

SAILORPC-12A 12.1" Full IP67 Panel PC

The rugged SAILORPC-12A panel PC based on Intel® Atom™ processor is designed in a robust and waterproof (IP 67/NEMA 6) aluminum housing. Withstanding even the highest demands of all-day field use, and protected against shock and vibration permitting extremely flexible integration into a wide variety of applications, such as: avionics, military, marine, mining, industrial...etc.



Features:

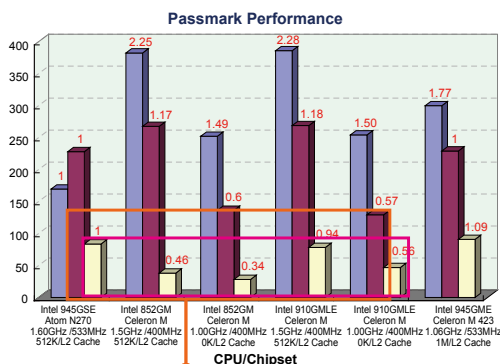
- 12.1" 1000 nits super high brightness TFT LCD available
- IP67 (NEMA 6) fully-enclosed aluminum die casting enclosure and IP67 waterproof lockable I/O
- Fanless system integrated with Intel® Atom™ N270 1.6G processor for ultra Low voltage
- Supports one 2.0 GB (max.) 400/533 MHz DDR2 SO-DIMM
- Built-in internal WiFi antenna supports 802.11 b/g/n high standard
- CAN-Bus interface for automotive applications
- Ambient light sensor detects ambient light for automated screen adjustments to optimize viewing. (Advanced Deep Dimming to Black for sunlight readable model)
- Standard VESA 75/100 compliance



Rugged Panel PC with Fanless Intel® Atom™ Processor

The fanless intelligent display computer, SAILORPC-12A, is using 45 nm Intel® Atom™ processor with up to 1.6 GHz frequency and can be used in harsh and safety-critical applications in transport, avionics, engineering or industrial automation.

Better graphic performance is excellent for: kiosk, self-service terminal, and digital signage applications.



Out Door Control System



National Park Guiding System



Zoo Guide

Evaluating 3D mark performance with different generation CPU and chipset combination, Intel® Atom™ processor is the best solution for low power consumption and better graphic performance choice.




IP67 Fully-Enclosed Design

The SAILORPC-A12 is designed by front sealing and test in the certified house chamber under UL's witnessed Test Data Program (TDP). IEI is following the IP67 standard testing procedures, This full IP67 touch monitor provides full IP67 protection including connectors, cables and Touch.

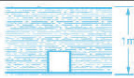
[IP67] Dust-Tight

First Digit The first digit indicates the level of protection that the enclosure provides against access to hazardous parts

Level		Effective Against
6		No ingress of dust; complete protection against contact

[IP67] Temporary immersion under water 1m

Second Digit Protection of the equipment inside the enclosure against harmful ingress of water

Level		Effective Against
7		Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1mof submersion)

Sealing enclosure with all sides of IP67 !



■ IPX7 Test

• Test for protection against Water



Up to 1m of submersion



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

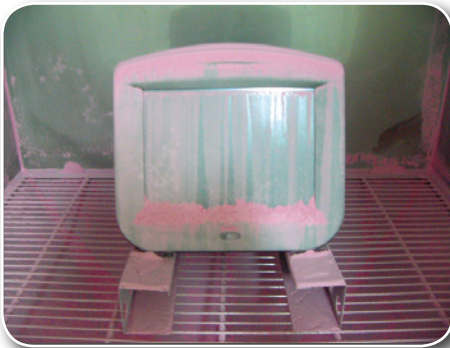
• Air Flow Test

Air pressure measurement is used as the IP67 test method, the air flow tester is capable of detecting leaks in product and evaluates the pass/fail status of the watertight system.



■ IP6X Test

• Test for protection against Dust



Sunlight Readable

■ Super High Brightness

SAILORPC-12ASR (Sunlight Readable Model) has greatly improved luminance through edge lighting to achieve super high brightness (up to 1000 cd/m²).

■ Low Reflection through AR (Anti-Reflection) Technology

Outdoor applications in daylight or other bright environments require technology that can suppress surface reflection. SAILORPC-12ASR sunlight readable model offers special AR (anti-reflection) surface treatment to prevent reflection, which ensures excellent visibility in daylight conditions.



Super High Brightness: 1000 nits
High Contrast: 700:1
Wide Viewing Angle: 60/60 (R/L) 45/75 (U/D)

Ambient Light Sensor

The SAILORPC-12A built in the ambient light sensor in the front panel to automatically detect the amount of light in the viewing environment and auto-adjusts the brightness of the screen.

Benefits:

- Avoid eye strained and tired, to provide comfortable viewing
- Power consumption saving
- Extend lamp lifetime



Day Mode:
Adjust to maximum 1000 nits Sunlight Readable automatically

Panel brightness auto-adjustment depends on the ambient light amount to save the system power

Night Mode:
Adjust to acceptable brightness automatically in a insufficient light ambient

Uninterrupted Wireless Connection

The SAILORPC-12A series featuring high speed WiFi IEEE 802. n protocol which builds on previous 802. standards by adding multiple-input multiple-output (MIMO) and 40 MHz operation to the physical (PHY) layer. MIMO uses multiple transmitter and receiver antennas to improve the system performance.

802.11 b/g/n ready with invisible antenna



27 times faster data transfer rate compared to 802.11b

Protocol	Freq. (GHz)	Thru. (Mbit/s)	Data (Mbit/s)	Range indoor (m)	Range outdoor (m)
802.11 a	5 GHz	23	54 Mbit/s	~35	~120
b	2.4 GHz	4.3	11 Mbit/s	~38	~140
g	2.4 GHz	19	54 Mbit/s	~38	~140
n	5 GHz and/ or 2.4 GHz	74	300 Mbit/s (2 streams)	~70	~250

802.11b/g Wi-Fi, which gives you up to broadband-speed browsing and connectivity, compared to traditional wired LAN.

The benefits here:

- Simple configuration
- Without hinders worker movement
- Without lessens man-hour productivity
- Without additional purchase of proprietary cables for specific devices
- Without the barrier to space

Benefit

- * Half the size of Mini-PCI
- * Higher bandwidth interface
- * Rigid mechanical spec.



802.11a	802.11b/g	802.11n
Access to email, instant image and the Internet	Streaming music Streaming video	VoIP /Gaming /NAS

CAN-Bus Automotive Applications

The SAILORPC-12A is equipped with automotive applied CAN-Bus interface. The Control Area Network (CAN) is a serial bus system, originally developed by Bosch for use in automobiles, and now is increasingly being used for control in industrial and automotive applications

Controller Area Network

- 1Mb/s data rate
- High reliability bus
- CAN is an open standard with many variants
- Capable of providing real-time communication.

■ CAN in cars and truck engine

- Networking controllers for engine timing, transmission, chassis and brakes.
- Networking components of chassis electronics and electronics which make the vehicle more comfortable. Examples of such multiplex applications are lighting control, air-conditioning, central locking and seat and mirror adjustment.



Other Application Fields:



Reliable Die-Casting Aluminum Chassis

These ruggedized LCD products are also designed for high reliability, shock and vibration tolerance, survival of high temperature, and corrosive environments. External materials like dust/ water can be very destructive to any type of equipment over time.

■ Fanless and Completely Sealed Strong Housing

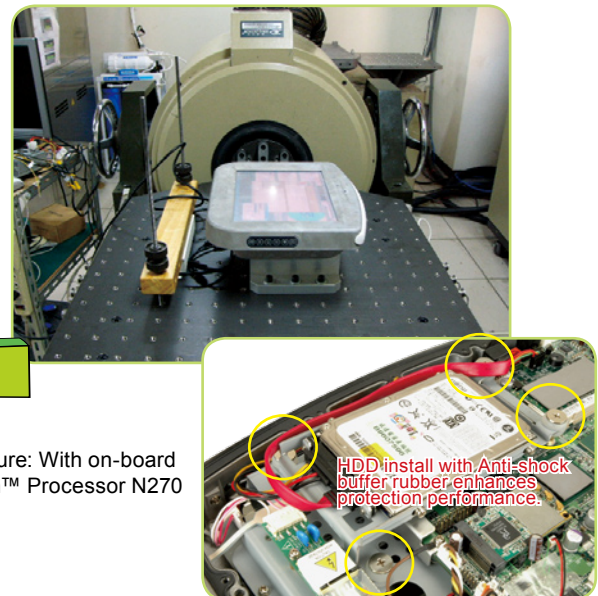
Sealed housing strictly avoids the water invasion and the rugged die-cast aluminum enclosure helps the need for using a fan as a heat dissipation device to minimize the troublesome overheating problem.



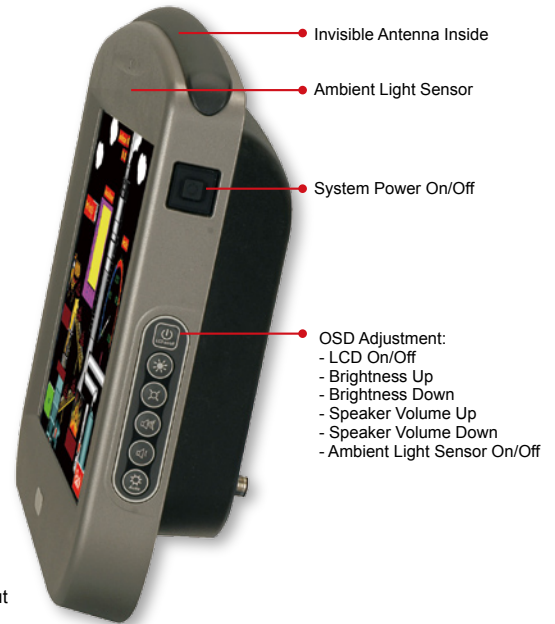
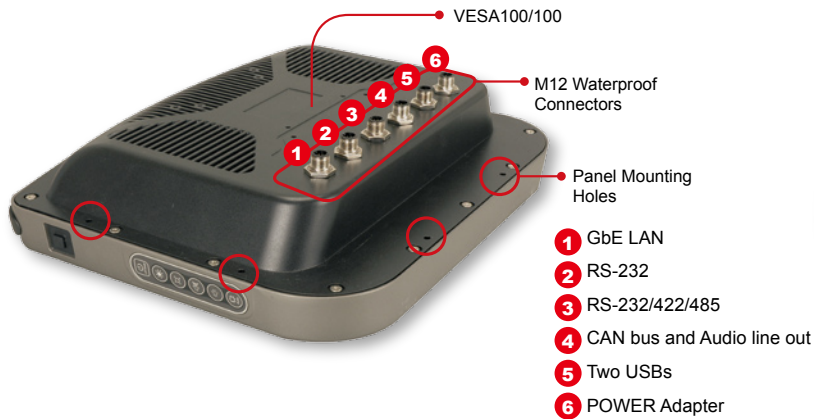
Operating Temperature: With on-board 1.6GHz Intel® Atom™ Processor N270 -10°C~50°C

■ Rigorous Shock/Vibration Test

Compliant with MIL-STD-810F shock and vibration protection, as well as offering IP67 water and dust proof front panel protection.



Fully Integrated I/O

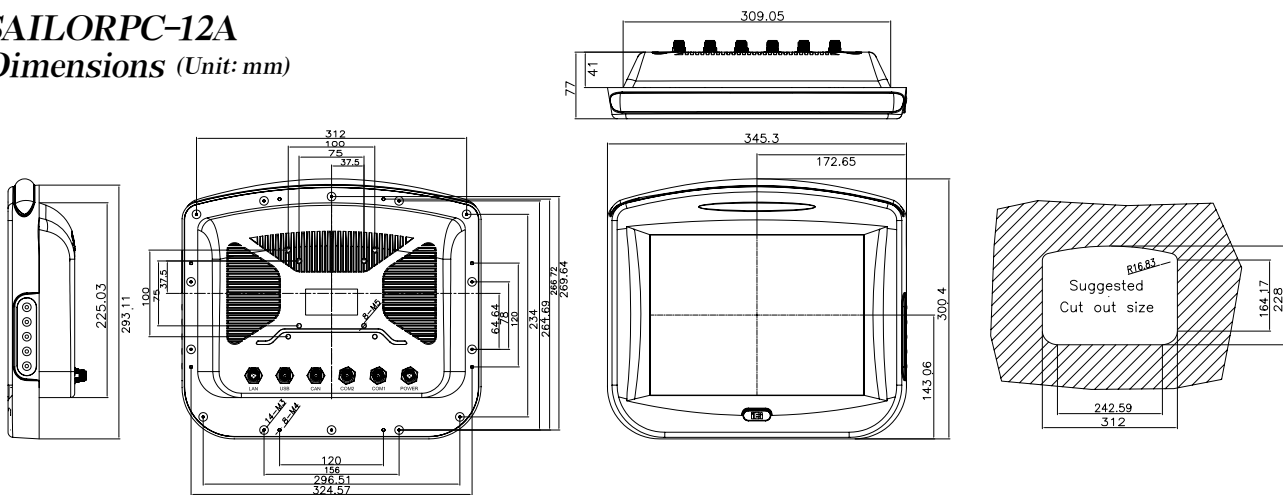


Specifications



Model		SAILORPC-12A-N270	SAILORPC-12ASR-N270	
Display	LCD Size	12.1"		
	Max Resolution	1024 x 768		
	Brightness (cd/m ²)	500	1000	
	Contrast Ratio	700:1	700:1	
	LCD Color	16.2M	262K	
	Pixel Pitch (mm)	0.3075(H) x 0.3075(V)	0.240(H) x 0.240(V)	
	Viewing Angle (H-V)	160°/160°	130°/120°	
Motherboard	Backlight MTBF (hrs)	50000	60000	
	SBC Model	SAILORMB-ATOM-R10		
	CPU	Intel® Atom™ process N270 1.6GHz CPU		
	Chipset	Intel® 945GSE + ICH7M	Intel® 945GSE + ICH7M	
I/O Ports and Switches	RAM	Supports one 400/533MHz DDR2 SO-DIMM(2GB Max.)		
	HDD Driver Bay	SSD	CF Type II	
		Expansion Slot	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				
Physical	1 x 8pin M12 connector for GbE LAN			
	Construction Front Panel	Aluminum		
	Construction Chassis	Heavy-duty Steel		
	Mounting	Panel, Rack, Stand and Arm VESA 100mm x 100mm		
	Front Panel Color	Silver (Pantone 8403C)		
	Dimensions (WxHxD) (mm)	345.3 x 300.4 x 77		
Environment	Net/Gross Weight	4.2 Kg / 5.3 Kg		
	Operation Temperature (°C)	-10°C ~50°C	-10°C ~50°C	
	Storage Temperature (°C)	-20°C ~70°C	-20°C ~70°C	
	Vibration	5~17Hz, 0.1" double amplitude displacement 17~640Hz, 1.5G acceleration peak to peak		
Touch Screen	Shock	10G acceleration part to part (11ms)		
	Resistive Type 5-Wire with RS-232 interface			
Optional Power Supply	P/N: 63000-CLG60121C-RS - 60W Power Adapter - Input: 90VAC~264VAC, 50/60Hz - Output: 12VDC - M12 waterproof connector 5P			
Power Requirement	9~28VDC			
Front Panel Protection	IP67 Compliant			
Power Consumption	33W		51W	
Certificate	Meets CE, FCC, CB, CCC, DNV			

SAILORPC-12A Dimensions (Unit: mm)



Ordering Information

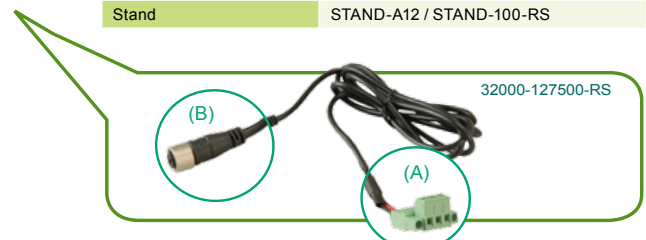
Brightness	OS	Part No.	Description
500 nits	CE 6.0	SAILORPC-12A/R/1/1-C6-R20	12.1" 500 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 1GB compact flash with Windows CE 6.0 operating system
	XPE	SAILORPC-12A/R/1/4-X-R20	12.1" 500 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 4GB compact flash with Windows XP Embedded operating system
		SAILORPC-12A/R/1/16-X-R20	12.1" 500 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 160GB SATA HDD with Windows XP Embedded operating system
	LINUX	SAILORPC-12A/R/1/4-L-R20	12.1" 500 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 4GB compact flash with LINUX operating system
		SAILORPC-12A/R/1/16-L-R20	12.1" 500 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 160GB SATA HDD with LINUX operating system
1000 nits	CE 6.0	SAILORPC-12ASR/R/1/1-C6-R20	12.1" 1000 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 1GB compact flash with Windows CE 6.0 operating system
	XPE	SAILORPC-12ASR/R/1/4-X-R20	12.1" 1000 cd/m ² IP67 panel PC with Intel® Atom™ N270 CPU 1.6GHz, 802.11 b/g/n wireless module, touch screen, 1GB DDR2 553 MHz, M12 connectors and 4GB compact flash with Windows XP Embedded operating system
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Packing List

Item	Part No.	Description
Panel mount screws Pack	44013-030041-RS	
Power cable	32000-127500-RS	2000mm;16AWG; (A) terminal block connector; (B) M12 Waterproof connector
Utilities CD	7B000-000087-RS	
Touch Pen	XTR104-0002-RS	

Options

Item	Part No.
Rack mounting kit	SAILORRK-12
ARM	ARM-11-RS / ARM-31-RS
Stand	STAND-A12 / STAND-100-RS



Optional cables and adapter

Item	Part No.
USB cable	CB-M12USB02-R10
RJ45 LAN cable	CB-M12RJ45-R10
DB-9 COM port cable	CB-M12COM-R10
DB-9 CAN bus and AUDIO line-out cable	CB-M12ACAN-R10
AUDIO line-out cable	CB-M12AUDIO-R10
Water-proof Power Adapter	63000-CLG6012IC-RS



USB cable
(CB-M12USB02-R10)



RJ45 LAN cable
(CB-M12RJ45-R10)



DB-9 COM port cable
(CB-M12COM-R10)



DB-9 CAN bus and
AUDIO line-out cable
(CB-M12ACAN-R10)



AUDIO line-out cable
(CB-M12AUDIO-R10)



Water-proof Power Adapter
(63000-CLG6012IC-RS)