panel Computer	Stationary Panel Computer	Touch Panel Computer	Industrial Monitor
Aspect Ratio	4:3			16:9		
CPU	Intel® Atom™ E3827 (1.75 GHz) processor	Intel® Atom™ E3827 (1.75 GHz) processor	4th Gen. Intel® Core™ i3-4010U/ i7-4650U (1.7 GHz) processor	SPC-1881WP: 4th Gen Intel® Core™ i3-4010U (1.7 GHz) processor SPC-2140WP: AMD® G-series T56N (1.6 G) processor	Intel® Celeron® J1900 processor	-
Memory	4 GB of 1600 MHz DDR3L SODIMM SDRAM (8 GB optional)	4 GB of 1600 MHz DDR3L SODIMM SDRAM (8 GB optional)	4 GB of 1600 MHz DDR3L SODIMM SDRAM (8 GB optional)	4 GB of DDR3L SODIMM	4 GB of 1600 MHz DDR3L SODIMM SDRAM (8 GB optional)	-
Display — Display Type	XGA TFT LED LCD	WXGA TFT LED LCD	WXGA TFT LED LCD	SPC-1881WP: WXGA TFT LED LCD SPC-2140WP: Full HD TFT LED LCD	Full HD TFT LED LCD	FPM-7151W/7181W: WXGA TFT LED LCD FPM-7211W: Full HD TFT LED LCD
Display — Display Size	TPC-1251T: 12.1" TPC-1551T: 15"	TPC-1051WP: 10.1" TPC-1551WP: 15.6"	TPC-1581WP: 15.6" TPC-1881WP: 18.5"	SPC-1881WP: 18.5" SPC-2140WP: 21.5"	21.5"	FPM-7151W: 15.6" FPM-7181W: 18.5" FPM-7211W: 21.5"
Display — Max. Resolution	1024 x 768	TPC-1051WP: 1280 x 800 TPC-1551WP: 1366 x 768	TPC-1581WP: 1366 x 768 TPC-1881WP: 1367 x 768	SPC-1881WP: 1366 x 768 SPC-2140WP: 1920 x 1080	1920 x 1080	FPM-7151W/7181W: 1366 x 768 FPM-7211W: 1920 x 1080
Display — Max. Colors	TPC-1251T: 16.2M TPC-1551T: 16.7M	TPC-1051WP: 262K TPC-1551WP: 16.7M	16.7M			
Display — Luminance (cd/m²)	TPC-1251T: 600 nits TPC-1551T: 400 nits	300 nits				
Display — Viewing Angle (H/V°)	160/140	TPC-1051WP: 170/170 TPC-1551WP: 170/160	170/160	SPC-1881WP: 170/160 SPC-2140WP: 178/178	178/178	FPM-7151W/7181W: 170/160 FPM-7211W: 178/178
Display — Backlight MTBF	50,000 hrs	TPC-1051WP: 25,000 hrs TPC-1551WP: 50,000 hrs	50,000 hrs			
Touchscreen	5-wire resistive	Projected capacitive touch			Projected capacitive touch	Projected capacitive touch
Network (LAN)	10/100/1000 Base-T x 2	10/100/1000 Base-T x 2		10/100/1000 Base-T x 2, M12 connector	10/100/1000 Mbps RJ45 x 2	-
Video Port	-	HDMI		-		VGA & DVI/HDMI
I/O	1 x RS-232, 1 x RS-232/422/485, 1 x USB 3.0, 1 x USB 2.0	1 x RS-232, 1 x RS-232/422/485, 1 x USB 3.0, 1 x USB 2.0	1 x RS-232/422/485, 1 x RS-232, 2 x USB 3.0, 1 x HDMI 1.4, 1 x Audio Out, 1 x USB 2.0 (optional), 1 x Audio Mic In (optional)	1 x RS-232, 1 x USB 2.0 to M12 connector, 1 24VDC to M12 connector, 1 x M12 connector	1 x RS-232, 1 x RS-232/485/422, 1 x USB 2.0, 1 x USB 3.0, 1 x waterproof wireless antenna (optional)	1 x RS-232/USB interface for touchscreen
HDD (Optional)	2.5" SATA HDD	2.5" SATA HDD			2.5" SATA HDD	-
Intelligent Keys	-	The function keys and home button built into the front panel enable quick access and configuration.			Yes	-
CompactFlash Slots	1 x CFast	1 x CFast		-	1 x CFast	-
Expansion Slots	1 x Full-size Mini PCIe	1 x Full-size Mini PCIe	1 x Full-size Mini PCIe (supports iDoor with the TPC-1251T-EHKE expansion kit)		1 x Full-size Mini PCIe	-
Input Power	24V$_{DC}$ ± 20%			24V$_{DC}$	24V$_{DC}$ ± 20%	
Ingress Protection	IP66-rated front panel	IP66-rated front panel		IP66-rated entire unit	IP69K-rated front panel IP69K-rated entire unit (optional)	IP66-rated front panel
Enclosure	Front panel: Die-cast magnesium alloy Rear cover: SECC	Front panel: Die-cast magnesium alloy Rear cover: SECC	Front panel: Die-cast aluminum alloy Rear cover: PC/ABS resin	Front panel: Die-cast aluminum alloy Rear cover: Die-cast aluminum alloy	Front panel: Stainless steel Rear cover: Aluminum/stainless steel (optional)	Front panel: Die-cast magnesium alloy Rear cover: SECC
Mount Options	Panel, desktop, wall, and VESA mount brackets (with optional mount kit)	Panel, desktop, wall, and VESA mount brackets (with optional mount kit)		Desktop, wall, and VESA arm mount brackets	VESA and flange adapter for arm and foot mount brackets	Desktop, wall, and VESA arm mount brackets
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	TPC-1051WP: -20 ~ 55 °C (-4 ~ 131 °F) TPC-1551WP: 0 ~ 55 °C (32 ~ 131 °F)	0 ~ 55 °C (32 ~ 131 °F)	0 ~ 55 °C (32 ~ 131 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 55 °C (32 ~ 131 °F)
Storage Temperature	-30 ~ 70 °C (-22 ~158 °F)	TPC-1051WP: -30 ~ 70 °C (-22 ~158 °F) TPC-1551WP: -20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	
Dimensions (W x H x D)	TPC-1251T: 311.80 x 238 x 57.2 mm (12.28 x 9.37 x 2.25") TPC-1551T: 383.2 x 307.3 x 61.1 mm (15.09 x 12.10 x 2.41")	TPC-1051WP: 283.1 x 202.3 x 61.4 mm (11.15 x 7.96 x 2.42") TPC-1551WP: 419.7 x 269 x 61.9 mm (16.52 x 10.59 x 2.44")	TPC-1581WP: 419.7 x 269 x 56.7 mm (16.52 x 10.59 x 2.23") TPC-1881WP: 488 x 309 x 56.7 mm (19.21 x 12.17 x 2.23")	SPC-1881WP: 488 x 309 x 65 mm (19.21 x 12.17 x 2.56") SPC-2140WP: 558.4 x 349.8 x 56.7 mm (21.98 x 13.77 x 2.23")	555 x 346.5 x 81 mm (21.85 x 13.64 x 3.19")	FPM-7151W: 419.7 x 269 x 47.7 mm (16.52 x 10.59 x 1.88") FPM-7181W: 488 x 309 x 47.7 mm (19.21 x 12.17 x 1.88") FPM-7211W: 558.4 x 349.8 x 47.7 mm (21.98 x 13.77 x 1.88")
Weight	TPC-1251T: 2.5 kg (5.51 lbs) TPC-1551T: 3.9 kg (8.59 lbs)	TPC-1051WP: 2.56 kg (5.64 lbs) TPC-1551WP: 5 kg (11.02 lbs)	TPC-1581WP: 6 kg (13.22 lbs) TPC-1881WP: 7 kg (15.44 lbs)	SPC-1881WP: 8 kg (17.64 lbs) SPC-2140WP: 9 kg (19.8 lbs)	15.8 kg (34.76 lbs)	FPM-7151W: 5 kg (11lbs) FPM-7181W: 6 kg (13.2 lbs) FPM-7211W: 8 kg (17.6 lbs)
Certification	BSMI, CCC, CE, FCC Class A, UL					
Operating System	Microsoft® WES7/WE8S/ Windows 7/8.1/10 Enterprise LTSB, Linux	Microsoft® WES7/WE8S/Windows 7/8.1/10 Enterprise LTSB, Linux		Microsoft® WES7 (32/64 bit), Windows 7 (32/64 bit), Windows Embedded 8.1 Industry Pro (64 bit)		Microsoft® XP/Vista/7/8/10/XPe, CE, Linux

Advantech's Innovative Design Concept - Simple, Flexible, and Reliable

As a leading provider of industrial PCs, Advantech is committed to continual product innovation and service development. Advantech's pioneering intelligent automation "i" technology concept emphasizes intelligent, integrated, and intuitive designs that innovate existing service models, user behaviors, and technology trends for the new era of industrial automation.

iKey

The integration of an intuitive and intelligent key simplifies automation panel configuration, while the flexible software design ensures easy and convenient customization.

iDoor

This standardized modular interface enables flexible expansion by supporting numerous applications and extended system functions through a wide range of I/O.

iLink

This reliable long-distance transmission technology transfers video signals and touch control commands over a single Ethernet cable, overcoming the inherent interference of harsh environments to ensure connectivity and provide a cost effective multi-display solution.

AMC

ADVANTECH iAutomation

Premier Partner

Vertrieb durch **AMC**

AMC — Analytik & Messtechnik GmbH Chemnitz

Heinrich-Lorenz-Str. 55
09120 Chemnitz
E-Mail: info@amc-systeme.de

Tel.: +49/371/38388-0
Fax: +49/371/38388-99
Web: www.amc-systeme.de

More Information

ADVANTECH

Enabling an Intelligent Planet

8600000150