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	60-4-397-4188

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Poland	Warsaw 48-22-33-23-740 / 41
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Russia	Toll Free 8-800-555-01-50
Moscow	7-495-232-1692

Americas

North America	Toll Free 1-800-205-7940
Toll Free	1-888-576-9668
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Milpitas	1-408-519-1788
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Open HMI Solutions

Interfaces for Seamless Interaction
between Humans and Machines



- ✓ Touch Panel Computers
- ✓ Industrial Panel PCs
- ✓ Industrial Monitors
- ✓ Industrial Automation Computing Platforms
- ✓ Domain-Focused Platforms



ADVANTECH

Enabling an Intelligent Planet

www.advantech.com/eA

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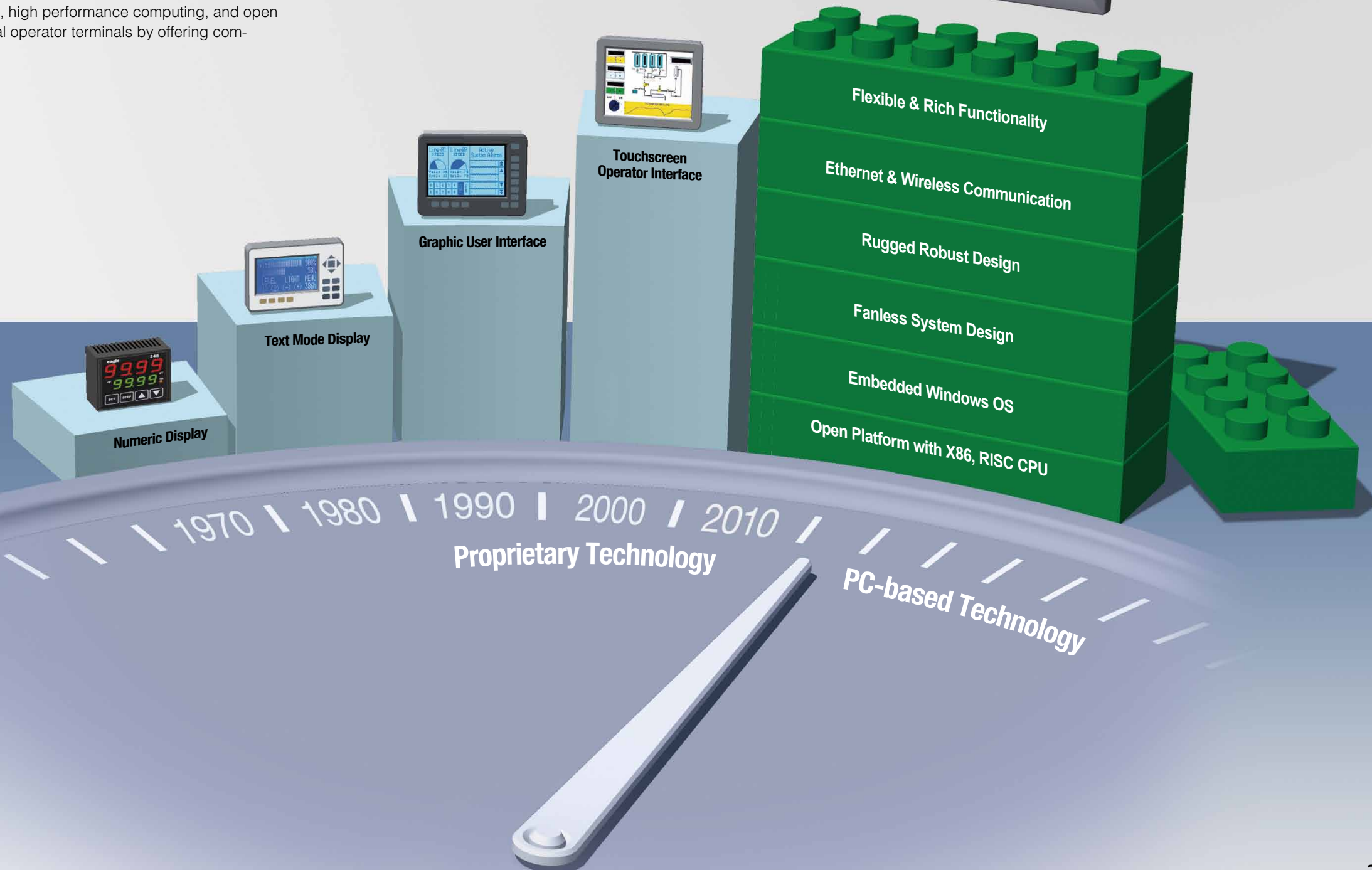
Breaking Through with **Open HMI Solutions**

The world market for operator terminals was estimated to have been worth just over \$1.5 billion in 2005. The total market is forecast to grow at a compound annual growth rate (CAGR) of 7.4% to \$2.3 billion in 2011. Open operator terminals are projected to have the fastest growing revenues and unit shipments over the forecast period 2006 to 2011, with CAGR's of 10.5% and 12.7% respectively. The worldwide touch-screen operator terminal market represented nearly 70% of total worldwide revenues in 2005, with this percentage set to increase slightly over the forecast period.

Uses these diskless and fanless products offer advanced functionality over traditional HMI with improved data handling and standard interfaces and communications. by using the Open HMI standard which uses a scalable operating system to provide PC-based functionality as well as standard file formats and interfaces.

Led by the flourishing PC-based technology market, Open HMI devices not only provide interactive, vivid displays for operators & supervisors, but also Ethernet networking, high performance computing, and open expansion capabilities. Open HMI devices are replacing traditional operator terminals by offering complete, intelligent HMI/SCADA platforms.

Open HMI



Open HMI, Unlimited Potential

Advantech's vision is to become the leading HMI platform provider in the PC-based industrial automation market by creating value-added, standard product solutions and by offering customization to meet unique requirements. Advantech offer a wide range of HMI products for automation needs, including; hardware platforms such as the Touch Panel Computers (TPC), Industrial Panel PC's (IPPC), and Industrial Monitors (FPM). We also offer powerful Windows XP/XPe/CE and Linux-based HMI solutions to easily migrate applications as the scope changes.



Touch Panel Computers (TPC)

Compact & Rugged HMI Platforms for Seamless Interaction between Humans and Machines

The ultra-slim, light, fanless and vibration-resistant design of Advantech's TPC series provides an ideal HMI platform for most automation applications. TPC products are available in display sizes of 3.5", 5.7", 6.4", 8", 10.4", 12.1", 15" and 17". TPC's feature processors that are low in power consumption, and they also have a unique fanless design. With their stable system architecture, TPC is an ideal solution for any industrial environment. In addition, the product housings are made from an aluminum-magnesium alloy which results in a lightweight unit, with corrosion resistance and excellent heat dissipation.



Industrial Monitors (FPM)

Full Range of Industrial-grade Units with Multi-function Capabilities and Brilliant Displays

Advantech's industrial monitors are designed specifically for harsh environments. These monitors feature industrial-grade flat panel LCDs with brightness that is often more than twice that of commercial monitors, making them much easier to see. FPM products are designed for factory floor environments and can withstand the higher temperatures, vibration, and the dirt and dust that can be commonplace. High NEMA and IP ratings for the bezel design enable these products to be installed in wet and dusty areas. The series of monitors come in sizes ranging from 6", 12", 15", 17" to 19".



Industrial Panel PC's (IPPC)

Powerful Computing and Robust Platforms with High Performance for Factory Floors

Advantech's IPPC series has proven their reliability through years of operation in all parts of the world. They can be built to achieve a high performance to cost ratio that is optimum for any industrial application. Constructed with heavy-duty aluminum or stainless steel front panels, the rugged design of Advantech's IPPC series can withstand tough industrial environments. Equipped with powerful Intel® Pentium® M & Celeron® M processors, IPPC's have high computing power, and also provides expansion slots for add-on boards. IPPC's can be configured with specific CPU, Memory, Drives and operating systems to meet your diverse needs.



Heavy-duty, Expandable & Reliable Solutions to Optimize Site Operations and Visualization

Advantech provides a range of open architecture powerful Industrial Panel PC's that incorporate widely used PC technology. These PC's are designed to be integrated with industrial platforms for controlling machinery or processes; displaying the information necessary to repair, maintain, or begin applications, and gather basic production information. The IPPC-7000 series provides industrial motherboards, passive backplanes and accessible front panels with USB ports & multiple membrane function keys.



Domain-Focused Platforms

Ultra-Rugged & Open Platforms with Special Industrial Certifications

These compact and heavy-duty with ultra rugged designs and industrial certifications, have been specifically designed to meet the diverse of across diverse industrial applications such as Oil and Gas, Military, and Food and Beverage. Advantech offers not only high-end technology for versatile applications with rugged materials, Panel PCs and monitors with stainless steel to satisfy the stringent standards required in food, beverage, clinical, chemical, pharmaceutical these hazardous applications. Furthermore, Advantech carries industrial automation technology into the oil and gas industry, industrial monitors passed Class 1, Division 2 Groups A,B,C,D certification to extend use to hazardous applications.

Touch Panel Computer Overview

The x86 TPC series provides a powerful and durable solution with high computing power and ultra low voltage processors.

- Fanless and compact design
- A PC/104 or PCI-104 expansion slot gives a high degree of versatility
- Rich standard I/O support: providing multiple standard communications to couple with different peripherals
- Dual LAN and Gigabit Ethernet support
- Downward I/O cabling: familiar interfaces for plugging in cables
- Grounding protection
- Variety of OS support, including; Windows XP, WinXPe and WinCE

Application-oriented Design & Protection



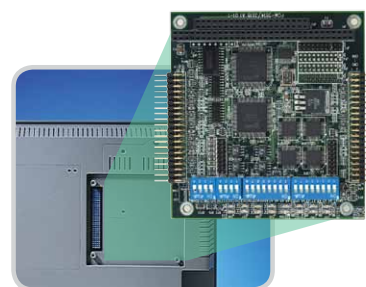
Wide variety of standard I/O support and dual LAN



Downward I/O cabling



Grounding protection



PCI-104 expansion

50mm



5.7" x86-based Touch Panel Computers



TPC-651H/650H

5.7" VGA TFT LCD Intel® Atom™ Thin Client Computers/ with Wide Operating Temperatures

1. RS-232 COM port
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-651H)
(2)10/100/1000B-T Ethernet x 1 (TPC-650H)
5. Power Receptor



12.1" x86-based Touch Panel Computers



TPC-1251H/1250H

12.1" SVGA TFT LCD Intel® Atom™ Thin Client Computers/with Wide Operating Temperatures

1. RS-232 COM Port
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-1251H)
(2)10/100/1000B-T Ethernet x 1 (TPC-1250H)
5. Power Receptor



15" x86-based Touch Panel Computer



TPC-1551H/1550H

15" XGA TFT LCD Intel® Atom™ Thin Client Computers/with Wide Operating Temperatures

1. RS-232 COM port x 1
2. RS-422/485 COM port
3. USB 2.0 Host x 2
4. (1)10/100/1000B-T Ethernet x 2 (TPC-1551H)
(2)10/100/1000B-T Ethernet x 1 (TPC-1550H)
5. Power Receptor



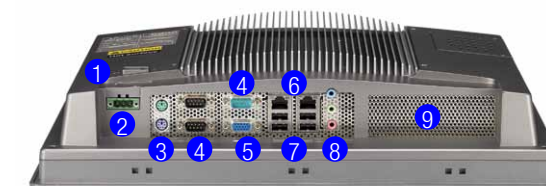
17" x86-based Touch Panel Computer



TPC-1780H/1770H

17" SXGA TFT LCD Core 2 Duo /Celeron M Touch Panel Computer

1. Power Switch & Fuse
2. Power Receptor
3. PS/2
4. RS-232 COM port x 3
5. VGA
6. 10/100/1000B-T Ethernet x 2
7. USB 2.0 Host x 4
8. Audio (Line-in,Line-out,MIC)
9. External Interface (PCI/104,RS-485/422)



Touch Panel Computer Overview

The RISC kernel consumes less power without sacrificing performance.

- Designed to run on Microsoft WinCE
- Supports horizontal & vertical orientation
- Provides thin client software solutions
- Supports CANopen 2.0b communication protocol



Embedded OS support
(Windows XPE/CE 5.0/6.0)



Remote display by Advantech
DiagAnywhere



CAN-bus device support

Horizontal & vertical screen orientation

3.5" RISC-based Touch Panel Computers



TPC-30T/32T 3.5" QVGA TFT LCD XScale PXA270 Touch Panel Computer with CAN-bus/CANopen

1. 10/100B-T Ethernet
2. RS-232/485 COM port (TPC-30T)
CAN-bus/RS-232 COM port (TPC-32T)
3. Power Receptor
4. SD Slot
5. USB 1.1 Host



5.7" RISC-based Touch Panel Computer



TPC-66T 5.7" QVGA TFT LCD XScale PXA270 Touch Panel Computer

1. RS-232 COM port
2. RS-232/485 COM port
3. 10/100B-T Ethernet
4. USB 1.1 Host
5. Fuse
6. Power Receptor
7. Power Switch
8. CompactFlash



5.7" RISC-based Touch Panel Computer



TPC-66SN 5.7" QVGA CSTN LCD XScale PXA270 Touch Panel Computer

1. RS-232 COM port
2. RS-232/485 COM port
3. 10/100B-T Ethernet
4. Fuse
5. Power Receptor
6. Power Switch
7. CompactFlash



Selection Guide and Ordering Information



Model	TPC-1780H	TPC-1770H	TPC-1570H	TPC-1270H	
CPU	Intel Core 2 Duo L7400 1.5 GHz	Intel Celeron M 1 GHz	Intel Pentium M 1.4 GHz Intel Celeron M 1 GHz Intel Celeron M 600 MHz	Intel Pentium M 1.4 GHz Intel Celeron M 1 GHz	
Memory	2 GB DDR2 SDRAM	1 GB DDR2 SDRAM	512 MB DDR SDRAM (up to 1 GB DDR SDRAM)	512 MB DDR2 SDRAM (up to 1 GB DDR2 SDRAM)	
Display	Type	SXGA TFT LCD	SXGA TFT LCD	SVGA TFT LCD	
	Size	17"	17"	15"	
	Max. Resolution	1280 x 1024	1280 x 1024	1024 x 768	800 x 600
	Max. Colors	16.7 M	16.7 M	262 K	262 K
	Luminance (cd/m²)	300	300	350	350
	Viewing Angle (H/V°)	160/160	160/160	120/100	140/120
	Backlight MTBF (hrs)	50,000	50,000	50,000	50,000
Touchscreen	Resistive	Resistive	Resistive	Resistive	
Flash Memory	N/A	N/A	N/A	N/A	
HDD	1 x Internal 2.5" PATA (optional)	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" SATA (optional)	
Network (LAN)	10/100/1000Base-T x 2	10/100/1000Base-T x 2	TPC-1570H-P2AE/C1AE 10/100Base-T x 1 10/100/1000Base-T x 1 TPC-1570H-B1AE 10/100Base-T x 2	TPC-1270H-P2BE 10/100Base-T x 1 10/100/1000Base-T x 1 TPC-1270H-C1BE 10/100Base-T x 2	
I/O ports	RS-232 x 3 USB x 4 KB x 1, Mouse x 1 VGA x 1 Audio (Mic-in x 1, Line-in x 1, Line-out x 1)	RS-232 x 3 USB x 4 KB x 1, Mouse x 1 VGA x 1 Audio (Mic-in x 1, Line-in x 1, Line-out x 1)	Serial Port x 3 (RS-232 x 2 and RS-232/485/422 x 1) Parallel Port x 1 VGA x 1, USB x 2 Audio (MIC-in x 1, Line-in x 1, Line-out x 1) PS/2 x 1	Serial Port x 4 (RS-232 x 3 and RS-232/485/422 x 1) VGA x 1, USB x 4 Audio (MIC-in x 1, Line-out x 1)	
CompactFlash Slot	Type II x 1	Type II x 1	Type II x 1	Type II x 1	
PCMCIA Slot	N/A	N/A	Type II x 1	N/A	
Expansion Slot	N/A	N/A	N/A	PCI-104 x 1	
Power Input Voltage	18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	
Dimension(WxHxD)(mm)	414 x 347.5 x 93 mm (16.3" x 13.68" x 3.66")	414 x 347.5 x 93 mm (16.3" x 13.68" x 3.66")	383 x 307 x 64.5 mm (15.08" x 12.09" x 2.54")	311 x 237 x 52.3 mm (12.24" x 9.33" x 2.06")	
Weight (Net/Gross)	8 kg (17.64 lbs)	8 kg (17.64 lbs)	5 kg (11.02 lbs)	3.3 kg (7.28 lbs)	
Front Cover	Die-Cast Aluminum Alloy	Die-Cast Aluminum Alloy	Al-Mg	Al-Mg	
Operating Temperature	0 ~ 45° C (32 ~ 113° F)	0 ~ 45° C (32 ~ 113° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	
Ingress Protection (Front Panel)	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	
Certifications	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	
Operating System	Windows XP Windows XP Embedded Windows CE 5.0/6.0	Windows XP Windows XP Embedded Windows CE 5.0/6.0 Linux	Windows XP Windows XP Embedded Windows CE 5.0/6.0 Linux	Windows XP Windows XP Embedded Windows CE 5.0/6.0 Linux	

Ordering Information

TPC-1780H-P3AE	17" SXGA TFT LCD with Intel Core 2 duo 1.5 GHz CPU, 2 GB DDR2 SDRAM
TPC-1770H-C2BE	17" SXGA TFT LCD with Intel Celeron M 1 GHz CPU, 1 GB DDR2 SDRAM
TPC-1570H-P2AE	15" XGA TFT LCD with Intel Pentium M 1.4 GHz CPU, 1 GB DDR SDRAM
TPC-1570H-C1AE	15" XGA TFT LCD with Intel Celeron M 1 GHz CPU, 512 MB DDR SDRAM
TPC-1570H-B1AE	15" XGA TFT LCD with Intel Celeron M 600 MHz CPU, 512 MB DDR SDRAM
TPC-1270H-P2BE	12.1" SVGA TFT LCD with Intel Pentium M 1.4 GHz CPU, 1 GB DDR2 SDRAM
TPC-1270H-C1BE	12.1" SVGA TFT LCD with Intel Celeron M 1 GHz CPU, 512 MB DDR2 SDRAM
TPC-1261H-A1BE	12.1" SVGA TFT LCD with AMD LX800 500 MHz CPU, 256 MB DDR SDRAM
TPC-1550H-N2AE	15" XGA Touch Panel PC, Atom N270 1.6GHz, 1GB
TPC-1551H-Z2AE	15" XGA Touch Panel PC, Atom 1.33GHz, 1GB
TPC-1250H-N2AE	12.1" SVGA Touch Panel PC, Atom N270 1.6GHz, 1GB
TPC-1251H-Z2AE	12.1" SVGA Touch Panel PC, Atom 1.33GHz, 1GB
TPC-650H-N2AE	5.7" VGA Touch Panel PC, Atom N270 1.6GHz, 1GB
TPC-651H-Z2AE	5.7" VGA Touch Panel PC, Atom 1.33GHz, 1GB
TPC-66SN-E2AE	5.7" STN LCD Intel Xscale CPU with WinCE 5.0
TPC-66T-E2BE	5.7" QVGA TFT LCD with Intel PXA270 312 MHz CPU, 64 MB SDRAM, WinCE 5.0
TPC-30T-E2AE	3.5" QVGA TFT LCD with Intel PXA270 312 MHz CPU, 64 MB SDRAM, WinCE 5.0
TPC-32T-E2AE	3.5" QVGA TFT LCD with Intel PXA270 312 MHz CPU, 64 MB SDRAM, WinCE 5.0 with CAN-Bus/CANopen



TPC-1551H/1550H	TPC-1251H/1250H	TPC-651H/650H	TPC-66SN	TPC-66T	TPC-30T/32T
1551H: Intel Atom Z520 1.33 GHz 1550H: Intel Atom N270 1.6 GHz	1251H: Intel Atom Z520 1.33 GHz 1250H: Intel Atom N270 1.6 GHz	651H: Intel Atom Z520 1.33 GHz 650H: Intel Atom N270 1.6 GHz	Intel PXA270 416 MHz	Intel PXA270 312 MHz	Intel PXA270 312 MHz
1 GB DDR2 SDRAM	1 GB DDR2 SDRAM	1 GB DDR2 SDRAM	64 MB SDRAM on board	64 MB SDRAM on board	64 MB SDRAM on board
XGA TFT LCD	SVGA TFT LCD	VGA TFT LCD	QVGA CSTN LCD	QVGA TFT LCD	QVGA TFT LCD
15"	12.1"	5.7"	5.7"	5.7"	3.5"
1024 x 768	800 x 600	640 x 480	320 x 240	320 x 240	320 x 240
262 K	262 K	262 K	64 K	64 K	64 K
350	420	700	400	300	200
160/140	160/140	160/140	100/55	140/120	120/110
50,000	50,000	50,000	60,000	30,000	30,000
Resistive	Resistive	Resistive	Resistive	Resistive	Resistive
N/A	N/A	N/A	64 MB on board	64 MB on board	32 MB on board
1551H-1 x Internal 2.5" SATA(optional)	1251H-1 x Internal 2.5" SATA(optional)	651H-1 x Internal 2.5" SATA(optional)	N/A	N/A	N/A
1551H: 10/100/1000Base-T x 2 1550H: 10/100/1000Base-T x 1	1251H: 10/100/1000Base-T x 2 1250H: 10/100/1000Base-T x 1	651H: 10/100/1000Base-T x 2 650H: 10/100/1000Base-T x 1	10/100Base-T x 1	10/100Base-T x 1	10/100Base-T x 1
1551H: RS-232 x 1, RS-422/485 x 1, USB 2.0 x 2 1550H: RS-232 x 2, USB 2.0 x 2, PS/2 x 1	1251H: RS-232 x 1, RS-422/485 x 1, USB 2.0 x 2 1250H: RS-232 x 2, USB 2.0 x 2 PS/2 x 1	651H: RS-232 x 1, RS-422/485 x 1, USB 2.0 x 2 650H: RS-232 x 2, USB 2.0 x 2 PS/2 x 1	Full RS-232 x 2, 4-pin RS-232/485 x 1, USB x 2 (Host x 1, Client x 1)	Serial Port x 3 (Full RS-232 x 2 and RS-485) USB x 1 (Host)	USB x 1 (Host) TPC-30T: RS-232/485 x 1 TPC-32T: CAN-Bus/RS-232 x 1 SD x 1
Type II x 1	Type II x 1	Type II x 1	Type II x 1	Type II x 1	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
18 ~ 28 Vdc	18 ~ 28 Vdc	18 ~ 28 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	8 ~ 28 Vdc
383 x 307 x 58.1 mm (15.08" x 12.09" x 2.29")	311 x 237 x 54 mm (12.24" x 9.33" x 2.12")	195 x 148 x 58 mm (7.68" x 5.83" x 2.28")	195 x 148 x 44.4 (7.68" x 5.83" x 1.75")	195 x 148 x 44.4 (7.68" x 5.83" x 1.75")	120.8 x 85.5 x 26.5 (4.76" x 3.37" x 1.04")
3 kg (5.51 lb)	2.5 kg (5.51 lb)	1.43 kg (3.15 lb)	0.8 kg (1.76 lbs)	0.8 kg (1.76 lbs)	0.25 kg (0.55 lbs)
Die-Cast Aluminum Alloy	Die-Cast Aluminum Alloy	ABS+PC	ABS	ABS	ABS
1551H: -20 ~ 60° C (-4 ~ 140° F) 1550H: 0 ~ 45° C (32 ~ 113° F)	1251H: -20 ~ 60° C (-4 ~ 140° F) 1250H: 0 ~ 45° C (32 ~ 113° F)	651H: -20 ~ 60° C (-4 ~ 140° F) 650H: 0 ~ 45° C (32 ~ 113° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
Windows XP/XPE WES7 Windows CE 6.0 Linux	Windows XP/XPE WES7 Windows CE 6.0 Linux	Windows XP/XPE WES7 Windows CE 6.0 Linux	Windows CE 5.0/6.0	Windows CE 5.0/6.0	Windows CE 5.0/6.0 Linux

Ordering Information

TPC-1570H-SMKE	TPC-1570H Desktop Stand Kit
TPC-1570H-WMKE	TPC-1570H Wall Mount Kit
TPC-1270H-SMKE	TPC-1270H Desktop Stand Kit
TPC-1270H-WMKE	TPC-1270H Wall Mount Kit
TPC-1250H-SMKE	TPC-1250H/1251H Desktop Stand
TPC-1250H-WMKE	TPC-1250H/1251H Wallmount Kit
TPC-1270H-EPKE	TPC Series PC/PCI-104 Extension Kit (bracket only)

Accessories



Industrial Monitor Overview

Aiming to be a leader in the display market, Advantech provides a full-range of industrial monitors for versatile applications. The Advantech FPM series ranges in size from 6", 12", 15", 17" to 19". Their industrial-grade high-brightness LCD and anti-glare design provide a long-lasting and reliable information interface. The FPM series supports panel mounting, VESA and desktop mounting to fit various kinds of applications.

Application-oriented Design



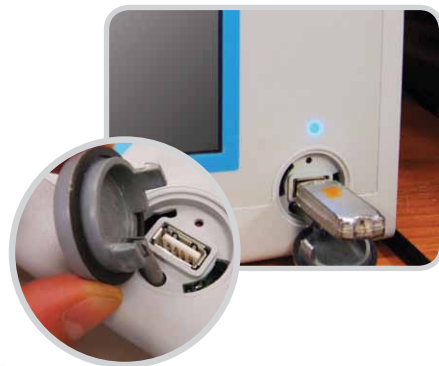
DC adapter with plug bracket makes the machine more reliable in critical environments

Industrial 24V_{DC} power input is compatible with factory installation

A combination of touchscreen interfaces with lockable connectors is provided, allowing secure attachments for a variety of uses



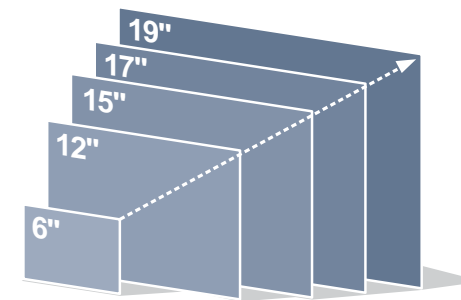
Front-accessible USB port provides a convenient & practical solution



Rear adjustable-OSD design provides a flat & easy-maintain screen



Complete Product Line



- Complete selection of sizes from 6" to 19"
- For diverse application demands

NEMA4/IP65 Compliant



The IP65 rating means that the monitor is protected from dust and jets of water from all directions.

Industrial-Proven Design



Has a tempered glass screen, which is nearly 4X stronger than annealed glass. When struck by an outside force, a tempered glass screen won't shatter into pieces, making it very easy to clean in the event of breakage



Robust design with stainless steel chassis and aluminum front panel

Versatile Mounting Methods for Different Application Environments



Panel Mount



Mounting Kit for Desktop



Swing Arm



Rack Mount



Wallmount



Model	FPM-5191G	FPM-5171G	FPM-5151G	FPM-3191G
LCD Display	Size (diagonal)	19"	17"	15"
	Resolution	1280 x 1024	1280 x 1024	1024 x 768
	Colors	16.7M	16.7 M	16.2 M
	Viewing Angle (H/V°)	178 x 178	170, 160	160, 130
	Luminance (cd/m2)	300	380	250
	Backlight Life (hrs)	50,000	50000	50000
	Contrast Ratio	1300:1	1000 : 1	700 : 1
Direct VGA Input	Yes	Yes	Yes	Yes
DVI Input	Yes	Yes	Yes	Yes
Touchscreen (optional)	Resistive	Resistive	Resistive	Resistive
OSD (onscreen display)	Yes	Yes	Yes	Yes
Touchscreen Sensor	AMT	AMT	AMT	ELO
Inverter	TDK	TDK	TDK	TDK
Power Adapter (voltage, AC)	100~240V (optional)	100-240 V (optional)	100-240 V (optional)	100-240 V (optional)
DC Power Input (voltage)	10~30V	10-30 V	10-30 V	N/A
Front Panel Ingress Protection	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Operating Temperature	0~50 C(32 ~ 122 F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature	-10 ~ 60 (-4 ~ 140 F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications	BSMI, CCC, CD, FCC, UL	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC
Dimensions (W x H x D)	481.9 x 355.9 x 58.5 mm (18.9" x 14" x 2.3")	422 x 310 x 86 mm (16.6" x 12.2" x 3.4")	383 x 307 x 48 mm (15" x 12" x 1.89")	482 x 399.2 x 66 mm (18.98" x 15.72" x 2.6")

Ordering Information

FPM-5191G-X0AE 19" SXGA Industrial Monitor with Direct-VGA and DVI-D Port
FPM-5191G-R3AE 19" SXGA Industrial Monitor with Resistive Touchscreen, Direct-VGA and DVI-D Port (Combo RS-232 & USB T/S)
FPM-5171G-X0AE 17" SXGA Industrial Monitor with Direct-VGA and DVI-D Port
FPM-5171G-R3AE 17" SXGA Industrial Monitor with Resistive Touchscreen, Direct-VGA and DVI-D Port (Combo RS-232 & USB T/S)
FPM-5151G-X0AE 15" XGA Industrial Monitor with Direct-VGA and DVI-D Port
FPM-5151G-R3AE 15" XGA Industrial Monitor with Resistive Touchscreen, Direct-VGA and DVI-D Port (Combo RS-232 & USB T/S)
FPM-3191G-XCE 19" SXGA Industrial Monitor with Rack-Mount Bezel, Direct-VGA and DVI-D Port
FPM-3191G-RCE 19" SXGA Industrial Monitor with Resistive Touchscreen, Rack-Mount Bezel, Direct-VGA and DVI-D Port (Combo RS-232 & USB TS)
FPM-3171G-XCE 17" SXGA Industrial Monitor with Rack-Mount Bezel, Direct-VGA and DVI-D Port
FPM-3171G-RCE 17" SXGA Industrial Monitor with Resistive Touchscreen, Rack-Mount Bezel, Direct-VGA and DVI-D Port (Combo RS-232 & USB TS)
FPM-3151G-R3AE 15" XGA Industrial Monitor with Resistive Touchscreen, Direct - VGA and DVI-D Ports (Combo RS-232 & USB TS),Wide Operating Temperature
FPM-3151G-X0AE 15" XGA WT Ind. Monitor, Direct - VGA and DVI-D Ports , Wide Operating Temperature
FPM-3121G-R3AE 12" SVGA Industrial Monitor with Resistive Touchscreen, Direct - VGA and DVI-D Ports (Combo RS-232 & USB TS), Wide Operating Temperature
FPM-3121G-X0AE 12" SVGA Industrial Monitor, Direct - VGA and DVI-D Ports , Wide Operating Temperature
FPM-3060G-XAE 6.5" VGA Industrial Monitor with Direct-VGA Port
FPM-3060G-RAE 6.5" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port (RS-232 TS)
FPM-3060G-UAE 6.5" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port (USB TS)



Model	FPM-3171G	FPM-2150G	FPM-3151G	FPM-3121G	FPM-3060G
Size (diagonal)	17"	15"	15"	12.1"	6.5"
Resolution	1280 x 1024	1024 x 768	1024 x 768	800 x 600	640 x 480
Colors	16.2 M	16.2 M	16.2 M	262 k	262 k
Viewing Angle (H/V°)	170, 160	140, 125	160, 140	160,140	140, 120
Luminance (cd/m2)	380	250	350	450	300
Backlight Life (hrs)	50000	50,000	50,000	50,000	50,000
Contrast Ratio	1000 : 1	500 : 1	700 : 1	700:1	500 : 1
Direct VGA Input	Yes	Yes	Yes	Yes	Yes
DVI Input	Yes	-	Yes	Yes	-
Touchscreen (optional)	Resistive	Resistive	Resistive	Resistive	Resistive
OSD (onscreen display)	Yes	Yes	Yes	Yes	Yes
Touchscreen Sensor	ELO	AMT	AMT	AMT	AMT
Inverter	TDK	TDK	TDK	TDK	TDK
Power Adapter (voltage, AC)	100-240 V (optional)	100-240 V	100-240 V	100~240V	100-240 V
DC Power Input (voltage)	N/A	N/A	24V	24V	N/A
Front Panel Ingress Protection	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA/IP65	NEMA4/IP65
Operating Temperature	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-30 ~ 80° C (-22 ~ 176° F)	-30 ~ 80° C (-22 ~ 176° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC
Dimensions (W x H x D)	482 x 354.8 x 63.5 mm (18.98" x 13.97" x 2.5")	383 x 307 x 48 mm (15" x 12" x 1.89")	422 x 310 x 70 mm (16.61" x 12.2" x 2.76")	331.2 x 224 x 60.5 mm (12.28" x 9.61" x 2.36")	220 x 150 x 46 mm (8.7" x 5.9" x 1.8")

Ordering Information

FPM-3151G-RMKE 19" industrial rack mounting Kit for FPM-3151G
FPM-2150G-RMKE 19" industrial rack mounting kit for FPM-2150G
FPM-2150G-SMKE Stand kit for FPM-2150G
FPM-3060G-VMKE VESA-Mount kit for FPM-3060G
FPM-5151G-SMKE Stand kit for FPM-5151G
I PPC-6152A-RMKE 19" industrial rack mounting kit for I PPC-6152A/F or FPM-5151G
I PPC-6172A-RMKE 19" industrial rack mounting kit for I PPC-6172A/F or FPM-5171G
PWR-246E Industrial DC to DC Converter with 24 ~ 48VDC Power Input
1757002742 57W 90-264V AC Adapter for FPM-5151G, FPM-5171G and FPM-5191G
1702002600 US Plug Power Cable 1.8M for 1757002742
1702002605 EU Plug Power Cable 1.8M for 1757002742
1702031801 UK Plug Power Cable 1.8M for 1757002742
1702031836 China/Australia Plug Power Cable 1.8M for 1757002742

Accessories

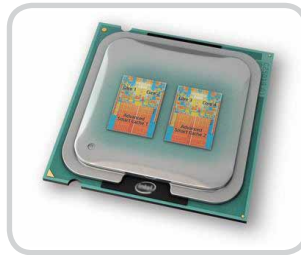
	FPM-3151G-RMKE 19" rack mounting kit for FPM-3151G		FPM-2150G-RMKE 19" rack mounting kit for FPM-2150G series		FPM-2150G-SMKE Stand / desk / wall mounting kit for FPM-2150G, FPM-3150G, FPM-3120G
	PWR-246E Industrial DC to DC converter w/24-48VDC power input		FPM-3060G-VMKE VESA mounting kit for FPM-3060G series		FPM-5151G-SMKE Stand Kit for FPM-5151G

Industrial Panel PC Overview

The robust design and compact size of the IPPC series make it a good fit for almost any industrial application. Constructed with heavy-duty aluminum or stainless steel front panel and tempered glass, the rugged design of IPPCs stand up to the toughest industrial operating environments. Equipped with powerful Intel Pentium M / Celeron M processors, IPPC's provide high performance with excellent expansion capabilities.

IPPC-6000 Series

High Performance & Compact Design



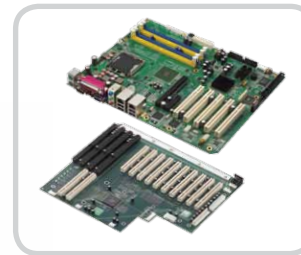
High performance with Core 2 Duo/ Core 2 Quad CPU support



Gull-wing design, easy for installation & maintenance

IPPC-4000 Series

Rich Expansion & 4U Rack Mount Design



Rich expansion slots and Industrial ATX motherboard / passive backplane



4U rack chassis and keyboard/ mouse pad drawer

IPPC-7000 Series

Membrane Keypad Control & Rack Mount Design



Detachable side open front panel



Membrane function/number keypads and mouse with front USB access

Complete Product Line for IPPC



IPPC-6152A/F, IPPC-6172A/F

15", 17" LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 x PCI Slots (A model)
15", 17" LCD Celeron M Fanless Industrial Panel PC with 2 x PCI Slots (F model)

- 15" XGA, 17" SXGA TFT LCD with touchscreen
- Intel Core 2 Quad Processor up to 3.0 GHz/ Core 2 Duo Processor up to 3.3 GHz (A model)
On board Intel Celeron M ULV 1 GHz with 512KB L2 (F model)
- System memory supports dual channel DDR3 SDRAM up to 4 GB (A model)
Configured system memory dual channel 1GB DDR2 SDRAM (F model)
- Offers two expansion slots for PCI add-on card
- Support one CompactFlash Slot (F model)
- Supports two Gigabit Lan (A model)
- Support vPro and AMT5.0 (A model)
- Front USB access and system reset function
- Flat-sealed front panel
- Control Box with gull-wing design for easy installation and maintenance
- Front panel is NEMA4/IP65 compliant



IPPC-6192A

19" SXGA TFT LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 x PCI Slots

- 19" SXGA TFT LCD with touchscreen
- Intel Core 2 Quad Processor up to 3.0 GHz/ Core 2 Duo Processor up to 3.3 GHz
- System memory supports dual channel DDR3 SDRAM up to 4 GB
- Offers two expansion slots for PCI add-on card
- Supports two Gigabit Lan
- Support vPro and AMT5.0
- Front USB access and system reset function
- Flat-sealed front panel
- Control Box with gull-wing design for easy installation and maintenance
- Front panel is NEMA4/IP65 compliant



IPPC-7157A, IPPC-7158B

15" XGA TFT LCD Industrial Panel PC with 7 x PCI/PCIe Slots and Membrane Keypad (IPPC-7157A)
15" XGA TFT LCD Industrial Panel PC with 14 x ISA/PCI Slots and Membrane Keypad (IPPC-7158B)

- 15" XGA TFT LCD with touchscreen (optional) provides vivid, sharp images
- ATX Motherboard supports Pentium 4 up to 2.8GHz/Celeron D up to 2.5 GHz (IPPC-7157A)
- ATX Mother board offers 2 PCIe and 5 PCI Slots (IPPC-7157A)
Passive Backplane offers 2 ISA, 10 PCI and 2 PICMG Slots (IPPC-7158B)
- Detachable side-open front panel makes maintenance fast & easy
- Programmable membrane function keys for varied application access
- Heavy-duty design with anti-rust chassis and NEMA4/IP65 aluminum front panel
- One front-accessible USB 2.0 port



IPPC-4000D, IPPC-4001D, IPPC-4008D

5.7" LCD 4U Industrial Panel PC with 7 x ISA/PCI Slots (IPPC-4000D)
5.7" LCD 4U Industrial Panel PC with 14 x ISA/PCI Slots and Keyboard Drawer (IPPC-4001D)
5.7" LCD 4U Half-sized Industrial Panel PC with 8 x PCI Slots and Keyboard Drawer (IPPC-4008D)

- 5.7" VGA TFT LCD with 5 Function keys and 5 Cursor Keys
- 4U rackmount chassis with Core 2 Duo/Pentium 4 ATX Industrial Motherboard (IPPC-4000D)
4U rackmount chassis with Passive Backplane and Keyboard Drawer (IPPC-4001D)
4U rackmount half-sized chassis with Passive Backplane and Keyboard Drawer (IPPC-4008D)
- Offers 2 x ISA and 5 PCI Slots / 2 x PCIe and 5 PCI Slots (IPPC-4000D)
Offers 2 x ISA, 10 x PCI and 2 x PICMG Slots (IPPC-4001D)
Offers 8 x PCI Slots (IPPC-4008D)
- Shock-resistant disk drive bay design holds up to three / four 5.25" drives
- Front accessible USB 2.0 & PS/2 port for easy data transferring
- Dual front-accessible filtered cooling fans provide optimal, streamlined airflow
- Front LEDs indicate system health, such as power status, fan operation, in chassis temperature and HDD activity
- Lockable front door prevents unauthorized access
- Supports 300 W single PS/2 and redundant ATX power supplies

Selection Guide and Ordering Information



Model Name	IPPC-6192A	IPPC-6172A	IPPC-6152A	IPPC-6172F	IPPC-6152F	
LCD Display	Type	SXGA TFT LCD	SXGA TFT LCD	XGA TFT LCD	SXGA TFT LCD	XGA TFT LCD
	Size	19"	17"	15"	17"	15"
	Max. Resolution	1280 x 1024	1280 x 1024	1024 x 768	1280 x 1024	1024 x 768
	Max. Colors	16.7M	16.7 M (RGB 6-bit + FRC data)	16.2 M (RGB 6-bit + FRC data)	16.2 M (RGB 6-bit + FRC data)	16.2 M (RGB 6-bit + FRC data)
	Viewing Angle (H, V°)	160/160	170, 160	160, 130	160, 160	140, 120
	Luminance (cd/m2)	300	380	250	300	250
	Backlight Life (hrs)	50,000	50,000	50,000	50,000	50,000
	Contrast Ratio	1300:1	1000 : 1	700 : 1	800 : 1	500 : 1
CPU	Socket LGA775 Core 2 Quad / Core 2 Duo up to 3GHz	Socket LGA775 Core 2 Quad / Core 2 Duo up to 3GHz	Socket LGA775 Core 2 Quad / Core 2 Duo up to 3GHz	On board Celeron M 1GHz/512KB L2	On board Celeron M 1GHz/512KB L2	
Memory	Up to 4GB DDR3 SDRAM 1333MHz/1066MHz	Up to 4GB DDR3 SDRAM 1333MHz/1066MHz	Up to 4GB DDR3 SDRAM 1333MHz/1066MHz	Configured 1GB DDR2 SDRAM	Configured 1GB DDR2 SDRAM	
IEEE 1394 (Firewire) Ports	-	-	-	-	-	
Serial Ports	2 x RS-232, 1 x RS232C/422/485	2 x RS-232, 1 x RS232C/422/485	2 x RS-232, 1 x RS232C/422/485	1 x RS-232	1 x RS-232	
Parallel Ports	-	-	-	One	One	
Video Ports	VGA	VGA	VGA	VGA	VGA	
USB Ports	5 x USB2.0 (one at front)	5 x USB2.0 (one at front)	5 x USB2.0 (one at front)	5 x USB 2.0 (one at front)	5 x USB 2.0 (one at front)	
Network (LAN)	2 x 10/100/1000Base-T	2 x 10/100/1000Base-T	2 x 10/100/1000Base-T	10/100Base-T x1 10/100/1000Base-T x 1	10/100Base-T x1 10/100/1000Base-T x 1	
DVD-ROM Drive	SATA Slim Type x 2	SATA Slim Type x 2	SATA Slim Type x 2	Slim Type x 1	Slim Type x 1	
Hard Disk Bay	2 x 2.5" SATA	2 x 2.5" SATA	2 x 2.5" SATA	1 x 2.5" SATA	1 x 2.5" SATA	
PCMCIA Slot	-	-	-	-	-	
Expansion Slots	2 x PCI	2 x PCI	2 x PCI	2 x PCI	2 x PCI	
Touchscreen Type (Optional)	Resistive	Resistive	Resistive	Resistive	Resistive	
Power Supply (AC)	350W	350W	350W	180 W	180 W	
Operating Temperature	0~50 C (32 ~ 122 F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	
Storage Temperature	-20~60 C (-4 ~ 140 F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	
Certifications	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	
Dimensions (W x H x D)	481.92 x 355.87 x 146mm (18.97" x 14.01" x 5.75")	481.9 x 355.9 x 142.7 mm (18.97" x 14.01" x 5.62")	449.92 x 315.63 x 142.7 mm (17.71" x 12.43" x 5.62")	481.92 x 355.87 x 146 mm (18.97" x 14.01" x 5.75")	449.92 x 315.63 x 141.7 mm (17.73" x 12.44" x 5.58")	

Ordering Information

IPPC-4000D-A0AE 5.7" VGA TFT LCD Pentium 3 4U 19" Rack Industrial Panel PC with 5 PCI and 2 ISA expansion slots
IPPC-4000D-A2AE 5.7" VGA TFT LCD C2Q/C2D 4U 19" Rack Industrial Panel PC with 5 PCI and 2 PCIe expansion slots
IPPC-4001D-B0AE 5.7" VGA TFT LCD 4U 19" Rack Industrial Panel PC with 2 PICMG, 10 PCI and 2 ISA Slots and keyboard/mouse drawer
IPPC-4008D-B0AE 5.7" VGA TFT LCD 4U 19" half-sized Rack Industrial Panel PC with 8 PCI slots and keyboard/mouse drawer
IPPC-7157A-X1AE 15" VGA TFT LCD Pentium D Rack Industrial Panel PC with 5 PCI and 2 PCIe slots and membrane keypad/mouse
IPPC-7157A-R1AE 15" VGA TFT LCD Pentium D Rack Industrial Panel PC with 5 PCI and 2 PCIe slots and membrane keypad/mouse with TS
IPPC-7158B-X1AE 15" VGA TFT LCD Rack Industrial Panel PC with 10 PCI, 2 PCI/ISA and 2 ISA and membrane keypad/mouse
IPPC-7158B-R1AE 15" VGA TFT LCD Rack Industrial Panel PC with 10 PCI, 2 PCI/ISA and 2 ISA and membrane keypad/mouse with TS
1700060202 Y-cable for PS/2 Mouse & Keyboard for CPU Cards
1702002600 US Plug Power Cable 1.8M for IPPC-4000 series and IPPC-7000 series
1702002605 EU Plug Power Cable 1.8M for IPPC-4000 series and IPPC-7000 series
1702031801 UK Plug Power Cable 1.8M for IPPC-4000 series and IPPC-7000 series
1702031836 China/Australia Plug Power Cable 1.8M for IPPC-4000 series and IPPC-7000 series
1702002600 US Plug Power Cable 1.8M for IPPC-6000 series and IPPC-9000 series AC power model
1702002605 EU Plug Power Cable 1.8M for IPPC-6000 series and IPPC-9000 series AC power model
1702031801 UK Plug Power Cable 1.8M for IPPC-6000 series and IPPC-9000 series AC power model
1702031836 China/Australia Plug Power Cable 1.8M for IPPC-6000 series and IPPC-9000 series AC power model



Model Name	IPPC-9171G	IPPC-9151G
Type	SXGA TFT LCD	XGA TFT LCD
Size	17"	15"
Max. Resolution	1280 x 1024	1024 x 768
Max. Colors	16.2 M	262K,144K
Viewing Angle (H, V°)	160, 160	120, 100
Luminance (cd/m2)	300	350
Backlight Life (hrs)	50,000	50,000
Contrast Ratio	800 : 1	400:1
CPU	Socket 478 Pentium 4 (up to 2.8 GHz)/ Celeron 2.4 GHz	Socket 478 Pentium 4 (up to 2.8 GHz)/ Celeron 2.4 GHz
Memory	Up to 2 GB DDR SDRAM (DDR-DIMM 184 pin)	Up to 2 GB DDR SDRAM (DDR-DIMM 184 pin)
IEEE 1394 (Firewire) Ports	Two	Two
Serial Ports	1 x RS-232, 1 x RS-232C/422/485	1 x RS-232, 1 x RS-232C/422/485
Parallel Ports	One	One
Video Ports	VGA/S-Video	VGA/S-Video
USB Ports	5 x USB 2.0 (one at front)	5 x USB 2.0 (one at front)
Network (LAN)	10/100Base-T	10/100Base-T
DVD-ROM Drive	Slim Type x 1	Slim Type x 1
Hard Disk Bay	1 x 3.5" SATA	1 x 3.5" SATA
PCMCIA Slot	Type II x 2	Type II x 2
Expansion Slots	2 x PCI	2 x PCI
Touchscreen Type (Optional)	Resistive	Resistive
Power Supply (AC)	180 W	180 W
Operating Temperature	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
Dimensions (W x H x D)	482 x 354.8 x 162 mm (18.97 x 13.96 x 6.37)	482 x 354.8 x 162 mm (18.97 x 13.96 x 6.37)

Ordering Information

IPPC-6192A-R1AE 19" SXGA TFT LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-6172A-R1AE 17" SXGA TFT LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-6152A-R1AE 15" XGA TFT LCD Core 2 Quad/Core 2 Duo Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-6172F-R0AE 17" SXGA TFT LCD Celeron M Fanless Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-6152F-R0AE 15" XGA TFT LCD Celeron M Fanless Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-9171G-RAE 17" SXGA TFT LCD Pentium 4 Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-9171G-XAE 17" SXGA TFT LCD Pentium 4 Industrial Panel PC with 2 PCI Slots
IPPC-9151G-RAE 15" XGA TFT LCD Pentium 4 Industrial Panel PC with 2 PCI Slots with resistive touchscreen
IPPC-9151G-XAE 15" XGA TFT LCD Pentium 4 Industrial Panel PC with 2 PCI Slots
IPPC-6172A-RMKE 19" industrial rack mounting kit for IPPC-6172A/F or FPM-5171G
IPPC-6152A-RMKE 19" industrial rack mounting kit for IPPC-6152A/F or FPM-5151G
IPPC-9151G-RMKE 19" industrial rack mounting kit for IPPC-9151G

Domain-Focused Platform Overview

These products are compact and heavy-duty with ultra rugged designs and industrial certifications, making them specially designed to meet needs across diverse industrial applications such as in the Marine, Military, and Food and Beverage markets.

IPPC-8151S for the Food and Beverage Industry

IP66 Certification to meet FDA Hygienic Requirements



All-around IP66 dustproof and waterproof with enclosure kit



316L stainless steel and Anti-corrosive and chemical resistant touchscreen

FPM Displays for Marine-based Applications

DNV Certification Ensures Reliability on the Seas



Sunlight readable, front OSD with dimming knob



IP65 certified front panel



Picture in picture



FPM Display for Oil and Gas Applications

Meets Hazardous Requirements with Class 1 Division 2 / ATEX Certification



FPM-8151H designed with robust anodizing coated aluminum front bezel and stainless rear cover



Selection Guide and Ordering Information



Model Name	FPM-3171S/3191S	FPM-8151H	IPPC-8151S	FPM-8192V	FPM-8232V	
Processor	-	-	Intel Celeron M 1.06GHz 1MB L2 on board	-	-	
OS	-	-	Windows XP	Windows 2000/XP/CE/Vista/Linux	Windows 2000/XP/CE/Vista/Linux	
Memory	-	-	1GB SO-DIMM DDR2 200pin 667MHz	-	-	
Storage	-	-	1 x CompactFlash Slot, 1 x SATA HDD interface (2.5" HDD bay)	-	-	
Display	Size/Type	17" SXGA TFT LCD with LED backlight and Resistive Touchscreen 19" SXGA TFT LCD with LED backlight and Resistive Touchscreen	15" XGA TFT LCD with LED backlight and Resistive Touchscreen	15" XGA TFT LCD with chemical resistance touch	19" SXGA Marine Grade Transflective LCD with resistive touch	23" UXGA Marine Grade Transflective LCD
	Max. Resolution	1280 x 1024	1024 x 768	1024 x 768	1280 x 1024	1600 x 1200
	Max. Colors	16.2 M	16.2 M	16.2 M	16.7M	16.7M
	Viewing Angle (degrees)	170/160 178/178	160/140	120/100	140/135	170/170
Touchscreen	5-wire resistive with enhanced ITO film	5-wire resistive with enhanced ITO film	5-wire resistive touch	5-wire resistive touch	-	
Brightness Control	Front OSD control pad with dimming control knob	Front OSD control pad with dimming control knob	software control	Front OSD control pad with dimming control knob	Front OSD control pad with dimming control knob	
I/O Port	Video Port: VGA & DVI-D Touch Screen: USB & RS-232 (Combo)	Video Port: VGA & DVI-D Touch Screen: USB & RS-232 (Combo)	3 x RS-232 4 x USB 2.0 2 x PS2 (Keyboard, Mouse) 1 x VGA Port 1 x Parallel Port	VGA, DVI-D, Composite Video, S-Video	VGA, DVI-D, Composite Video, S-Video	
Keypad & Buttons	Buttons	-	-	-	-	
Expansion	-	-	1 x half-length PCI Slot	-	-	
Audio	Speaker	-	Stereo speaker	-	-	
	Microphone	-	3.5 mm microphone jack	-	-	
	Earphone	-	3.5 mm headset jack	-	-	
Wireless module	WLAN	-	-	-	-	
	Bluetooth	-	-	-	-	
	WAN	-	-	-	-	
Power	Battery	-	-	-	-	
	Battery Life	-	-	-	-	
	Adapter	DC Jack: external 57 W power adapter, with 100 ~ 240 VAC input and 12 VDC @ 4.75 A output (Optional)	DC Jack: external 57 W power adapter, with 100 ~ 240 VAC input and 12 VDC @ 4.75 A output (Optional)	Built-in 10 ~ 30 VDC, 18A, 85W	Built-in 45 W, 24 VDC, 2.5 A	"Built-in 80 W, 24 VDC, 3.3 A 100 ~ 240 VAC (Optional)"
Operating Temperature	0 ~ 50° C	-20 ~ 60° C	0 ~ 50° C	-10 ~ 55° C	-10 ~ 55° C	
Storage Temperature	-20 ~ 60° C	-30 ~ 80° C	-20 ~ 60° C	--40 ~ 70° C	-40 ~ 60° C	
IP Rating	Front panel is NEMA4/IP65 compliant	Front panel is NEMA4/IP65 compliant	"Front IP66 6-side IP66 with enclosure kit"	IP65 Front, IP54 rear cover	IP65 Front, IP54 rear cover	
Drop Rating	-	-	-	-	-	
Certificate	CE, FCC Class A, UL, CB, BSMI, CCC	CE, FCC Class A, UL, CB, BSMI, CCC	CE, FCC, CCC, CB, BSMI, UL	CCC, CE, FCC, DNV, IEC 60945, IACS-E10	CCC, CE, FCC, DNV, IEC 60945, IACS-E10	
Dimensions (L x W x H)	482 x 354.8 x 63.5 mm (18.98" x 13.97" x 2.5") 482 x 399.2 x 66 mm (18.98" x 15.72" x 2.6")	422 x 338 x 68 mm (16.61" x 13.31" x 2.68")	400.00 x 313.6 x 90.44 mm	483 x 444 x 75 mm	584 x 534 x 115.1 mm	
Weight	9.25 kg (20.39 lbs) / 10.65 kg (23.46 lbs)	7.73 kg (17.04 lbs)	12 Kg (26.45 lbs)	14.5 kg (31.96 lbs)	18 Kg (39.68 lbs)	

Ordering Information

FPM-8192V-X0AE	19" SXGA Transflective Marine Grade Monitor with Direct-VGA, S-Video and DVI Ports
FPM-8192V-R1AE	19" SXGA Transflective Marine Grade Monitor with Resistive Touchscreen
FPM-8232V-X0AE	23" UXGA Marine Grade Monitor with Direct-VGA, S-Video and DVI Ports
FPM-8151H-R3AE	15" XGA Industrial Monitor with Resistive Touchscreen
FPM-3171S-R3AE	17" SXGA Ind. Monitor w/Resistive TS (RS-232,USB)
FPM-3191S-R3AE	19" SXGA Ind. Monitor w/Resistive TS (RS-232,USB)
IPPC-8151S-R0AE	15" XGA TFT LCD Celeron® M Fanless Industrial Panel PC with Stainless Steel
IPPC-8151S-EMKE	IPPC-8151S enclosure mounting kit
IPPC-8151S-SMKE	IPPC-8151S Stand mounting kit
IPPC-8151S-IMKE	IPPC-8151S IP66 I/O Connector Kit

HMI Application Story Overview

Advantech's open HMI solutions are designed to fulfill the needs of mission-critical automation applications. Their rugged features and powerful computing technology deliver reliability and flexibility.



Point of Service Terminals in Gas Stations

IPPC-6152A - 15" XGA TFT LCD Intel Pentium 4/Celeron M Industrial Panel PC with 2 x PCI Slots

Our clients' existing Point of Sales terminals were breaking down frequently and they were looking to upgrade their machines so that they would perform more reliably in the demanding environment, and be able to operate around-the-clock, 24 hours a day, 7 days a week. The high temperatures, dust and chemical density of their environment was very demanding, but nevertheless they were looking to increase their minimum total Operating Life Cycle to at least 5 years. Furthermore, the Point of Sales terminals needed to be equipped with a variety of communication, Ethernet and USB ports to fulfill multiple equipment connectivity.

The IPPC-6152A was the best choice for this application. Not only can it easily link with the Transaction Server, its wide operating temperature range and fanless design allow it to operate all day long while maintaining system stability. Furthermore, each IPPC-6152A is equipped with ingress protection on the front panel, allowing it to withstand harsh environmental conditions.



Intelligent Transportation Solution for Traffic Light Displays

TPC-1261H - 12.1" SVGA TFT LCD Geode LX800 Touch Panel Computer

Creating traffic flow installations that ensure safe, efficient and environmentally friendly traffic and mobility is the day to day concern of many countries. An integrated approach is necessary to provide complete solutions and keep traffic moving: to combat traffic-jams, keep cities liveable and to streamline the flow between cities and motorways. Having detailed information about communication and traffic systems for urban road networks and road systems, plus the capability to connect together different systems, guarantees a successful integrated approach at all levels. In this solution, the TPC-1261H provides an intelligent control panel allowing users to easily monitor and maintain the traffic information system without complications.

The robust and fanless TPC-1261H is an excellent solution for this application. The Windows OS ensures our customers can easily integrate intelligent and value-added services, while the unique transfective solution makes operating in direct sunlight easier than ever before.



HMI in Modern Oil Drilling for the Petroleum Industry

IPPC-9151G - 15" XGA TFT LCD Pentium 4 Industrial Panel PC with 2 x PCI Slots

A mudlogger in the modern oil field gathers data and collects samples during the drilling process. This can be challenging, especially during drilling activity. Much of the equipment will require precise calibration or alignment by the mudlogger to provide accurate readings. Over 30 data parameters are needed to be recorded and controlled while withstanding the harsh conditions of a modern oil field. Furthermore, distributed control on the mudlogging device should be implemented by advanced control technologies, so as to improve the control precision of all technological parameters during the operation.

This is an extremely taxing application that requires a highly rugged, reliable and user-friendly HMI. The IPPC-9151G is able to withstand the intense electromagnetic interference, noise, vibration, and unstable currents present, and still provide dependable operation.



Automated Bakery Systems for the Food Industry

TPC-66SN - 5.7" QVGA CSTN LCD XScale PXA270 Touch Panel Computer

Because of the high temperatures inside bakeries, high operating temperatures are required for all of the automated hardware systems hardware. An intuitive and easy-to-learn user interface also needs to be implemented within the controlling software. Furthermore, to connect the machine to other devices within the branch a corresponding hardware and software interface is necessary. In this way, new or updated recipes can be remotely added to the system. Finally, a touch panel computer is implemented as the control device to provide information on each phase of the baking process.

The TPC-66SN was highly recommended for this application. Not only does it provide reliable use in the hot environment, it's easy to use interface made the entire process easier for the end user. The operator starts the process by choosing the program from the TPC-66SN, which lasts nearly twenty hours, starting at -20° C and ending at +30° C. During the process the TPC-66SN shows each phase as graphical information.

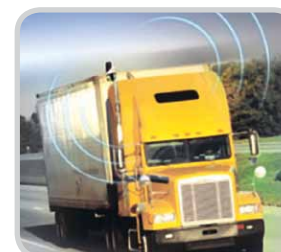


Automatic Fluid Filling System for Road Construction Vehicles

TPC-1570H - 15" XGA TFT LCD Intel Pentium M/Celeron M Touch Panel Computer

When designing this system, the customer wanted to have the capability for automatic and manual fueling. Additionally, they wanted to have warning displays and alarm messages, in the event of a leaky oil container or faulty hydraulic fluid filter. Each vehicle's fuel list needed to be adjusted through a password protected menu, and for each fluid, a pulse generator flow controller should be connected to the counter input of an Ethernet based I/O controller, which was connected to a Touch Panel Computer, which required a fanless and IP65 compliant design to withstand the harsh outdoor conditions.

As the main interface for this solution, the TPC-1570H was the perfect solution. Not only does it provide a rugged, reliable and fanless solution, it's easy to use interface made the complicated process much easier for the operator, who is responsible for the correct filling of oil, hydraulic fluid and water. The filling process starts after pressing the "start filling" key from the touchscreen menu and each individual fluid filling process can be viewed on the touchscreen monitor.



Wireless Fleet Management System with In-Vehicle Display

UNO-2053E - AMD GX2 UNO with 2 x LAN, 2 x COM and Audio

FPM-3060G - 6.4" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port

In order to provide an efficient management system for transportation applications, our customer was looking to implement advanced operating software that was easy to use whilst being powerful and functional. They required the ability to interact with maps onscreen, and view multiple vehicles onscreen at once. Furthermore, they wanted to have detailed reports for monthly distance tracking, average/top speeds, suburbs visited, driving times, waiting times and more. All of these functions needed to be established in their new eCarCenter.

The fleet management system consists of an FPM-3060G Industrial Monitor attached to an UNO-2053E, installed within the truck, and communicating with the eCarCenter in the central office. A satellite tracks a vehicle via GPS, sending this information to both the eCarCenter and the UNO-2053E, which displays all of the information on the industrial display within the truck itself. This way, the management team will always know the location of the truck, while the driver has access to updated road, safety and weather information displayed through the FPM-3060G.