

# Marine Panel PC Series

**New**

The maritime field faces critical environmental challenges, making reliable and rugged systems essential. IEI provides maritime professionals and marine-grade computers and panel PCs that use leading technologies and reliable designs which are perfect for applications on the dock, on the open deck, or in the control room or bridge.

- 19" and 24" Fanless Panel PC with 4th Generation Intel® Core™ i5 Dual-core Processor
- -15°C ~ +55°C Wide Temperature and IP66 Protection with Flat-bezel Projected Capacitive Touchscreen
- Excellent Visual Performance
  - Three independent displays
  - Full OSD function configuration
  - 0%~100% full range dimming
  - 178°/178° wide viewing angles
  - Optical bonding improves visibility under bright light (optional)
- Isolation Protection
  - RS-232/422/485 isolated serial ports
  - Isolated 18V ~ 36V DC input
  - 2 x Isolated CAN-bus 2.0B
- iRIS Remote Management Module



## Multiple Isolated Ports for Comprehensive Protection against Electrical Surges

Ground loop and electric surges are common in the marine applications of electronic products, due to the dense placement of devices. These stray electrical signals can cause equipment damage or malfunction.

### ■ 2.5 kV Isolation Protection on the RS-232/422/485

IEI marine computer is protected from any stray electrical signals from other devices on the ship. Electric surges that were generated from other electronic devices which often passed through serial lines to the marine computer can cause severe damage and malfunction to the computers.

### ■ Isolated 18~36V DC Power 2250VDC Input to Output Basic Insulation



### ■ Two independent CAN 2.0B channels with 2.5 kV Isolation Protection

CAN 2.0B is a kind of marine electronics data network for communication between marine electronic devices such as chart plotters, navigation instruments, GPS receivers, etc.



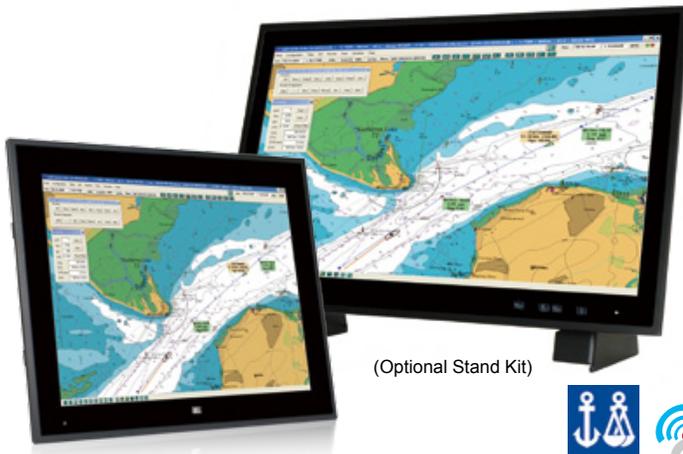
**S24A-QM87**

Intel® Core™ i5 Dual-core Processor



**S19A-QM87**

Intel® Core™ i5 Dual-core Processor



(Optional Stand Kit)

**Features**

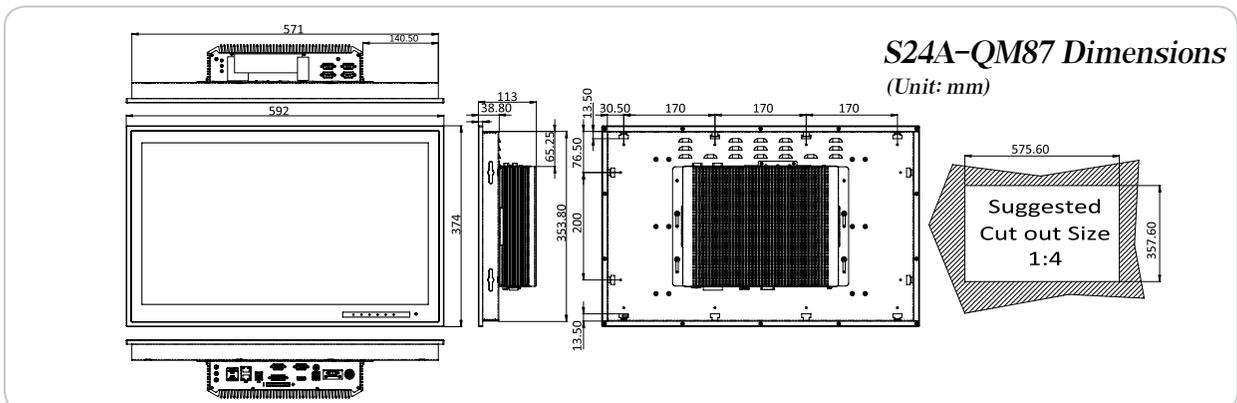
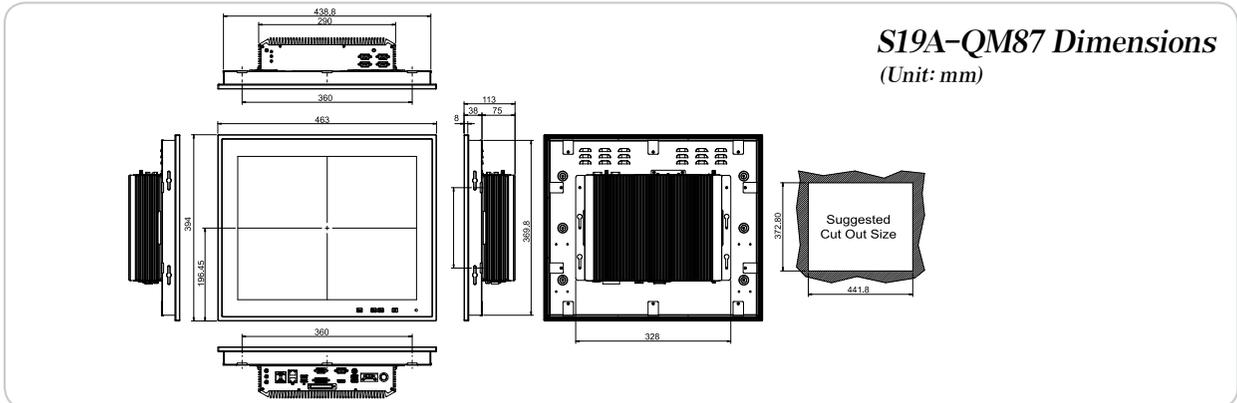
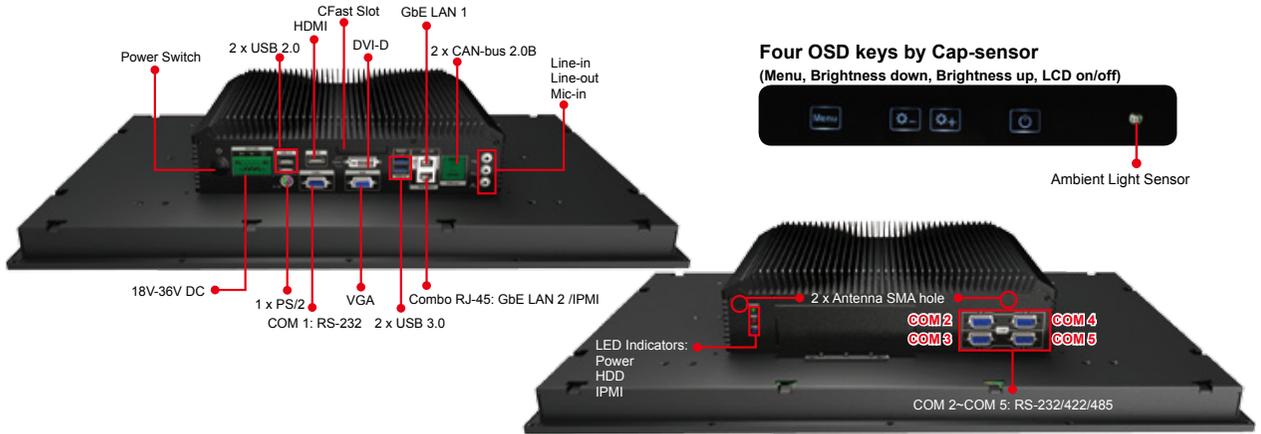


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**Specifications**

Model	Coming Soon	S19A-QM87	New	S24A-QM87
LCD	LCD Size	19"		24"
	Panel Type		PMVA	AMVA
	Max. Resolution	1280 x 1024 (5:4)		1920 x 1080 (16:9)
	Contrast Ratio	2000 : 1		5000 : 1
	Brightness (cd/m²)	300		300
	LCD Color	16.7M		16.7M
	Pixel Pitch (um)	294 x 294		276.75 x 276.75
	Viewing Angles (H-V)	178° / 178°		178° / 178°
Touchscreen & Controller	Backlight MTBF (HRs)	50000		50000
		EXC7920 (10-point)		EXC7200 (2-point)
System	SBC Model		SMB-QM87-R10	
	Chipset		Intel® QM87	
	CPU	Intel® 22nm 4th Generation Mobile Core™ i5-4400E 2.7GHz processor		
	RAM	4GB 1600MHz DDR3 SDRAM (2GB*2) Two 204-pin 1600/1333MHz dual-channel DDR3 SDRAM support up to 16GB		
Input Interfaces	I/O Ports & Switch	2 x USB 2.0	1 x Isolated 18V ~ 36V DC 3-pin terminal block	
		2 x USB 3.0	1 x Power button	
	Expansion	1 x VGA 1 x DVI-D 1 x HDMI 1 x Mic-in 1 x Line-out 1 x Line-in 2 x Antenna SMA hole (reserved)	1 x PS2 (through Y-type cable supporting KB/MS) 2 x CAN-bus 2.0B, 3-pin terminal block (2.5 kv isolation protection) 1 x DB-9 RS-232 (non-isolated) , 4 x DB-9 RS-232/422/485 (2.5 kv isolation protection) 2 x RJ-45 GbE LAN with teaming support (2KV isolation protection)	
Ethernet Controller	GbE1: Intel® I217LM with Intel® AMT 9.0 support GbE2: Intel® I210-AT PCIe controller			
Sensor	Ambient light sensor (0% ~ 100%)			
OSD	Menu, Brightness down, Brightness up, LCD on/off by cap-sensor (Graphic Engine: Genesis STDP6038)			
Storage	2 x 2.5" SSD bay with RAID 0/1 function 1 x Accessible CFast socket			
LED Indicator	Power (power on: green; power off: orange)/storage (red, blinking)/IPMI (blue)			
Power Requirement	Isolated 18V ~ 36V DC, screw-type 3-pin terminal block			
Operating Temperature	-15°C ~ 55°C (5°F ~ 131°F)			
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)			
Humidity	5% to 95% RH			
Thermal Design	Fanless			
Watchdog Timer	Supports 1~255 sec. system reset			
Certifications	EMC: CE, FCC			
	Safety: DNV, IEC 60945 4th, IACS-E10, IEC 61174 IP rating: IP66 compliant front panel and IP22 compliant rear cover			
Housing	Front aluminum sheet metal (Black C)			
Cut-out Dimensions (L x W)		442 mm x 373 mm		576 mm x 358 mm
Dimensions (L x W x H)		463 mm x 394 mm x 113 mm		592 mm x 374 mm x 113 mm
Net Weight (kg)		9.91		13.03
Gross Weight (kg)		13.38		17.19
Vibration and Shock	IEC 60945 / DNV 2.4 compliant / IACS-E10			
Power Supply (DC Input)	DC Input ATX Power Supply			
	- P/N: 041D710-00-101-RS			
	- 150W Power Supply			
	- Input: 18~36V DC, 8-4A (max.) - Output (max.): 12V @13A			
Power Consumption		112W		117W



## Packing List

Item	Q'ty	Remark
S19A-QM87 or S24A-QM87	1	
User Manual & Driver CD	1	Drivers and User Manual
One Key Recovery CD	1	
Screw Pack	1	Including necessary screws
PS/2 Cable	1	Round cable; PS/2 cable
Wire strain band	3	Wire strain band

## Options

Item	Part No.	Description
	PK-S19A-R10	For S19A
Panel Mount Kit	PK-S24A-R10	For S24A
Desktop Stand	STAND-S24A-R10	For S19A & S24A
Ceiling Mount Kit	CEILMT-S24-R10	For S19A/S24A
iRIS Module	iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface

## Ordering Information

P/N	Description
S19A-QM87I-5/PC/4G-R10	19" 300cd/m <sup>2</sup> SXGA marine panel PC with Intel® Mobile Core™ i5-4400E 2.7GHz CPU, 2*2GB DDR3 RAM, projected capacitive touchscreen, isolated 18-36V DC, iRIS-2400 supported, R10
S24A-QM87I-5/PC/4G-R10	24" 300cd/m <sup>2</sup> FHD marine panel PC with Intel® Mobile Core™ i5-4400E 2.7GHz CPU, 2*2GB DDR3 RAM, projected capacitive touchscreen, isolated 18-36V DC, iRIS-2400 supported, R10

