

Advantech Panel PCs

Diverse offerings for a wide range of applications

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- Benefits and Features
- Selection Guide



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Advantech's PPC Product Family

Reliable, Cost-Effective, and High-Performance Industrial Panel PCs

Advantech's PPC (panel PC) product family offers highly scalable, economical solutions in a range of performance classes that support various display sizes to satisfy diverse equipment manufacturing and process automation applications. The PPC product portfolio includes an all-in-one series (PPC-3000) and a configurable series (PPC-6000C). The all-in-one series features an optimized design, compact form factor, and industrial-grade specifications, such as rich I/O, flexible expansion slots, and a wide operating temperature range. Regarding the configurable series, these products are designed to be equipped with any mini-ITX motherboard according to price and functionality.

All-in-One Series

Advantech's PPC-3000/3000S series systems are equipped with a fanless, low-power Intel® Core™ i/Atom™ processor. The standard PPC model (PPC-3000 series) features rich I/O and expansion slots that enable system integrators to build complex systems. Meanwhile, the PPC-3000S series systems, which are aimed at industrial IoT applications, are ultra slim devices that feature a stylish appearance to ensure easy integration.

All-in-One

- Fanless
- Compact
- Low power consumption

General Purpose

- Essential I/O
- Ultra slim
- All-metal body

Industry Oriented

- Rich I/O
- Slim
- Expandible
- Wide temperature range

Configurable Series

Compatible with diverse mini-ITX motherboards, the PPC-6000C series allows system integrators to configure the device according to their exact usage requirements. This flexibility and versatility makes PPC-6000C ideal for applications that require high-performance computing and multiple expansions, such as machine vision operations.

Configurable

- Fan
- High computing power
- Selectable motherboard

Customizable

Features



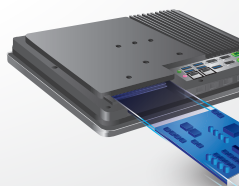
IP65-rated true-flat panel

In addition to IP65 certification for dust and water resistance, Advantech's panel PCs are equipped with a true flat P-CAP/resistive touchscreen, giving the system an elegant and stylish appearance.



Rich industrial-grade I/O

To ensure excellent connectivity for integrating devices and peripherals, Advantech's PPC systems are equipped with multiple industrial-grade I/O, including isolated RS-422/485, GPIO, RS-232, USB 3.0, DisplayPort, and Line Out ports.





PPC-3001S

- 6/7th gen Intel® Core™ i processor
- PCAP touch screen control
- All-metal body



PPC-3000S

- Intel® Celeron® N4200/N2930/N2807 processor
- PCAP/resistive touch screen control
- All-metal body



PPC-3001

- 6/7th gen Intel® Core™ i processor
- PCAP/resistive touch screen control
- PCIe x4/PCI expansion



PPC-3000

- Intel® Atom™ E3845/E3940 processor
- Wide operating temperature (-20 ~ 60 °C/-4 ~ 140 °F)
- Resistive touch screen control
- PCIe x1/PCI expansion

PPC-6000C

- Compatible with diverse mini-ITX MBs
- Supports CPUs with up to 65W TDP
- PCAP/resistive touch screen control
- PCIe x4/2 x PCI or PCIe x1



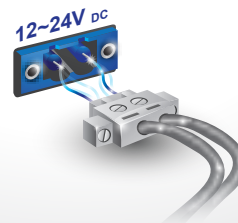
Expansion slots

PPC series systems feature expansion slots that support a range of optional riser cards, such as PCI, PCIe x1, and PCIe x4, to enable flexible expansion according to the platform specifications.



Wide operating temperature range

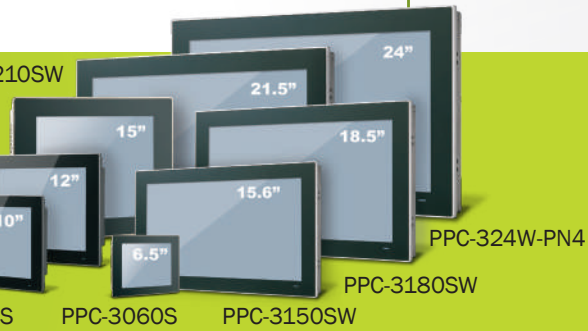
All PPC-3000 series systems equipped with an Intel® Atom™ processor support a wide operating temperature range of -20 ~ 60 °C, making them suitable for operation in harsh environments.



Wide input power range

With support for a wide input power range of 12 ~ 24 V_{DC}, Advantech PPC systems can be operated in various industrial environments without necessitating an additional power converter or generating increased energy costs.

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All-metal body

PPC-3000S series products are designed with an all-metal body to ensure an elegant and streamlined appearance.

Accessories

PPC-IPS-AE



A lightweight, intelligent power management module that protects the system from electrical damage and reduces the potential for data losses. This module can serve as a temporary power source during short-term power outages and can ensure safe system shutdowns.

PPC-STAND-A1E



An elegant desktop stand made of aluminum alloy that supports VESA 75/100. This stand allows users to adjust the vertical viewing angle and can be affixed to surfaces using two screws.

PPC-ARM-A03



A swivel arm equipped with a C-clamp to enable installation on any surface. The swivel arm supports 360-degree rotation.

PPC-174T-WL-MTE




A compact wall-mount kit that supports 360-degree rotation and vertical/horizontal viewing angle adjustment.

PPC-WLAN-C1E



An optional WiFi + BT4.2 Combo Module with dual antennae (2T2R) and 802.11 a/b/g/n/ac support.

	PPC-3001S				PPC-3000S								
Model	PPC-3151SW/3181SW/3211SW  PPC-324W-P7				PPC-3060S	PPC-3100S/3120S/3150S/3210SW				 PPC-3150SW/3180SW/324W-PN4			
CPU	6th Gen Intel® Core™ i processor		7th Gen Intel® Core™ i processor		Intel® Celeron® N2807 (1.58 GHz)	Intel® Celeron® N2930 (1.86 GHz)				Intel® Pentium® N4200 (1.1G up to 2.5GHz)			
Memory	1 x SODIMM DDR4 1866/2133 MHz (up to 16 GB)				1 x SODIMM DDR3L 1333 (up to 4 GB)	1 x SODIMM DDR3L, 1333 MHz (up to 8 GB)				1 x SODIMM, DDR3L 1600/1866 (up to 8GB)			
Display Size	15.6"	18.5"	21.5"	23.8"	6.5"	10.4"	12.1"	15"	21.5"	15.6"	18.5"	23.8"	
Max. Resolution	1920 x 1080	1366 x 768	1920 x 1080	1920 x 1080	640 x 480	800 x 600	1024 x 768	1024 x 768	1920 x 1080	1366 x 768	1366 x 768	1920 x 1080	
Luminance (cd/m²)	450	450	300	350	700	400	500	400	300	400	450	350	
Backlight MTBF	50,000	50,000	50,000	30,000	50,000	30,000	30,000	50,000	50,000	50,000	50,000	30,000	
Touchscreen	Multi-touch projected capacitive				5-wire analog resistive / Multi-touch projected capacitive					Multi-touch projected capacitive			
Network (LAN)	2 x GbE (Intel® I211-AT, I219LM)				2 x GbE (Intel® I211)					2 x GbE (Intel® I211)			
I/O	1 x RS-232, 1x RS-232/422/485 (by BIOS), 2 x USB 3.0, 2 x USB 2.0, 1 x HDMI, 1 x TPM2.0 (optional module),				1 x RS-232, 1x RS-232/422/485 (by BIOS), 2 x USB 2.0, 1 x USB 3.0,					1 x RS-232, 1x RS-232/422/485 (by BIOS), 2 x USB 3.0, 2 x USB 2.0, 1 x Line-out, 1 x HDMI,			
Storage	1 x 2.5" SATA bay, 1 x mSATA bay				1 x 2.5" SATA bay (optional), 1 x mSATA bay					1 x 2.5" SATA bay (optional), 1 x mSATA bay			
Expansion Slots	N/A				N/A					N/A			
Additional Expansion	1 x Full-size Mini PCIe				1 x Full-size Mini PCIe					1 x Full-size Mini PCIe			
Input Power	12 ~ 24 V _{DC}				12 ~ 24 V _{DC}					12 ~ 24 V _{DC}			
Operating Temperature	0 ~ 50 °C with SSD				0 ~ 50 °C with SSD					0 ~ 50 °C with SSD			
Operating System	Windows 7/10 (64bit), Linux, Android 8.1		Windows 10(64-bit), Linux		Windows 7/10 (64bit), Linux, Android 6.0					Windows 10 (64bit), Linux, Android 8.1			

	PPC-3001				PPC-3000					PPC-6000C				
Model	PPC-3151  PPC-412	PPC-3151W/3211W			PPC-3100/3120-RE9A		PPC-3150/3170/3190			PPC-6121	PPC-6151C	PPC-6171C	PPC-6191C	
CPU	6th Gen Intel® Core™ i5-6300U	7th Gen Intel® Core™ i5-7300U			Intel® Atom™ E3940 (1.6 GHz)		Intel® Atom™ E3845 (1.91 GHz)			8/9th Gen Intel® Core™ i/ Celeron® processor		Supports processors with up to 65 W TDP depending on the Mini-ITX motherboard		
Memory	1 x SODIMM DDR4, 1866/2133 MHz (up to 16 GB)				1 x SODIMM DDR3L 1600/1866 MHz (up to 8 GB)		1 x SODIMM DDR3L 1333 MHz (up to 8 GB)			2 x 260-pin SO-DIMM DDR4, 2666 MHz (up to 32 GB, 16 GB per SODIMM)		Dependent on the Mini-ITX motherboard specifications		
Display Size	15"	12.1"	15.6"	21.5"	10.4"	12.1"	15"	17"	19"	12.1"		15"	17"	19"
Max. Resolution	1024 x 768	1024 x 768	1920 x 1080	1920 x 1080	800 x 600	1024 x 768	1024 x 768	1280 x 1024	1280 x 1024	1024 x 768		1024 x 768	1280 x 1024	1280 x 1024
Luminance (cd/m²)	400	600	450	300	400	600	400	350	350	600		500	350	350
Backlight MTBF	50,000	50,000	50,000	50,000	30,000	50,000	50,000	50,000	50,000	50,000		50,000	50,000	50,000
Touchscreen	Multi-touch projected capacitive	5-wire analog resistive	Multi-touch projected capacitive		5-wire analog resistive		5-wire analog resistive			5-wire analog resistive		5-wire analog resistive		
Network (LAN)	2 x GbE (Intel® I211-AT, I219LM)				2 x GbE (Intel® I210)		2 x GbE (Intel® I210)			2 x GbE (Intel® I211-AT, I219LM)		Dependent on the Mini-ITX motherboard specifications		
I/O	1 x isolated RS-422/485, 4 x RS-232 (2 x by optional module, Expect :PPC-412), 1 x GPIO (8 channels, TTL level), 4 x USB 3.0, 1 x VGA, 1 x DP1.2, 1 x Line-Out, 1 x Mic-In, 1 x TPM2.0 (optional module)				4 x RS-232, 1 x isolated RS-422/485 (by BIOS), 4 x USB 3.0, 1 x Line-out, 1 x Mic-in, 1 x VGA, 1 x HDMI, 1 x GPIO (8 channels, TTL),		1 x isolated RS-422/485, 4 x RS-232 (2 x by optional module), 1 x GPIO (8 channels, TTL level), 1 x USB 3.0, 3 x USB 2.0, 1 x VGA, 1 x DP1.1a, 1 x Line-Out, 1 x Mic-In			4 x RS-232, 1 x isolated RS422/485, 4 x USB3.1, 1 x VGA, 1 x HDMI 1.4 , 1 x Mic in, 1 x Line out, 1 x GPIO (8channels, TTL)		4 x Reserved ports 2 x WLAN antenna ports		
Storage	1 x 2.5" SATA bay, 1 x M.2 bay (22 x 42 mm)		2 x 2.5" SATA bay, 1 x M.2 bay (22 x 42 mm)		1 x 2.5" SATA bay, 1 x mSATA bay		1 x 2.5" SATA bay, 1 x mSATA bay			1 x 2.5" SATA bay, 1 x mSATA bay		1 x 2.5" SATA bay, 2 x 2.5" SATA bay (optional)		
Expansion Slots	1 x PCIe x4 or PCI(Expect, PPC-412)				N/A	(optional) 1 x PCIe x1 or 1 PCI	1 x PCI or 1 x PCIe x1			(optional) 1 x PCIe x4 or 1 x PCI		2 x PCI or 1 x PCIe x4 (in the accessory box)		
Additional Expansion	1 x Full-size Mini PCIe, (only PPC-3151 optional) 1 x Cfast,				1 x Full-size Mini PCIe		1 x Full-size Mini PCIe, (optional) 1 x Cfast,			1 x M.2 2230 (E Key)		Dependent on the Mini-ITX motherboard specifications		
Input Power	9~32 V _{DC}				9 ~ 32 V _{DC}		9 ~ 32 V _{DC}			12 ~ 30 V _{DC}		100 ~ 240 V _{AC} @ 50/60 Hz		
Operating Temperature	0 ~ 50 °C with SSD				-20 ~ 60 °C with SSD		-20 ~ 60 °C with SSD			0 ~ 50 °C with SSD		0 ~ 50 °C with 35W CPU 0 ~ 45 °C with 65W CPU		
Operating System	Windows 7/10 (64bit), Linux	Windows 10 (64bit), Linux			Windows 10 (64bit), Linux, Android 8.1		Windows 7/10(64bit), WEC7, Linux, Android 6.0			Windows 10 (64bit), Linux		Dependent on the Mini-ITX motherboard specifications		

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