# Heavy Industrial Panel PCs

IEI's rugged industrial panel PCs (PPC) all have reliable IP 65 aluminum front panels are suitable for the demands of harsh industrial environments. Powerful Intel® Core™ 2 Duo, Pentium® 4 and Pentium® M processor and AMD low power processor are integrated onto a wide range of feature-rich IEI embedded motherboards that drive the IEI industrial PPCs. Multi I/O and expansion capabilities enables you to interface your system with many external devices.

High Brightness | Expansion Slot | IP65/IP67 Compliant



## A. Industrial Aluminum Panel PCs

### Compact Size
Compact size with fanless design



### High Performance
Desktop Dual Core form factor with multiple expansion interfaces (PCI express/PCI / PCIe mini)



### Slim Type
Robust Fanless/Mobile Dual Core Aluminum PPCs

PPC-37xxA/N270




### Flexible Expansion
Embedded form factor with multiple expansion interfaces (PCMCIA/PCI/ mini PCI(mini PCIe)/Express Card)

PPC-5350GS/A311




| Product Line | | 27-series | 37-series | | | 51-series | | 53-series | |
|---|---|---|---|---|---|---|---|---|---|
| Platform | | AMD LX800 | Intel® 852GM | Intel® 945GME | Intel® 945GSE (ATOM) | Intel® 852GME | Intel® 945G | Intel® 855GME | Intel® 910GMLE |
| Expansion Slot | | 1 x Mini PCI (Wireless LAN Module) | N/A | 1 x PCIe mini (Wireless LAN Module) | 1 x PCIe mini (Wireless LAN Module) | 1 x PCI | 1 x PCI/1 x PCIe x4 (PCIe x1 signal) 1 x PCIe mini (Wireless LAN Module) | 1 x PCI 1 x PCMCIA 1 x mini PCI (Wireless LAN Module) | 1 x Express Card 1 x PCI 1 x PCIe mni (Wireless LAN Module) |
| Wireless | | 802.11 b/g (10.4"/12.1" Optional) | N/A | 802.11 b/g Optional | 802.11 b/g Optional | N/A | N/A | 802.11 b/g Optional | 802.11 b/g Optional |
| Models | | | | | | | | | |
| 6.5" | 640 x 480 | PPC-2706GS | | | | | | | |
| 8.4" | 800 x 600 | PPC-2708GHS | PPC-3708GHS/8522 | PPC-3708GHS/9452 | PPC-3708A/N270 Fanless | | | | |
| 10.4" | 800 x 600 | Fanless PPC-2710GHS | PPC-3710GHS/8522 | PPC-3710GHS/9452 | PPC-3710A/N270 Fanless | | | | |
| 12.1" | 1024 x 768 | Fanless PPC-2712GS | PPC-3712GXS/8522 | PPC-3712GXS/9452 | PPC-3712A/N270 Fanless PPC-3712BA/N270/890A Fanless PPC-3712BT/N270/709TX | | | | |
| 15" | 1024 x 768 | | | | | PPC-5150GS | PPC-5150A | PPC-5350GS/A300 | PPC-5350GS/A311 |
| 17" | 1280 x 1024 | | | | | PPC-5170GS | PPC-5170A | | |
| 19" | 1280 x 1024 | | | | | PPC-5190GS | PPC-5190A | | |

## B. Industrial Vertical Application Panel PCs

Fanless




**SAILOR-12A** 12.1" Full IP67 PPC




**UPC-12A** 12.1" UPS PPC




**WIDS-515A/517A** 15"/17" Wireless panel mount PPC

| Product Line | LCD Size | | Platform | Expansion Slot | Wireless | Models |
|---|---|---|---|---|---|---|
| SAILOR Series Full IP67 Panel PCs | 12.1" | 1024 x 768 | Intel® 945GSE (ATOM) | N/A | 802.11 b/g/n | SAILOR-12A |
| | | | | | | SAILOR-12ASR ☀ |
| UPC Series UPS Panel PCs | 12.1" | 1024 x 768 | Intel® 910GMLE | 1 x PCI/PCIex1 | 802.11 b/g/n | UPC-12A/910 |
| | | | | | | UPC-12AH/910 ☀ |
| | | | Intel® GM45 | | | UPC-12A/GM45 |
| | | | | | | UPC-12AH/GM45 ☀ |
| WIDS Series Wireless Panel Mount Panel PCs | 15" | 1024 x 768 | Intel® 945G | 1 x PCI/PCIex1 | 802.11 b/g/n | WIDS-515A |
| | 17" | 1280 x 1024 | | | | WIDS-517A |

Note: ☀ Sunlight Readable Version

# Feature 1. IP65/IP67 Waterproof Panel PCs

The IP (ingress protection) rating system is an international standard for classifying the degrees of protection from solid objects and liquids afforded by electrical equipment and enclosures. IEI waterproof laboratory was found to have the facilities, equipment and personnel needed to conduct the waterproof tests and fully witnessed by UL International. All of the industrial panel PC products designed to be rugged, ideal for any industrial environment where dust and drizzle is encountered.

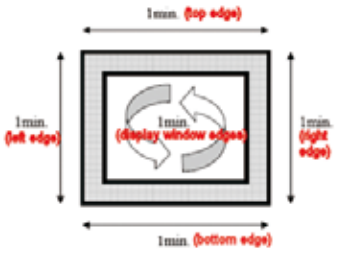
## IP65 Front Panel Compliant

**[ IP65 ] Dust-Tight**

**[ IP65 ] Protected against water sprayed from all directions**



*Strict Testing Procedures*




| | Water Flown Rate | Hose Diameter |
|---|---|---|
| IP64 | 10.0L /min | 0.5mm |
| IP65 | 12.5L/min | 6.3mm |
| IP66 | 100L/min | 12.5mm |
| UL50 | 246L/min | 25.4mm |




The distance from water hose to EUT is of 3M.

## Full IP67 Sealed

**[ IP67 ] Dust-Tight**

**[ IP67 ] Temporary immersion under water 1m**




*IP67 Waterproof M12 Connectors*



*Waterproof OSD Keypad*






*Testing Procedures*

Protected against the effects of temporary immersion between 15 cm and 1m. Duration of test 30 minutes

### NEMA Enclosure Rating and IP Rating

NEMA (National Electrical Manufacturers Association) sets the industry standards in the USA for electrical equipment enclosures. The European Standards are determined by the Institute of Petroleum and are sometimes referred to as Ingress Protection (IP) numbers. The standards are listed below.

- IP Classification – addresses the European market
- NEMA Classification – addresses the American market

**Table of NEMA Enclosure Rating and Comparison to IP Code**

| Enclosure Type Number IEC | Enclosure Classification Designation |
|---|---|
| 1 | IP 10 |
| 2 | IP 11 |
| 3 | IP 54 |
| 3R | IP 14 |
| 3S | IP 54 |
| 4 and 4X | IP 56 |
| 5 | IP 52 |
| 6 | IP 67 |
| 12 | IP 52 |
| 13 | IP 54 |

# Feature 2. Rigorous Vibration and Shock Testing

IEI rugged industrial Panel PCs follows the strict environmental testing procedures performed to ensure the panel PCcan withstand the relatively infrequent, non-repetitive shocks or transient vibration encountered in handling, transportation and service environments.





### 1. Vibration Testing Specifications

- **Testing Standard:** MIL-STD-810F 514.5C-1
- **Operating Random Vibration Mode**
  10-500 Hz, 60min/axis. ,Equivalent to Z:1.04 Grms X:0.204 Grms Y:0.74 Grms
- **Non-Operating Sine Mode**
  5~17Hz, 0.1" double amplitude displacement
  17~640Hz, 1.5G acceleration peak to

### 2. Shock Testing Specifications

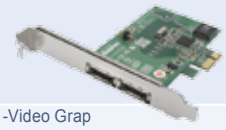
- **Testing Standard:** IEC68-2-27
- **Operating Shock Half-Sine Wave Shock**
  3G acceleration part to part (11ms)
- **Non-Operation Shock Half-Sine Wave Shock**
  10G acceleration part to part (11ms)



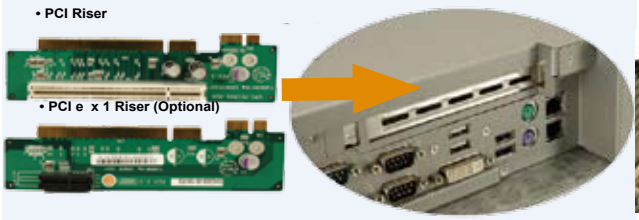
HDD with Anti-shock buffer rubber enhances protection performance.

# Feature 3. Versatile Expansion Interface

The industrial PPC with various kinds of expansion interfaces with the flexibility of functions enhancement and the ease of system integration.

| | 1. PCI Slot | 2. PCIe x 1 Slot | 3. PCIe mini | 4. PCMCIA | 5. Express Card |
|---|---|---|---|---|---|
| Various ExpansionInterface |  |  |  |  |  |
| Applications | -Capture card<br>-Wireless card<br>-Serial card | -Video Grap<br>-FireWire hics Card | -Wireless USB-3G broadband wireless-WiFi-GSM | -TV tuners<br>-WLAN/WWAN/Smart Card/SATA<br>-Bluetooth device<br>-Memory Card Adapter | -TV tuners<br>-WLAN/WWAN/Smart Card/SATA<br>-Bluetooth device<br>-Memory Card Adapter |
| Solution Models | PPC-51xxGS<br>PPC-51xxA<br>WIDS-51xA<br>PPC-5350GS/A300<br>PPC-5350GS/A311 | PPC-51xxA<br>WIDS-51xA | PPC-27xxGS<br>PPC-37xxGS/9452<br>PPC-37xxA/N270<br>PPC-5350GS/A311 | PPC-5350GS/A300 | PPC-5350/A311 |

### PCI/PCIe External Expansion Slot




### Internal PCIe mini Slot




### External Express Card Slot



# Feature 4. User Friendly Interface

**1. User-accessible CF**

PPC has a CF slot on the bottom panel that makes installing and replacing CF cards easy.



**2. Securing Your CF Card**

PPC has a CF slot on the bottom panel
A security door on the PPC protects the CF card from being stolen in public places.



**3. Lockable Power Cord**

Power plug lock keeps power cable securely in place.



**4. CMOS Reset button**

The CMOS reset button forces the BIOS to be reset to its default values for the following reasons:
---Fast BIOS updating
---Hard device conflicts slows down or disrupts system operation



Restoring default system settings!



**5. Selectable AT/ATX mode switch**

Easily select the AT or ATX power mode with an easily accessed switch.

### Production Line



AT power mode allows multiple panel PCs automatically start when the central power unit is connected.











### General Ticketing Machine (GTM)



The ATX power mode allows the panel PCs to be turned on/off remotely via network.

# Industrial Vertical Application Panel PCs Selection Guide




| Model | | SAILOR-12A(SR)-N270 | UPC-12A(H)/910 | UPC-12A(H)/GM45 | WIDS-515A/9455 | WIDS-517A/9455 |
|---|---|---|---|---|---|---|
| Display | LCD Size | 12.1" | 12.1" | | 15" | 17" |
| | Max Resolution | 1024 x 768 | 1024 x 768 | | 1024 x 768 | 1280 x 1024 |
| | Brightness (cd/m2) | 400 (1000) | 450 (1000) | | 350 | 300 |
| | Contrast Ratio | 500 : 1 (700 : 1) | 700 : 1 | | 700 : 1 | 800 : 1 |
| | LCD Color | 262K | 262K | | 16.2M | 16.7M |
| | Pixel Pitch (mm) | 0.240(H) x 0.240(V) | 0.240(H) x 0.240(V) | | 0.297(H) x 0.297(V) | 0.264(H) x 0.264(V) |
| | Viewing Angle (V-H) | 120/140 (120/130) | 160/160 (120/130) | | 125/140 | 140/140 |
| | Backlight MTBF (hrs) | 60000 (50000) | 50000 | | 50000 | 50000 |
| Motherboard | SBC Model | SAILORMB-945GSE-N270-R10 | UPCMB-9102-R10 | UPCMB-GM45-R10 | POS-9455-R11 | |
| | CPU | Intel® Atom™ process N270 1.6GHz CPU | Intel® Celeron® M processor 1.0GHz with 512KB L2 Cache | Intel® Celeron M 575 2.0Ghz CPU / Intel® Core 2 Duo T7500 2.2GHz CPU / Intel® Core 2 Duo T9400 2.53GHz CPU | LGA 775 Intel® Core™2 Duo / Celeron® D with a 533/800/1066 MHz FSB | |
| | Chipset | Intel® 945GSE + ICH7M | Intel® 910GMLE + ICH6M | Intel® GM45+ICH9M | Intel® 945G + ICH7R | |
| | RAM | Supports one 400/533MHz DDRII SO-DIMM (2GB Max.) | Supports two 400/533MHz DDRII SO-DIMM (4GB Max.) | Supports two 667/800 MHz DDRII SO-DIMM (4GB Max.) | Supports two 667 MHz DDRII SO-DIMM (4GB Max.) | |
| I/O Ports and Switches | | 1 x 5pin M12 connector for POWER Adapter<br>1 x 8pin M12 connector for two USB<br>1 x 5pin M12 connector for CAN bus and Audio line out<br>1 x 8pin M12 connector for UART RS-232/422/485<br>1 x 8pin M12 connector for UART RS-232<br>1 x 8pin M12 connector for GbE LAN | 3 x RS-232 COM Port<br>1 x RS-232/422/485 COM Port<br>2 x RJ-45 for Giga LAN<br>6 x USB 2.0 (2 waterproof USBs in front Panel)<br>1 x VGA Port<br>1 x Power Switch<br>1 x Audio Jack (Lin-out, Mic-in)<br>1 x Reset Button<br>1 x COMS Clear Button<br>1 x 9~28VDC Power Jack<br>1 x Power Mode Switch (Battery or DC input)<br>1 x 9~28VDC Power Input Terminal Block<br>1 x Networking UPS Management Port by RJ-45 Ethernet<br>1 x Remote COM port by RJ-45 connector<br>1 x UPS Remote Power Switch (2 pin terminal block) | | 4 x RS-232 COM Port<br>2 x RJ-45 for Giga LAN<br>1 x RS-232/422/485 COM Port<br>3 x Audio (Lin-in, Line-out,MIC-in)<br>6 x USB 2.0 (2 waterproof USB in the front of the panel)<br>1 x CMOS reset button<br>2 x PS/2 (KB/MS)<br>1 x AT/ATX switch<br>1 x LPT<br>1 x USB switch<br>1 x VGA Port | |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD Bay | 1 x 2.5" SATA HDD Bay | | 1 x 2.5" SATA HDD Bay With anti-shook | |
| | SSD | CF Type II | | | | |
| | CD-ROM Driver Bay | N/A | N/A | | Slim Type CD-ROM Bay | |
| Extension Slot | | 1 x Wireless Lan Module (802.11 b/g/n) (internal Mini PCIe interface) | 1 x Wireless Lan Module (802.11 b/g/n) (internal Mini PCIe interface)<br>1 x PCI Slot | 1 x Wireless Lan Module (802.11 b/g/n) (internal Mini PCIe interface)<br>1 x PCI Slot<br>1 x PCIe by 1 Slot (Option) | 1 x Wireless Lan Module (802.11 b/g/n) (internal Mini PCIe interface)<br>1 x PCI Slot<br>1 x PCIe by 1 Slot (Option) | |
| Physical | Construction Front Panel | Aluminum | | | | |
| | Construction Chasis | Aluminum | Aluminum | | Heavy-duty Steel | |
| | Mounting | Panel, Wall, Rack, Stand and Arm, VESA 100mm x 100mm | Panel, Wall, Rack, Stand and Arm, VESA 100mm x 100mm | | Panel, Wall, Rack, Stand and Arm, VESA 100mm x 100mm | |
| | Front Panel Color | Silver (8403C) | Orange (Pantone151C) | | Silver (Pantone 8001C) | |
| | Dimension (WxHxD) (mm) | 345.3 x 300.4 x 77 | 335 x 280 x 119 | | 410 x 329 x 124.5 | 451.98 x 375.96 x 123 |
| | Net Gross Weight | 4.2 Kg / 5.3 Kg | 5.8 Kg / 6.9 Kg | | 7 Kg /11 Kg | 8 Kg / 12 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | -10°C ~55°C | | -10°C ~50°C | |
| | Storage Temperature (°C) | -20°C ~60°C | -20°C ~60°C | | -20°C ~60°C | |
| | Vibration | 5~17Hz, 0.1" double amplitude displacement<br>17~640Hz, 1.5G acceleration peak to peak | | | | |
| | Shoock | 10G acceleration part to part (11ms) | | | | |
| Touch Screen | | Resistive Type 5-Wire with RS-232 interface | | | | |
| Power Supply | | Power Adapter<br>- P/N: 63000-CLG60121C-RS<br>- 60W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC<br>- M12 waterproof connector 5P | Power Adapter<br>- P/N: 63000-FSP096AHB-RS<br>- 96W Power Adapter<br>- Input: 90VAC~264VAC,50/60Hz<br>- Output: 12VDC | | AC Input ATX Power Supply<br>- P/N: ACE-A618A-RS<br>- 180W Power Supply<br>- Input: 90 ~ 264VAC @ 50/60Hz<br>- Output (max.) : 3.3V@14A, 5V@16A, 12V@14A, -12V@0.5A<br>DC Input ATX Power Supply<br>- 200W,<br>- P/N: ACE-4520C-RS<br>- 200W Power Supply<br>- Input: 24VDC @ 50/60Hz<br>Output (max.) : 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A | AC Input ATX Power Supply<br>- P/N: ACE-A622A-RS<br>- 220W Power Supply<br>- Input: 90 ~ 264VAC @ 50/60Hz<br>- Output (max.) : 3.3V@14A, 5V@16A, 12V@14A, -12V@0.8A<br>DC Input ATX Power Supply<br>- 200W,<br>- P/N: ACE-4520C-RS<br>- 200W Power Supply<br>- Input: 24VDC @ 50/60Hz<br>Output (max.) : 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A |
| Power Requirement | | 9~28VDC | 9~28VDC | | 90 ~ 264VAC or 24VDC | |
| Front Panel Protection | | IP65 Compliant | IP67 Compliant | | IP65 Compliant | |
| Certificate | | Meets CE, FCC, CB , CCC | | | | |
| Battery | Capacity | N/A | 14.8V, 3800 mAH | | N/A | |
| | UPS run-time | N/A | 50~60 mins | 30~40 mins | N/A | |

# PPC-27 Series Selection Guide

## AMD Geode LX800 Platform






| Model | | PPC-2706GS | PPC-2708GHS | PPC-2710GHS | PPC-2712GS |
|---|---|---|---|---|---|
| Display | LCD Size | 6.5" | 8.4" | 10.4" | 12.1" |
| | Max Resolution | 640(W) x 480(H) | 800(W) x 600(H) | 800(W) x 600(H) | 1024(W) x 768(H) |
| | Brightness (cd/m²) | 500 | 400 | 400 | 450 |
| | Contrast Ratio | 450:1 | 400:1 | 400:1 | 700:1 |
| | LCD Color | 262K | 262K | 262K | 262K |
| | Pixel Pitch (mm) | 0.069(W) x 0.207(H) | 0.213(H) x 0.213(V) | 0.264(H) x 0.264(V) | 0.240(H) x 0.240(V) |
| | Viewing Angle (V-H) | 120/140 | 100/120 | 100/120 | 160/160 |
| | Backlight MTBF (hrs) | 30,000 | 50,000 | 50,000 | 50,000 |
| Motherboard | SBC Model | WAFER-LX-800 | WAFER-LX-800 | AFLMB-LX-800 | AFLMB-LX-800 |
| | CPU | AMD Geode LX800 500MHz processor | | | |
| | Chipset | AMD Geode LX800 + AMD CS5536 | | | |
| | RAM | Supports one 333/400MHz DDR SO-DIMM (1GB Max.) | | | |
| I/O Ports and Switches | | 1 x RS232 COM Port | 2 x RS232 COM Port (One optional for Touch Screen) | 2 x RS232 COM Port | 2 x RS232 COM Port |
| | | 2 x USB Port | 2 x USB Port | 2 x RJ-45 for 10/100Mbps LAN | 2 x RJ-45 for 10/100Mbps LAN |
| | | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 2 x USB 2.0 | 4 x USB 2.0 |
| | | 2 x RJ-45 for 10/100Mbps LAN | 2 x RJ-45 for 10/100Mbps LAN | 1 x VGA Port | 1 x VGA Port |
| | | 1 X VGA out | 1 X VGA out | 1 x Audio (Line-out) | 1 x Audio (Line-out) |
| | | 1 x Audio (Line-out) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) |
| | | 1 x 12VDC input Power Jack | 1 x 12VDC input Power Jack | 1 x 12VDC input Power Jack | 1 x 12VDC input Power Jack |
| | | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch |
| | | | | 1 x Reset Button | 1 x Reset Button |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD Bay | | | |
| | SSD | CF Type II | | | |
| | CD-ROM Driver Bay | N/A | | | |
| Extension Slot | | N/A | N/A | 1 x Wireless Lan 802.11 b/g Module (internal Mini PCI interface) | 1 x Wireless Lan 802.11 b/g Module (internal Mini PCI interface) |
| Physical | Construction Front Panel | Aluminum | | | |
| | Construction Chasis | Heavy-duty Steel | | | |
| | Mounting | Panel, Wall, Rack, Stand and Arm VESA 100mm x 100mm | | | |
| | Front Panel Color | Silver (Pantone 8001C) | | | |
| | Dimensions (WxHxD) (mm) | 183 x 143 x 62.6 | 244 x 178 x 67 | 311.5 x 242 x 58 | 340 x 260 x 66 |
| | Net Gross Weight | 1.4 Kg / 3.4 Kg | 2.2 Kg / 4.4 Kg | 2.8 Kg / 5.5 Kg | 2.8 Kg / 5.7 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | | | |
| | Storage Temperature (°C) | -20°C ~60°C | | | |
| | Vibration | 5~17Hz, 0.1" double amplitude displacement 17~640Hz, 1.5G acceleration peak to peak | | | |
| | Shoock | 10G acceleration part to part (11ms) | | | |
| Touch Screen | | Resistive Type 4-Wire with RS-232 interface | Resistive Type 4-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface |
| Power Supply | | P/N: 63000-FSP0601AD101C746-RS 60W Power Adapter Input: 90VAC~264VAC, 50/60Hz Output: 12VDC | P/N: 63000-FSP0601AD101C746-RS 60W Power Adapter Input: 90VAC~264VAC, 50/60Hz Output: 12VDC" | P/N: 63000-FSP0481AD101C-RS 48W Power Adapter Input: 90VAC~264VAC, 50/60Hz Output: 12VDC | P/N: 63000-FSP0481AD101C-RS 48W Power Adapter Input: 90VAC~264VAC, 50/60Hz Output: 12VDC |

# PPC-37 Series Selection Guide

**Intel® 852GM Platform**

**Intel® 945GM Platform**



| Model | | PPC-3708GHS/8522 | PPC-3710GHS/8522 | PPC-3712GS/8522 | PPC-3708GHS/9452 | PPC-3710GHS/9452 | PPC-3712GXS/9452 |
|---|---|---|---|---|---|---|---|
| Display | LCD Size | 8.4" | 10.4" | 12.1" | 8.4" | 10.4" | 12.1" |
| | Max Resolution | 800(W) x 600(H) | 800(W) x 600(H) | 1024(W) x 768(H) | 800(W) x 600(H) | 800(W) x 600(H) | 1024(W) x 768(H) |
| | Brightness (cd/m²) | 400 | 400 | 450 | 400 | 400 | 450 |
| | Contrast Ratio | 400:1 | 400:1 | 700:1 | 400:1 | 400:1 | 700:1 |
| | LCD Color | 262K | 262K | 262K | 262K | 262K | 262K |
| | Pixel Pitch (mm) | 0.213(H) x 0.213(V) | 0.264(H) x 0.264(V) | 0.240(H) x 0.240(V) | 0.213(H) x 0.213(V) | 0.264(H) x 0.264(V) | 0.240(H) x 0.240(V) |
| | Viewing Angle (V-H) | 100/120 | 100/120 | 160/160 | 100/120 | 100/120 | 160/160 |
| | Backlight MTBF (hrs) | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| Motherboard | SBC Model | NANO-8522 | NANO-8522 | NANO-8522 | NANO-9452 | NANO-9452 | NANO-9452 |
| | CPU | Socket 479 2.1GHz (max.) Intel® Pentium® M / Celeron M with 400 MHz 1 GHz or 600 MHz Intel Celeron zero cache CPU | | | Socket M Intel® Core™2 Duo, Core Duo, Core Solo with 667MHz FSB Intel® Celeron® M 533MHz FSB | | |
| | Chipset | Intel 852GM + ICH4 | | | Intel 945GM + ICH7M | | Intel 945GM + ICH7M |
| | RAM | Supports one 266/200MHz DDR SO-DIMM (1GB Max.) | | | Supports one 400/533/667 MHz DDRII SO-DIMM (1GB Max.) | | |
| I/O Ports and Switches | | 2 x RS232 COM Port | 2 x RS232 COM Port | 3 x RS232 COM Port (One optional for Touch Screen) | 2 x RS232 COM Port | 2 x RS232 COM Port | 2 x RS232 COM Port |
| | | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port |
| | | 1 x RJ-45 for LAN Port | 1 x RJ-45 for LAN Port | 1 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port |
| | | 4 x USB 2.0 | 4 x USB 2.0 | 4 x USB 2.0 | 2 x USB 2.0 | 2 x USB 2.0 | 2 x USB 2.0 |
| | | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port |
| | | 1 x Audio (Line-in, Line-out, MIC-in) | | | 1 x Audio (Line-in, Line-out, MIC-in) | | |
| | | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) |
| | | 1 x 12VDC input Power Jack | | 1 x LPT | 1 x 12VDC input Power Jack | | |
| | | 1 x Power Switch | 1 x Power Switch | 1 x 12VDC input Power Jack | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch |
| | | 1 x 9~36VDV input Terminal block (Optional) | | 1 x Power Switch | 1 x 9~36VDV input Terminal block (Optional) | | |
| | | 1 x 9~36VDV input Terminal block (Optional) | | | | | |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD Bay | | | 1 x 2.5" SATA/IDE HDD bay with anti-shook | | 1 x 2.5" SATA/IDE HDD bay with anti-shook |
| | SSD | CF Type II | | | | | |
| | CD-ROM Driver Bay | N/A | | Slim Type CD-ROM Bay | N/A | | Slim Type CD-ROM Bay |
| Extension Slot | | N/A | | | 1 x Wireless Lan 802.11 b/g Module (internal Mini PCIe interface) | | |
| Physical | Construction Front Panel | Aluminum | | | | | |
| | Construction Chasis | Heavy-duty Steel | | | | | |
| | Mounting | Panel, Wall, Rack, Stand and Arm VESA 100mm x 100mm | | | | | |
| | Front Panel Color | Silver (Pantone 8001C) | | | | | |
| | Dimension (WxHxD) (mm) | 243.57 x 78 x 75.2 | 311.5 x 242 x 77.8 | 340 x 260 x 73.4 | 243.57 x 78 x 75.2 | 311.5 x 242 x 77.8 | 340 x 260 x 73.4 |
| | Net Gross Weight | 2.2 Kg / 4.4 Kg | 3.4 Kg / 5.8 Kg | 6 Kg / 8 Kg | 2.2 Kg / 4.4 Kg | 3.4 Kg / 5.8 Kg | 6 Kg / 8 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | | | | | |
| | Storage Temperature (°C) | -20°C ~60°C | | | | | |
| | Vibration | 5~17Hz, 0.1" double amplitude displacement 17~640Hz, 1.5G acceleration peak to peak | | | | | |
| | Shoock | 10G acceleration part to part (11ms) | | | | | |
| Touch Screen | | Resistive Type 4-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 4-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface |
| Power Supply | | For BGA Model<br>- P/N: 63000-FSP0601AD101C746-RS<br>- 60W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC<br>For Socket Model<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC | For BGA Model<br>- P/N: 63000-FSP0601AD101C746-RS<br>- 60W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC<br>For Socket Model<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC | For BGA Model<br>- P/N: 63000-FSP0601AD101C746-RS<br>- 60W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC<br>For Socket Model<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC | Power Adapter<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC | Power Adapter<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC | Power Adapter<br>- P/N: 63000-FSP0841ADC11118-RS<br>- 84W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC" |

# PPC-37 Series Selection Guide

## Intel® Atom Platform



| Model | | PPC-3708A/N270 | PPC-3710A/N270 | PPC-3712A/N270 | PPC-3712B/N270 |
|---|---|---|---|---|---|
| Display | LCD Size | 8.4" | 10.4" | 12.1" | 12.1" |
| | Max Resolution | 800(W) x 600(H) | 800(W) x 600(H) | 1024(W) x 768(H) | 1024(W) x 768(H) |
| | Brightness (cd/m²) | 400 | 400 | 450 | 450 |
| | Contrast Ratio | 400:1 | 400:1 | 700:1 | 700:1 |
| | LCD Color | 262K | 262K | 262K | 262K |
| | Pixel Pitch (mm) | 0.213(H) x 0.213(V) | 0.264(H) x 0.264(V) | 0.240(H) x 0.240(V) | 0.240(H) x 0.240(V) |
| | Viewing Angle (V-H) | 100/120 | 100/120 | 160/160 | 160/160 |
| | Backlight MTBF (hrs) | 50,000 | | | |
| Motherboard | SBC Model | NANO-945GSE-N270 | | | |
| | CPU | Intel® Atom™ process N270 1.6GHz CPU | | | |
| | Chipset | Intel 945GSE + ICH7M | | | |
| | RAM | Supports one 400/533MHz DDRII SO-DIMM (2GB Max.) | | | |
| I/O Ports and Switches | | 2 x RS232 COM Port | 2 x RS232 COM Port | 2 x RS232 COM Port | 2 x RS-232 COM Port |
| | | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port |
| | | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port |
| | | 2 x USB 2.0 | 2 x USB 2.0 | 2 x USB 2.0 | 4 x USB 2.0 |
| | | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port |
| | | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) |
| | | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) |
| | | 1 x 12VDC input Power Jack | 1 x 12VDC input Power Jack | 1 x 12VDC input Power Jack | |
| | | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch | |
| | | 1 x 9~36VDV input Terminal block (Optional) | 1 x 9~36VDV input Terminal block (Optional) | 1 x 9~36VDV input Terminal block (Optional) | |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD Bay With anti-shook | | | |
| | SSD | CF Type II | | | |
| | CD-ROM Driver Bay | N/A | N/A | Slim Type CD-ROM Bay | Slim Type CD-ROM Bay |
| Extension Slot | | 1 x Wireless Lan 802.11 b/g Module (internal Mini PCIe interface) | | | |
| Physical | Construction Front Panel | Aluminum | | | |
| | Construction Chasis | Heavy-duty Steel | | | |
| | Mounting | Panel, Wall, Rack, Stand and Arm<br>VESA 100mm x 100mm | | | |
| | Front Panel Color | Silver (Pantone 8001C) | | | |
| | Dimension (WxHxD) (mm) | 243.57 x 78 x 75.2 | 311.5 x 242 x 77.8 | 340 x 260 x 73.4 | 340 x 260 x 73.4 |
| | Net Gross Weight | 2.2 Kg / 4.4 Kg | 3.4 Kg / 5.8 Kg | 6 Kg / 8 Kg | 6.2 Kg / 8.2 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | | | |
| | Storage Temperature (°C) | -20°C ~60°C | | | |
| | Vibration | "5~17Hz, 0.1"" double amplitude displacement<br>17~640Hz, 1.5G acceleration peak to peak" | | | |
| | Shoock | 10G acceleration part to part (11ms) | | | |
| Touch Screen | | Resistive Type 4-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface | Resistive Type 5-Wire with RS-232 interface |
| Power Supply | | Power Adapter<br>- P/N: 63000-FSP0601AD101C746-RS<br>- 60W Power Adapter<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output: 12VDC" | | | For AT AC Input Model:<br>- P/N: ACE-890A-RS<br>- 86W Power Supply<br>- Input: 90VAC ~ 264VAC<br>- Output: 12VDC"<br>For ATX DC Input Model:<br>- P/N: ACE-709TX-RS<br>- 90W Power Supply<br>- Input: 36VDC ~ 72VDC<br>- Output: 12VDC |

# PPC-51 Series Selection Guide

**Intel® 852GM Platform**

**Intel® 945G Platform**



| Model | | PPC-5150G | PPC-5170G | PPC-5190G | PPC-5150A | PPC-5170A | PPC-5190A |
|---|---|---|---|---|---|---|---|
| Display | LCD Size | 15" | 17" | 19" | 15" | 17" | 19" |
| | Max Resolution | 1024(W) x 768(H) | 1280(W) x 1024(H) | 1280(W) x 1024(H) | 1024(W) x 768(H) | 1280(W) x 1024(H) | 1280(W) x 1024(H) |
| | Brightness (cd/m²) | 350 | 300 | 300 | 350 | 300 | 300 |
| | Contrast Ratio | 700:1 | 800:1 | 700:1 | 700:1 | 800:1 | 700:1 |
| | LCD Color | 16.2M | 16.7M | 16.7M | 16.2M | 16.7M | 16.7M |
| | Pixel Pitch (mm) | 0.297(H) x 0.297(V) | 0.264(H) x 0.264(V) | 0.294(H) x 0.294(V) | 0.297(H) x 0.297(V) | 0.264(H) x 0.264(V) | 0.294(H) x 0.294(V) |
| | Viewing Angle (V-H) | 125/140 | 160/160 | 160/170 | 125/140 | 160/160 | 160/170 |
| | Backlight MTBF (hrs) | 50,000 | | | | | |
| Motherboard | SBC Model | POS-8520 | | | POS-9455 | | |
| | CPU | Socket 478 Intel® Pentium® 4, Celeron M with 533MHz(max.) FSB | | | LGA 775 Socket with Intel® Core™2 Duo, Celeron® D with 533/800/1066 MHz | | |
| | Chipset | Intel 852GME + ICH5 | | | Intel® 945G + ICH7R | | |
| | RAM | Supports two 266/333MHz DDR DIMM (4GB Max.) | | | Supports two 400/533/667MHz DDRII DIMM (4GB Max.) | | |
| I/O Ports and Switches | | 4 x RS232 COM Port | 4 x RS232 COM Port | 4 x RS232 COM Port | 4 x RS232 COM Port | 4 x RS232 COM Port | 4 x RS232 COM Port |
| | | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port |
| | | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port |
| | | 4 x USB 2.0 | 4 x USB 2.0 | 6 x USB 2.0 | 4 x USB 2.0 | 4 x USB 2.0 | 6 x USB 2.0 |
| | | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port | 1 x VGA Port |
| | | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) |
| | | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) |
| | | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch | 1 x Power Switch |
| | | 1 x PCI Slot | 1 x PCI Slot | 1 x PCI Slot | 1 x AT / ATX Switch | 1 x AT / ATX Switch | 1 x AT / ATX Switch |
| | | | | | 1 x PCI Slot | 1 x PCI Slot | 1 x PCI Slot |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD bay with anti-shook | | | | | |
| | SSD | CF Type II | | | | | |
| | CD-ROM Driver Bay | Slim Type CD-ROM Bay | | | | | |
| Extension Slot | | 1 x PCI slot | | | 1 x PCI slot<br>1 x PCIe mini card | | |
| Physical | Construction Front Panel | Aluminum | | | | | |
| | Construction Chasis | Heavy-duty Steel | | | | | |
| | Mounting | Panel, Wall, Rack, Stand and Arm<br>VESA 100mm x 100mm | | | | | |
| | Front Panel Color | Silver (Pantone 8001C) | | | | | |
| | Dimension (WxHxD) (mm) | 410 x 309 x 110.5 | 452 x 356 x 115 | 483 x 399 x 115.2 | 410 x 309 x 110.5 | 452 x 356 x 115 | 483 x 399 x 115.2 |
| | Net Gross Weight | 7 Kg / 11 Kg | 8 Kg / 12 Kg | 12.6 Kg / 18.2 Kg | 7 Kg / 11 Kg | 8 Kg / 12 Kg | 12.6 Kg / 18.2 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | | | | | |
| | Storage Temperature (°C) | -20°C ~60°C | | | | | |
| | Vibration | 5~17Hz, 0.1"" double amplitude displacement<br>17~640Hz, 1.5G acceleration peak to peak | | | | | |
| | Shoock | 10G acceleration part to part (11ms) | | | | | |
| Touch Screen | | Resistive Type 5-Wire with RS-232 interface | | | | | |
| Power Supply | ATX AC-Input | AC Input ATX Power Supply<br>- P/N: ACE-4518AP-RS<br>- 180W Power Supply<br>- Input: 90VAC~240VAC, 50/60Hz<br>- Output(max.): 3.3A@16.8A, 5V@12A, 12V@10A, -12V@0.8A | | | AC Input ATX Power Supply<br>- P/N: ACE-A618A-RS<br>- 180W Power Supply<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output(max.): 3.3A@14A, 5V@16A, 12V@14A, -12V@0.5A | AC Input ATX Power Supply<br>- P/N: ACE-A622A-RS<br>- 220W Power Supply<br>- Input: 90VAC~264VAC, 50/60Hz<br>- Output(max.): 3.3A@14A, 5V@16A, 12V@10A, -12V@0.8A | |
| | ATX DC-Input | DC Input ATX Power Supply<br>- P/N: ACE-4520C-RS<br>- 200W Power Supply<br>- Input: 24VDC, 50/60Hz<br>- Output(max.): 3.3A@12A, 5V@12A, 12V@15.4A, -12V@0.5A | | | | | |

# PPC-53 Series Selection Guide

## Intel® 855GME Platform



## Intel® 910GMLE Platform



| Model | | PPC-5350GS/A300 | PPC-5350GS/A311 |
|---|---|---|---|
| Display | LCD Size | 15" | |
| | Max Resolution | 1024(W) x 768(H) | |
| | Brightness (cd/m²) | 350 | |
| | Contrast Ratio | 700:1 | |
| | LCD Color | 16.2M | |
| | Pixel Pitch (mm) | 0.297(H) x 0.297(V) | |
| | Viewing Angle (V-H) | 125/140 | |
| | Backlight MTBF (hrs) | 50,000 | |
| Motherboard | SBC Model | A300 | A311 |
| | CPU | Socket 479 Intel® Pentium® 4, Celeron M with 400MHz(max.) FSB<br>1 GHz ULV Intel Celeron zero cache CPU | Socket 479 Intel® Pentium® M, Celeron M with 400/533MHz(max.) FSB<br>1 GHz ULV Intel Celeron zero cache CPU |
| | Chipset | Intel 855GME + ICH4 | 910GMLE + ICH6M |
| | RAM | Supports two 266/333MHz DDR DIMM (2GB Max.) | Supports two 400/533MHz DDRII DIMM (2GB Max.) |
| I/O Ports and Switches | | 4 x RS232 COM Port | 4 x RS232 COM Port |
| | | 1 x RS-232/422/485 Port | 1 x RS-232/422/485 Port |
| | | 2 x RJ-45 for LAN Port | 2 x RJ-45 for LAN Port |
| | | 4 x USB 2.0 | 4 x USB 2.0 |
| | | 1 x VGA Port | 1 x VGA Port |
| | | 1 x Audio (Line-in, Line-out, MIC-in) | 1 x Audio (Line-in, Line-out, MIC-in) |
| | | 1 x PS/2 (KB/MS) | 1 x PS/2 (KB/MS) |
| | | 1 x Power Switch | 1 x Power Switch |
| | | 1 x AT / ATX Switch | 1 x AT / ATX Switch |
| | | 1 x DVI port | 1 x DVI port |
| | | 1 x PCI Slot | 1 x PCI Slot |
| Driver Bay | HDD Driver Bay | 1 x 2.5" SATA/IDE HDD bay with anti-shook | |
| | SSD | CF Type II | |
| | CD-ROM Driver Bay | Slim Type CD-ROM Bay | |
| Extension Slot | | 1 x PCI slot | 1 x PCI slot<br>1 x PCIe mini card |
| Physical | Construction Front Panel | Aluminum | |
| | Construction Chasis | Heavy-duty Steel | |
| | Mounting | Panel, Wall, Rack, Stand and Arm<br>VESA 100mm x 100mm | |
| | Front Panel Color | Silver (Pantone 8001C) | |
| | Dimension (WxHxD) (mm) | 410 x 309 x 110.5 | |
| | Net Gross Weight | 8 Kg / 12 Kg | 7 Kg / 11 Kg |
| Environment | Operation Temperature (°C) | -10°C ~50°C | |
| | Storage Temperature (°C) | -20°C ~60°C | |
| | Vibration | 5~17Hz, 0.1" double amplitude displacement<br>17~640Hz, 1.5G acceleration peak to peak | |
| | Shoock | 10G acceleration part to part (11ms) | |
| Touch Screen | | Resistive Type 5-Wire with RS-232 interface | |
| Power Supply | ATX AC-Input | AC Input ATX Power Supply<br>- P/N: ACE-4518AP-RS<br>- 180W Power Supply<br>- Input: 90VAC~240VAC, 50/60Hz<br>- Output(max.): 3.3A@16.8A, 5V@12A, 12V@10A, -12V@0.8A | |
| | ATX DC-Input | DC Input ATX Power Supply<br>- P/N: ACE-815C-RS<br>- 100W Power Supply<br>- Input: 24VDC, 50/60Hz<br>- Output(max.): 3.3A@4A, 5V@13A, 12V@2.5A, -12V@0.3A | |

# SAILOR-12A

NEW

## 12.1" Full IP67 Panel PC

Full IP67
Up to 1 meter of submersion

Fanless | Wireless 802.11 b/g/n | IP 67 | Sunlight Readable | CAN-Bus automotiv applications







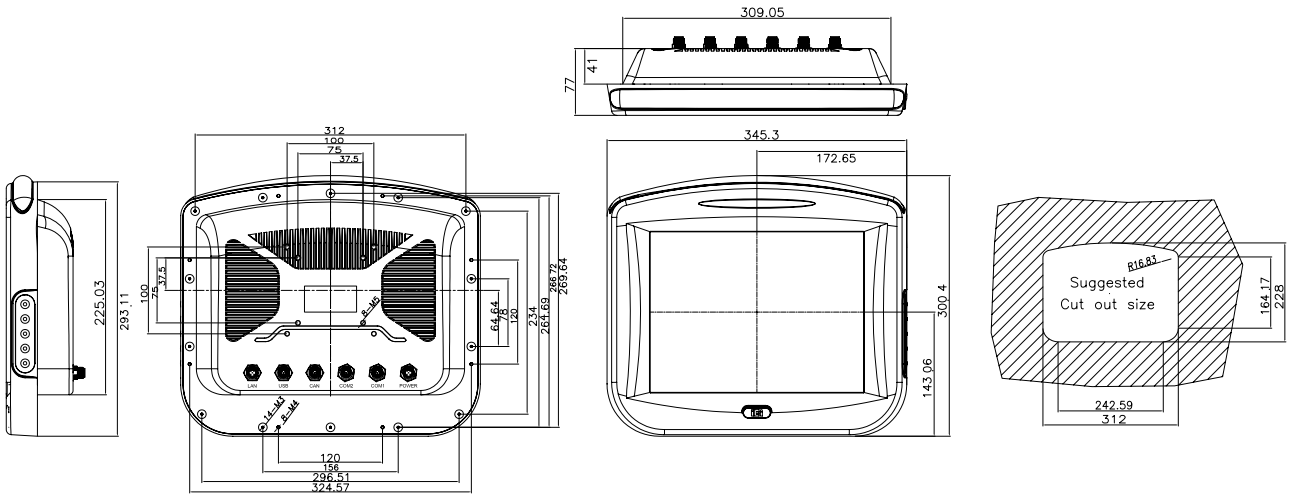


## Specifications

Note: Please refer to page 20 to 25 for details

| Model | | Sunlight Readable | Regular Brightness |
|---|---|---|---|
| | | SAILOR-12ASR/M12 | SAILOR-12A/M12 |
| Display | LCD Size | 12.1" | |
| | Max Resolution | 1024 x 768 | |
| | Brightness (cd/m²) | 1000 | 400 |
| | Contrast Ratio | 700 : 1 | 500 : 1 |
| | LCD Color | 262K | 262K |
| | Pixel Pitch (mm) | 0.240mm(H) x 0.240mm(V) | 0.240mm(H) x 0.240mm(V) |
| | Lamp Life Time (hrs) | 50000 | 60000 |
| Mainboard | CPU | N270 (Atom 1.6GHz) | |
| | Chipset | Mobile Intel 945GSE Chipset + ICH7M | |
| | RAM | 1 x 200-pin SO-DIMM DDR2 400/533 MHz up to 2GB | |
| I/O Interface | | 1 x 5pin M12 connector for POWER Adapter | |
| | | 1 x 8pin M12 connector for two USB | |
| | | 1 x 5pin M12 connector for CAN bus and Audio line out | |
| | | 1 x 8pin M12 connector for UART RS-232/422/485 | |
| | | 1 x 8pin M12 connector for UART RS-232 | |
| | | 1 x 8pin M12 connector for GbE LAN | |
| Storage | IDE | 1x CFII | |
| | HDD Drive Bay | 1 x 2.5" SATA HDD bay | |
| Extension | | 1 x Wireless Lan Module (802.11 b / g / n) (internal Mini PCIe interface) | |
| Membrane Keypad Functions | | LCD ON/OFF | |
| | | Brightness Control | |
| | | Volume Control | |
| | | Auto dimming Control | |
| Environment | Mounting | VESA 75 / VESA 100 | |
| | Front Panel Color | Silver (Pantone 8403C) | |
| | Dimensions (W x H x D) (mm) | 345.3 mm x 300.4 mm x 77 mm | |
| | Operation Temperature (°C) | -10°C ~50°C | |
| | N/G Weight | 4.2 kg | |
| | IP Level | IP67 Sealed | |
| | Power Consumption | 43W | 32W |
| | Safety & EMI | CE / FCC/ CCC / CB | |

## Dimensions (Unit: mm)




## Packing List

| Item | Part Number | Q'ty | Specifications |
|---|---|---|---|
| Panel mount screws Pack | 44013-030041-RS | 1 | |
| Power cable | 32000-127500-RS | 1 | 2000mm;16AWG;<br>(A) terminal block connector;<br>(B) M12 Waterproof connector |
| Utilities CD | 7B000-000087-RS | 1 | |
| Touch Pen | XTR104-0002-RS | 1 | |



## Options

| Model | SAILOR-12A/M12 |
|---|---|
| Wall mounting kit | AFLWK-12 |
| Rack mounting kit | SAILORRK-12 |
| ARM | ARM-11-RS / ARM-31-RS |
| Stand | STAND-A12 / STAND-100-RS / STAND-150-RS |
| OS: WinCE 6.0 | SAILORCF-12-N270-CE060-R10 |
| OS: WinXPE | SAILORCF-12-N270-XPE-R10 |
| OS: Linux | SAILORCF-12-N270-LNX-R10 |

## Optional cables and adapter

| Item | Part Number | Description |
|---|---|---|
| USB cable | CB-M12USB02-R10 | USB cable; 3000MM; 24AWG;<br>(A) USB A type 4-pin FEMALE X2;<br>(B) M12 waterproof connector |
| RJ45 LAN cable | CB-M12RJ45-R10 | RJ45 LAN cable; 3000MM; 24AWG;<br>(A) RJ45 PLUG 8P8C<br>(B) M12 waterproof connector |
| DB-9 COM port cable | CB-M12COM-R10 | COM PORT cable; 3000MM; 24AWG;<br>(A) D-SUB 9P MALE<br>(B) M12 waterproof connector |
| DB-9 CAN bus and AUDIO line-out cable | CB-M12ACAN-R10 | CAN bus AND AUDIO CABLE;3000MM;24AWG;<br>(A) D-SUB 9P FEMALE<br>(B) M12 waterproof connector |
| AUDIO line-out cable | CB-M12AUDIO-R10 | AUDIO CABLE;3000MM;24AWG;<br>(A) STEREO JACK Φ3.5MM;<br>(B) M12 waterproof connector |
| Water-proof Power Adapter | 63000-CLG6012IC-RS | Input: AC:90V~264V<br>Output: 12V/5A;60W;M12 waterproof connector 5P |


USB cable


RJ45 LAN cable


DB-9 COM port cable


DB-9 CAN bus and AUDIO line-out cable


AUDIO line-out cable


Water-proof Power Adapter

## Ordering Information

| Part Number | Description |
|---|---|
| SAILOR-12A-N270/WT-R/1GB-M12-R10 | 12.1" 400 cd/m² XGA fanless panel PC with Intel® Atom™ N270 CPU 1.6GHzU,802.11 b/g/n wireless module,touch screen,1GB DDR2 553 MHz, M12, RoHS |
| SAILOR-12ASR--N270/WT-R/1GB-M12-R10 | 12.1" 1000 cd/m² XGA fanless panel PC with Intel® Atom™ N270 CPU 1.6GHzU,802.11 b/g/n wireless module,touch screen,1GB DDR2 553 MHz, M12, RoHS |

# UPC-12A

## 12.1" Aluminum UPS Panel PC with Smart Battery Backup

NEW





1 9~28VDC Input
2 Power Switch
3 DC 12V Power Jack
4 3 x RS-232 COM
1 x RS-232/422/485 COM
5 User-accessible CF
6 4 x USB2.0
7 1 x PCI Expansion Slot (Optional PCIex1 expansion)
8 2 x RJ-45 Giga LAN
9 Remote LAN
10 Clear cmos
11 Reset
12 Line-out
13 Mic-in
14 Remote DC On/Off
15 VGA Output



*Smart battery backup provides emergency power (14.8V, 3800 mAH)*



Rugged Aluminum Die-casting Body!

Smart Battery | Sunlight Readable | wireless 802.11 b/g/n | Touch Screen | Light Sensor | PCI/PCIe Expansion Capability | IP 65 Front Panel

Note: Please refer to page 26 to 31 for details

## Specifications

| Model | | Regular Brightness | | Sunlight Readable | |
|---|---|---|---|---|---|
| | | UPC-12A/910 | UPC-12A/GM45 | UPC-12AH/910 | UPC-12AH/GM45 |
| Display | LCD Size | 12.1" | | 12.1" | |
| | Max Resolution | 1024 x 768 | | 1024 x 768 | |
| | Brightness (cd/m²) | 450 | | 1000 | |
| | Contrast Ratio | 700:1 | | 700 : 1 | |
| | LCD Color | 262k | | 262k | |
| | Pixel Pitch (mm) | 0.240(H) x 0.240(V) | | 0.240(H) x 0.240(V) | |
| | Viewing Angle (V-H) | 160/160 | | 120/130 | |
| | Backlight MTBF | 50000hrs | | 50000hrs | |
| Motherboard | CPU | Intel® Celeron® M processor 1.0GHz with 512KBL2 Cache | Intel® Core™2 Duo T7500 2.2GHz<br>Intel® Celeron® M 575 2.0GHz<br>Intel® Core™2 Duo T9400 2.53GHz | Intel® Celeron® M processor 1.0GHz with 512KBL2 Cache | Intel® Core™2 Duo T7500 2.2GHz<br>Intel® Celeron® M 575 2.0GHz<br>Intel® Core™2 Duo T9400 2.53GHz |
| | Chipset | Intel® 910GMLE + ICH6M | Intel® GM45 Chipset + ICH9M | Intel® 910GMLE + ICH6M | Intel® GM45 Chipset + ICH9M |
| | RAM | two DDRII SO-DIMM Up to 4GB | | | |
| I/O | | 3 x RS-232 COM<br>1 x RS-232/422/485 COM<br>2 x RJ-45 Giga LAN<br>6 x USB 2.0 (2 waterproof USBs in front of the panel)<br>1 x VGA<br>1 x Power Switch<br>2 x Audio Jack (Lin-out, Mic-in)<br>1 x Reset Button | | 1 x COMS Clear Button<br>1 x 9~28VDC Power Jack<br>1 x Power Mode Switch (Battery or DC input)<br>1 x 9~28VDC Power Input Terminal Block<br>1 x Networking UPS Management Port by RJ-45 Ethernet<br>1 x Remote COM port by RJ-45 connector<br>1 x UPS Remote Power Switch (2 pin terminal block) | |
| Expansion | | 1 x PCI, 1 x PCIex1 (Optional), 1 x PCIe mini (Wireless LAN Module) | | | |
| LED Indicator | | Power LED / HDD Status / Charging / Discharging / Light Sensor | | | |
| Membrane Keypad | | LCD On/Off; Brightness Up/Down; Volume Up/Down; Auto Dimming On/Off; Battery Low Beeper (under 10% batter capacity beeper on/off) | | | |
| Drive Bay | SSD | CF Type II | | | |
| | HDD | 1 x 2.5" SATA HDD bay | | | |
| Battery | Capacity | 14.8V, 3800 mAH | | | |
| | UPS run-time | 60 mins | 40 mins<br>50 mins<br>40 mins | 50 mins | 40 mins<br>30 mins<br>40 mins |
| Physical | Construction Material | Aluminum Die-casting | | | |
| | Mounting | VESA 100 mm x100 mm | | | |
| | Front Panel Color | Orange (Pantone 151C) | | | |
| | Dimensions (WxHxD) (mm) | 335 x 280 x 119 | | | |
| Environment | Operation Temperature (°C) | -10°C~55°C | | | |
| | Storage Temperature (°C) | -20°C~70°C | | | |
| | Net/Gross Weight | 5.8 Kg / 6.9 Kg | | | |
| | IP Level | IP65 Front Panel Compliant | | | |
| | Safety & EMC | CE / FCC / CCC / CB | | | |
| Touch Screen | | Resistive Type 5-Wire (Touch controller IC is on board) | | | |
| Power Requirement | | 9~28VDC | | | |
| Power Consumption | | 56W | 63W<br>60W<br>65W | 64W | 73W<br>70W<br>74W |