

Heavy Industrial Panel PC Solution



The Next Era IoT Panel PC Solution

IEI offers complete robust panel solutions for harsh industrial environments. The product portfolio varies from sizes and performance. To catch the wave of cloud computing and intelligent solutions, IEI introduces the iRIS remote management solution to enhance efficiency for system integration. With all these benefits, IEI is your solid solution for industrial computing.

» Heavy Industrial Panel PC Product Line

General Purpose Panel PC

Size	Intel® Bay Trail	Intel® H61	Intel® H81	Intel® Q370
5.7"	PPC-F06B-BT			
8"	PPC-F08B-BT			
10.4"	PPC-F10B-BT			
12.1"	PPC-F12B-BT			
15"	PPC-F15B-BT	PPC-5150A-H61	PPC-F15A-H81	PPC-F15C-Q370
15.6"				PPC-FW15C-Q370
17"	PPC-F17B-BT	PPC-5170A-H61	PPC-F17A-H81	PPC-F17C-Q370
18.5"				PPC-FW19C-Q370
19"	PPC-F19B-BT	PPC-5190A-H61		
21.5"			PPC-F22A-H81	PPC-FW22C-Q370
23.8"			PPC-F24A-H81	PPC-FW24C-Q370

Vertical Market Panel PC

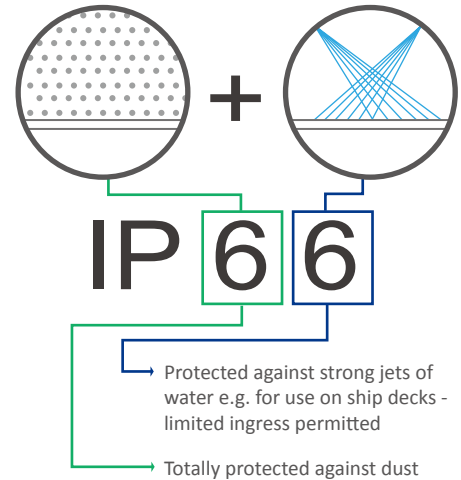
Solutions	Marine Series			UPC Series		INOX Series
Size	Intel® QM87 (PPC)	Monitor	Embedded Box	Intel® QM77	Intel® Skylake ULT	Intel® Skylake ULT
12"			SBOX-100-QM87		UPC-F12A-ULT3	
15"				UPC-V315-QM77		INOX-F15C-ULT3
19"	S19A-QM87	S19M-AD				
24"	S24A-QM87	S24M-AD				

PPC-F-Q370 Series

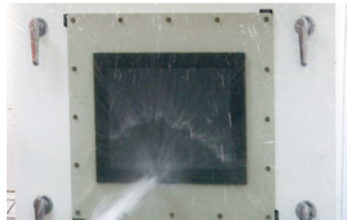
» IP66 Front Panel Protection

PPC-FxxC series provides front mechanical IP dust and water resistant design. The sealing concept of PPC-FxxC contains the following product sealing to offer rugged IP66 front protection:

- PCAP touchscreen to front aluminum bezel with waterproof glue dispensing
- Internal dust sealing poron from LCD to the touchscreen
- Rubber sealing for mounting to the equipment



Test for protection against dust



Test for protection against water

» Anti-glare and UV-resistant Touch Screen Ideal for Outdoor Applications

Etching anti-glare, never peel off!

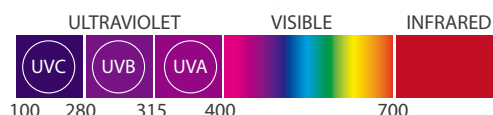
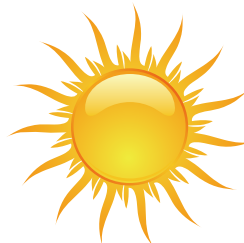
The PPC-FxxC series is built with anti-glare touch screen, which has lower reflection compared to normal touch screen. The reflection will reduce from 8% to 1% and it will eliminate the interference of shine and lights on displays and improve the screen clarity.



UV-resistant ensures reliable continuous operation for mission critical applications

Outdoor applications exposing to direct sunlight and long-term ultraviolet (UV) light will affect PCAP panel appearance such as PCAP top glass hard coat cracking and hazing, or varying degrees of yellowing and bubbling. Thus, IEI offers a UV resistant PCAP touch solution to equip outdoor industrial systems exposed to direct long-term sunlight with anti-UV characteristics.

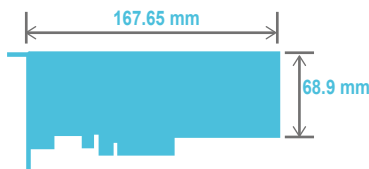
- Blocks UV wavelengths less than $\approx 340\text{nm}$
- Meets ASTM G154 performance criteria
Cycle 1 for 1000 hours



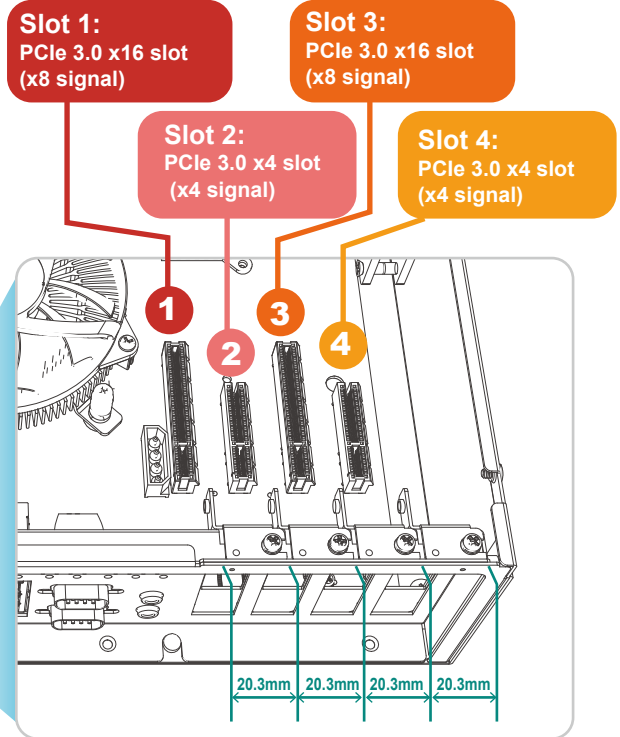
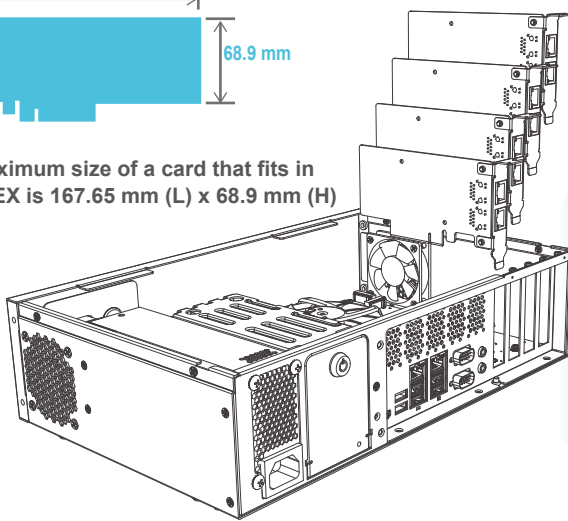
» Four PCIe x4/x8 Low Profile Expansion Slots

The PPC-FxxC series supports multiple PCIe slots including two PCIe 3.0 x8 and two PCIe 3.0 x4 slots, which are compatible with standard low profile add-on cards, to meet different edge inference computing applications.

- **High Speed:** 10GbE card, fiber network card
- **I/O card:** Serial port card, USB card, LAN card, etc.
- **AI accelerating card:** VPU card, FPGA, GPU card, etc.
- **Wireless card:** Wi-Fi card, mobile wireless card, etc.
- **Storage card**



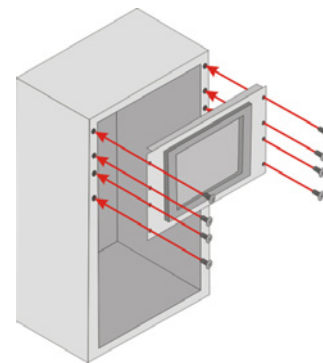
The maximum size of a card that fits in this FLEX is 167.65 mm (L) x 68.9 mm (H)



» Flexible Deployment

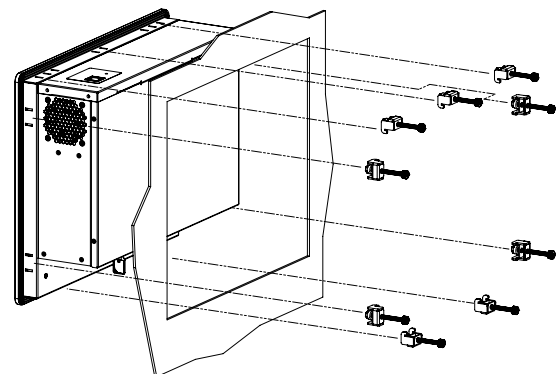
Rack Mount

The PPC-FxxC with rack mounting kit can easily fit the standard 19" cabinet for industrial applications.



Panel Mount

Panel mounting is the mounting way that mounts product into an opening of a customer's fixture from the front and secured from the rear. All user controls are located on the rear of the mechanism, making the panel mount displays a good choice for applications requiring a display with no external or exposed controls such as CNC equipment, gaming, casino system, ATM, and kiosk.



PPC-F-Q370 Series Selection Guide



LCD Size		15"	W15"	17"
Model		PPC-F15C-Q370	PPC-FW15C-Q370	PPC-F17C-Q370
TFT LCD	LCD Size	15"	15.6"	17"
	Max. Resolution	1024x768	1366x768	1280x1024
	Brightness (cd/m ²)	450	400	350
	Contrast Ratio	800:1	500:1	1000:1
	LCD Color	16.2M	16.2M	16.7M
	Viewing Angle (H/V)	160°/150°	170°/160°	170°/160°
	Backlight MTBF (Hrs)	70,000	50,000	50,000
Touch Screen		PCAP touch with 10-point multitouch, anti-glare coating		
Mainboard	CPU	8th Generation Intel® Core™ i7/i5/i3 and Pentium® processor in the LGA 1151 package		
	Chipset	Intel® Q370 Chipset		
	Memory	2 x 288-pin 2666/2400 MHz dual-channel DDR4 unbuffered DIMM slot supporting up to 64GB		
	Graphics Engine	Intel® HD Graphics Gen 9 Engines with 16 low-power execution units, supports DX2015, OpenGL 5.X and OpenCL 2 x, ES 2.0		
	Ethernet	Intel® I211 controller		
Storage		(1) 4 x Accessible 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support) with LED indicator (2) 2 x M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD socket		
I/O Ports and Switches		1 x HDMI output 2 x GbE LAN 6 x USB 3.1 Gen 1 (5Gb/s) Type-A 2 x RS-232 DB-9 type 1 x Mic in 1 x Line out 1 x AC power in Inlet Power button with power LED (power on=Blue) AT/ATX mode switch Reset button		
Expansion Slots		2 x PCIe 3.0 by 8 (by 16 slot) 2 x PCIe 3.0 by 4 (maximum card size supported: 68 mm x 167 mm)		
Thermal Solution		Smart Fan		
Power Supply		AC input ATX power supply 1. 250W power supply - Input: 115VAC~230VAC, 50/60Hz - Output (max.): 3.3V@12A, 5V@14A, 12V@25A, -12V@0.3A, +5Vsb@3A 2. 350W power supply (Build to Order) - Input: 115VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@29A, -12V@0.3A, +5Vsb@3A - Efficiency: Full load (100%) 87%, Typical load (50%) 90%, Light load (20%) 87%		
Watchdog Timer		Software Programmable support 1~255 sec. system reset		
Construction	IP Rating	IP66-rated front panel		
	Chassis Construction	Metal Housing		
	Mounting	Rack/Panel Mount		
	Color	Front Bezel : Cyan-blue (PSM 296C), Others: Black C		
	Cut-out dimensions (LxDxH) (mm)	361.1 x 285.6	379.1 x 232.3	391 x 324
	Dimensions (LxDxH) (mm)	378.5 x 303 x 118	400.1 x 253.3 x 121	408.4 x 341.4 x 119
Environmental	Operating Temperature	-20°C ~ 50°C (with SSD and up to TDP 65W processor) -20°C ~ 40°C (with HDD or add-on cards without fan)		
	Storage Temperature	-30°C ~ 60°C		
	Operating Humidity	5% ~95%, non-condensing		
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak		
	Shock	10G acceleration part to part (11ms)		

PPC-F-Q370 Series Selection Guide



LCD Size		18.5”	21.5”	23.8”
Model		PPC-FW19C-Q370	PPC-FW22C-Q370	PPC-FW24C-Q370
TFT LCD	LCD Size	18.5"	21.5"	23.8"
	Max. Resolution	1366x768	1920x1080	1920x1080
	Brightness (cd/m²)	400	250	250
	Contrast Ratio	1000:1	1000:1	3000:1
	LCD Color	16.7M	16.7M	16.7M
	Viewing Angle (H/V)	170°/160°	170°/160°	178°/178°
	Backlight MTBF (Hrs)	50,000	30,000	30,000
Touch Screen		PCAP touch with 10-point multitouch, anti-glare coating		
Mainboard	CPU	8th Generation Intel® Core™ i7/i5/i3 and Pentium® processor in the LGA 1151 package		
	Chipset	Intel® Q370 Chipset		
	Memory	2 x 288-pin 2666/2400 MHz dual-channel DDR4 unbuffered DIMM slot supporting up to 64GB		
	Graphics Engine	Intel® HD Graphics Gen 9 Engines with 16 low-power execution units, supports DX2015, OpenGL 5.X and OpenCL 2 x, ES 2.0		
	Ethernet	Intel® I211 controller		
Storage		(1) 4 x Accessible 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support) with LED indicator (2) 2 x M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD socket		
I/O Ports and Switches		1 x HDMI output 2 x GbE LAN 6 x USB 3.1 Gen 1 (5Gb/s) Type-A 2 x RS-232 DB-9 type 1 x Mic in	1 x Line out 1 x AC power in Inlet Power button with power LED (power on=Blue) AT/ATX mode switch Reset button	
Expansion Slots		2 x PCIe 3.0 by 8 (by 16 slot) 2 x PCIe 3.0 by 4 (maximum card size supported: 68 mm x 167 mm)		
Thermal Solution		Smart Fan		
Power Supply		AC input ATX power supply 1. 250W power supply - Input: 115VAC~230VAC, 50/60Hz - Output (max.): 3.3V@12A, 5V@14A, 12V@25A, -12V@0.3A,+5Vsb@3A 2. 350W power supply (Build to Order) - Input: 115VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@29A, -12V@0.3A,+5Vsb@3A -Efficiency: Full load (100%) 87%, Typical load (50%) 90%, Light load (20%) 87%		
Watchdog Timer		Software Programmable support 1~255 sec. system reset		
Construction	IP Rating	IP66-rated front panel		
	Chassis Construction	Metal Housing		
	Mounting	Rack/Panel Mount	Panel Mount	
	Color	Front Bezel : Cyan-blue (PSM 296C), Others: Black C		
	Cut-out dimensions (LxDxH) (mm)	447.8 x 267.2	533 x 341	577.6 x 359.6
	Dimensions (LxDxH) (mm)	469.8 x 289.2 x 120.8	550.4 x 358.4 x 117.8	600 x 356.6 x 119
Environmental	Operating Temperature	-20°C ~ 50°C (with SSD and up to TDP 65W processor) -20°C ~ 40°C (with HDD or add-on cards without fan)		
	Storage Temperature	-30°C ~ 60°C		
	Operating Humidity	5% ~95%, non-condensing		
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak		
	Shock	10G acceleration part to part (11ms)		

PPC-F-Q370 Series

15"/15.6"/17" AI Ready Panel PC Based on Intel® OpenVINO™ toolkit

Features

- 15"~24" Panel PC with 8th Generation LGA 1151 Intel® Core™ i7/i5/i3 and Pentium® processor
- Four hot-swappable and accessible HDD drive bays, support RAID 0/1/5/10
- Two PCIe 3.0 by 4 and two PCIe 3.0 by 8 slots
- Dual M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD support



Specifications

Model		PPC-F15C-Q370	PPC-F17C-Q370	PPC-FW15C-Q370
TFT LCD	LCD Size	15"	17"	15.6"
	Max. Resolution	1024x768	1280x1024	1366x768
	Brightness (cd/m²)	450	350	400
	Contrast Ratio	800:1	1000:1	500:1
	LCD Color	16.2M	16.7M	16.2M
	Viewing Angle (H/V)	160°/150°	170°/160°	170°/160°
	Backlight MTBF (Hrs)	70,000	50,000	50,000
Touch Screen		PCAP touch with 10-point multitouch, anti-glare coating		
Mainboard	CPU	8th Generation Intel® Core™ i7/i5/i3 and Pentium® processor in the LGA 1151 package		
	Chipset	Intel® Q370 Chipset		
	Memory	2 x 288-pin 2666/2400 MHz dual-channel DDR4 unbuffered DIMM slot supporting up to 64GB		
	Graphics Engine	Intel® HD Graphics Gen 9 Engines with 16 low-power execution units, supports DX2015, OpenGL 5.X and OpenCL 2 x, ES 2.0		
	Ethernet	Intel® I211 controller		
Storage		(1) 4 x Accessible 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support) with LED indicator (2) 2 x M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD socket		
I/O Ports and Switches		1 x HDMI output 2 x GbE LAN 6 x USB 3.1 Gen 1 (5Gb/s) Type-A 2 x RS-232 DB-9 type 1 x Mic in	1 x Line out 1 x AC power in Inlet Power button with power LED (power on=Blue) AT/ATX mode switch Reset button	
Expansion Slots		2 x PCIe 3.0 by 8 (by 16 slot) 2 x PCIe 3.0 by 4 (maximum card size supported: 68 mm x 167 mm)		
Thermal Solution		Smart Fan		
Power Supply		AC input ATX power supply 1. 250W power supply - Input: 115VAC~230VAC, 50/60Hz - Output (max.): 3.3V@12A, 5V@14A, 12V@25A, -12V@0.3A, +5Vsb@3A 2. 350W power supply (Build to Order) - Input: 115VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@29A, -12V@0.3A, +5Vsb@3A - Efficiency: Full load (100%) 87%, Typical load (50%) 90%, Light load (20%) 87%		
Watchdog Timer		Software Programmable support 1~255 sec. system reset		
Construction	IP Rating	IP66-rated front panel		
	Chassis Construction	Metal Housing		
	Mounting	Rack/Panel Mount		
	Color	Front Bezel : Cyan-blue (PSM 296C), Others: Black C		
	Cut-out dimensions (LxDxH) (mm)	361.1 x 285.6	391 x 324	379.1 x 232.3
	Dimensions (LxDxH) (mm)	378.5 x 303 x 118	408.4 x 341.4 x 119	400.1 x 253.3 x 121
Environmental	Operating Temperature	-20°C ~ 50°C (with SSD and up to TDP 65W processor) -20°C ~ 40°C (with HDD or add-on cards without fan)		
	Storage Temperature	-30°C ~ 60°C		
	Operating Humidity	5% ~95%, non-condensing		
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak		
	Shock	10G acceleration part to part (11ms)		

PPC-F-Q370 Series

18.5"/21.5"/23.8" AI Ready Panel PC Based on Intel® OpenVINO™ toolkit

Features

- 15"~24" Panel PC with 8th Generation LGA 1151 Intel® Core™ i7/i5/i3 and Pentium® processor
- Four hot-swappable and accessible HDD drive bays, support RAID 0/1/5/10
- Two PCIe 3.0 by 4 and two PCIe 3.0 by 8 slots
- Dual M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD support



Specifications

Model		PPC-FW19C-Q370	PPC-FW22C-Q370	PPC-FW24C-Q370
TFT LCD	LCD Size	18.5"	21.5"	23.8"
	Max. Resolution	1366x768	1920x1080	1920x1080
	Brightness (cd/m²)	400	250	250
	Contrast Ratio	1000:1	1000:1	3000:1
	LCD Color	16.7M	16.7M	16.7M
	Viewing Angle (H/V)	170°/160°	170°/160°	178°/178°
	Backlight MTBF (Hrs)	50,000	30,000	30,000
Touch Screen		PCAP touch with 10-point multitouch, anti-glare coating		
Mainboard	CPU	8th Generation Intel® Core™ i7/i5/i3 and Pentium® processor in the LGA 1151 package		
	Chipset	Intel® Q370 Chipset		
	Memory	2 x 288-pin 2666/2400 MHz dual-channel DDR4 unbuffered DIMM slot supporting up to 64GB		
	Graphics Engine	Intel® HD Graphics Gen 9 Engines with 16 low-power execution units, supports DX2015, OpenGL 5.X and OpenCL 2.x, ES 2.0		
	Ethernet	Intel® I211 controller		
Storage		(1) 4 x Accessible 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support) with LED indicator (2) 2 x M.2 2280 PCIe Gen 3.0 x4 NVMe™ SSD socket		
I/O Ports and Switches		1 x HDMI output 2 x GbE LAN 6 x USB 3.1 Gen 1 (5Gb/s) Type-A 2 x RS-232 DB-9 type 1 x Mic in	1 x Line out 1 x AC power in Inlet Power button with power LED (power on=Blue) AT/ATX mode switch Reset button	
Expansion Slots		2 x PCIe 3.0 by 8 (by 16 slot) 2 x PCIe 3.0 by 4 (maximum card size supported: 68 mm x 167 mm)		
Thermal Solution		Smart Fan		
Power Supply		AC input ATX power supply 1. 250W power supply - Input: 115VAC~230VAC, 50/60Hz - Output (max.): 3.3V@12A, 5V@14A, 12V@25A, -12V@0.3A, +5Vsb@3A 2. 350W power supply (Build to Order) - Input: 115VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@29A, -12V@0.3A, +5Vsb@3A -Efficiency: Full load (100%) 87%, Typical load (50%) 90%, Light load (20%) 87%		
Watchdog Timer		Software Programmable support 1~255 sec. system reset		
Construction	IP Rating	IP66-rated front panel		
	Chassis Construction	Metal Housing		
	Mounting	Rack/Panel Mount	Panel Mount	
	Color	Front Bezel : Cyan-blue (PSM 296C), Others: Black C		
	Cut-out dimensions (LxDxH) (mm)	447.8 x 267.2	533 x 341	577.6 x 359.6
	Dimensions (LxDxH) (mm)	469.8 x 289.2 x 120.8	550.4 x 358.4 x 117.8	600 x 356.6 x 119
Environmental	Operating Temperature	-20°C ~ 50°C (with SSD and up to TDP 65W processor) -20°C ~ 40°C (with HDD or add-on cards without fan)		
	Storage Temperature	-30°C ~ 60°C		
	Operating Humidity	5% ~95%, non-condensing		
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak		
	Shock	10G acceleration part to part (11ms)		

Ordering Information

Part No.	Description
PPC-F15C-Q370-P/PC/25-R10	15" 450cd/m ² 1024 x 768 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F15C-Q370-i3/PC/25-R10	15" 450cd/m ² 1024 x 768 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F15C-Q370-i5/PC/25-R10*	15" 450cd/m ² 1024 x 768 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F15C-Q370-i7/PC/25-R10*	15" 450cd/m ² 1024 x 768 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F17C-Q370-P/PC/25-R10	17" 350cd/m ² 1280 x 1024 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F17C-Q370-i3/PC/25-R10	17" 350cd/m ² 1280 x 1024 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F17C-Q370-i5/PC/25-R10*	17" 350cd/m ² 1280 x 1024 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-F17C-Q370-i7/PC/25-R10*	17" 350cd/m ² 1280 x 1024 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW15C-Q370-P/PC/25-R10	15.6" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW15C-Q370-i3/PC/25-R10	15.6" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW15C-Q370-i5/PC/25-R10*	15.6" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW15C-Q370-i7/PC/25-R10*	15.6" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW19C-Q370-P/PC/25-R10	18.5" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW19C-Q370-i3/PC/25-R10	18.5" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW19C-Q370-i5/PC/25-R10*	18.5" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW19C-Q370-i7/PC/25-R10*	18.5" 400cd/m ² 1366 x 768 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW22C-Q370-P/PC/25-R10	21.5" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW22C-Q370-i3/PC/25-R10	21.5" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW22C-Q370-i5/PC/25-R10*	21.5" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW22C-Q370-i7/PC/25-R10*	21.5" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW24C-Q370-P/PC/25-R10	23.8" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Pentium® Gold G5400T Processor (2-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW24C-Q370-i3/PC/25-R10	23.8" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i3-8100T Processor (4-core, 4-thread, 3.10 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW24C-Q370-i5/PC/25-R10*	23.8" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i5-8500T Processor (6-core, 6-thread, 2.1 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10
PPC-FW24C-Q370-i7/PC/25-R10*	23.8" 250cd/m ² 1920 x 1080 AI modular Panel PC, Intel® Core™ i7-8700T Processor (6-core, 12-thread, 2.4 GHz) TDP 35W, two PCIe x4 and two PCIe x8 slots, four HDD bays, 250W PSU, R10

*Build to order

**350W AC PSU models are by build-to-order manufacturing

Options

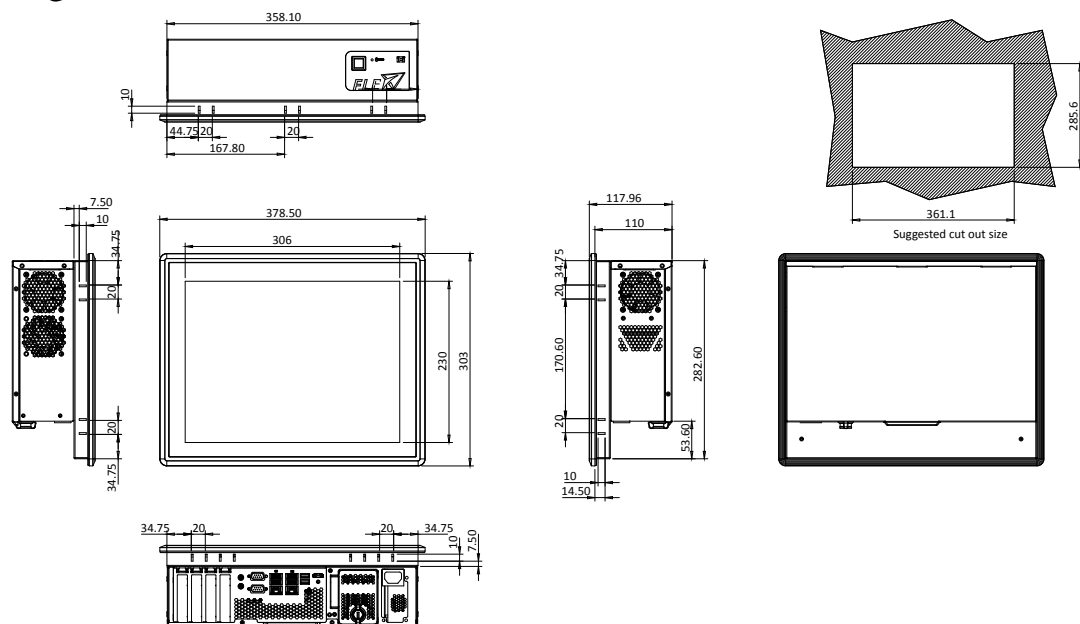
Item	PPC-F15C	PPC-FW15C	PPC-F17C	PPC-FW19C	PPC-FW22C	PPC-FW24C
Panel Mount Kit	FPK-12-R10	FPK-14-R10	FPK-13-R10	FPK-13-R10	FPK-13-R10	FPK-14-R10
Rack Mount Kit	FRK15C-R10	FRKW15C-R10	FRK17C-R10	FRKW19C-R10	N.A.	N.A.

Packing List

Item	Q'ty	Description
44013-030041-RS	16	Flat head screws for HDD bracket, M3*4
32702-000200-100-RS	1	European power cord, 1830mm

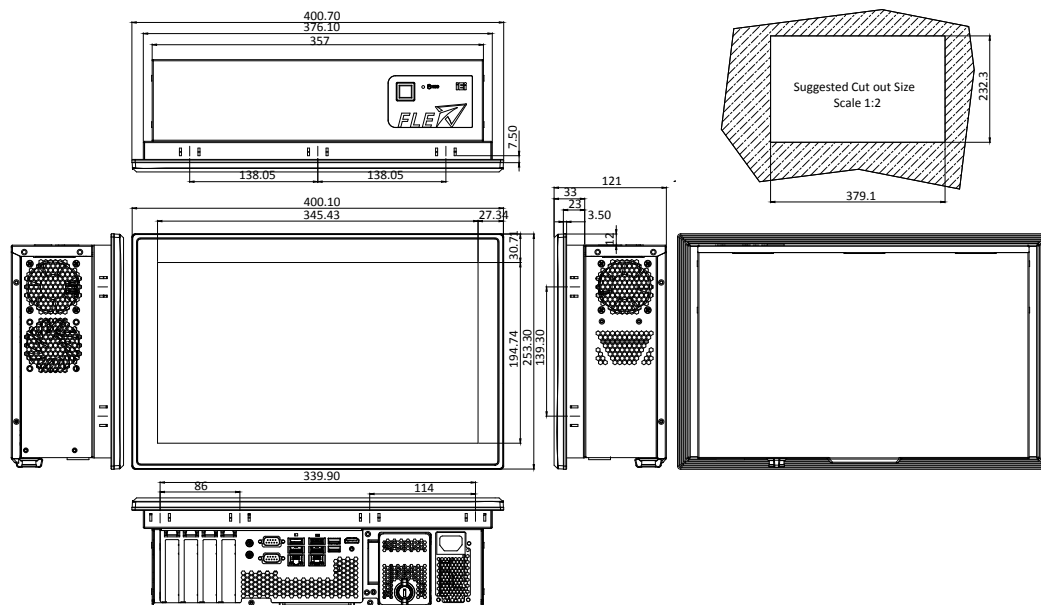
PPC-F15C-Q370 Dimensions

(Unit: mm)



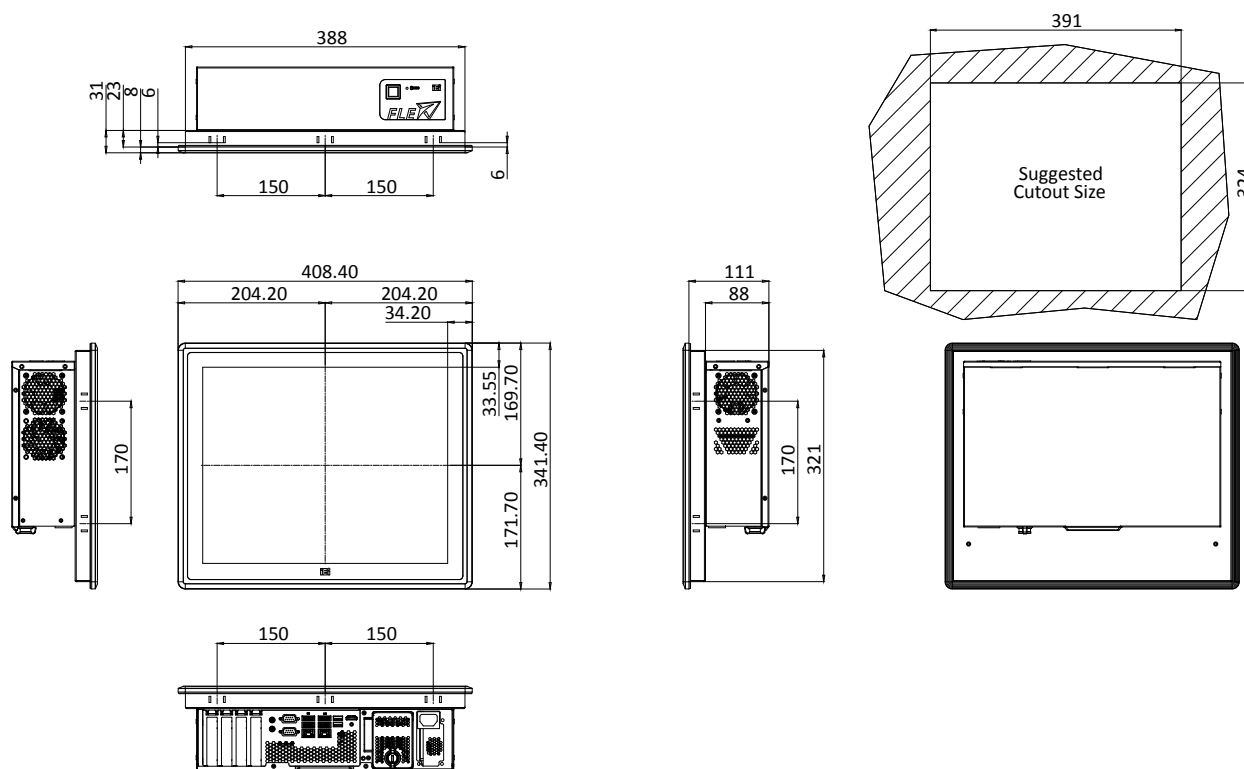
PPC-FW15C-Q370 Dimensions

(Unit: mm)



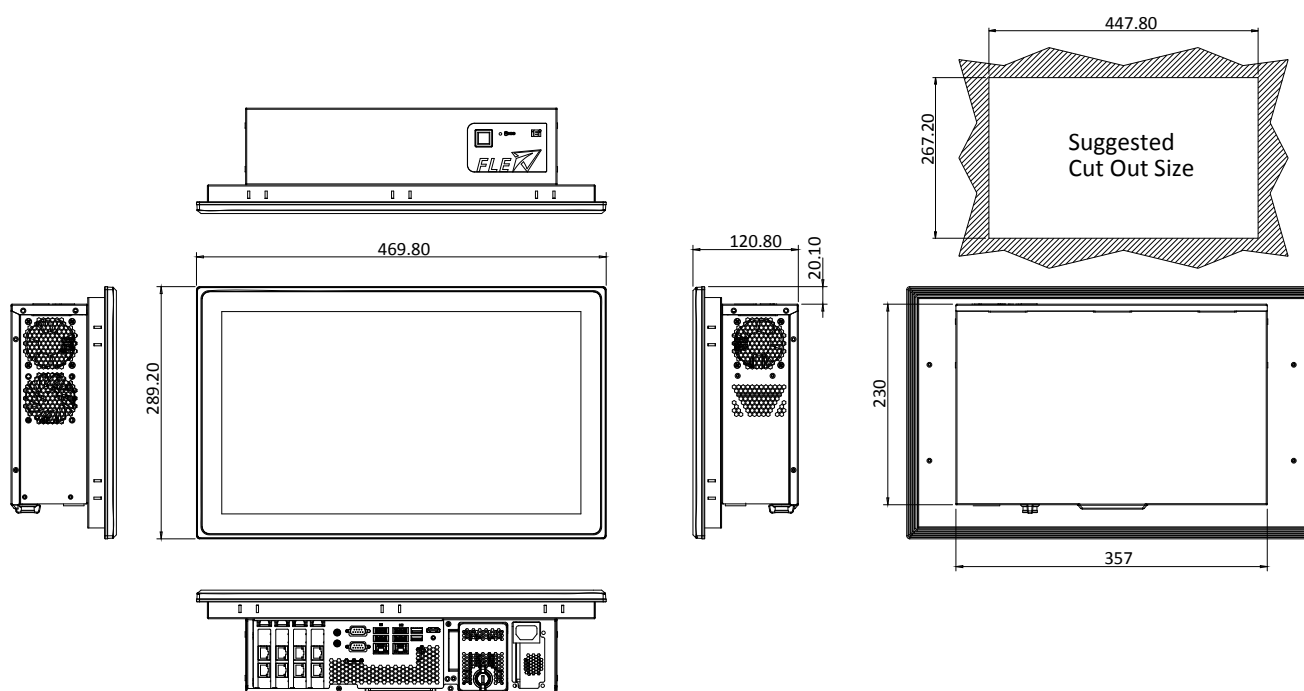
PPC-F17C-Q370 Dimensions

(Unit: mm)



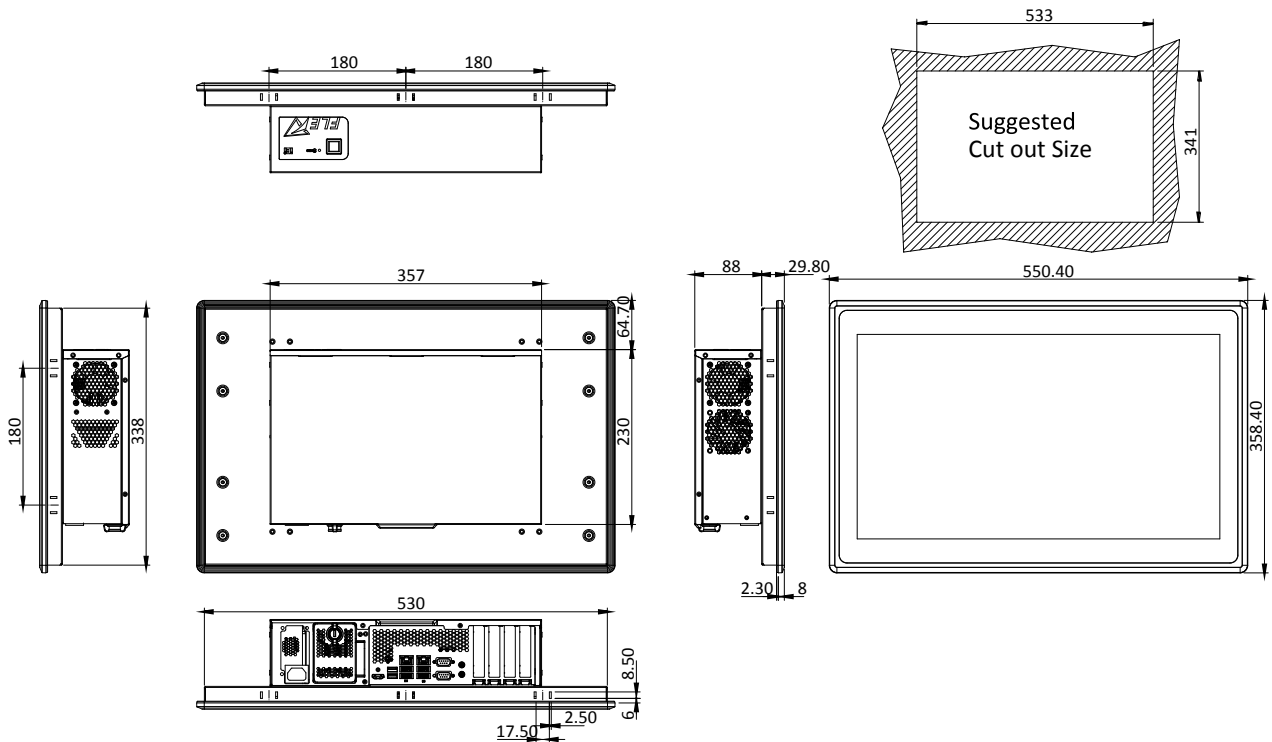
PPC-FW19C-Q370 Dimensions

(Unit: mm)



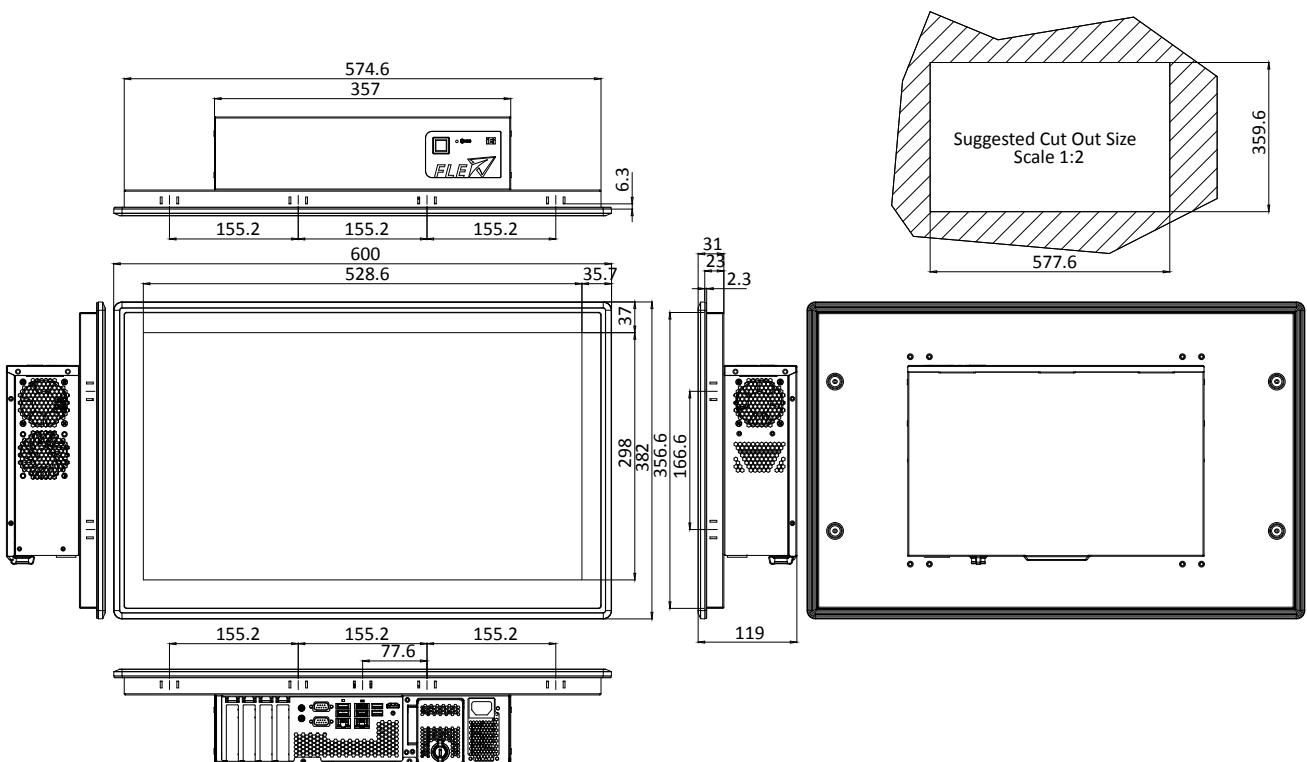
PPC-FW22C-Q370 Dimensions

(Unit: mm)



PPC-FW24C-Q370 Dimensions

(Unit: mm)



PPC-F Series

IEI is dedicated to developing impeccable industrial panel PC products. The PPC and PPC-F series industrial panel PCs not only keep rugged design of IP65 protection but also enrich aesthetic experience by implementing the seamless mounting method. The projected capacitive touch option is added to these new series of products to provide up to 2 points multi-touch solution! Additionally, we also provide high performance H81 series and low power consumption Bay Trail series to meet customers' requests.

■ PPC-F Industrial Panel PC Series

The PPC-F series aims at slim and compact design. Therefore, this new series makes a huge improvement in mechanical design to achieve the goal.



PPC-F15A-H81
262.2 x 322.2 mm



PPC-5150A-H61
309 x 410 mm

VS

■ 8mm Ultra Thin Bezel Design

To enhance aesthetic experience in industrial automation applications, the depth of the front bezel of the PPC-F is only 8mm to minimize the gap between the wall and the system in wall/panel mounting, which is neat and simple during integration.

■ 10-Point Multi Touch

The PPC series supports 10-point projected capacitive touch, enhancing smooth operations! IEI also provides 12" to 24" resistive single type and projected capacitive type touchscreen options to enrich simple and intuitive user experience.

■ FHD Industrial Panel PC Available

Going big is the market trend on industrial panel PC and monitor products. Thus, IEI launches new PPC-F series industrial panel PC. Users can enjoy high quality graphics and enriched data display at the same time from FHD panels.

■ Impeccable Front Panel

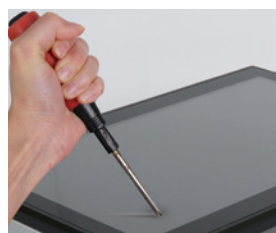
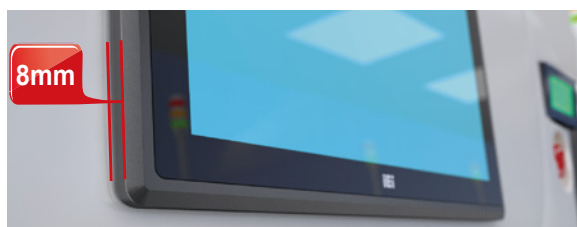
6H Anti-scratch Touch

The PPC-F series equipped with projected capacitive touchscreen uses 6H hardness vandal proof strengthened glass to prevent damages from physical impact.

Front Bezel IP65 Protection

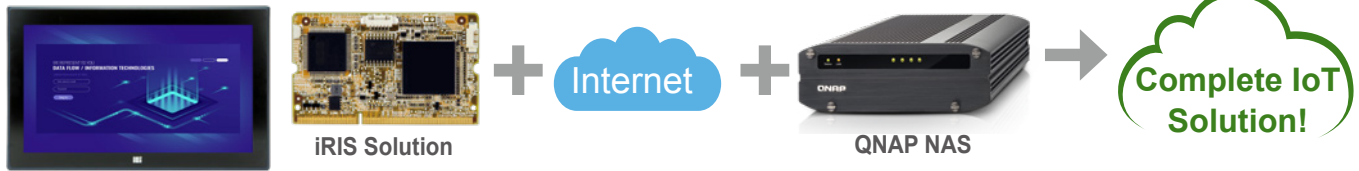
Designed for harsh environments, the PPC-F series provides front bezel IP65 protection to resist dust and water jet.

PPC-F15A-H81 vs. PPC-5150A-H61



■ IEI Remote Intelligent Management System

The PPC-F supports iEi iRIS remote management, which helps users to manage multiple devices through single management interface and elevates work efficiency. iRIS solution only requires a module and Internet connection! (For PPC-F H81 & PPC-F 12B/15B/17B only)



Remote Power Management

Users can remotely power on/off all the iRIS devices and set up power cycle to simplify power control process.

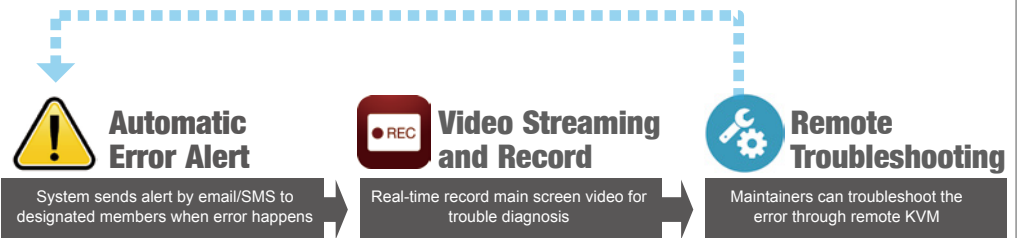


Unify industrial automation process through a simple setting!



24H Active Recovery

With remote troubleshooting everywhere, there is no need to send out maintenance staff anymore!



■ Built-in 80-Plus Silver Power Supply

The 80-plus silver power supply is implemented into the PPC-F H81 series, which reduces power loss and increases efficiency during power transition. With the certified power supply, the power transition between AC source and DC source could maintain up to 85% efficiency, and the power loss is only 15% or less. For customers, the high efficiency of power transition could reduce not only cost but also heat loss.. Furthermore, it could make a friendly environment. (For PPC-F H81 series only)

Parameters	Loading	Gold	Silver	Bronze	80 Plus
Efficiency	20%	87%	85%	82%	80%
	50%	90%	88%	85%	80%
	100%	87%	85%	82%	80%
Power Factor	50%	90% (across the full range)			90% (@100% Load)



■ PCIe Mini Card Expansion

Two full-size PCIe Mini card expansion slots are reserved in the PPC-F series (Depends on models). With a wide variety of IEI PCIe Mini card solutions, it is flexible and easy to add extra functions in the system.

WiFi Module



WIFI-RT3593-DB-R10

LAN Module



MPCIE-LAN-R10

3G Module



MPCIE-3G-R10

USB3.0 Module

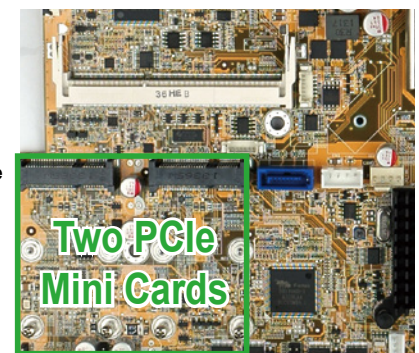


MPCIE-USB3-R10

Capture Card Module



IVCME-C604



PPC-F Series Selection Guide



LCD Size		5.7"	8"	10.4"	12"	15"	
Model		PPC-F06B-BT	PPC-F08B-BT	PPC-F10B-BT	PPC-F12B-BT	PPC-F15A-H81	PPC-F15B-BT
Display	LCD Size	5.7" (4:3)	8" (4:3)	10.4"	12" (4:3)	15" (4:3)	15" (4:3)
	Max. Resolution	640 (W) x 480 (H)	800 (W) x 600 (H)	800 (W) x 600 (H)	1024 (W) x 768 (H)	1024 (W) x 768 (H)	1024 (W) x 768 (H)
	Brightness (cd/m ²)	550	500	400	600	450	450
	Contrast Ratio	800 : 1	500 : 1	700 : 1	700 : 1	800 : 1	800 : 1
	LCD Color	262K	16.2M	16.2M	16.2M	16.2M	16.2M
	Pixel Pitch (mm) (HxV)	0.18 x 0.18	0.2025 x 0.0675	0.264 x 0.264	0.24 x 0.24	0.297 x 0.297	0.297 x 0.297
	Viewing Angle (V/H)	160° / 140°	140° / 120°	160° / 140°	160° / 140°	160° / 150°	160° / 150°
	Backlight MTBF (hrs)	50000	50000	30000	50000	70000	70000
Touch	TouchScreen	4-wire resistive type flat touch window, 3H	5-wire resistive type flat touchscreen, 3H	5-wire resistive type flat touchscreen, 3H	5-wire resistive single touch window, 3H (Anti-glare Surface) 10-point Projected capacitive touch window, 6H (Anti-UV, Anti-glare Surface)		
	Touch Controller	PenMount DMC9000	PenMount DMC9000	PenMount DMC9000	Penmount DMC 9000 EETI EXC3188	Penmount DMC 9000 EETI EXC3188	Penmount DMC 9000 EETI EXC3188
Motherboard	CPU	Intel® Celeron® processor N2807, dual-core, 1.58GHz	Intel® Celeron® J1900 on-board SoC, quad-core, 2GHz	Intel® Celeron® J1900 on-board SoC, quad-core, 2GHz	Intel® Celeron® quad-core J1900 SoC, 2GHz	4th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® processor, up to TDP 65W CPU	Intel® Celeron® quad-core J1900 SoC, 2GHz
	Chipset	N/A	N/A	N/A	N/A	N/A	Intel® H81
	RAM	2GB DDR3L 1600MHz on-board RAM (system max. 4GB by MOQ=300pcs)	1 x 204-pin DDR3L SO-DIMM slot (max. 8GB)	1 x 204-pin DDR3L SO-DIMM slot (max. 8GB)	2 x 204-pin 1066/1333 MHz DDR3L SO-DIMM supported (max. 8GB)	2 x 204-pin DDR3 SO-DIMM slots (max. 16GB)	2 x 204-pin 1066/1333 MHz DDR3L SO-DIMM supported (max. 8GB)
	Ethernet	2 x RTL 8111E	2 x RTL 8111E	2 x RTL 8111E	1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller	1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I217 controller	1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller
	Audio Codec	Realtek ALC662 HD codec	Realtek ALC892 HD codec	Realtek ALC892 HD codec	Realtek ALC662 HD codec	Realtek ALC662 HD codec	Realtek ALC662 HD codec
I/O Ports and Switches		1 x RJ-45 LAN port 1 x RS-232 COM port (DB-9 connector) (RI/5V/12V) 1 x RS-422/485 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x 9 V~36 V DC lockable jack (2-pin) 1 x Audio port (line-out) 1 x Power switch 1 x Reset button 1 x AT/ATX switch	1 x RS-232 COM port (RJ-45 connector) 1 x RS-232/422/485 COM port (DB-9 connector) (RI/5V/12V) 2 x USB 3.1 Gen 1 (5Gb/s) 2 x GbE LAN 1 x Power switch 1 x Reset button 1 x AT/ATX switch 1 x Audio port (line-out) 1 x 9 V~30 V lockable power jack	1 x RS-232 COM port (RJ-45 connector) 1 x RS-232/422/485 COM port (DB-9 connector) (RI/5V/12V) 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 2 x GbE LAN 1 x Power switch 1 x Reset button 1 x AT/ATX switch 1 x Audio port (line-out) 1 x 9 V~30 V lockable power jack	2 x RJ-45 LAN port 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x HDMI 2 x RS-232 1 x RS-232/422/485 1 x VGA 1 x 9 V~36 V DC jack (4-pin) 1 x 9 V~36 V DC terminal block 1 x Power switch	2 x RJ-45 LAN Port 2 x USB 3.1 Gen 1 (5Gb/s) 4 x USB 2.0 1 x HDMI output 4 x RS-232 1 x RS-422/485 1 x MIC-in 1 x Line-out 1 x VGA output 1 x AC/DC power plug (DC model is by build to order manufacturing) 1 x AT/ATX switch 1 x Clear CMOS 1 x Reset button 1 x Power switch	2 x RJ-45 LAN port 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x HDMI 2 x RS-232 1 x RS-232/422/485 1 x VGA 1 x 9 V~36 V DC jack (4-pin) 1 x 9 V~36 V DC terminal block 1 x Line-out 1 x Power switch
Drive Bay	HDD Driver Bay	N/A	N/A	1 x 2.5" HDD bay	1 x 2.5" HDD bay	1 x 2.5" HDD bay	1 x 2.5" HDD bay
	SSD	mSATA					
Expansion Slot		1 Full Size PCIe Mini Slot (with mSATA, PCIe/USB Signal)	1 x Full-size PCIe Mini slot (with mSATA/Pcie/USB signal) 1 x Half-size PCIe Mini slot for Wi-Fi modules	1 x Full-size PCIe Mini card slot 1 x Full-size PCIe Mini card slot colay mSATA			
System Cooling		Fanless	Fanless	Fanless	Fanless	Active fan	Fanless
Environment	Operating Temperature	-10°C~50°C (14°F~122°F)					
	Storage Temperature	-20°C~60°C (-4°F~140°F)					

PPC-F Series Selection Guide



LCD Size		17”		19”	22”	23.8”
Model		PPC-F17A-H81	PPC-F17B-BT	PPC-F19B-BT	PPC-F22A-H81	PPC-F24A-H81
Display	LCD Size	17”	17”	19”	22”	23.8”
	Max. Resolution	1280 (W) x 1024 (H)			1920 (W) x 1080 (H)	
	Brightness (cd/m²)	350			250	
	Contrast Ratio	1000 : 1				
	LCD Color	16.7M				
	Pixel Pitch (mm) (HxV)	0.26 x 0.26	0.26 x 0.26	0.294 x 0.294	0.25 x 0.25	0.28 x 0.28
	Viewing Angle (V/H)	170° / 160°	170° / 160°	170° / 160°	165° / 165°	178° / 178°
	Backlight MTBF (hrs)	50000			30000	
Touch	Touchscreen	5-wire resistive single touch window, 3H (Anti-glare Surface) 10-point Projected capacitive touch window, 6H (Anti-UV, Anti-glare Surface)			10-point Projected capacitive touch window, 6H (Anti-UV, Anti-glare Surface)	
	Touch Controller	Penmount DMC 9000 EETI EXC3188			EETI EXC3188	
Motherboard	CPU	4th generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU	Intel® Celeron® quad-core J1900 SoC, 2GHz	Intel® Celeron® processor J1900 (2M cache, up to 2.42 GHz)	4th generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU	
	Chipset	Intel® H81	N/A		Intel® H81	
	RAM	2 x 204-pin DDR3 SO-DIMM slots (max. 16GB)	2 x 204-pin 1066/1333 DDR3L SO-DIMM supported (max. 8GB)	2 x 204-pin DDR3L SO-DIMM slot (max. 8GB), pre-installed with 2GB	2 x 204-pin DDR3 SO-DIMM slots (max. 16GB)	
	Ethernet	1 x PCIe GbE by Intel® I210 controller 1 x PCIe GbE by Intel® I211 controller				
	Audio Codec	Realtek ALC662 HD codec				
I/O Ports and Switches		2 x RJ-45 LAN Port 2 x USB 3.1 Gen 1 (5Gb/s) 4 x USB 2.0 1 x HDMI output 4 x RS-232 1 x RS-422/485 1 x MIC-in 1 x Line-out 1 x VGA output 1 x AC/DC power plug (DC model is by build to order manufacturing) 1 x AT/ATX switch 1 x Clear CMOS 1 x Reset button 1 x Power switch	2 x RJ-45 LAN port 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x HDMI 2 x RS-232 1 x RS-232/422/485 1 x VGA 1 x DC jack (4-pin) 1 x Terminal block 1 x Microphone & speaker 1 x power switch	2 x RJ-45 LAN port 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x HDMI 2 x RS-232 1 x RS-232/422/485 1 x VGA 1 x 9 V~36 V DC jack (4-pin) 1 x 9 V~36 V DC terminal block 1 x Line-out (PPC-F15B & PPC-F17B & PPC-F19B only) 1 x Power switch	2 x RJ-45 LAN Port 2 x USB 3.1 Gen 1 (5Gb/s) 4 x USB 2.0 1 x HDMI output 4 x RS-232 1 x RS-422/485 1 x MIC-in 1 x Line-out 1 x VGA output 1 x AC/DC power plug (DC model is by build to order manufacturing) 1 x AT/ATX switch 1 x Clear CMOS 1 x Reset button 1 x Power switch	2 x RJ-45 LAN Port 2 x USB 3.1 Gen 1 (5Gb/s) 4 x USB 2.0 1 x HDMI output 4 x RS-232 1 x RS-422/485 1 x MIC-in 1 x Line-out 1 x VGA output 1 x AC/DC power plug (DC model is by build to order manufacturing) 1 x AT/ATX switch 1 x Clear CMOS 1 x Reset button 1 x Power switch
Drive Bay	HDD Driver Bay	1 x 2.5" SATA HDD bay with anti-shook			1 x 2.5" SATA HDD bay with anti-shook or 1 x 3.5" SATA HDD bay with anti-shook	
	SSD	mSATA				
Expansion Slot		1 x Full-size PCIe Mini card 1 x Full-size PCIe Mini card co-lay mSATA				
System Cooling		Active fan	Fanless	Fanless	Active fan	
Environment	Operating Temperature	-10°C~50°C (14°F~122°F)				
	Storage Temperature	-20°C~60°C (-4°F~140°F)				

PPC-F H81 Series



Intelligent Industrial Panel PC

Features

- Support IEI iRIS-2400 IEI remote intelligent solution
- Scalable Intel® H81 chipset supports LGA1150 Intel® 4th generation Core™ i7/i5/i3, Pentium® or Celeron® processor with up to 65W TDP
- Robust IP65 aluminum front bezel
- Aesthetic ultra-thin bezel for seamless panel mount installation
- Projected capacitive multi-touch
- Dual full-size PCIe Mini card expansion
- AC/DC power input options (DC model by build to order manufacturing)



Specifications

Model		PPC-F15A	PPC-F17A	PPC-F22A	PPC-F24A
LCD	LCD Display	15" (4:3)	17" (5:4)	21.5" (16:9)	23.8" (16:9)
	Max. Resolution	1024(W) x 768(H)	1280(W) x 1024(H)	1920(W) x 1080(H)	1920(W) x 1080(H)
	Brightness (cd/m²)	450	350	250	250
	Contrast Ratio	800 : 1	800 : 1	1000 : 1	3000 : 1
	LCD Color	16.2M	16.7M	16.7M	16.7M
	Pixel Pitch (mm)	0.297 x 0.297	0.26 x 0.26	0.25 x 0.25	0.28 x 0.28
	Viewing Angle (H-V)	160° / 150°	170° / 160°	170° / 160°	178° / 178°
	Backlight MTBF (hrs)	70000	50000	30000	30000
Motherboard	SBC Model	FPPCMB-H81-R10			
	CPU	LGA1150 Intel® 4th generation Core™ i7/i5/i3, Pentium® or Celeron® processor with up to 65W TDP			
	Chipset	Intel® H81			
	RAM	Support 2 x 204-pin 1066/1333/1600 MHz dual-channel DDR3 SO-DIMM slots (max. 16GB)			
Touch	Touchscreen & Controller	5-wire resistive single touch window, 3H/Penmount 9000 (Anti-glare Surface) 10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)		10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)	
Input Interfaces	I/O Ports & Switch	2 x RJ-45 LAN Port 2 x USB 3.1 Gen 1 (5Gb/s) 4 x USB 2.0 1 x HDMI output 4 x RS-232 1 x RS-422/485 1 x MIC-in 1 x Line-out		1 x VGA output 1 x AC/DC power plug (DC model is by build to order manufacturing) 1 x AT/ATX switch 1 x Clear CMOS 1 x Reset button 1 x Power switch	
	Expansion	1 x Full-size/half-size PCIe Mini card (PCIe and USB signal) 1 x Full-size/half-size PCIe Mini card (PCIe , USB and mSATA signal)			
Wireless LAN		802.11 b/g/n (optional)			
Storage		1 x 2.5" HDD/SSD drive bay 1 x mSATA		1 x 2.5" HDD/SSD drive bay or 1 x 3.5" HDD/SSD drive bay 1 x mSATA	
iRIS Remote Management Solution		iRIS-2400 (optional)			
Physical	Construction Material	Aluminum front cover and sheet metal rear cover			
	Mounting	Panel mount, rack mount, 100x100 VESA mount		Panel mount, 100x100 VESA mount	
	Enclosure Color	Black C			
	Dimensions (mm)	303 x 378.5 x 68.7	341.4 x 408.4 x 73.8	350.4 x 550.4 x 71.7	382 x 600 x 71.7
	Cutout Dimensions (mm)	285.6 x 361.1	323 x 390	341 x 536	359.6 x 577.6
	Net/ Gross Weight (kg)	5.6/ 8.3	7.5/10.7	10.1/14.4	10.5/14.8
Environment	Operating Temperature (with air flow)	-10°C ~ 50°C			
	Storage Temperature	-20°C ~ 60°C			
	Humidity	10% to 95% (non-condensing)			
	IP Level	Front IP 65			
	Safety and EMC	CE & FCC certified			
Power Supply	AC Input	AC input ATX power supply - P/N: 63030-010220-100-RS - 220W power supply - Input: 90VAC-264VAC, 50/60Hz - Output (max.): 3.3V@10A, 5V@14A, 12V@14A, -12V@0.3A			
	DC Input (produced by order)	DC input ATX power supply - P/N: XACE-4520C-RS - 200W power supply - Input: 24VDC, 15A (max) - Output (max.): 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A			
Power Consumption		80W	100W	110W	120W

Ordering Information

Part No.	Description
PPC-F15AA-H81i-P/4G/PC-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R22
PPC-F15AA-H81i-i3/4G/PC-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R22
PPC-F15AA-H81i-i5/4G/PC-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, PCAP touch window with AG coating, R22
PPC-F15AA-H81i-P/4G/R-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R22
PPC-F15AA-H81i-i3/4G/R-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R22
PPC-F15AA-H81i-i5/4G/R-R22	15" 450 cd/m ² XGA Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R22
PPC-F17AA-H81i-P/4G/PC-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R13
PPC-F17AA-H81i-i3/4G/PC-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R13
PPC-F17AA-H81i-i5/4G/PC-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R13
PPC-F17AA-H81i-P/4G/R-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R13
PPC-F17AA-H81i-i3/4G/R-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R13
PPC-F17AA-H81i-i5/4G/R-R13	17" 350 cd/m ² SXGA Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, resistive touch window with AG coating, R13
PPC-F22AA-H81i-i3/4G/PC-R13	21.5" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, AG projective capacitive touch window, R13
PPC-F22AA-H81i-i5/4G/PC-R13	21.5" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, AG projective capacitive touch window, R13
PPC-F22AA-H81i-P/4G/PC-R13	21.5" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, AG projective capacitive touch window, R13
PPC-F24AA-H81i-P/4G/PC-R21	23.8" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Intel® Pentium® Processor G3420 (3M Cache, 3.20 GHz), TDP 53W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R21
PPC-F24AA-H81i-i3/4G/PC-R21	23.8" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Core i3 Dual Core i3-4330 Processor (4M Cache, 3.50 GHz), TDP 54W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R21
PPC-F24AA-H81i-i5/4G/PC-R21	23.8" 250 cd/m ² FHD Panel PC with Intel® H81 chipset, Core i5 Quad Core i5-4570S Processor (6M Cache, up to 3.60 GHz), TDP 65W, 2GB RAM*2, support iRIS-2400, black color, PSU ACE-A622B, projective capacitive touch window with AG coating, R21

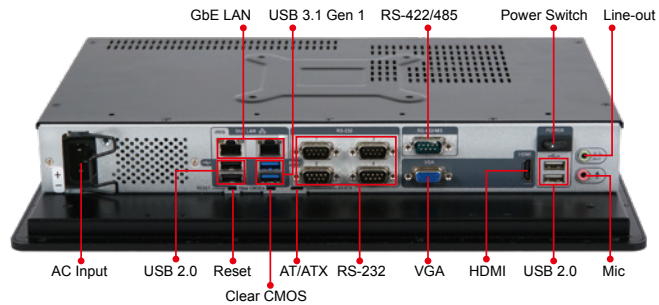
Options

Item	PPC-F15A	PPC-F17A	PPC-F22A	PPC-F24A
Arm	ARM-31-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS
Stand	STAND-A21 STAND-A19-RS STAND-C19-R10	STAND-C19-R10 STAND-A21-R10	STAND-C19-R10 STAND-A21-R10	STAND-C19-R10 STAND-A21-R10
Wall Mount Kit	WK-190MS-R10			
Panel Mount Kit	FPK-04-R10		FPK-05-R10	FPK-06-R10
Rack Mount Kit	FRK15-R10	FRK17-R10	N/A	
Wi-Fi Kit	EMB-WIFI-KIT11-R20			
iRIS (IEI Remote Intelligent System) Kit	iRIS-2400-R10			

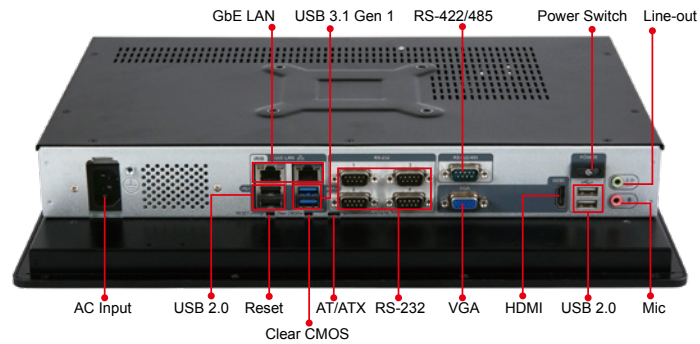
Packing List

Item	Q'ty	Remark
Power Cord	1	Depends on shipping region
Screw Kit	1	
Touch Pen	1	Resistive touch only

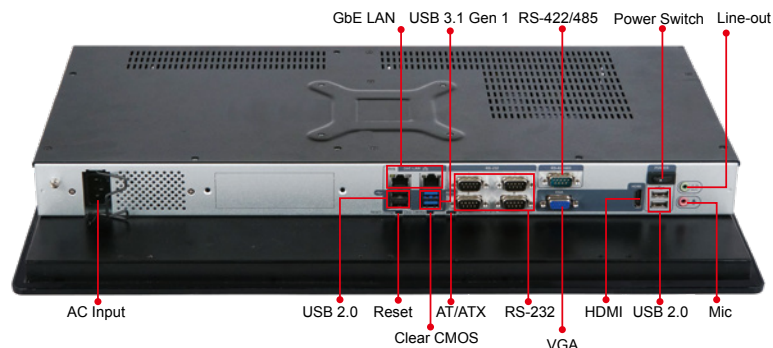
PPC-F15A Fully Integrated I/O



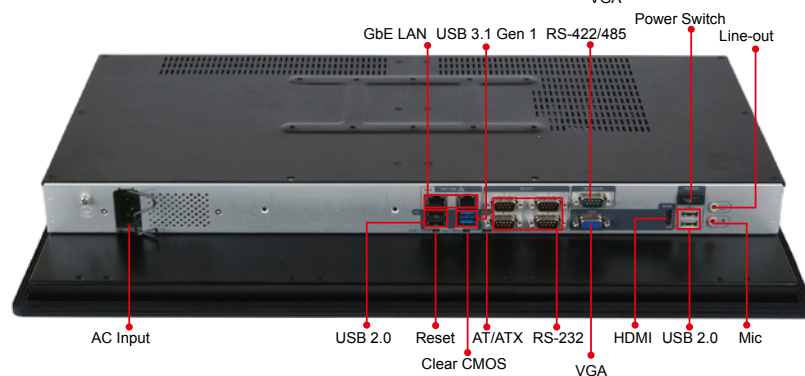
PPC-F17A Fully Integrated I/O



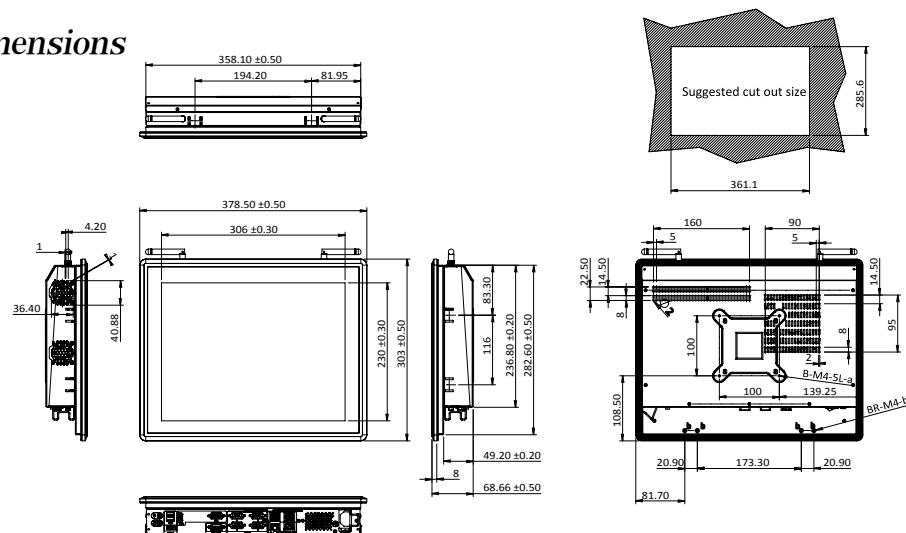
PPC-F22A Fully Integrated I/O



PPC-F24A Fully Integrated I/O

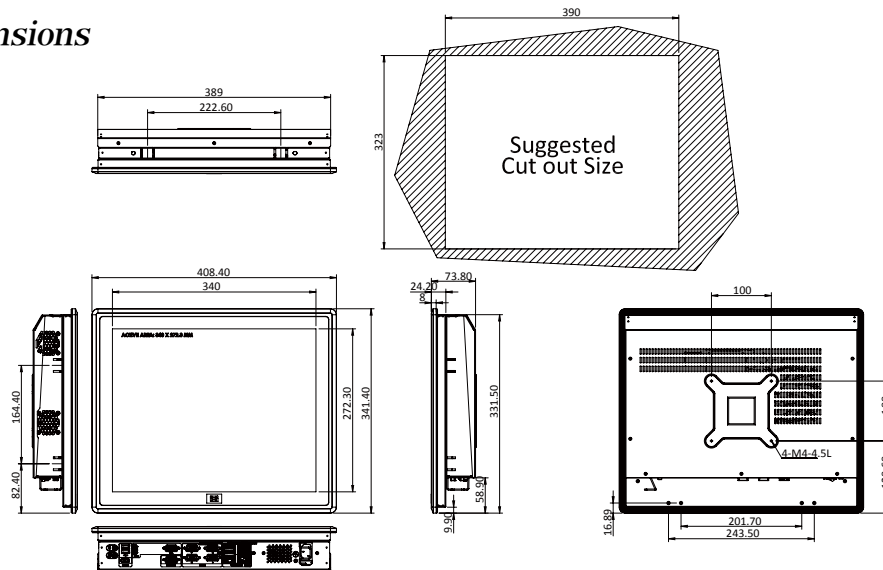


PPC-F15A Dimensions (Unit: mm)



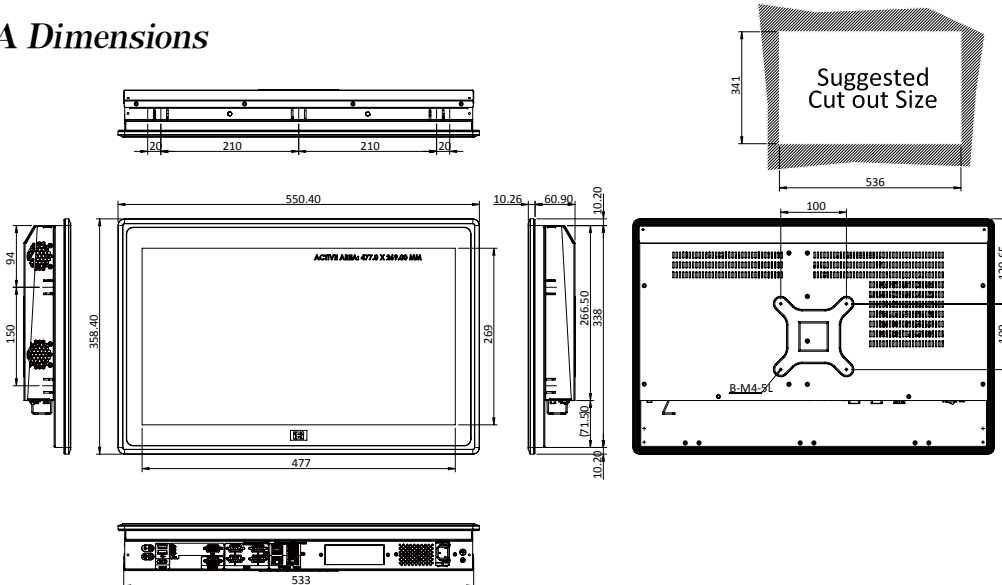
PPC-F17A Dimensions

(Unit: mm)



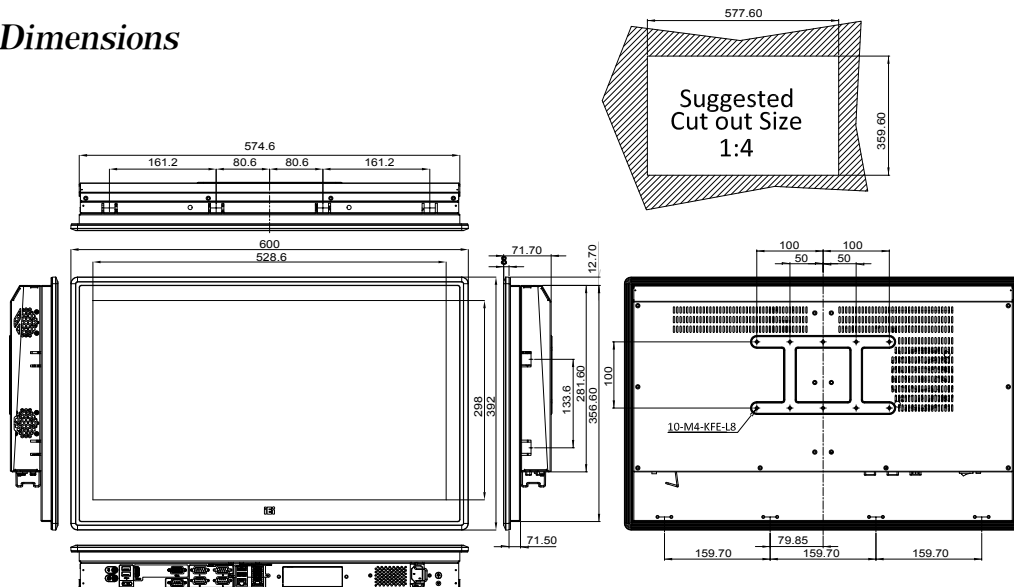
PPC-F22A Dimensions

(Unit: mm)



PPC-F24A Dimensions

(Unit: mm)



PPC-F Bay Trail Fanless Series

5.7"/8"/10.4" Fanless Intel® Bay Trail Solution

Features

- 5.7", 8" and 10.4" fanless industrial panel PC
- 2.0 GHz Intel® Celeron® J1900 quad-core processor or 1.58 GHz Intel® Celeron® N2807 dual-core processor
- Low power consumption DDR3L memory supported
- IP 65 compliant front panel
- 9 V~30 V wide DC input
- mSATA SSD supported
- Dual GbE for backup
- -10°C~50°C extended operating temperature



Specifications

Model		PPC-F06B-BT	PPC-F08B-BT	PPC-F10B-BT
LCD	LCD Display	5.7" (4:3)	8" (4:3)	10.4"
	Max. Resolution	640 (W) x 480 (H)	800 (W) x 600 (H)	800 (W) x 600 (H)
	Brightness (cd/m²)	550	500	400
	Contrast Ratio	800:1	500:1	700:1
	LCD Color	262K	16.2M	16.2M
	Pixel Pitch (mm)	0.18 (H) x 0.18 (V)	0.2025 (H) x 0.0675 (V)	0.264 (H) x 0.264 (V)
	Viewing Angle (H-V)	160° / 140°	140° / 120°	160° / 140°
	Backlight MTBF (hrs)	50000	50000	30000
Motherboard	CPU	Intel® Celeron® N2807 dual-core processor, 1.58GHz	Intel® Celeron® J1900 quad-core on-board SoC, 2GHz	
	RAM	2GB DDR3L 1600MHz on-board RAM (system max. 4GB, by MOQ=300pcs)	1 x 204-pin DDR3L SO-DIMM slots (max. 8GB)	
Touch	Touchscreen & Controller	4-wire resistive type flat touch window, PenMount DMC9000	5-wire resistive type flat touchscreen, PenMount DMC9000	
	Surface Hardness	3H	3H	3H
Input Interfaces	I/O Ports & Switches	2 x RJ-45 LAN port 1 x RS-232 COM port (DB-9 connector) (RI/5V/12V) 1 x RS-422/485 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x 9 V~30 V DC lockable DC jack (2-pin) 1 x Audio port (line-out) 1 x Power switch 1 x Reset button 1 x AT/ATX switch	1 x RS-232 COM port (RJ-45 connector) 1 x RS-232/422/485 COM port (DB-9 connector) (RI/5V/12V) 2 x USB 3.1 Gen 1 (5Gb/s) 2 x GbE LAN 1 x Power switch 1 x Reset button 1 x AT/ATX switch 1 x Audio port (line-out) 1 x 9 V~30 V lockable power jack	1 x RS-232 COM port (RJ-45 connector) 1 x RS-232/422/485 COM port (DB9 connector) (RI/5V/12V) 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 2 x GbE LAN 1 x Power switch 1 x Reset button 1 x AT/ATX switch 1 x Audio port (line-out) 1 x 9 V~30 V lockable power jack
		Expansion		
Wireless LAN		802.11 b/g/n (optional)		
Storage	SSD	mSATA	mSATA	mSATA
	HDD	N/A	N/A	1 x 2.5" HDD bay
Physical	Construction Material	Aluminum front bezel		
	Mounting	Stand, panel mount, rack mount, VESA 75x75	Stand, panel mount, rack mount, VESA 75x75	Stand, panel mount, rack mount, VESA 75x75/100x100
	Enclosure Color	Black C		
	Dimensions (mm)	136.4 x 178.5 x 56.3	182.2 x 222.2 x 44	232.4 x 285.2 x 44
	Net Weight	0.89 kg	1.17 kg	1.77 kg
	Cut-out Dimensions (mm)	157.5 x 115.4	207 x 154	267.2 x 214.4
Environment	Operating Temperature (with air flow)	-10°C~50°C (14°F~122°F)		
	Storage Temperature	-20°C~60°C (-4°F~140°F)		
	Humidity	10% to 95% (non-condensing)		
	IP Level	IP 65 compliant front panel		
	Safety and EMC	CE & FCC Class A certified		
Power	Power Adapter	P/N: 63040-010036-121-RS 36W Power Adapter Input: 90 - 264V AC, 50/60Hz Output: 12V DC		
	Power Requirement	9 ~ 30V DC		
	Power Consumption	24W	28W	34W

Ordering Information

Part No.	Description
PPC-F06B-BT-N1/2G/R-R10	5.7" 450 cd/m ² VGA panel PC with Intel® Celeron® processor N2807, TDP 4.3W, 2GB on-board DDR3L RAM, black color, 9-30V DC input, resistive touch window, R10
PPC-F08B-BT-J1/2G/R-R10	8" 500 cd/m ² SVGA panel PC with Intel® Celeron® processor J1900, TDP 10W, 2GB DDR3L RAM, black color, 9-30V DC input, resistive touch window, R10
PPC-F10B-BT-J1/2G/R-R10	10.4" 400 cd/m ² SVGA panel PC with Intel® Celeron® processor J1900, TDP 10W, 2GB DDR3L RAM, black color, 9-30V DC input, resistive touch window, R10

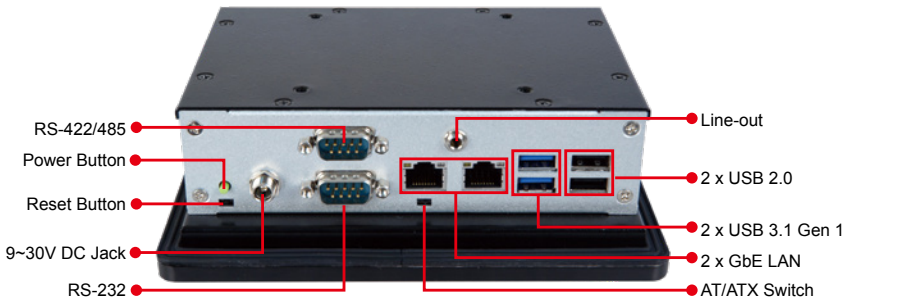
Options

Item	PPC-F06B	PPC-F08B	PPC-F10B
Arm	ARM-11-RS	ARM-11-RS	ARM-11-RS
Stand	STAND-100-RS STAND-B08	STAND-100-RS STAND-B08 STAND-C12-R10	STAND-100-RS STAND-B08 STAND-C12-R10
Wall Mount Kit	AFLWK-12	AFLWK-12	AFLWK-12
Panel Mount Kit	FPK-07-R10	FPK-07-R10	FPK-09-R10
Wi-Fi Kit	EMB-WIFI-KIT01-R20		

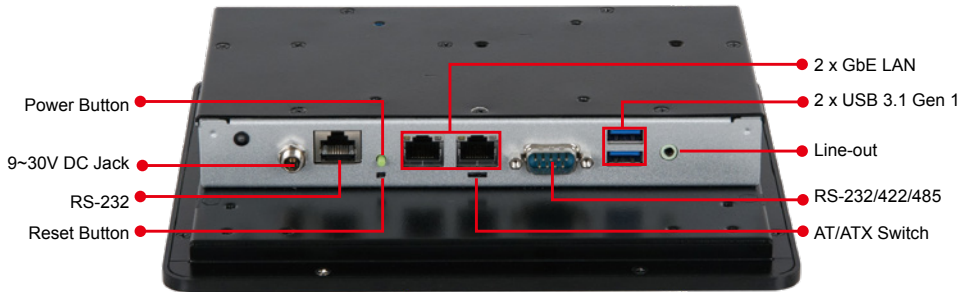
Packing List

Item	Q'ty	Remark
PPC-FxxB-BTi Panel PC	1	
Touch Pen	1	Resistive type models only P/N: 43125-0002C0-00-RS
Power Cord	1	Part numbers vary by regions
Screw Pack	1	Including necessary screws
Power Adapter	1	9V~30V DC P/N: 63040-010036-121-RS

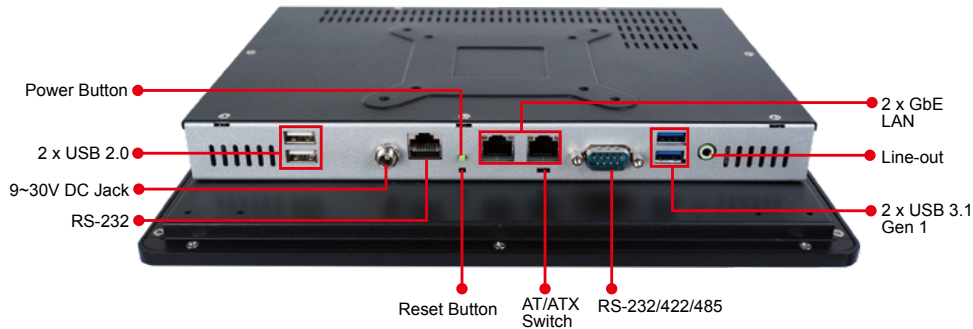
PPC-F06B
Fully Integrated I/O

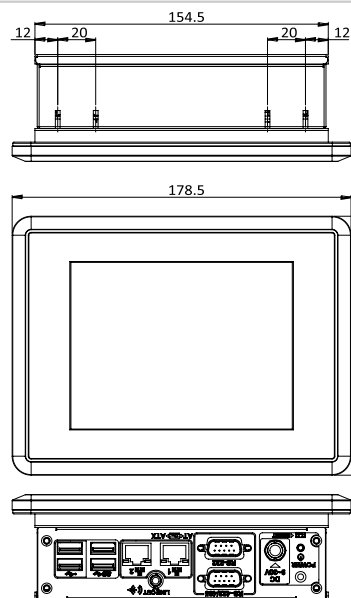


PPC-F08B
Fully Integrated I/O

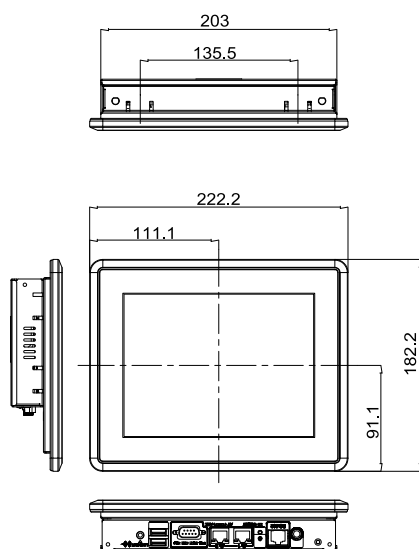
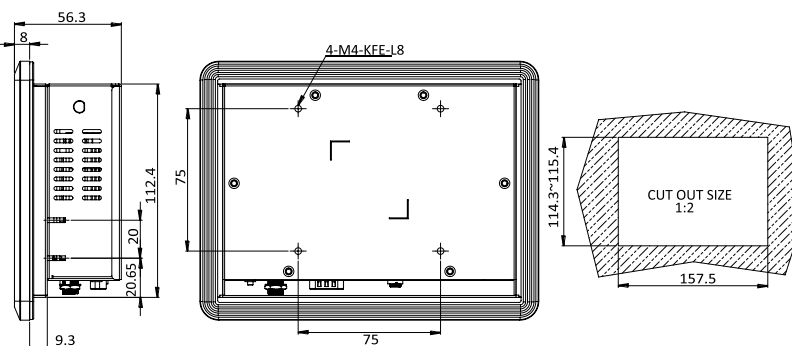


PPC-F10B
Fully Integrated I/O

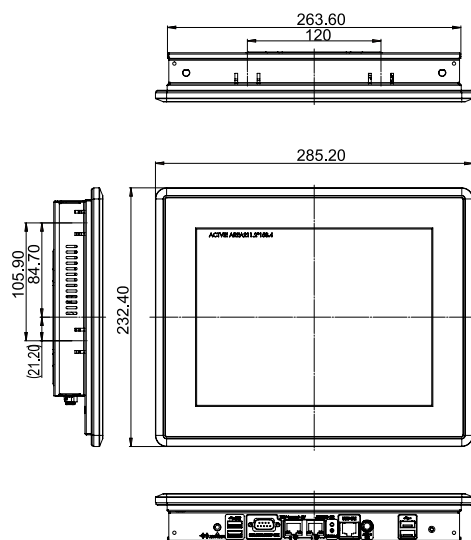
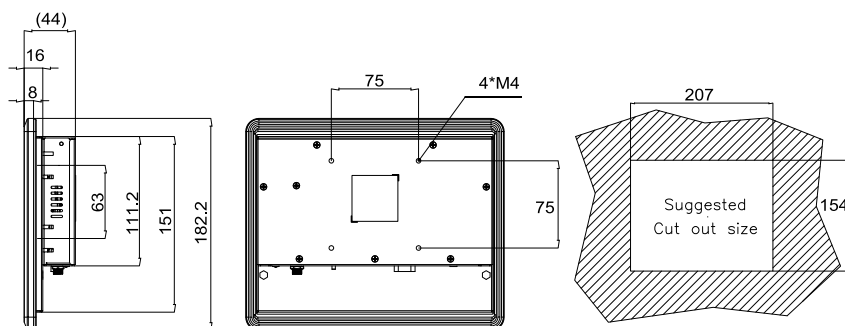




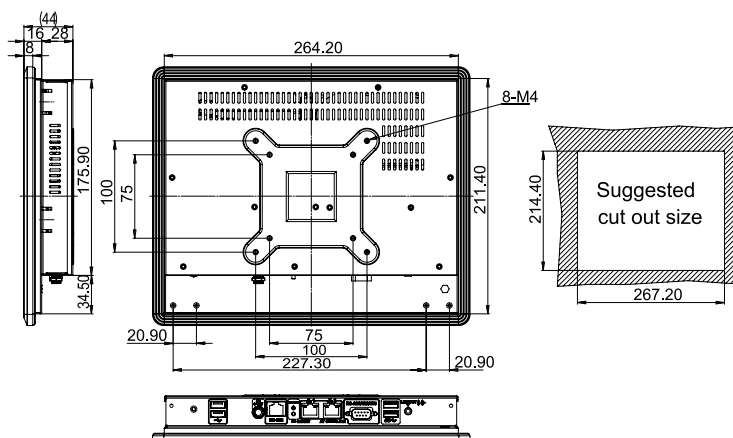
PPC-F06B-BT
Dimensions (Unit: mm)



PPC-F08B-BT
Dimensions (Unit: mm)



PPC-F10B-BT
Dimensions (Unit: mm)



PPC-F Bay Trail Fanless Series

12"/15"/17"/19" Fanless Intel® Bay Trail Solution

Features

- Support IEI iRIS-2400 remote intelligent solution
- Intel® Celeron® J1900 quad-core SoC
- Robust IP65 aluminum front bezel
- Aesthetic ultra-thin bezel for seamless panel mount installation
- Projected capacitive multi-touch and resistive single touch options
- Dual full-size PCIe Mini card expansion
- 9V~36V DC wide range DC input



Specifications

Model		PPC-F12B-BT	PPC-F15B-BT	PPC-F17B-BT	PPC-F19B-BT
LCD	LCD Display	12.1" (4:3)	15" (4:3)	17" (5:4)	19" (5:4)
	Max. Resolution	1024 (W) x 768 (H)	1024 (W) x 768 (H)	1280 (W) x 1024 (H)	1280 (W) x 1024 (H)
	Brightness (cd/m ²)	600	450	350	350
	Contrast Ratio	700 : 1	800 : 1	800 : 1	1000 : 1
	LCD Color	16.2M	16.2M	16.7M	16.7M
	Pixel Pitch (mm)	0.24 x 0.24	0.297 x 0.297	0.26 x 0.26	0.294 x 0.294
	Viewing Angle (H-V)	160° / 140°	160° / 150°	170° / 160°	170° / 160°
	Backlight MTBF (hrs)	50000	70000	50000	50000
Motherboard	CPU	Intel® Celeron® processor J1900 (2M cache, up to 2.42 GHz)			
	RAM	2 x 204-pin DDR3L SO-DIMM slot (max. 8GB), pre-installed with 2GB			
Touch	Touchscreen & Controller	5-wire resistive single touch window, 3H/Penmount DMC9000 (Anti-glare Surface)			
		10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)			
Input Interfaces	I/O Ports & Switches	2 x RJ-45 LAN port 2 x USB 3.1 Gen 1 (5Gb/s) 2 x USB 2.0 1 x HDMI 2 x RS-232 1 x RS-232/422/485 1 x VGA 1 x 9 V~36 V DC jack (4-pin) 1 x 9 V~36 V DC terminal block 1 x Line-out (PPC-F15B & PPC-F17B & PPC-F19B only) 1 x Power switch			
	Expansion	1 x Full-size PCIe Mini slot (mSATA/PCIe/USB signal) 1 x Full-size/half-size PCIe Mini slot (PCIe/USB signal)			
Wireless LAN		802.11 b/g/n (optional)			
Drive Bay		1 x 2.5" HDD/SSD drive bay			
Remote Management Solution		iRIS-2400, QTS-Gateway			
Physical	Construction Material	Aluminum front panel and sheet metal rear cover			
	Mounting	Panel mount, rack mount, VESA 100x100			
	Enclosure Color	Black C			
	Dimensions (mm) (W x L x D)	262.2 x 322.2 x 47.2	303 x 378.5 x 46.2	341.4 x 408.4 x 51.8	372.4 x 447.4 x 52.87
	Weight (Net)	3.2 kg	4.1 kg	5 kg	6.5 kg
Environment	Cutout Dimensions (mm)	244.8 x 304.8	285.6 x 361	323 x 390	355 x 430
	Operating Temperature (with air flow)	-10°C~50°C (14°F~122°F)			
	Storage Temperature	-20°C~60°C (-4°F~140°F)			
	Humidity	10% to 95% (non-condensing)			
	IP Level	IP 65 compliant front panel			
Power	Safety and EMC	CE & FCC Class A certified			
	Power Adapter	P/N: 63040-010060-110-RS 60W Power Adapter Input: 90 - 264V AC, 50/60Hz Output: 12V DC			
		9 V~36 V DC			
	Power Requirement				
	Power Consumption	40W	41W	42W	33W

Ordering Information

Part No.	Description
PPC-F12B-BTi-J1/2G/PC-R12	12.1" 600 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, projected capacitive touch window with AG coating, R12
PPC-F12B-BTi-J1/2G/R-R12	12.1" 600 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, resistive touch window with AG coating, R12
PPC-F15B-BTi-J1/2G/PC-R22	15" 450 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, projected capacitive touch with AG coating, R22
PPC-F15B-BTi-J1/2G/R-R22	15" 450 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, resistive touch window with AG coating, R22
PPC-F17B-BTi-J1/2G/PC-R12	17" 350 cd/m ² SXGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, projected capacitive touch window with AG coating, R12
PPC-F17B-BTi-J1/2G/R-R12	17" 350 cd/m ² SXGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, resistive touch window with AG coating, R12
PPC-F19B-BTi-J1/2G/PC-R11	19" 350 cd/m ² SXGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, AG projected capacitive touch window, R11
PPC-F19B-BTi-J1/2G/R-R11	19" 350 cd/m ² SXGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*1, support iRIS-2400, black color, 9-36V DC input, AG resistive touch window, R11



QTS-Gateway

Part No.	Description
PPC-F12B-BT-QGW-J1/4G/PC-R11	12" 600 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*2, black color, with QTS-Gateway, 9-36V DC input, projected capacitive touch window, R11
PPC-F15B-BT-QGW-J1/4G/PC-R11	15" 450 cd/m ² XGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*2, black color, with QTS-Gateway, 9-36V DC input, projected capacitive touch window, R11
PPC-F17B-BT-QGW-J1/4G/PC-R11	17" 350 cd/m ² SXGA Panel PC with Intel® Celeron® Processor J1900, TDP 10W, 2GB RAM*2, black color, with QTS-Gateway, 9-36V DC input, projected capacitive touch window, R11

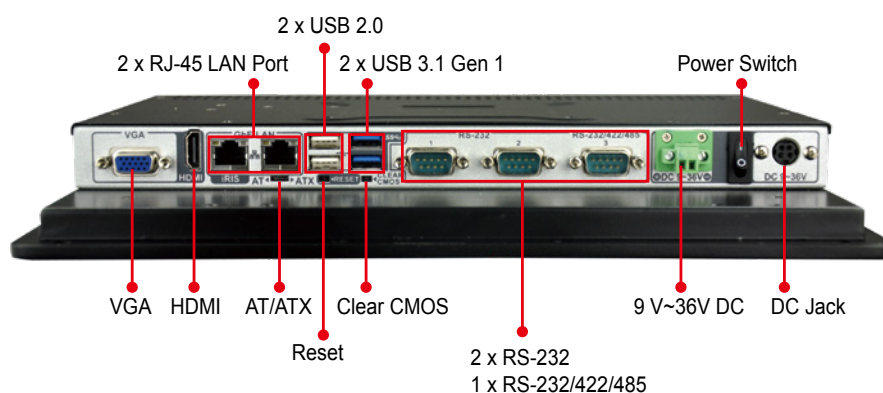
Options

Item	PPC-F12B	PPC-F15B	PPC-F17B	PPC-F19B
Arm	ARM-31-RS			
Stand	STAND-C12-R10 STAND-A12-RS	STAND-C19-R10 STAND-A19-RS	STAND-C19-R10 STAND-A19-RS	STAND-C19-R10 STAND-A19-RS
Wall Mount Kit	WK-190MS-R10			
Panel Mount Kit	FPK-09-R10	FPK-10-R10	FPK-10-R10	FPK-11-R10
Rack Mount Kit	FRK12-R10	FRK15-R10	FRK17-R10	FRK19P-R10
Wi-Fi Kit	EMB-WIFI-KIT01-R20	EMB-WIFI-KIT11-R20	EMB-WIFI-KIT11-R20	EMB-WIFI-KIT11-R20
iRIS (IEI Remote Intelligent System) Kit	iRIS-2400-RS			

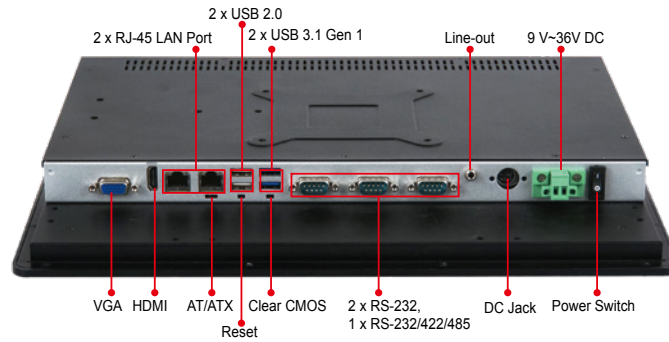
Packing List

Item	Q'ty	Remark
PPC-FxxB-BTi Panel PC	1	
Touch Pen	1	Resistive type models only (P/N: 43125-0002C0-00-RS)
Power Cord	1	Part numbers vary by regions
Screw Pack	1	Including necessary screws
Power Adapter	1	9V~36V DC(P/N: 63040-010060-110-RS)

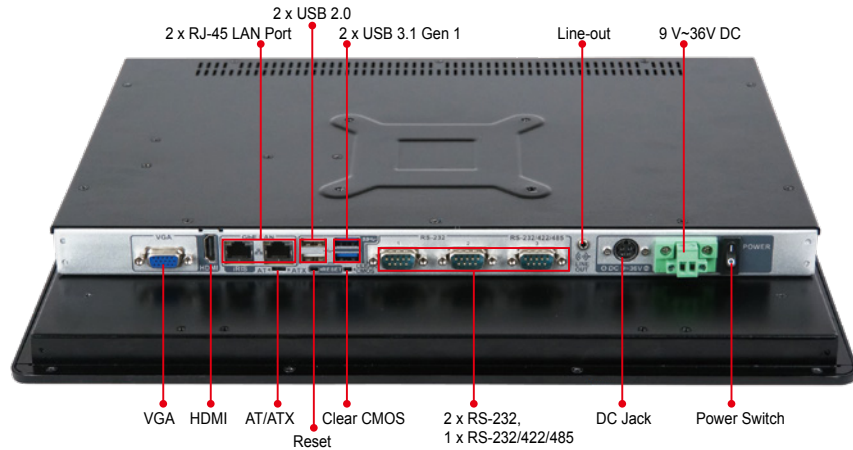
PPC-F12B Fully Integrated I/O



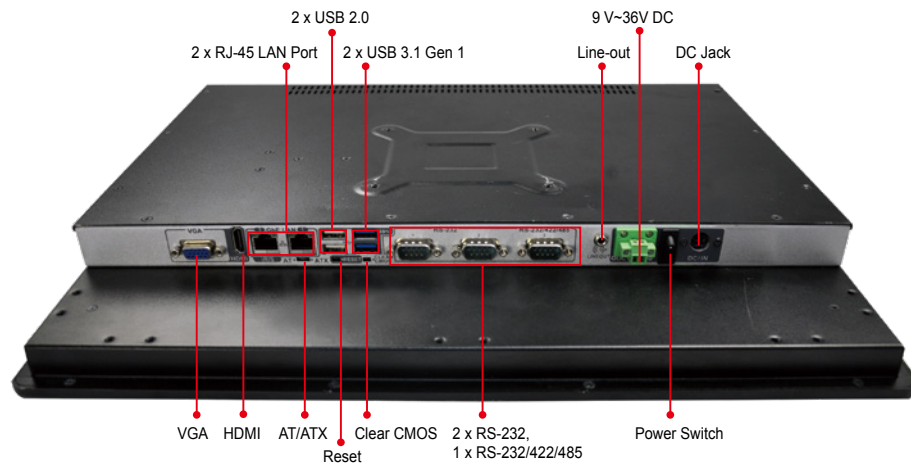
PPC-F15B
Fully Integrated I/O



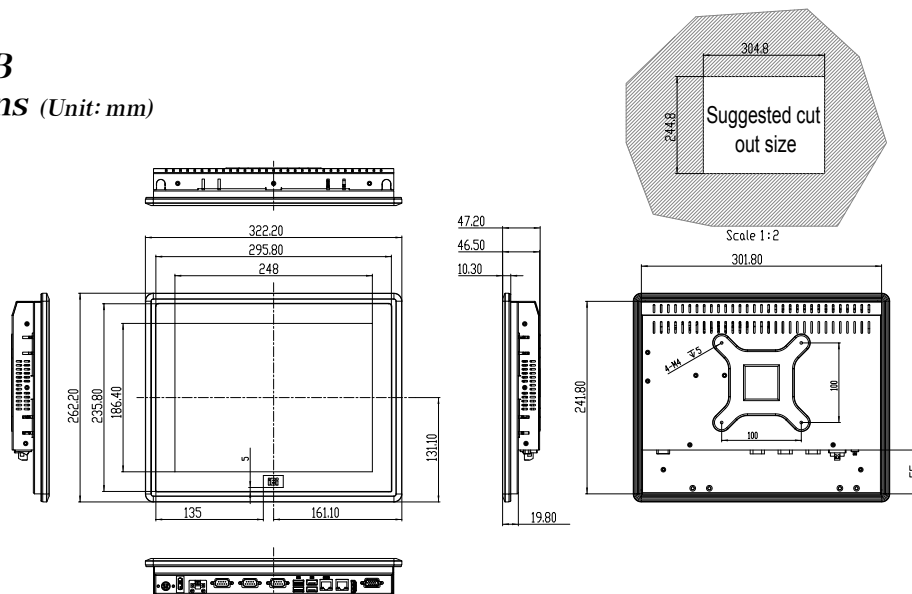
PPC-F17B
Fully Integrated I/O

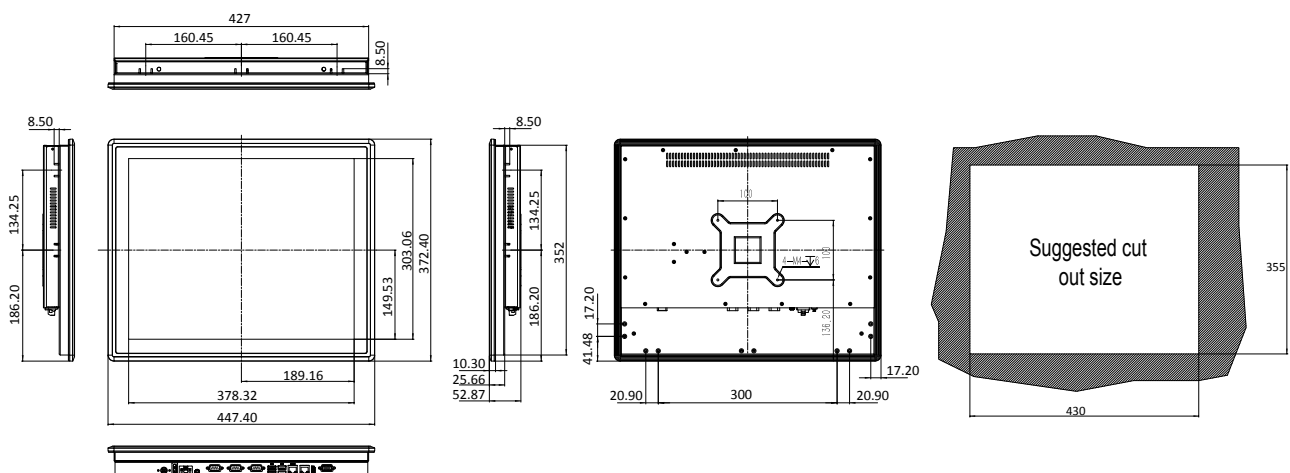
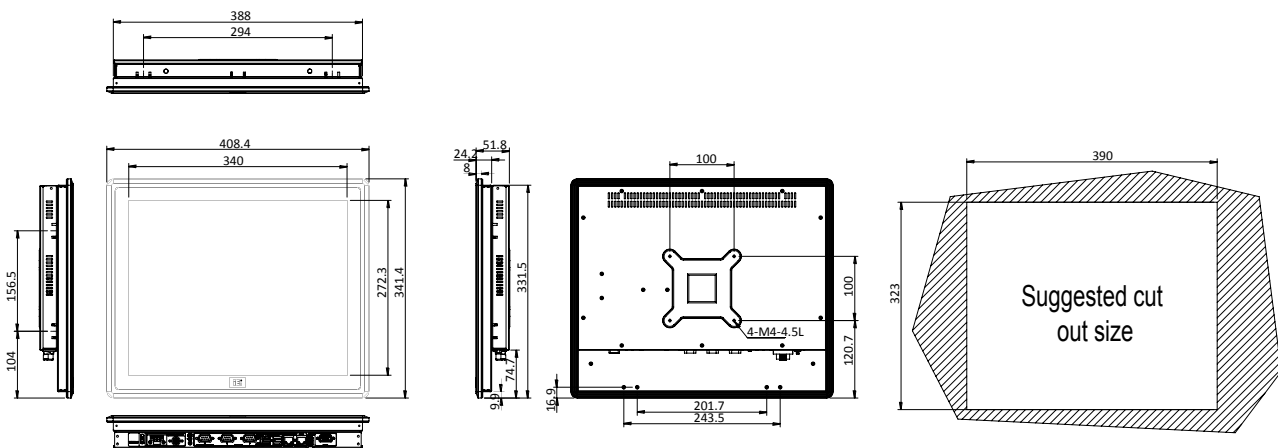
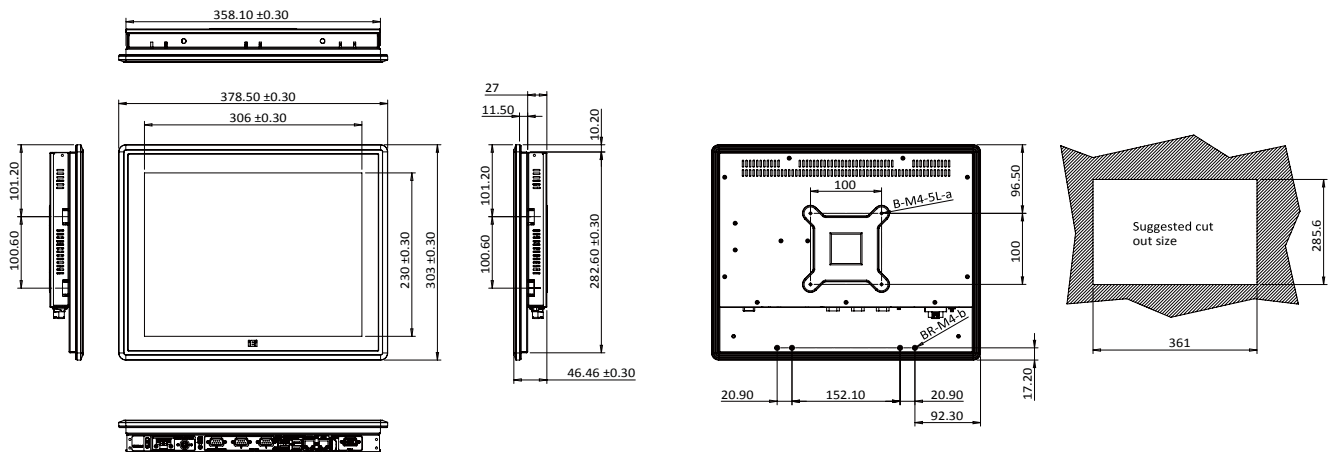


PPC-F19B
Fully Integrated I/O



PPC-F12B
Dimensions (Unit: mm)





PPC Series

Robust Product Design

IP Protection Improvement

The PPC series is equipped with robust front panel for water protection and tightly front assembly against the intrusion from any direction.

IP Code Table

The IP Code (International Protection Rating) consists of the letters IP followed by two digits.

Solids		Liquids	
First Numeral		Second Numeral	
No Protection	0	0	No Protection
Objects Greater than 50mm	1	1	Vertically Dripping Water
Objects Greater than 12mm	2	2	75°-90° Sprayed Water
Objects Greater than 2.5mm	3	3	30°-90° Sprayed Water
Objects Greater than 1.0mm	4	4	Water sprayed-low Pressure
Dust-Protected	5	5	Water jets-low Pressure
Dust-Tight	6	6	Water Jets-high Pressure
IP 66 Compliant!		7	Temporary Immersion
		8	Indefinite Immersion



Wide Temperature Range (-20°C~60°C)

The PPC-5150A-H61/ PPC-5170A-H61 and UPC-V315 supports wide operating temperature, surviving from any kinds of harsh environment.



High Efficiency Transmission

SFP Fiber LAN

The small form-factor pluggable transceiver (SFP) is a compact, hot-pluggable transceiver used for both telecommunication and data communication applications.

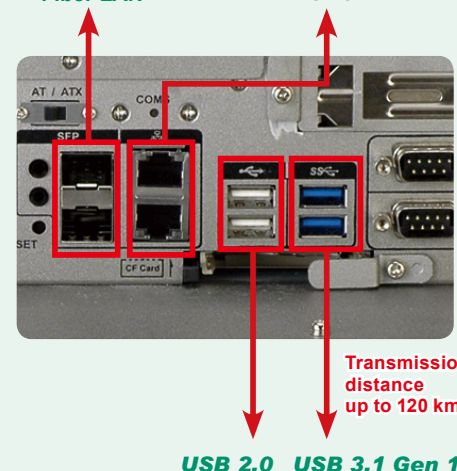
- Immunity to electromagnetic interference
- High electrical resistance
- No sparks
- Long transmission distance – up to 2 km (multi-mode)/120 km (single-mode)

Transmission Distance

Type	Core Diameter	Wavelength (nm)	Cost	Max. Distance (km)
Single-Mode	8 to 10	1310 or 1550	More expensive	120 ★
Multi-Mode	50 or 62.5	850 or 1300	Medium	2
RJ-45	N/A	N/A	Cheaper	0.1

Multiple choices

We provide two transmission LAN types for choice, either 2 × Fiber LAN or 2 × RJ-45.



USB 3.1 Gen 1 – Faster Data Transmission

USB 3.1 Gen 1 has higher transmission speed and wider data bandwidth, supporting faster transferring for the user.

USB Version	USB 1.0	USB 2.0	USB 3.1 Gen 1
Data Transfer Rate)	12Mbps	480Mbps	5Gbps ★
Media (Data Size)	Transfer Time		
Song / Pic (4 MB)	5.3 sec	0.1 sec	0.01 sec
HD-Movie (25GB)	9.3 hr	13.9 min	70 sec

PPC Series Selection Guide



LCD Size		15"	17"	19"
Model		PPC-5150A-H61	PPC-5170A-H61	PPC-5190A-H61
Display	LCD Size	15 "	17 "	19 "
	Max Resolution	1024(W) x 768(H)	1280(W) x 1024(H)	1280(W) x 1024(H)
	Brightness (cd/m ²)	450	350	350
	Contrast Ratio	800:1	800 : 1	1000 : 1
	LCD Color	16.2M	16.7M	16.7M
	Pixel Pitch (mm) (HxV)	0.297 x 0.297	0.264(H) x 0.264(V)	0.294(H) x 0.294(V)
	Viewing Angle (V/H)	150° / 160°	160° / 160°	160° / 170°
	Backlight MTBF (hrs)	50000		
Touch	Touchscreen	5-wire resistive type with RS-232 interface		
	Touch Controller	DMC 9000		
Motherboard	CPU	2nd/3rd generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU		
	Chipset	Intel® H61		
	RAM	Two 204-pin DDR3 SO-DIMM slots (max. 16GB)	Two 204-pin DDR3 SO-DIMM slots (max. 16GB)	Two 204-pin DDR3 SO-DIMM slots (max. 16GB)
	Ethernet	Realtek RTL8111E PCIe GbE controller supporting ASF 2.0		
	Audio Codec	Realtek ALC662 audio codec		
I/O Ports and Switches		4 x RS-232 COM port 1 x RS-232/422/485 port 2 x RJ-45 for LAN port 4 x USB 2.0, 2 x USB 3.1 Gen 1 (5Gb/s) on rear 1 x VGA port 1 x Audio (Line-out, MIC-in) 2 x SFP fiber LAN 1 x Power switch 1 x AT/ATX switch 1 x PCI/PCIe slot	1 x RS-232/422/485 2 x RJ-45 for LAN port 4 x USB 2.0, 2 x USB 3.1 Gen 1 (5Gb/s) on rear 1 x VGA port 1 x Audio (Line-out, MIC-in) 2 x SFP fiber LAN 1 x Power switch 1 x AT/ATX switch 1 x PCI/PCIe slot	4 x RS-232COM port 1 x RS-232/422/485 port 2 x RJ-45 for LAN port 4 x USB 2.0, 2 x USB 3.1 Gen 1 (5Gb/s) on rear 1 x VGA port 1 x Audio (Line-out, MIC-in) 2 x SFP fiber LAN 1 x Power switch 1 x AT/ATX switch 1 x PCI/PCIe slot
Drive Bay	HDD Drive Bay	1 x 2.5" SATA HDD bay with anti-shook		
	SSD	CF Type II, mSATA (SATA2)		
	CD-ROM Drive Bay	Slim type CD-ROM bay		
Expansion Slot		Either 1 x PCI slot or 1 x PCIe slot, 1 x PCIe Mini card		
System Cooling		Active with fan		
Environment	Operating Temperature	-20°C ~ 60°C	-20°C ~ 60°C	-10°C ~ 50°C
	Storage Temperature	-30°C ~ 70°C	-30°C ~ 70°C	-20°C ~ 60°C

15" Industrial Panel PC

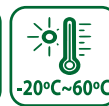
PPC-5150A-H61

Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® Processor



Features

- High brightness TFT-LCD panel with LED backlight
- Multiple storage options: 2.5" SATA HDD, CF slot and mSATA
- Dual Ethernet provides continuous network service and allows sharing among different workgroups in two different subnets
- Optional PCI / PCIe x 1 expansion slot
- Optional slim type CD-ROM drive bay
- Robust aluminum front bezel and metal casing
- IP 66 compliant front panel
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery (over 4GB storage capacity)



Specifications

Model		PPC-5150A-H61
Display	LCD Size	15 "
	Max. Resolution	1024(W) x 768(H)
	Brightness (cd/m ²)	450
	Contrast Ratio	800 : 1
	LCD Color	16.2M
	Pixel Pitch (mm) (HxV)	0.297(H) x 0.297(V)
	Viewing Angle (V/H)	150°/160°
Touch	Backlight MTBF (hrs)	50000
	Touchscreen	5-wire resistive type with RS-232 interface
Motherboard	Touch Controller	DMC 9000
	SBC	POS-H61
	CPU	2nd/3rd generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU
	Chipset	Intel® H61
	RAM	Two 204-pin DDR3 SO-DIMM slots (max. 16GB)
	Ethernet	Realtek RTL8111E PCIe GbE controller supporting ASF 2.0
I/O Ports and Switches	Audio Codec	Realtek ALC662 audio codec
		4 x RS-232 COM port 1 x RS-232/422/485 port 2 x RJ-45 for LAN port 4 x USB 2.0, 2 x USB 3.1 Gen 1 (5Gb/s) on rear 1 x VGA port
Drive Bay	HDD Drive Bay	1 x 2.5" SATA/IDE HDD bay with anti-shock
	SSD	CF Type II, mSATA (SATA2 signal)
	CD-ROM Driver Bay	SATA slim type CD-ROM bay
Expansion Slot		Either 1 x PCI slot or 1 x PCIe slot,
		1 x PCIe Mini card
Physical	Front Panel Construction	Aluminum
	Chassis Construction	Heavy-duty steel
	Mounting	Panel, wall, rack, stand and arm (VESA 100 mm x 100 mm)
	Front Panel Color	Silver (Pantone 8001C)
	Dimensions (WxHxD) (mm)	410 x 309 x 110.5
	Cut Out Dimensions (WxH) (mm)	387 x 286
	Net/Gross Weight	7 kg / 11 kg
Environment	Operating Temperature	-20°C ~ 60°C
	Storage Temperature	-30°C ~ 70°C
	System Cooling	Active with fan
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak
	Shock	10G acceleration part to part (11ms)
Power Supply	IP Rating	Front IP66 Compliant
	AC Input	AC input ATX power supply - P/N: 63030-010220-100-RS - 220W power supply - Input: 90VAC~264VAC, 50/60Hz - Output (max.): 3.3V@10A, 5V@14A, 12V@14A, -12V@0.3A
	DC Input	DC input ATX power supply - P/N: ACE-4520C-RS - 200W power supply - Input: 24 VDC (18~36 VDC) - Output (max.): 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A

Ordering Information

Part No.	Description
PPC-5150A-H61-P/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Pentium® G6xxT dual-core CPU (above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, AC input PSU, touch screen, R20
PPC-5150AD-H61-P/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Pentium® G6xxT dual-core CPU (above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, R20
PPC-5150A-H61-i3/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Core™ i3 2xxxT dual-core CPU (above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, AC input PSU, touch screen, R20
PPC-5150AD-H61-i3/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Core™ i3 2xxxT dual-core CPU (above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, R20
PPC-5150A-H61-i5/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Core™ i5 2xxxT dual-core CPU (above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, AC input PSU, touch screen, R20
PPC-5150AD-H61-i5/R-R20	15" 450 cd/m ² XGA panel PC with POS-H61, Intel® Core™ i5 2xxxT dual-core CPU (above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, R20
PCIR-01H-R10	One PCI slot riser card
PCIER-101H-R10	One PCIe x1 slot riser card

IQ Mounting Options

Item	Part No.
Rack Mount Kit	RK-150MS-R10
Arm	ARM-31-RS
Stand	STAND-210-R11

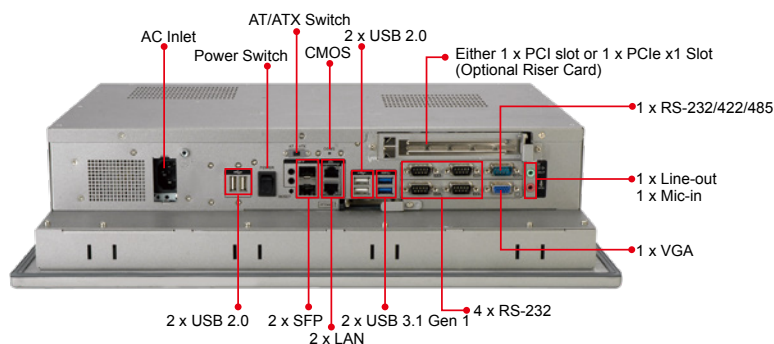
Options

Item	Description
EMB-WIFI-KIT01-R20	Wi-Fi module with RF cable and antenna, 1T1R, 802.11b/g/n
73400-AD7760H01-RS	Slim type SATA DVD-ROM

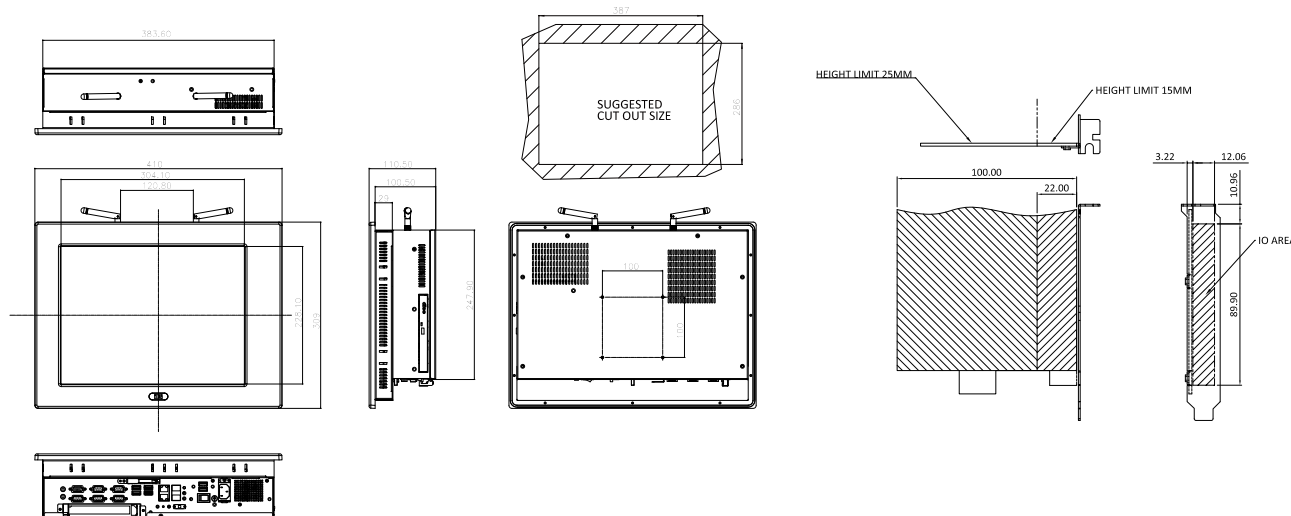
Packing List

Item	Part No.	Remark
SATA CD-ROM Cable	32803-000300-100-RS	Slim-line SATA 7+6P to SATA 7P/4P power, L=200/150 mm
Power Cord	32000-000002-RS	European standard, 1830 mm, plug (16A, 250V), connector (10A, 250V)
Panel Mount Kit	19Z00-000024-RS	19Z00-000024-RS x8
Wall Mount Kit	41020-016102-00-RS	
Touch Pen		

Fully Integrated I/O



PPC-5150A-H61 Dimensions (Unit: mm)



17" Industrial Panel PC

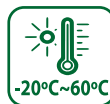
PPC-5170A-H61

Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® Processor



Features

- High brightness TFT-LCD panel with LED backlight
- Multiple storage options: 2.5" SATA HDD, CF slot, and mSATA
- Dual Ethernet provides continuous network service and allows sharing among different workgroups in two different subnets
- Optional PCI / PCIe x1 expansion slot
- Optional slim type CD-ROM drive bay
- Robust aluminum front bezel and metal casing
- IP 66 compliant front panel for PPC-5170A-H61
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery (over 4GB storage capacity)



Specifications

Model		PPC-5170A-H61
Display	LCD Size	17"
	Max. Resolution	1280(W) x 1024(H)
	Brightness (cd/m²)	350
	Contrast Ratio	800 : 1
	LCD Color	16.7M
	Pixel Pitch (mm) (HxV)	0.264(H) x 0.264(V)
	Viewing Angle (V/H)	170°/ 160°
	Backlight MTBF (hrs)	50000
Touch	Touchscreen	5-wire resistive type with RS-232 interface
	Touch Controller	DMC 9000
Motherboard	SBC	POS-H61
	CPU	2nd/3rd generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU
	Chipset	Intel® H61
	RAM	Two 204-pin DDR3 SO-DIMM slots (Max. 16GB)
	Ethernet	Realtek RTL8111E PCIe GbE controller supporting ASF 2.0
	Audio Codec	Realtek ALC662 audio codec
I/O Ports and Switches		4 x RS-232 COM port
		1 x RS-232/422/485 port
Drive Bay	HDD Driver Bay	1 x 2.5" SATA HDD bay with anti-shock
	SSD	CF Type II, mSATA (SATA2 signal)
	CD-ROM Driver Bay	SATA slim type CD-ROM bay
		Either 1 x PCI slot or 1 x PCIe slot
	Expansion Slot	1 x PCIe Mini card
Physical	Front Panel Construction	Aluminum
	Chassis Construction	Heavy-duty steel
	Mounting	Panel, wall, rack, stand and arm (VESA 100 mm x 100 mm)
	Front Panel Color	Silver (Pantone 8001C)
	Dimensions (WxHxD) (mm)	452 x 356 x 115
	Cut Out Dimensions (WxH) (mm)	426 x 331
	Net/Gross Weight	8 kg / 12 kg
	IP Rating	Front IP66 compliant
Environment	Operating Temperature	-20°C ~ 60°C
	Storage Temperature	-30°C ~ 70°C
	System Cooling	Active with fan
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak
	Shock	10G acceleration part to part (11ms)
Power Supply	AC Input	AC input ATX power supply - P/N: 63000-ACEA622A166-RS - 220W power supply - Input: 90VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@10A, -12V@0.8A
	DC Input	DC input ATX power supply - P/N: ACE-4520C-RS - 200W power supply - Input: 24 VDC (18~36 VDC) - Output (max.): 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A

Ordering Information

Part No.	Description
PPC-5170A-H61-P/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Pentium® G6xxT dual-core CPU (above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5170AD-H61-P/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Pentium® G6xxT dual-core CPU (above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PPC-5170A-H61-i3/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Core™ i3 2xxxT dual-core CPU (above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5170AD-H61-i3/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Core™ i3 2xxxT dual-core CPU (above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PPC-5170A-H61-i5/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Core™ i5 2xxxT dual-core CPU (above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5170AD-H61-i5/R-R10	17" 350 cd/m ² SXGA panel PC with POS-H61, Intel® Core™ i5 2xxxT dual-core CPU (above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PCIR-01H-R10	One PCI slot riser card
PCIER-101H-R10	One PCIe x1 slot riser card

IQ Mounting Options

Item	Part No.
Rack Mount Kit	RK-170MS-R10
Arm	ARM-31-RS
Stand	STAND-210-R11

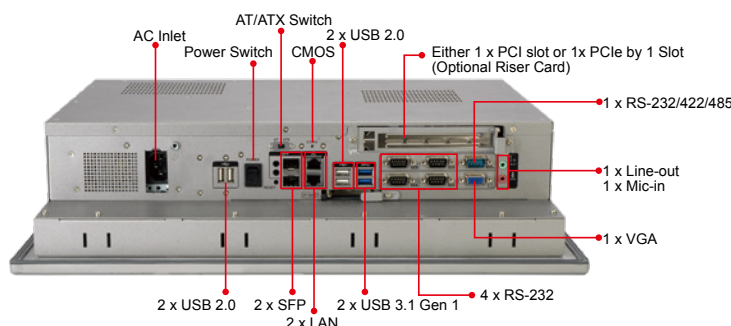
Options

Part Number	Description
19Z00-000112-RS	IDE CD-ROM installation kit (W/O IDE cable)
41019-0393C0-00-RS	IDE HDD bracket
32200-000037-RS	25cm HDD IDE cable
EMB-WIFI-KIT01-R20	Wi-Fi module with RF cable and antenna
73400-AD7760H01-RS	Slim type SATA DVD-ROM

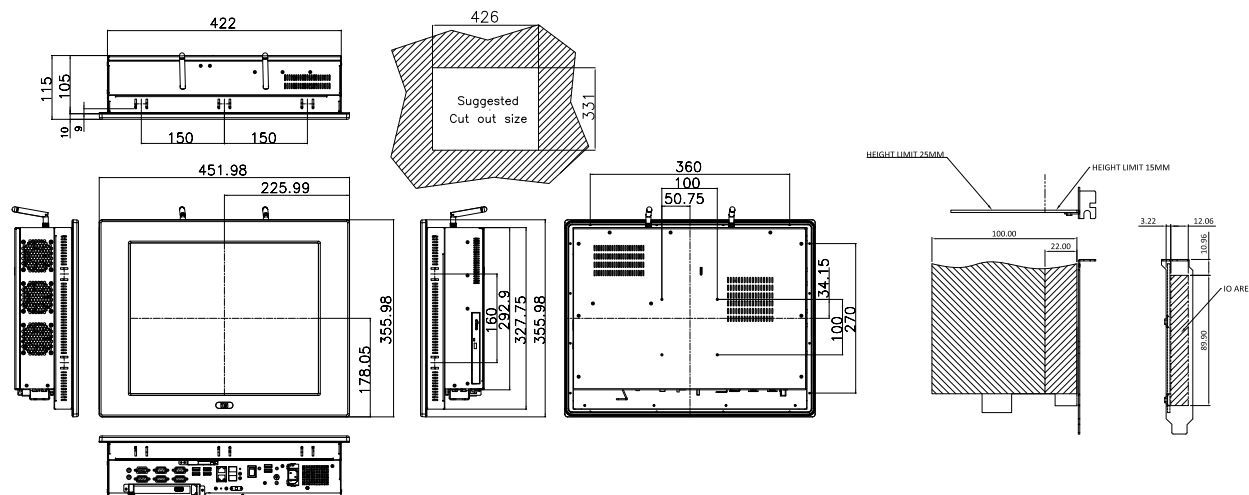
Packing List

Item	Part No.	Remark
SATA CD-ROM Cable	32803-000300-100-RS	Slim-line SATA 7+6P to SATA 7P/4P power, L=200/150 m
Power Cord	32000-000002-RS	European standard, 1830 mm, plug (16A, 250V), connector (10A, 250V)
Panel Mount Kit	19Z00-000024-RS	19Z00-000024-RS x10
Wall Mount Kit	41020-016102-00-RS	
Touch Pen		

Fully Integrated I/O



PPC-5170A-H61 Dimensions (Unit: mm)



19" Industrial Panel PC

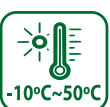
PPC-5190A-H61

Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® Processor



Features

- High brightness TFT-LCD panel with LED backlight
- Multiple storage options: 2.5" SATA HDD, CF slot, and mSATA
- Dual Ethernet provides continuous network service and allows sharing among different workgroups in two different subnets
- Optional PCI / PCIe x1 expansion slot
- Optional slim type CD-ROM drive bay
- Robust aluminum front bezel and metal casing
- IP 66 compliant front panel for PPC-5190A-H61
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery (Over 4GB storage capacity)



Specifications

Model		PPC-5190A-H61
Display	LCD Size	19"
	Max. Resolution	1280(W) x 1024(H)
	Brightness (cd/m²)	350
	Contrast Ratio	1000 : 1
	LCD Color	16.7M
	Pixel Pitch (mm) (HxV)	0.294(H) x 0.294(V)
	Viewing Angle (V/H)	160°/ 170°
	Backlight MTBF (hrs)	50,000
Touch	Touchscreen	5-wire resistive type with RS-232 interface
	Touch Controller	DMC 9000
Motherboard	SBC	POS-H61
	CPU	2nd/3rd generation Intel® Core™ i7/ i5/ i3, Pentium® and Celeron® processor, up to TDP 65W CPU
	Chipset	Intel® H61
	RAM	Two 204-pin DDR3 SO-DIMM slots (max. 16GB)
	Ethernet	Realtek RTL8111E PCIe GbE controller supporting ASF 2.0
	Audio Codec	Realtek ALC662 audio codec
I/O Ports and Switches		4 x RS-232 COM port 1 x RS-232/422/485 port 2 x RJ-45 for LAN port 4 x USB 2.0, 2 x USB 3.1 Gen 1 (5Gb/s) on rear 1 x VGA port 1 x Audio (Line-out, MIC-in) 2 x SFP fiber LAN 1 x Power switch 1 x AT / ATX switch 1 x PCI/PCIe slot
Drive Bay	HDD Driver Bay	1 x 2.5" SATA HDD bay with anti-shook
	SSD	CF Type II, mSATA (SATA2 signal)
	CD-ROM Driver Bay	Slim type CD-ROM bay
Expansion Slot		Either 1 x PCI slot or 1 x PCIe slot 1 x PCIe Mini card
Physical	Front Panel Construction	Aluminum
	Chassis Construction	Heavy-duty steel
	Mounting	Panel, wall, rack, stand and arm (VESA 100 mm x 100 mm)
	Front Panel Color	Silver (Pantone 8001C)
	Dimensions (WxHxD) (mm)	482 x 399 x 115
	Cut Out Dimensions (WxH) (mm)	450 x 363
	Net/Gross Weight	12.6 kg / 18.2 kg
Environment	Operating Temperature	-10°C ~ 50°C
	Storage Temperature	-20°C ~ 60°C
	System Cooling	Active with Fan
	Vibration	5~17Hz, 0.1 double amplitude displacement 17~640Hz 1.5G acceleration peak to peak
	Shock	10G acceleration part to part (11ms)
	IP Rating	Front IP66 compliant
Power Supply	AC Input	AC input ATX power supply - P/N: 63000-ACEA622A166-RS - 220W power supply - Input: 90VAC~264VAC, 50/60Hz - Output (max.): 3.3V@14A, 5V@16A, 12V@10A, -12V@0.8A
	DC Input	DC input ATX power supply - P/N: ACE-4520C-RS - 200W power supply - Input: 24 VDC (18~36 VDC) - Output (max.): 3.3V@12A, 5V@12A, 12V@15.4A, -12V@0.5A

Ordering Information

Part No.	Description
PPC-5190A-H61-P/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Pentium Dual Core G6xxT (Above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5190AD-H61-P/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Pentium Dual Core G6xxT (Above 2.2GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PPC-5190A-H61-i3/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Core i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5190AD-H61-i3/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Core i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PPC-5190A-H61-i5/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Core i5 Dual Core 2xxxTCPU (Above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-A622A, touch screen, RoHS
PPC-5190AD-H61-i5/R-R10	19" 350 cd/m ² SXGA Panel PC with POS-H61, Core i5 Dual Core 2xxxTCPU (Above 2.7GHz), TDP 35W, 2GB DDR3 RAM*2, Silver color, PSU ACE-4520C, touch screen, RoHS
PCIR-01H-R10	1-Slot PCI riser card
PCIER-101H-R10	1-Slot PCIe x 1 riser card

IQ Mounting Options

Item	Part No.
Rack Mount Kit	RK-190MS-R10
Arm	ARM-31-RS
Stand	STAND-210-R11

Options

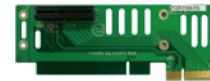
Part Number	Description
EMB-WIFI-KIT11-R20	Wi-Fi module with RF cable and antenna, 1T1R, 802.11b/g/n
73400-AD7760H01-RS	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS

Packing List

Item	Part No.	Remark
SATA CD-ROM Cable	32803-000300-100-RS	Slim-line SATA 7+6P to SATA 7P/4P power, L=200/150 m
Power Cord	32000-000002-RS	European standard, 1830 mm, plug (16A, 250V), connector (10A, 250V)
Panel Mount Kit	19Z00-000024-RS	19Z00-000024-RS x10
Wall Mount Kit	41020-016102-00-RS	
Touch Pen		

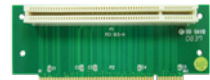
PCIER-101H-R10

PCIe x4 slot with PCIe x1 signal riser card

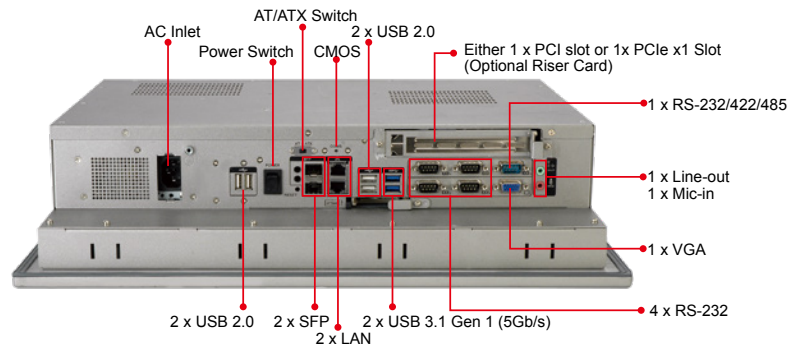


PCIR-01H-R10

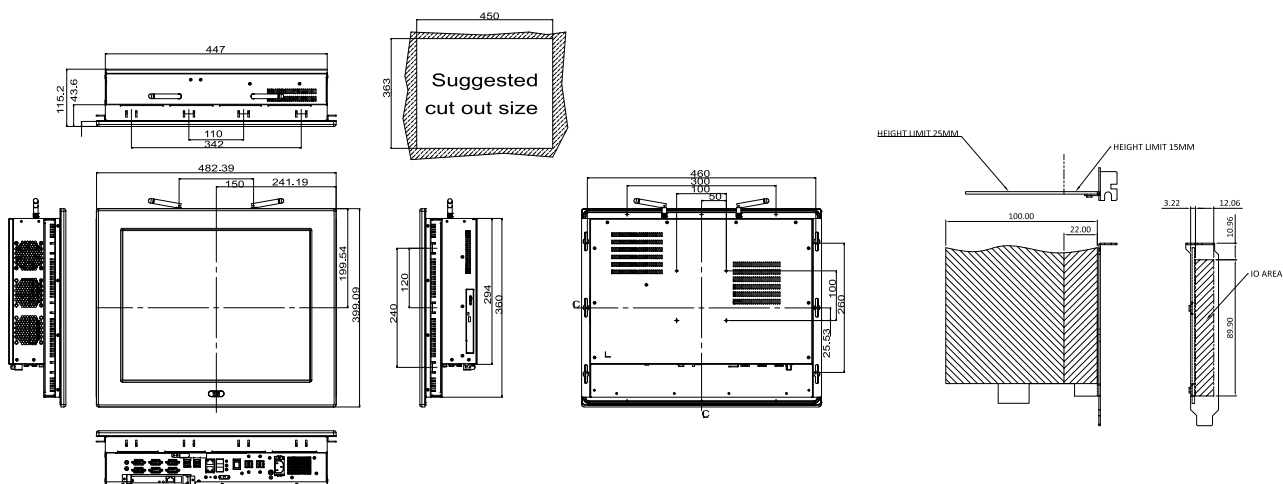
One-slot PCI riser card



PPC-5190A-H61 Fully Integrated I/O



PPC-5190A-H61 Dimensions (Unit: mm)



Vertical Market PPC Selection Guide



Marine Series

Model		S19A-QM87	S24A-QM87	S19M	S24M
Display	LCD Size	19"	24"	19"	24"
	Max. Resolution	1280 x 1024	1920 x 1080	1280 x 1024	1920 x 1080
	Brightness (cd/m ²)	300	300	300	300
	Contrast Ratio	2000:1	5000:1	2000:1	5000:1
	LCD Color	16.7M	16.7M	16.7M	16.7M
	Pixel Pitch (mm) (HxV)	0.294 x 0.294	276.75 x 276.75	0.294 x 0.294	276.75 x 276.75
	Viewing Angle (V/H)	178° / 178°	178° / 178°	178° / 178°	178° / 178°
	Backlight MTBF (hrs)	50000	50000	50000	50000
Touch	Touchscreen	Projected capacitive touch with USB interface, 6H			
Motherboard	CPU	Intel® 22nm 4th Generation Mobile Core™ i5-4400E 2.7GHz processor		-	-
	Chipset	Intel® QM87	Intel® QM87	-	-
	RAM	Two 204-pin 1600/1333 MHz dual-channel DDR3 SDRAM support up to 16GB		-	-
	Ethernet	GbE1: Intel® I217LM with Intel® AMT 9.0 support GbE2: Intel® I210-AT PCIe controller		-	-
	Audio Codec	N/A	N/A	-	-
I/O Ports and Switches		3 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 1 x VGA 1 x DVI-D 1 x HDMI 1 x PS/2 (through Y-type cable supporting KB/MS) 2 x CAN-bus 2.0B, 3-pin terminal block (2.5KV isolation protection) 1 x DB-9 RS-232 (non-isolated), 4 x DB-9 RS-232/422/485 (2.5KV isolation protection) 2 x RJ-45 GbE LAN with teaming support (2KV isolation protection) 1 x Mic-in 1 x Line-out 1 x Line-in 2 x Antenna SMA hole (reserved) 1 x Isolated 9V ~ 36V DC 3-pin terminal block 1 x Power button			
Drive Bay	HDD Driver Bay	-	-	-	-
	SSD	2 x SSD Bay & 1 x CFAST	2 x SSD Bay & 1 x CFAST	-	-
Expansion Slot		2 x PCIe Mini card	2 x PCIe Mini card	-	-
System Cooling		Fanless	Fanless	Fanless	Fanless
Environment	Operating Temperature	-15°C to 55°C (5% to 95% RH)			
	Storage Temperature	-20°C to 60°C			
IP Rating		Front IP 66 / Rear IP 22			

Vertical Market PPC Selection Guide

UPC and IP69K Series



Model		UPC-F12C-ULT3	UPC-V315-QM77	INOX-F15C-ULT3
Display	LCD Size	12.1"	15"	15"
	Max. Resolution	1024 x 768	1024(W) x 768(H)	1024(W) x 768(H)
	Brightness (cd/m²)	600	400	450
	Contrast Ratio	700 : 1	700 : 1	800 : 1
	LCD Color	16.2M	16.2M	16.2M
	Pixel Pitch (mm) (HxV)	0.240 (H) x 0.240 (V)	0.297 (H) x 0.297 (V)	0.297 (H) x 0.297 (V)
	Viewing Angle (V/H)	160° / 140°	160° / 140°	160° / 150°
	Backlight MTBF (hrs)	50000	50000	70000
Touch		P-CAP / Resistive Touch	5-wire resistive type with RS-232 interface, 3H	P-CAP / Resistive Touch
Motherboard	CPU	6th Generation Intel® Core™ i5 and Celeron® ULT Processor	Intel® Celeron® 1047UE processor Intel® Core™ i3-3217UE processor Intel® Core™ i5-3517UE processor	6th Generation Intel® Core™ i5 and Celeron® ULT Processor
	Chipset		Mobile Intel® QM77 Express Chipset	
	RAM	1 x 260-pin 2133/1867 MHz single-channel DDR4 SO-DIMMs (system max. 32GB)	Built-in one 2 GB DDR3 memory (system max. 8GB: on board max. 4GB, socket max. 4GB)	2 x 260-pin 2133/1867 MHz Dual-channel DDR4 SO-DIMMs (system max. 32GB)
	Ethernet	LAN1: PCIe GbE by Intel I210 controller LAN2: PCIe GbE by Intel I211 controller	Intel® WG82579LM GbE PHY	2 x PCIe GbE by Intel I210 controller
	Audio Codec	Realtek ALC892 audio codec	Realtek ALC892 HD audio codec	Realtek ALC892 audio codec
I/O Ports and Switches		M12 Type: 1 x 8-pin M12 connector for RS-232 1 x 8-pin M12 connector for RS-232/422/485 1 x 8-pin M12 connector for GbE LAN 2 x 8-pin M12 connector for USB2.0 x2 1 x 5-pin M12 connector for DC Jack (12~36V DC) Standard Type: 1 x DC Jack (12V-36V DC) 1 x DC in Terminal Block (12V-36V DC) 1 x HDMI 1 x VGA 1 x RS-232 (COM1 RJ-45) 1 x RS-232/422/485 (COM2 RJ-45) 2 x LAN 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s)	3 x RS-232 (RJ-45) 1 x RS-422/485 (RJ-45) 1 x CAN-bus 1 x VGA 1 x HDMI port 2 x GbE LAN 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 1 x Reset button 1 x Audio jack (Line out, MIC) 1 x DC jack (9~36V DC) 1 x Terminal block (9~36V DC) 1 x AT/ATX mode switch	2 x 8-pin M12 connector for RS-232/422/485 2 x 8-pin M12 X-Code connector for GbE LAN 2 x 8-pin M12 connector for 2*USB2.0 1 x 5-pin M12 connector for DC Jack (9-36V DC) 1 x Power switch with power led indicator 1 x Pressure relief valve
Drive Bay	HDD Driver Bay	1 x 2.5" SATA SSD bay	1 x 2.5" SATA SSD bay	SATA SSD
	SSD	1 x M.2 (B key 2242 with USB 2.0 and SATA signal)	mSATA (SATA 2)	1 x mSATA / 1 x M.2 B-key (2242/2260/2280)
Expansion Slot		1 x Full-size/half-size mini PCIe card slot (PCIe x1 and USB 2.0 signal)	1 x PCIe Mini slot	1 x Full size mini PCIe card slot (SATA 6G/s) 1 x Full-size/half-size (PCIex1 and USB 2.0 signal) 1 x B key M.2 slot (2242/2260/2280 with USB 3.1 Gen 1 (5Gb/s), PCIe x2, SATA signal)
System Cooling		Fanless	Fanless	Fanless
Environment	Operating Temperature	-20°C ~ 60°C (without heater solution) -40°C ~ 60°C (with heater solution)	-20°C ~ 60°C	-20°C ~ 50°C
	Storage Temperature	-40°C ~ 70°C	-30°C ~ 70°C	-30°C ~ 60°C
IP Rating		Full IP65 or Full IP66 (with M12 connectors)	Full IP 65	Front IP69K/ Others IP66

Marine Series

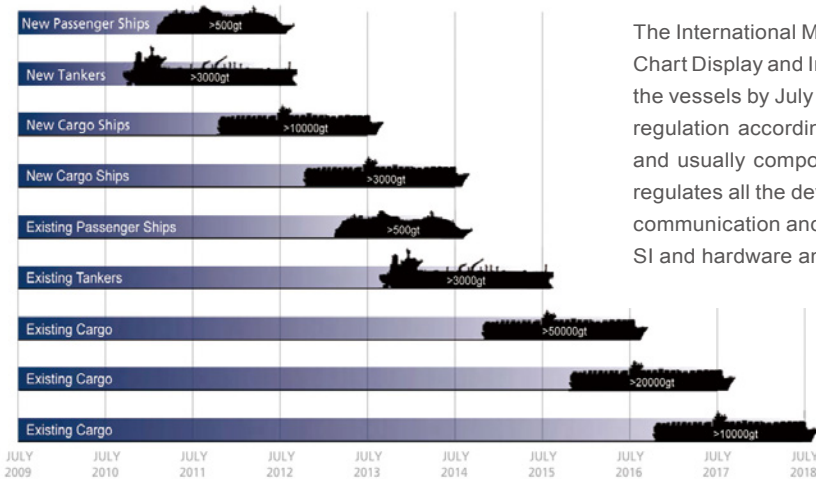
The maritime field faces critical environmental challenges, making reliable and rugged systems essential. IEI provides maritime professionals and marine-grade panel PCs and monitors and embedded box that use leading technologies and reliable designs which are perfect for applications on the dock, on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



IPMI 2.0 Compliant



» ECDIS Implementation Schedule

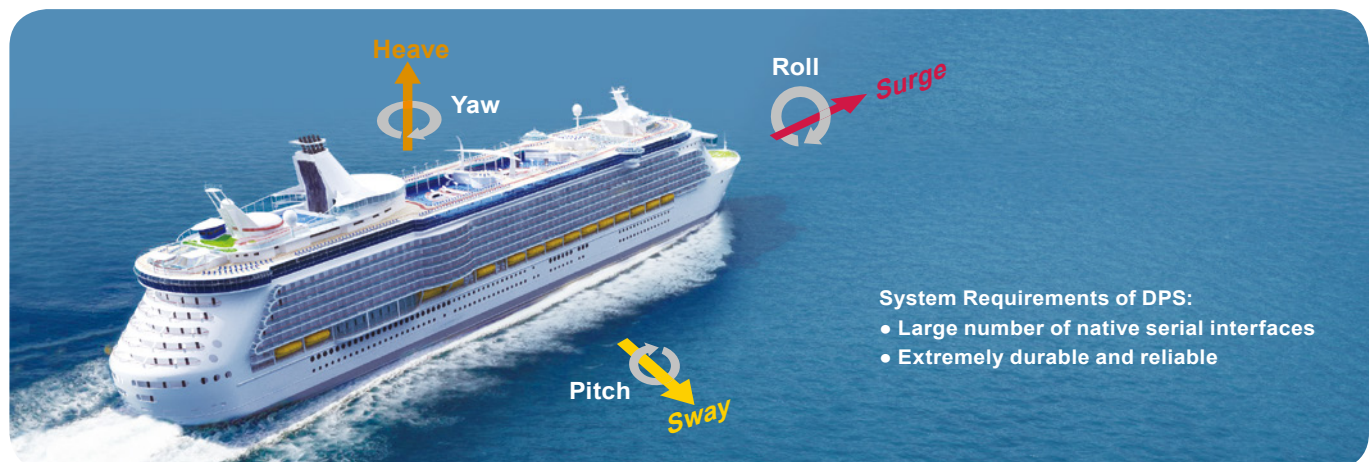


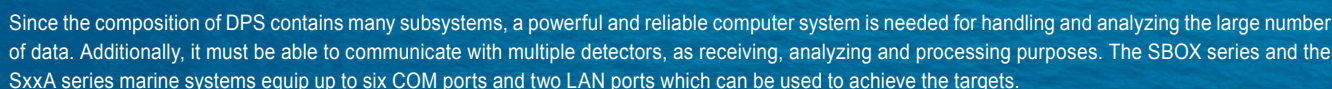
The International Maritime Organization (IMO) has announced that Electronic Chart Display and Information System (ECDIS) should be implemented into all the vessels by July 2018. Both new ships and existing ships should follow this regulation according to the timetable. The bridge systems are complicated and usually composed of multiple sub-systems. ECDIS clearly defines and regulates all the devices and connections, which include data collection, data communication and color calibration. Therefore, this is a huge opportunity for SI and hardware manufacturers.

» Dynamic Position System (DPS)

Dynamic Positioning System (DPS) is a closed-loop control system. It is driven by the control system of the ship to counteract the environmental forces to the ship, such as wind, waves and ocean currents. This mechanism could make ship remain in the position on the sea. DPS precisely calculates the propellant force by continuously monitoring the ship position deviation and analyzing the natural forces which could affect ship's navigation direction. This process could make the ship remain in the correct position and maintain the right direction.

DPS is commonly used at various marine applications, such as subsea engineering work, underwater salvage, marine resources survey, marine engineering lifting, marine engineering umbilical laying, deep diving support, underwater engineering operations and marine engineering comprehensive test. DPS consists of measurement systems, control systems, power systems and propulsion systems, and other components. DPS possesses many functions which include maintaining the specified location, targeting, automatic searching for the best bow position, turning point tracking, ROV automatic tracking, changing the center of rotation, automatic navigation, parallel movement and other functions.





The bridge system usually needs to collect and analyze many observation data, including anemometer stations, speed logs, weather stations and GPS signal. In order to precisely observe the changing walruses, the sensors are usually located at the top of ship or in the open deck. Therefore, with the long distance communication, these signals and communication paths should all follow specific regulation such as NEMA 0813. There are large amounts of data received at bridge, and they should be carefully processed and precisely analyzed. A powerful and reliable embedded box or panel PC is necessary for this task. IEI marine embedded box, the SBOX series, equips up to six COM ports which can be used to synchronously handle a large amount of data. The system of ship bridge consists of many sub-systems, which includes navigation system, path control system, radar system, etc. Most of them usually have dual system in order to prevent the failure of primary system. Additionally, dual system could also appear the identical information such as sea chart to the captain and pilot simultaneously. In practical application, dual or more LAN ports are necessary for connecting and controlling multiple monitors. The SBOX series and the S24A/S19A series contain six ports and two LAN ports to fulfill the requirements mentioned above.



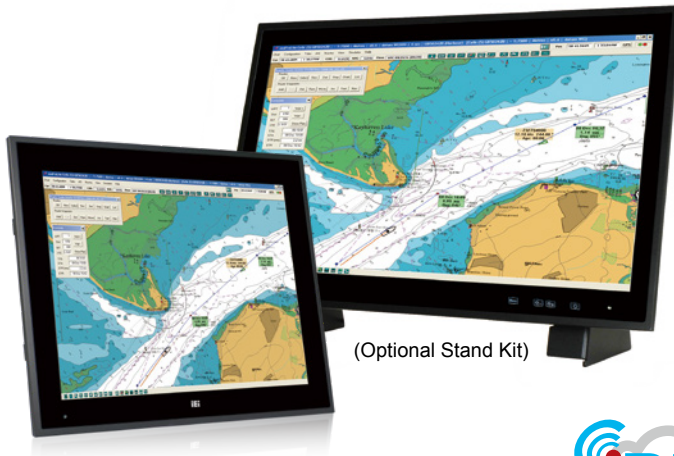
Marine Panel PC Series

S19A-QM87

Intel® Core™ i5 Dual-core Processor

S24A-QM87

Intel® Core™ i5 Dual-core Processor



(Optional Stand Kit)

- **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**



Specifications

Model		S19A-QM87	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
		EEX3188 (10 point) , 6H	EEX3188 (10 point) , 6H
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 1600/1333 MHz dual-channel DDR3 SDRAM support up to 16GB	
Input Interfaces	I/O Ports & Switch	2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 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 Isolated 18V ~ 36V DC 3-pin terminal block 1 x Power button 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)
	Expansion	2 x Full-size PCIe Mini slot, 1 x iRIS-2400 slot (iRIS remote management module)	
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 (graphics 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 24V DC (18~31.2 V 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: 24V DC, 8-4A (max.) - Output (max.): 12V @13A	
Power Consumption		112W	117W

Ordering Information

P/N	Description
S19A-QM87i-i5/PC/4G-R11	19" 300cd/m ² SXGA marine panel PC with Intel® Mobile Core™ i5-4400E 2.7GHz CPU, 2*2GB DDR3 RAM, projected capacitive touch screen, isolated 18-36V DC, iRIS-2400 supported, R11
S24A-QM87i-i5/PC/4G-R11	24" 300cd/m ² FHD marine panel PC with Intel® Mobile Core™ i5-4400E 2.7GHz CPU, 2*2GB DDR3 RAM, projected capacitive touch screen, isolated 18-36V DC, iRIS-2400 supported, R11

Options

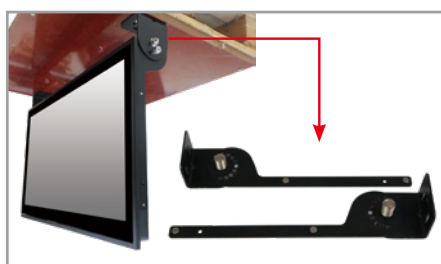
Item	Part No.	Description
Panel Mount Kit	PK-S19A-R10	For S19A
	PK-S24A-R10	For S24A
Desktop Stand	STAND-S24A-R10	For S19A & S24A
Ceiling Mount Kit	CEILMT-S24-R10	For S19A/S24A
HDMI Lockable Kit	HDMI-LK-R10	Universal HDMI Locking Adapter
iRIS Module	iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC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

Packing List

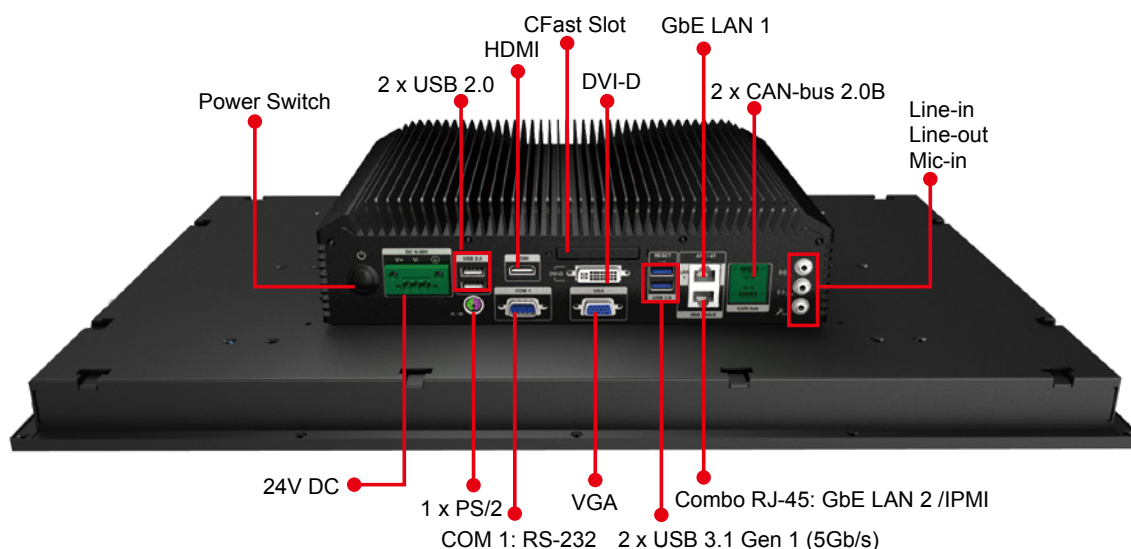
Item	Q'ty	Remark
S19A-QM87 or S24A-QM87	1	
Screw Pack	1	Including necessary screws
PS/2 Cable	1	Round cable; PS/2 cable
Wire Strain Band	3	Wire strain band



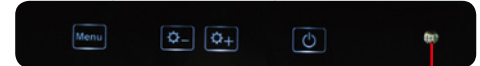
STAND-S24A-R10



CEILMT-S24-R10



Four OSD Keys by Cap-sensor
(Menu, Brightness down, Brightness up, LCD on/off)

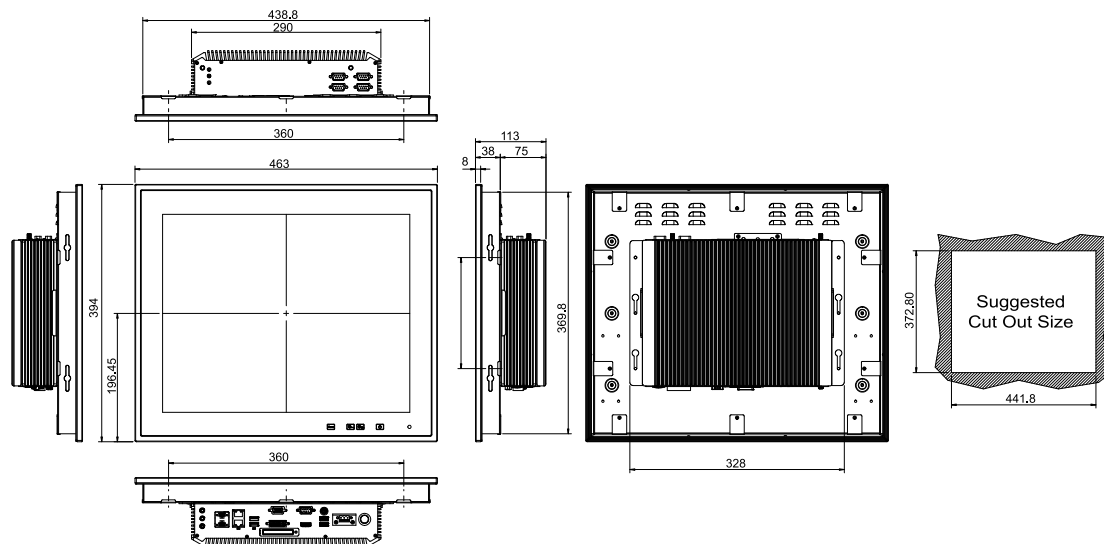


Ambient Light Sensor



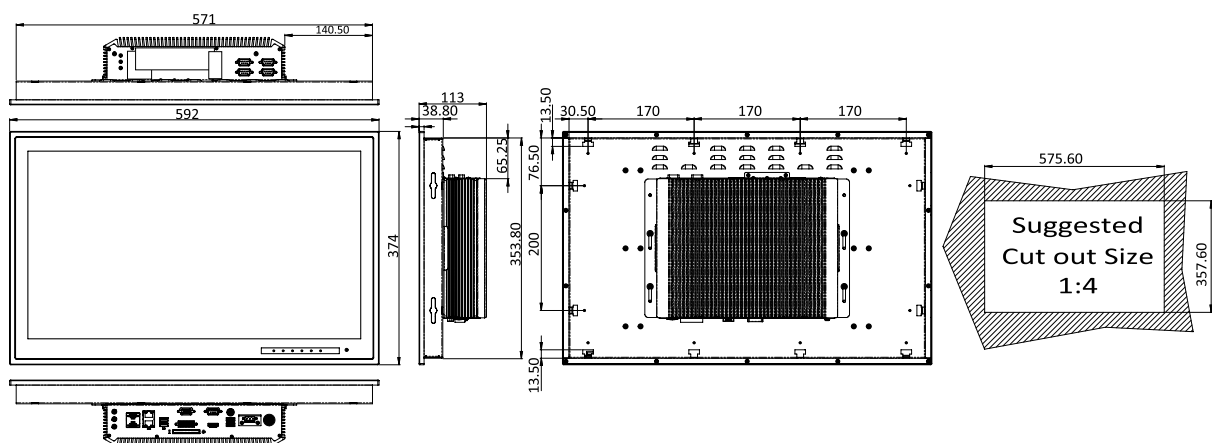
S19A-QM87 Dimensions

(Unit: mm)



S24A-QM87 Dimensions

(Unit: mm)



Marine Embedded Box Series

SBOX-100-QM87

Intel® Core™ i5 Dual-core Processor



Features

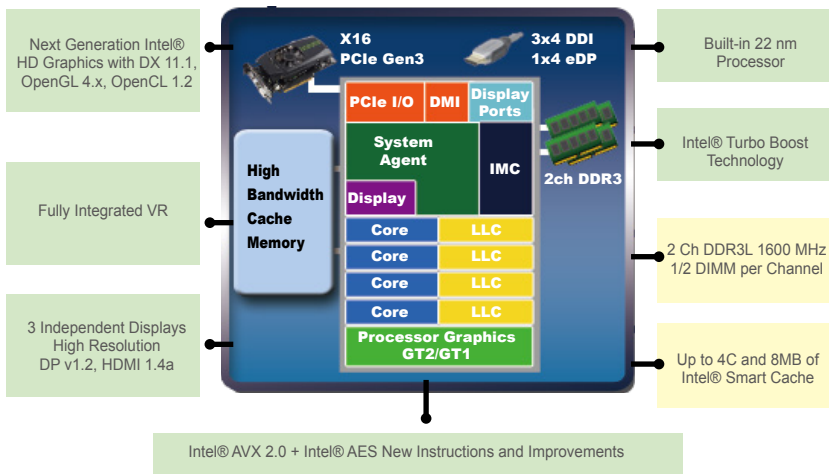
- Fanless marine computer with 4th Generation Intel® Core™ i5 dual-core processor
- -15°C ~ +55°C wide temperature
- Isolation protection
 - » 4 x RS-232/422/485 isolated serial ports
 - » Isolated 18 V~24 V DC input
 - » 2 x Isolated CAN-bus 2.0B
- 2 x 2.5" SSD bay with RAID 0/1 function
- Supports IEI iRIS-2400 (IPMI 2.0 compliant)



■ Intel® Core™ i5 High Performance Computing Power in a Fanless Design

IEI's high performance marine solutions are built with the powerful Intel® Core™ i5 CPU within a fanless system architecture. No matter your applications are general marine system management, monitoring or conning systems, radar systems, or ECDIS navigation, IEI's marine computers will give you the most stability than ever.

- Improved CPU performance with Intel® 22nm 4th Generation Mobile Core™ i5-4400E 2.7 GHz processor
- Two 204-pin 1600/1333MHz dual-channel DDR3 SDRAM support up to 16 GB



**-15°C ~ 55°C
FANLESS!**

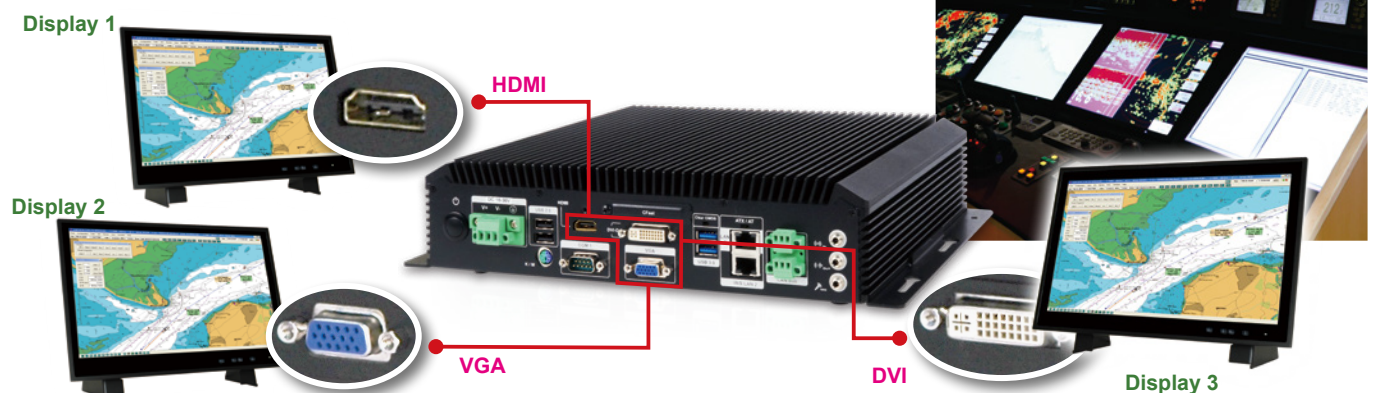


With IEI's fanless solutions, your vessels can avoid the bothersome of replacement of fan, increasing safety and efficiency for the crew and the entire ship.

Three independent aluminum heat sinks help the heat dissipate averagely, and help the system efficiently achieve wide operating temperature range between -15°C~55°C.

■ 3 independent displays: HDMI, DVI, and VGA

The three simultaneously independent displays are supported via the on-board video output combinations of VGA, DVI and HDMI. This versatile combination of display output options make the marine system ideal for multi-monitor required applications in the bridge room.



■ 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

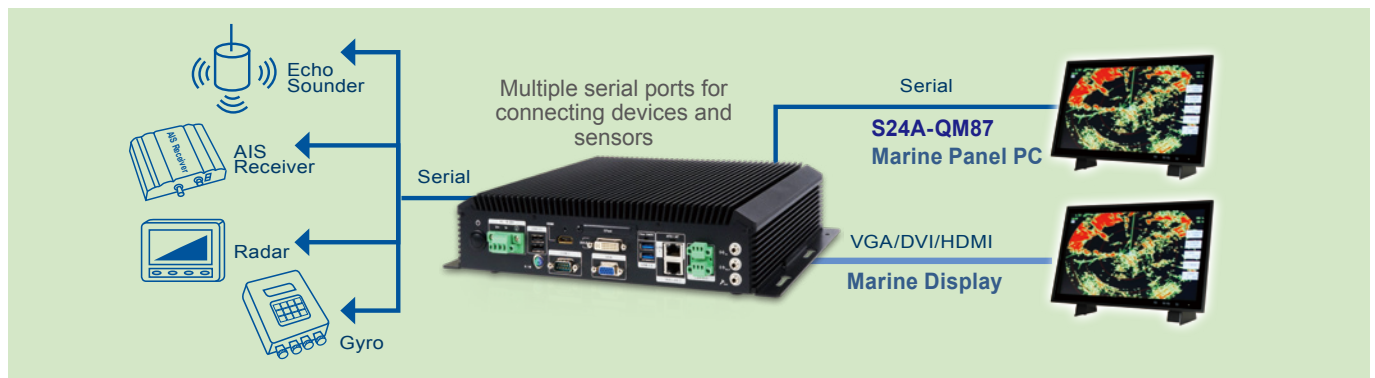
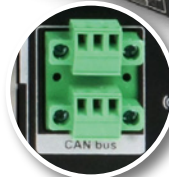
IEI marine computer is protected from any stray electrical signals from other devices on the ship. Electric surges that were generated from other electronic devices which often passed through serial lines to the marine computer can cause severe damage and malfunction to the computers.



■ Isolated 18 V~24 V DC power 2250 V DC Input to Output Basic Insulation

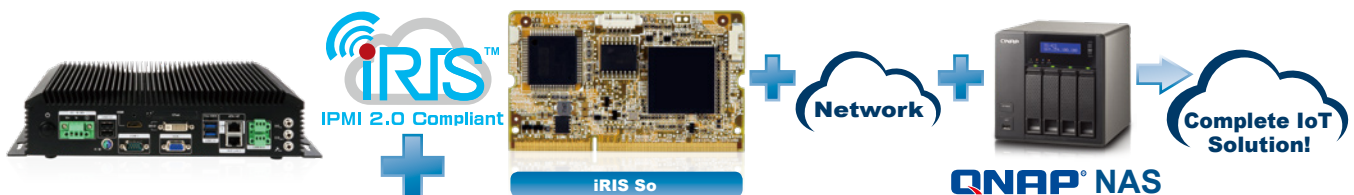
■ Two independent CAN 2.0B channels with 2.5 kV isolation protection

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



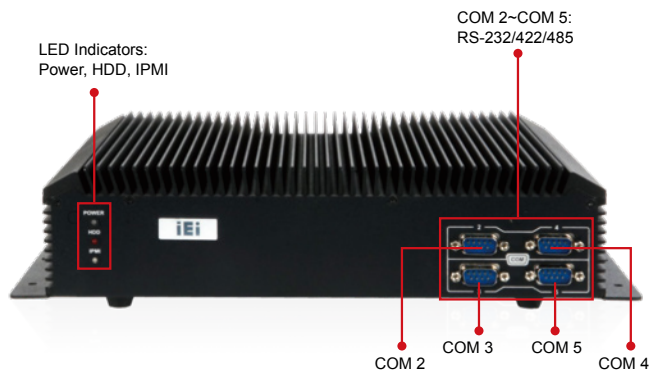
■ IEI Remote Intelligent Management System

The marine computer supports IEI iRIS remote management solution which helps users to manage multiple devices through single management interface and elevates work efficiency. The iRIS solution only requires a module and Internet connection!

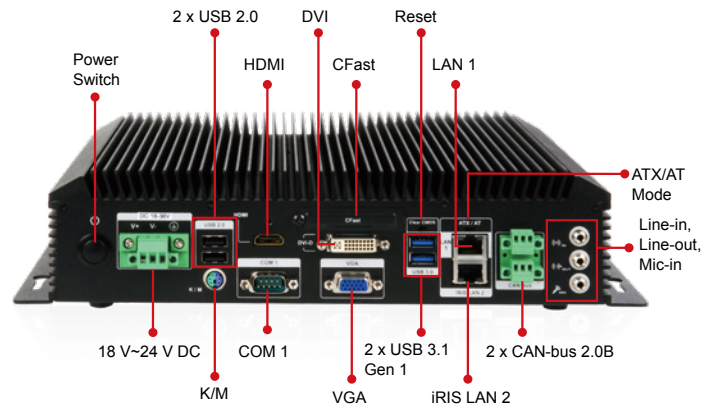


iRIS Key Feature	Detailed Functions	iRIS Key Feature	Detailed Functions
System health monitor	- Hardware monitor - Health log - Event log	Screen record	- Remote video streaming record - Event Trigger Setting & video record
Remote system maintenance	- Remote BIOS update - Remote OS recovery - Remote KVM + One Key Recovery - Remote out-of-band backup	Remote power control	- Reset Power - Power Off Server — Immediately - Power Off Server — Orderly - Power On Server - Power Cycle Server
Active alert & notice	- Send instant system alerts via e-mail - Send instant system alerts via SMS - Send instant system alerts to management server	Remote troubleshooting	- Remote software update - Remote OS installation & recovery - Remote KVM - Post code display
Remote device control	- Fan control - Remote KVM - Remote setting BIOS	Diagnose before dispatch	- Health log analysis - Event log analysis
		Group control	Group control

Front view



Rear view

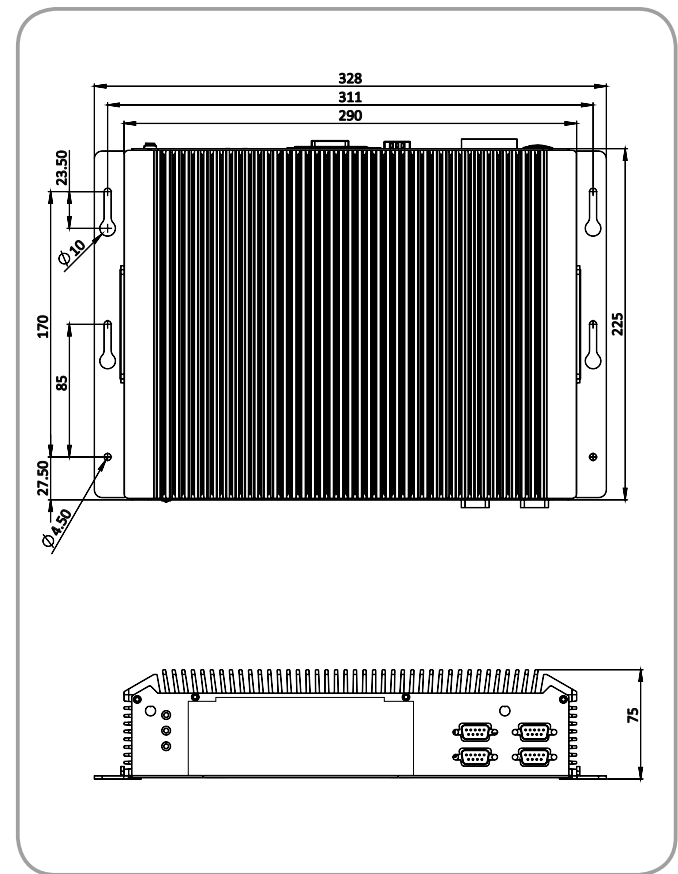


Specifications

Model		SBOX-100-QM87
Chassis	Color	Black
	Dimensions (WxHxD) (mm)	290 x 75 x 225
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® mobile Core™ i5-4400E (2.7 GHz, 37W)
	Chipset	Intel® QM87
	System Memory	2 x 204-pin DDR3 SO-DIMM slot (system max. 16 GB) Pre-installed 4 GB DDR3 SO-DIMM
IPMI	iRIS Solution	iRIS-2400
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s SSD bay with RAID 0/1 function
	CF Card/CFast	1 x CFast
I/O Interfaces	PS2 (KB/MS)	1
	USB 3.1 Gen 1	2
	USB 2.0	2
	Ethernet	2 x RJ-45 with teaming support 1 x PCIe GbE by Intel® I217LM 1 x PCIe GbE by Intel® I210-AT (2 with 2 kV isolation)
	COM Port	1 x DB-9 (non-isolated) 4 x RS-232/422/485 (with 2.5 kV isolation)
	CAN-bus/OBD-II	2 x CAN-bus (with 2.5 kV isolation)
	Display	1 x VGA, 1 x DVI-D, 1 x HDMI
	Resolution	VGA: Up to 1920 x 1200 @ 60 Hz HDMI: Up to 2500 x 1600 @ 60 Hz DVI-D: Up to 2500 x 1600 @ 60 Hz
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in
	Wireless	2 x Antenna SMA hole (reserved)
Expansions	PCIe Mini	2 x Full size*
LED Indicator & Button	Indicator	Power (power on: green, power off: orange), storage (red, blinking), IPMI (blue)
	Power Input	Terminal block: Isolated 24V DC (18~31.2 V DC)
Power	Consumption	100 W (Intel® mobile Core™ i5-4400E with 4 GB DDR3 memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-15°C ~ 55°C (5°F ~ 131°F) with air flow (SSD)
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Humidity	5% ~ 95%, non-condensing
	Operating Shock	
	Operating Vibration	IEC 60945 and DNV 2.4 IASC-E10 compliant
	Weight (Net/Gross)	4.08 kg / 6.03 kg
	Safety/EMC	EMC/CE/FCC/DNV, IEC 60945 4th, IACS-E10, IEC 61174 compliant IP rating: IP22 compliant rear cover
OS	Supported OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E

*SBOX-100-QM87i-QGW-R10 has only one Half-size PCIe Mini slot

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
SBOX-100-QM87i-i5/4G-R10	Fanless marine computer with Intel® Mobile Core™ i5-4400E 2.7 GHz processor, 4 GB DDR3 memory, iRIS-2400 supported, isolated 18 V~36 V DC, R10
SBOX-100-QM87i-QGW-R10	Fanless marine computer with Intel® Mobile Core™ i5-4400E 2.7GHz Processor, DDR3 8GB, iRIS-2400 supported, with QTS-Gateway, isolated 18~36V DC, RoHs

Packing List

Item	P/N	Qty	Remark
PS/2 cable	32006-000300-100-RS	1	PS/2 cable
Rubber pad & screw pack		1	Rubber pad & screw pack

Marine Monitor Series

The marine monitor series possesses many sophisticated features that fit with practical marine environment, including front panel IP 66 dust- and water-proof level, wide-rang operating temperatures, multi-point capacitive touch, wide viewing angles and OSD control. Especially, optical bonding is a good choice for the use of high brightness environments. Versatile mounting ways offer customers flexible methods in accordance with different operating environments.



■ Optical Bonding Enhance Visibility (optional)

The lightness is a crucial factor to sailing safety. IEI provides an option for optical bonding between touchscreen and LCD panel. The light transmitting between various medias could produce reflection. Traditionally, there is an air gap between touchscreen and LCD panel, which could reflect light seriously. It could affect the sailing security tremendously. Adding optical bonding material between touchscreen and LCD panel can improve reflection effectively and increase brightness by 10%. Furthermore, it not only increases hardness of touchscreen but also reduces power consumption.

Improving the viewing experience

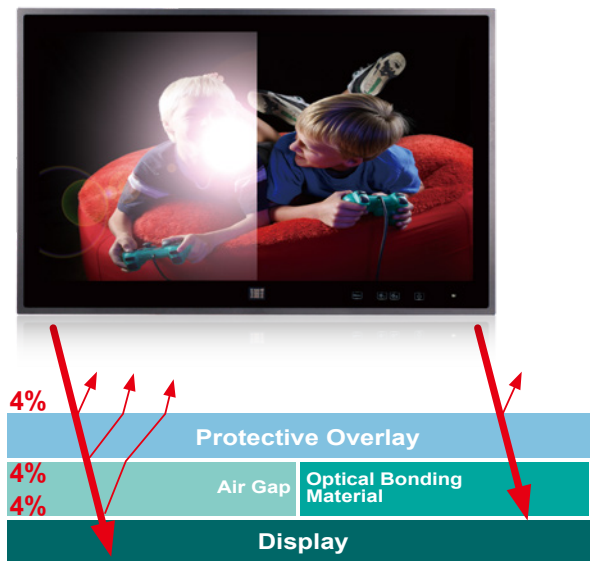
- Increase contrast ratio by 400% in sunlight
- Increase brightness by 10%

Increasing the display ruggedness

- Increase the falling ball impact resistance by up to 3 times

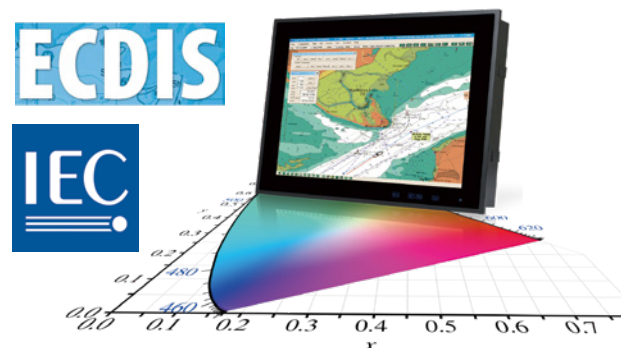
Reduced power consumption

- By reducing the light loss due to reflection



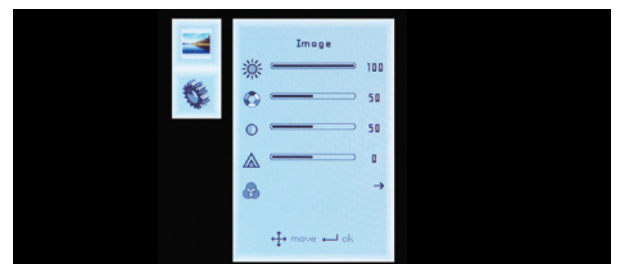
■ ECDIS (optional)

For industrial and commercial applications, color rendering accuracy and consistency are absolutely essential. The human eye is generally likely to be impacted by environment and misled presentation of colors in the brain. The maritime environment is much more ruggedized compared with general industrial environment. The requirements for the degree of light and dark and color of accuracy are more stringent. Color calibration technology ensures that monitor would effectively show the largest accuracy and minimum deviation of artificial color. IEI marine monitors and panel PCs follow the IEC 61174 ECDIS regulation. It is performed by monitoring up to N checkpoints and measuring the color and brightness of the display. After precisely calculating and highly reliable calibrating, the profile matrix will be stored in the firmware of monitor. The monitors (PPCs) compliant with ECDIS specifications will provide a more safe and secure maritime environment.



■ Adjustable LCD Brightness and Auto-Dimming Available

The auto-dimming function could slightly modify LCD brightness according to ambient light. To consider the safety of navigation and operators' eye comfort, both LCD brightness and OSD brightness are designed to be programmable.



■ OSD Control on Front Panel

On Screen Display (OSD) offers customers a quick way to modify the LCD brightness. In contrary to traditional tuner, the full flat OSD design not only features beautiful outward appearance but also improves the shortcoming of dust accumulation in physical button.



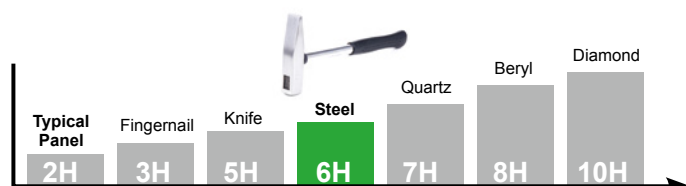
■ Lockable HDMI Cable Support (optional)

The lockable HDMI cable design not only increase reliability but also reduces the possibilities of accidental human errors. Therefore, important information could be displayed continuously.



■ 6H Multiple Projected Capacitive Touchscreen

The IEI marine products provide capacitive multi-touch up to 10 points (2-point on 24" model). In practical applications, 10-point touch can simulate engine button and pump switch so that there will be less real buttons. This can enhance the reliability of marine infrastructure.



MOH's Hardness Rating



6H 10-point Touch for S19M



6H 2-point Touch for S24M

■ Picture-in-Picture (PIP) Function & Surveillance Application

Picture-in-Picture function offers high efficiency to surveillance. You can monitor the radar information and observe surveillance video simultaneously. Simply connect BNC camera to BNC input port and link DVR to BNC output port. Therefore, you can monitor and record at the same time, and the record can be saved for further use.

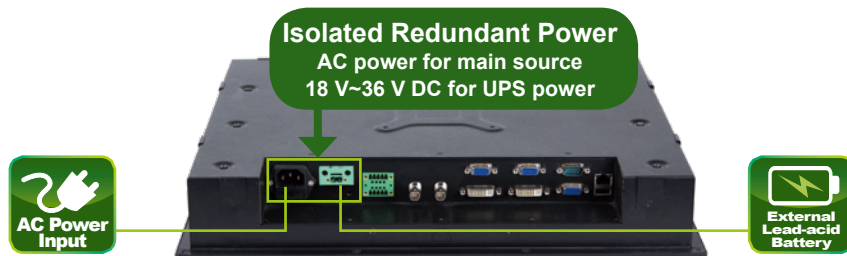


PIP Matching Table

Sub Channel	Main Channel					
	VGA1	VGA2	DVI1	DVI2	CVBS1	
VGA1	X		X	X	X	
VGA2		X	X	X	X	
DVI1	X	X	X		X	
DVI2	X	X		X	X	
CVBS1	X	X	X	X	X	

■ Reliable Power System

There are usually two systems - one master for use, and one slave for backup. IEI provides isolated redundant power, which means you will have separate power inputs, including AC source and DC source. When AC source is terminated, the DC source will continue to supply power to the device.

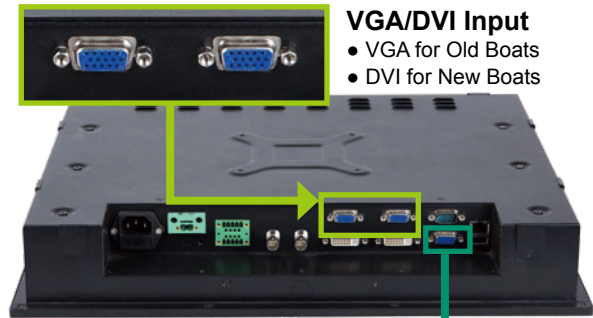
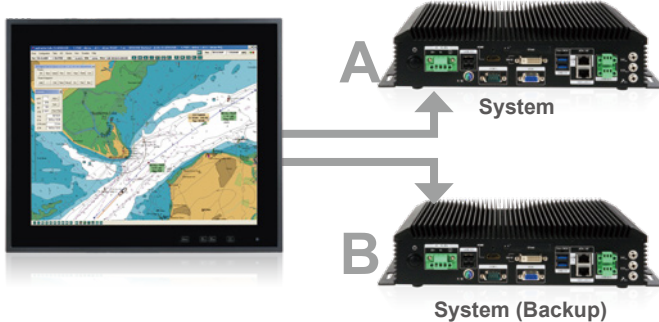


Dual Video Input Support

The IEI marine products equips with two VGA inputs and two DVI inputs. VGA is designed for the old ships while DVI is designed for the new ones. Additionally, in order to prevent failure of the main system, dual video input design is provided for much more reliability. Hence, operation will not be terminated due to switching between systems

Dual Video Input Support

Redundant VGA & DVI



VGA/DVI Input

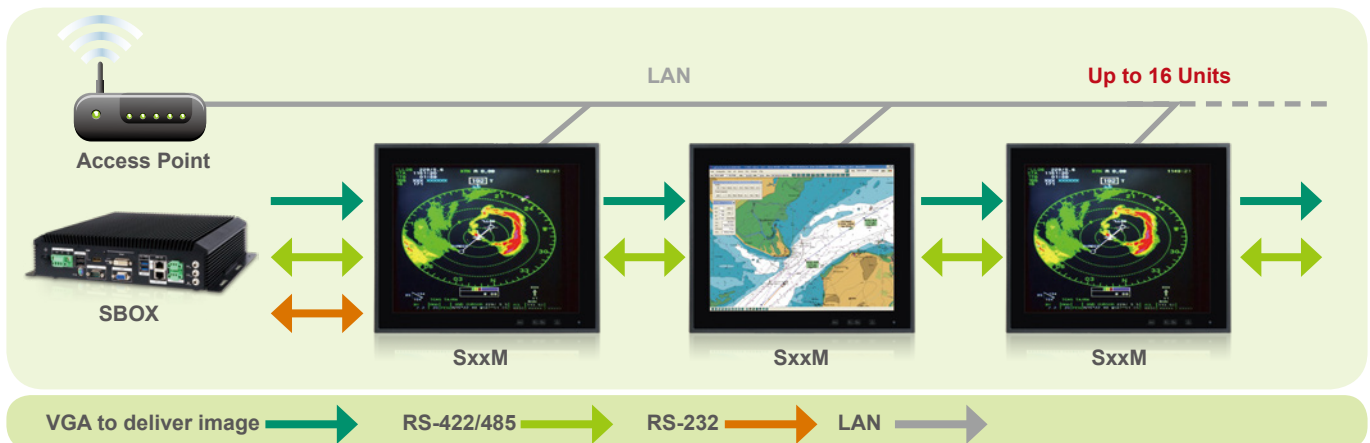
- VGA for Old Boats
- DVI for New Boats

Independent Video Output Support

VGA output port features display cascade function, providing a convenient way to duplicate display signal. This function helps customers to connect devices quickly and easily.

Daisy Chain OSD Remote Control

It is essential to show the same displays to captains and pilots through the monitors which are usually cascaded at the ship bridge. The marine monitor equips both VGA input and VGA output. By connecting the VGA-out of the first monitor to the VGA-in of the second monitor, the IEI marine monitors feature group display with maximum up to 16 screens in the group. To comply with the ECDIS regulation, adjusting the brightness and contrast on all monitors at the same time is necessary, and this can be achieved through the Ethernet or serial COM ports. LAN is used to communicate in long distance in the group; as for short distance, COM port is the best choice. The LAN port can also be used for updating firmware and maintaining service.



Versatile Mounting Methods (optional)

Versatile mounting methods provide customers a secure way to settle the instrument. We provide three different mounting kits for customers, which include stand, ceiling mount kit and panel mount kit.



Stand Alone



Ceiling Mount



Panel Mount

Marine Monitor Series

S19M

19" IP66 Marine Monitors

S24M

24" IP66 Marine Monitors



Features

- IP66 Front / IP22 Rear
- -15°C ~ +55°C Wide Temperature and Flat-bezel Projected Capacitive Touchscreen
- Excellent Visual Performance
 - Full OSD function configuration
 - 0%~100% full range dimming
 - 178°/178° wide viewing angles
- Multiple Video Input
 - Two VGA, two DVI, and one BNC
- Multiple Video Output
 - One VGA and one BNC
- Dual Isolated AC/DC Input with Redundant Power Protection
- Remote OSD Settings through LAN, RS-232, RS-422 and RS-485



Specifications

Model		S19M	S24M
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°
	Backlight MTBF (HRs)	50000	50000
Touchscreen & Controller		EXC7920 (10-point), 6H	EXC7200 (2-point), 6H
Scalar Chip		STD8028	
I/O Ports		• DVI-D Signal Input: 2 x DVI (24-pin, female) • VGA Signal Input: 2 x D-sub (15-pin, female) • VGA Signal Output: 1 x D-sub (15-pin, female) - Clone of VGA IN* • Composite Video Input: 1 x BNC connector (female) • Composite Video Output: 1 x BNC connector (female) • RS-232/422/485 for Remote control (non-isolated) • Touchscreen: 1 x USB Type A connector (female) • Ethernet: 1 x RJ-45 connector for remote control • Isolated AC Power Inlet: 100V~240V AC • Isolated DC Terminal Block: 18V~36V DC • 1 x Buzzer	
PIP		Yes	
OSD Button		P-CAP button (LCD on/off, Menu, Auto, Up, Down, Left, Right)	
LED/Sensor		Ambient light sensor (0%~100%)	
Power Requirement		Multi-power Supply: Isolated AC Power: 100-240V, 2-1A, 50-60Hz Isolated DC Power: 18-36V, 8-4A	
Operating Temperature		-15°C ~ 55°C	
Storage Temperature		-20°C ~ 60°C	
Humidity		5% to 95% RH	
Thermal Design		Fanless	
Housing		Aluminum front , sheet metal back (Black C)	
Cut-out Dimensions (W x L)		442 mm x 373 mm	576 mm x 358 mm
Dimensions (W x L x D)		463 mm x 394 mm x 113 mm	592 mm x 374 mm x 113 mm
Mounting		VESA 100mm x 100mm	VESA 100mm x 100mm
Net Weight (kg)		7.74	11.48
Gross Weight (kg)		11.54	15.97
Approvals		EMC: CE, FCC	
		Safety: DNV, IEC 60945 4th, IACS-E10	
		IP Rating: IP66 front, IP22 rear	

Ordering Information

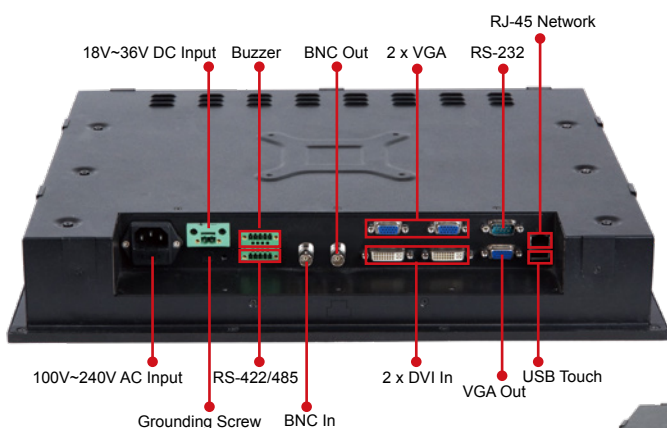
PN	Description
S19M-AD/PC-R11	19" SXGA 300cd/m ² Marine Display with AC and DC redundant power, PCAP touch screen, R11
S24M-AD/PC-R11	24" FHD 300cd/m ² Marine Display with AC and DC redundant power, PCAP touch screen, R11

Options

Item	Part No.	Description
Panel Mount Kit	PK-S19M-R10	For S19M
	PK-S24M-R10	For S24M
Desktop Stand	STAND-A21-R10	For S19M & S24M

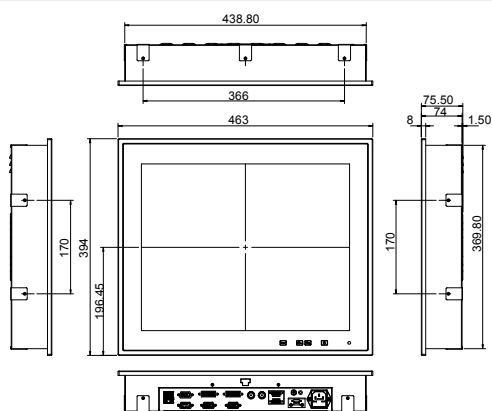
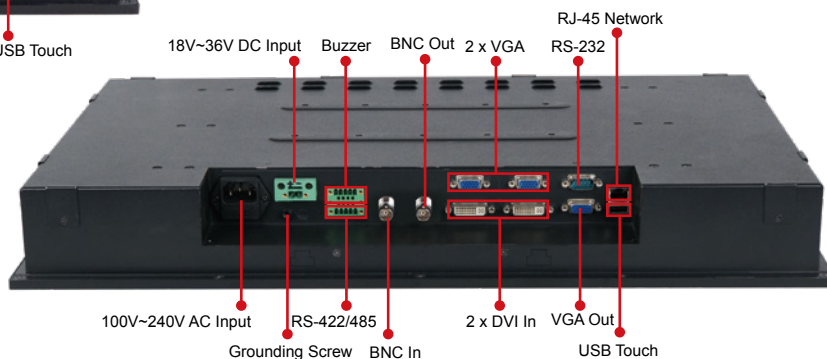
Packing List

Item	Q'ty	Remark
VGA	1	VGA signal cable
DVI	1	DVI signal cable
USB	1	USB touchscreen cable
Power Cord	1	Power cord
S19M or S24M	1	

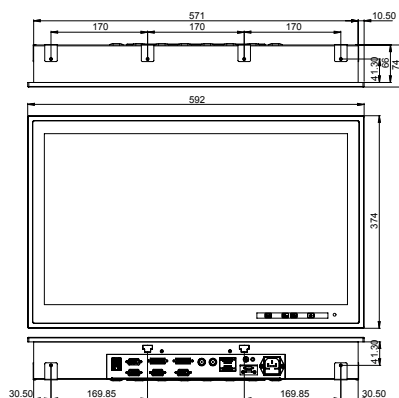
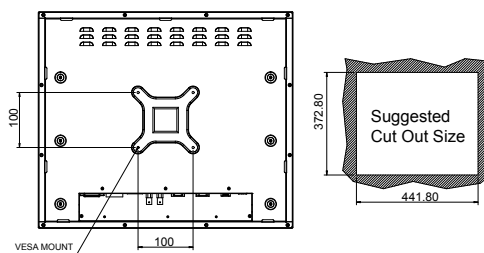


S19M Fully Integrated I/O

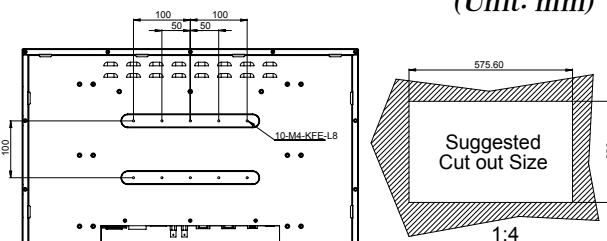
S24M Fully Integrated I/O



S19M Dimensions (Unit: mm)



S24M Dimensions (Unit: mm)



UPC Series

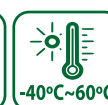
UPC-F12C-ULT3

Intel® Core™ i5 and Celeron® ULT Processor



Features

- 12.1" fanless panel PC with Intel® Skylake ULT processor
- IP66 6-side protection with M12 connector I/O cover
- IP65 6-side protection with standard cable I/O cover
- Built-in wireless 802.11 a/b/g/n/ac and Bluetooth V4.0
- Operating temperature : -20°C ~ 60°C
- Flat glass PCAP touch with 6H hardness, resistive touch window



Specifications

Model		UPC-F12CM-ULT3		UPC-F12C-ULT3	
Display	LCD Display	12.1"			
	Max Resolution	1024(W) x 768(H)			
	Brightness (cd/m²)	600			
	Contrast Ratio	700:1			
	LCD Color	16.2M			
	Pixel Pitch (mm)	0.24(H) x 0.24(V)			
	Viewing Angle (H-V)	160° / 140°			
	Backlight MTBF (Hrs)	50,000			
Motherboard	CPU	6th generation Intel® Core™ i5 and Celeron® ULT processor			
	RAM	1 x 260-pin 2133/1867 MHz single-channel DDR4 SO-DIMMs			
	Ethernet	LAN1: PCIe GbE by Intel® I211 controller LAN2: PCIe GbE by Intel® I211 controller			
Touchscreen		P-CAP / Resistive Touch			
Input Interfaces	I/O Ports & Switch	M12 Type: 1 x 8-pin M12 connector for RS-232 1 x 8-pin M12 connector for RS-232/422/485 1 x 8-pin M12 connector for GbE LAN 2 x 8-pin M12 connector for two USB 2.0 1 x 5-pin M12 connector for DC jack (12V~36V DC)		Standard Type: 1 x DC jack (12V-36V DC) 1 x DC-in terminal block (12V-36V DC) 1 x HDMI 1 x VGA/CAN Bus 1 x RS-232 (COM1 RJ-45) 1 x RS-232/422/485 (COM2 RJ-45) 2 x LAN 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s)	
Expansion		1 x Full-size/half-size PCIe Mini card slot (PCIe x1 and USB 2.0 signals)			
Connectivity	Wi-Fi & BT	802.11 a/b/g/n/ac + Bluetooth v4.0			
	RFID	Reserved RFID antenna area (optional)			
Storage		1 x 2.5" HDD bay			
		1 x M.2 (B key 2242 with USB 2.0 and SATA signal)			
Physical	Construction	Aluminum die-casting			
	Mounting	VESA 100mm x 100mm			
	Net/Gross Weight (kg)	4.95 kg / 7.62 kg		5.02 kg / 7.40 kg	
	Dimensions (W x L x D) (mm)	316 x 279 x 67			
Environment	Operating Temperature (with air flow)	-20°C ~ 60°C (without heater solution) -40°C ~ 60°C by project base			
	Storage Temperature	-20°C ~ 70°C			
	IP Level	Full IP65 or Full IP66 (with M12 connectors)			
	Safety	CE / FCC			
Power	Power Requirement	Power 1: 12V ~ 36V (terminal block)			
		Power 2: 12V ~ 36V (DC jack)			

Ordering Information

M12 Type

Part No.	Description
UPC-F12CM-ULT3-C/R/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, resistive touch, M12 I/O, R10
UPC-F12CM-ULT3-C/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, PCAP touch, M12 I/O, R10
UPC-F12CM-ULT3-i5/R/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, resistive touch, M12 I/O, R10
UPC-F12CM-ULT3-i5/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, PCAP touch, M12 I/O, R10

Standard Type

Part No.	Description
UPC-F12C-ULT3-C/R/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, resistive touch, R10
UPC-F12C-ULT3-C/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, PCAP touch, R10
UPC-F12C-ULT3-i5/R/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, resistive touch, R10
UPC-F12C-ULT3-i5/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, PCAP touch, R10
UPC-F12C-ULT3-C/CA/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th Generation Mobile Celeron® 3955U (15W) on-board Processor (ULT), 1*4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, with CAN bus, PCAP touch, R10
UPC-F12C-ULT3-i5/CA/PC/4G-R10	12.1" 600cd/m ² XGA fanless ultra panel PC with Intel® 14nm 6th Generation Mobile Core™ i5-6300U (15W) on-board Processor (ULT), 1*4GB DDR4 RAM, 802.11a/b/g/n/ac Wi-Fi module, with CAN bus, PCAP touch, R10

Optional

Item	Description
63040-010060-110-RS	Power Adapter (for standard only)
63040-030080-000-RS	Water-proof Power Adapter (for M12 only)
CB-M12USB02-R20	USB Cable (for M12 only)
CB-M12RJ45-R20	LAN Cable (for M12 only)
CB-M12COM-R20	COM Port Cable (for M12 only)
Arm	ARM-11-RS
Stand	STAND-A12-RS STAND-C12-R10
MIFARE RFID Kit	UPC-F-MF-RFID-KIT01-R10 (ATO only)



USB cable
(CB-M12USB02-R20)



RJ-45 LAN cable
(CB-M12RJ45-R10)



DB-9 COM port Cable
(CB-M12COM-R20)

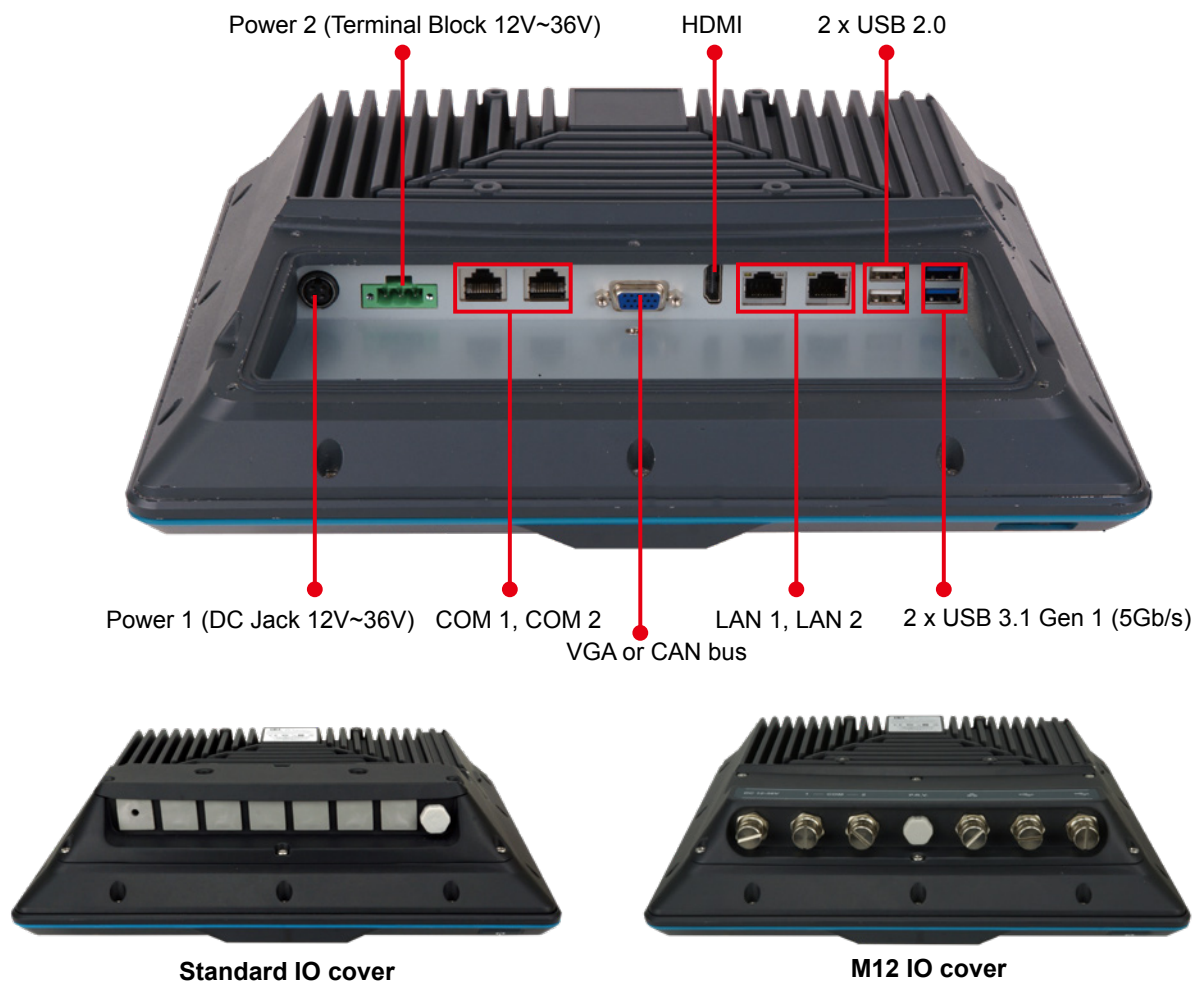


Water-proof Power Adapter
(63040-030080-000-RS)

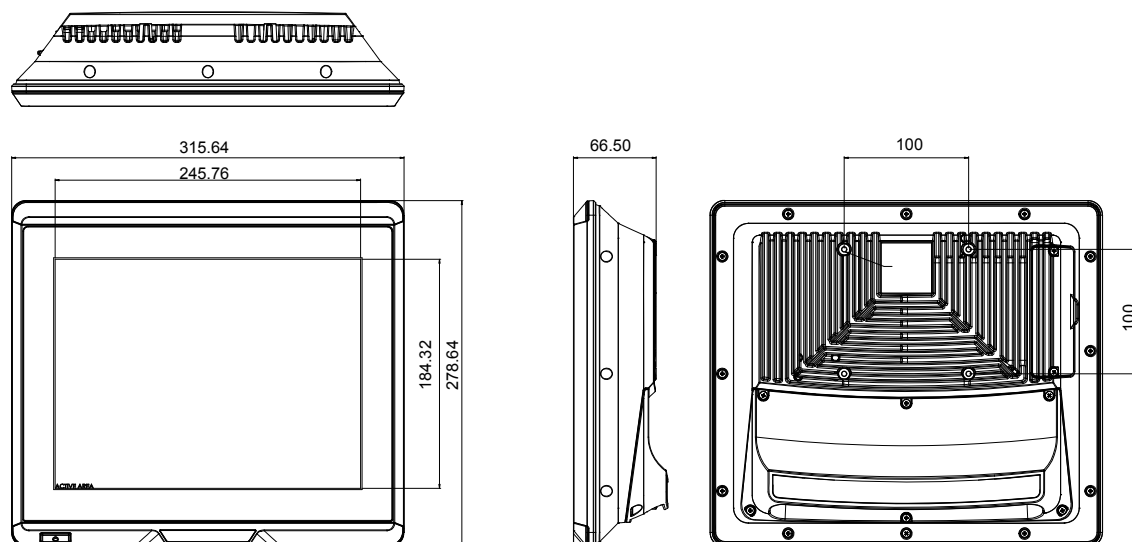
Packing List

Item	Q'ty	Remark
Touch Pen	1	Resistive type only
Ferrite core	2	
D-Sub to RJ45 cable	2	for standard only
Waterproof plugs: Φ3	10	Φ3x2, Φ4x1, Φ5x1, cover x 6 (for standard only)
M12 to USB cable	1	for M12 only

I/O Interface



UPC-F12C Dimensions (Unit: mm)



UPC Series

UPC-V315-QM77

Intel® Mobile QM77 Express Chipset



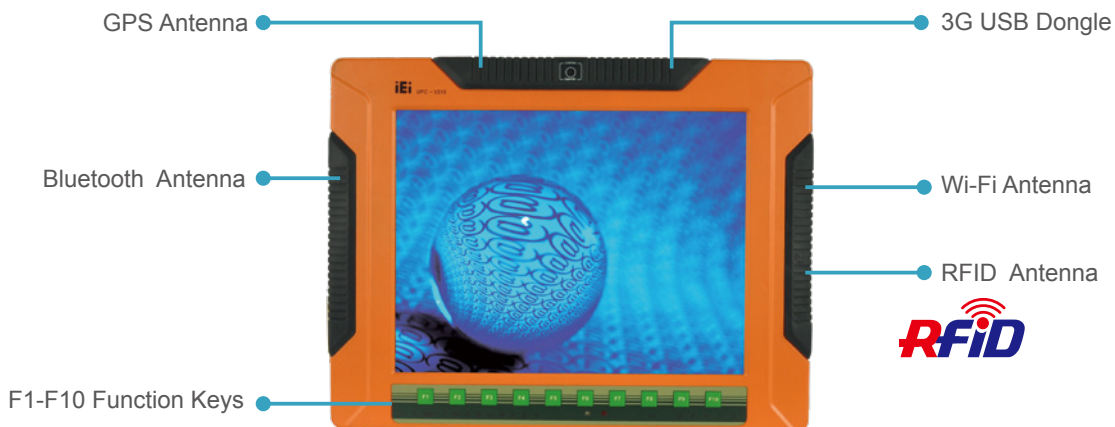
Features

- Intel® Ivy Bridge mobile chipset
- 15" 400 nits 1024 x 768 LCD with LED backlight
- Full IP 65 compliant die-casting aluminum chassis
- PCIe Mini card expansion
- Dual-DC input, 9V ~ 36V and 10.5V ~ 36V, switch automatically
- ACC power support
- Dual-band 2.4/5 GHz Wi-Fi 802.11a/b/g/n 3T3R MIMO design
- Reserved space for 3.75G HSUPA USB dongle
- Optional GPS receiver
- Optional EM or Mifare RFID reader
- Optional Bluetooth module
- Built-in 2-megapixel webcam with AF, AE and AWB capabilities
- CAN-bus interface with isolation
- F1 ~ F10 function keys with customization options



» Various Connection Options

The UPC-V315 provides different kinds of communication interfaces, such as LAN/ WLAN/3G/GPS/Bluetooth/ RFID, which maximize flexibility of system integration and ensure seamless workflow.



Connection Feasibility

**Dual-Band 2.4/5 GHz Wi-Fi**

Dual-band 2.4/5 GHz 802.11a/b/g/n 3T3R MIMO design with up to 450 Mbps speed

**Bluetooth V2.1+EDR (optional)**

Connect peripheral devices with Bluetooth, such as earphone, scanner, etc.

**3.75G HSUPA (optional)**

Comparing to wireless network, 3.75G HSUPA has higher mobility with long-range mobile communication and no hotspot limitation. It is also able to connect to the Internet in real time.

**GPS (optional)**

Travel navigation, real-time locating and path tracking

» Robust Mechanical Design

The UPC-V315 is fully IP65 protected with aluminum chassis and water proof rubber gaskets. It also supports wide operating temperature from -20°C to 60°C.

-20°C

60°C

Note: Power adapter supports operating temperature 0°C to 40°C.



» PCIe Mini Card Expansion

A. 3T3R Wi-Fi Module

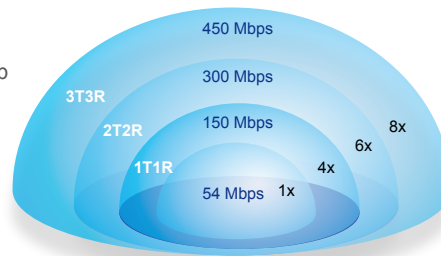
UPC-V315 supports IEEE 802.11a/b/g/n 3T3R Wi-Fi module, enhancing the transmission speed and coverage.

T: Transmitter

The number T is absolutely relative with speed, 1T up to 150Mbps, 2T up to 300Mbps, 3T up to 450Mbps.

R: Receiver

The number R is relative with receiving dead angle and distance. The higher R is, the wider the receiving range.



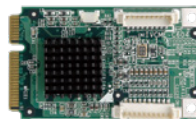
B. Solid State Disk mSATA

mSATA is compact, rugged, and much faster than traditional HDD, which is suitable for harsh environment.



C. 4-Channel Capture Card

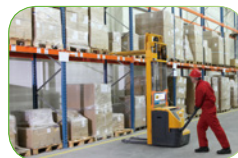
The UPC-V315-QM77 supports 4-channel video capture solution via PCIe Mini card, which can easily integrate IP camera for surveillance and real-time video streaming.



IVCME-C604



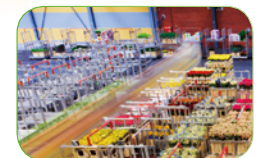
QM77 Only



Forklift Management



Slaughter House Factory

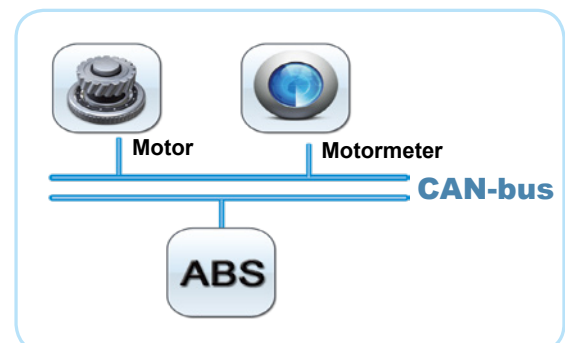


Flower Market Management

» CAN-bus Interface with Isolation

The Control Area Network (CAN) is a serial bus system. The UPC-V315 on-board CAN controllers provide bus arbitration and error detection with automatic transmission repeat function. This drastically reduces the chance of data loss, ensures system reliability, and is suitable for network intelligent I/O devices such as sensors or actuators of machines or plants.

1. Isolated protection voltage 2500V/min DC protection
2. Typical transient immunity 50 kV/ms ESD protection



» AUPS Network Administration Tool

Intelligent Software Utility

The remote management software utility and application program allow users to easily get the status of the AUPS and to control the AUPS power functions from anywhere with internet connection.



Network Remote Management Software Battery Capacity Status

UPS Status Monitoring

Stack Version: v1.3
Build Date: May 10 2018 00:08:00

- STATUS** - display UPS status and change UPS ON/OFF
- Send E-mail** - Send UPS status with E-MAIL
- Configuration** - setup IP Address and enable DHCP...

Power On/OFF

(click to toggle)
UPS ON/OFF:
☒ ON
☐ OFF
OS Shut Down:
☐ Yes
☒ No

AUPS

Stack Version: v1.3
Build Date: May 10 2018 00:08:00

- STATUS** - display UPS status and change UPS ON/OFF
- Send E-mail** - Send UPS status with E-MAIL

"Battery 1":
STATUS: Charging
Capacity(%): 87
VOLTAGE(mV): 12175
Current(mA): 2454
Temperature(C): 35
RemainTime(min): Not Used

UPS ON/OFF:
☒ ON
☐ OFF
OS Shut Down:
☐ Yes
☒ No

"Battery 1":
STATUS: Charging
Capacity(%): 87
VOLTAGE(mV): 12175
Current(mA): 2454
Temperature(C): 35
RemainTime(min): Not Used

Remote control DC output ON/OFF via web interface.

» AUPS Local USB Utility Tool

Monitor the Most Critical Battery Functions on the Local Machine

The battery monitoring utility provides AUPS status monitoring and configuration ability. Uninterruptible Power Systems is a significant product that serves as emergency power when you suffer from electric event.



MONITORING SYSTEM STATUS

Shows system status real-time monitoring

- DC Power indicator
- Battery capacity
- Battery status
- Temperature



BATTERY STATUS

Shows battery status real-time monitoring

- Real-time information update
- Status bar



LAN CONFIGURATION

LAN shows system IP Address information



E-MAIL

The E-mail page is where to set the SMTP settings for sending alert notification via e-mail



SETTING

Setting system management

Buzzer	Enable or disable the buzzer that warns when the system is switching to use battery power.
Enable LAN	Enable or disable the LAN for remote monitoring function.
Power	Click the button to power off the AUPS power module immediately.
Auto DC on	Enable to automatically power on the AUPS once DC power is applied.
Shut down condition (capacity %)	Set the battery capacity parameter for the system to shut down automatically.
DC off delay time (0~65536 sec)	Set the delay time for the AUPS series to power off after the system shut down.
System will be down-converted (capacity %)	Set the battery capacity parameter for the system to automatically switch to the Balanced power plan set in its Windows OS.
System go to sleep mode (capacity %)	Set the battery capacity parameter for the system to go into sleep mode automatically.

Specifications

Model		UPC-V315-QM77
Display	LCD Size	15"
	Max. Resolution	1024(W) x 768(H)
	Brightness (cd/m ²)	400
	Contrast Ratio	700:1
	LCD Color	16.2M
	Pixel Pitch (mm) (HxV)	0.297(H) x 0.297(V)
	Viewing Angle (V/H)	125° / 140°
	Backlight MTBF (hrs)	50000
Touch	Touchscreen	5-wire resistive type with RS-232 interface
	Touch Controller	DMC 9000
Motherboard	CPU	Intel® Celeron® 1047UE processor Intel® Core™ i7-3517UE processor Intel® Core™ i3-3217UE processor
	Chipset	Mobile Intel® QM77 Express Chipset
	RAM	Built-in one 2 GB DDR3 memory (system max. 8GB: on board max. 4GB, socket max. 4GB)
	Ethernet	Intel® WG82579LM GbE PHY
	Audio Codec	Realtek ALC892 HD audio codec
I/O Ports and Switches		3 x RS-232 (RJ-45) 1 x RS-422/485 (RJ-45) 1 x CAN-bus 1 x VGA 1 x HDMI port 2 x GbE LAN 2 x USB 2.0 2 x USB 3.1 Gen 1 (5Gb/s) 1 x Reset button 1 x Audio jack (Line out, MIC) 1 x DC jack (9~36V DC) 1 x Terminal block (9~36V DC) 1 x AT/ATX mode switch
System	Audio	AMP 3W + 3W (internal speaker)
	Camera	2-megapixel
Connectivity	Wireless	IEEE 802.11a/b/g/n 3T3R module (WIFI-RT5393-DB-R10) Telec certified
	Bluetooth	Bluetooth V2.0+EDR with USB interface (optional)
	3G	Reserved USB connector (optional)
	GPS	FV-W9U (optional, internal USB header)
Drive Bay	HDD Driver Bay	1 x 2.5" SATA SSD bay
	SSD	mSATA (SATA2 signal)
	CD-ROM Driver Bay	N/A
Expansion Slot		1 x PCIe Mini card
System Cooling		Fanless
Physical	Construction Material	Aluminium alloy
	Mounting	VESA 100mm x100mm or 75mm x 75mm with M8 screws
	Front Panel Color	Orange (Pantone 15C)
	Dimensions (WxHxD) (mm)	427.19 x 330.63 x 77.06
	Net Weight	7.97 kg
Environment	Operating Temperature	-20°C ~ 60°C
	Storage Temperature	-30°C ~ 70°C
	Operating Humidity	5% ~90%, non-condensing
	Shock	Half-sine wave shock 3G; 11ms; 3 shocks per axis
	Vibration	MIL-STD-810F 514.5C-1 (with SSD)
	IP Rating	Full IP 65
Power	Adapter	90 W ; 63040-010090-101-RS
	Requirement	Power 1: 9V~36V(+/-0.3V) Power 2: 10.5V~36V(+/-0.3V)

Ordering Information

P/N	Description
UPC-V315-QM77-C/R/2G-R20	15" 400cd/m ² XGA fanless full IP65 panel PC with mobile Intel® QM77 Express Chipset and Intel® Celeron® dual-core 1047UE processor (2M cache, 1.40 GHz), TDP 17W, 802.11a/b/g/n wireless module, resistive touchscreen, 2M camera, microphone, 2GB DDR3 RAM, R20
UPC-V315-QM77-i3/R/2G-R20	15" 400cd/m ² XGA fanless full IP65 panel PC with mobile Intel® QM77 Express Chipset and Intel® Core™ i3-3217UE processor, 802.11a/b/g/n wireless module, resistive touchscreen, 2-mgeapixel camera, microphone, 2GB DDR3 RAM, R20
UPC-V315-QM77-i7/R/2G-R20	15" 400cd/m ² XGA fanless full IP65 panel PC with mobile Intel® QM77 Express Chipset and Intel® Core™ i7-3517UE processor, 802.11a/b/g/n wireless module, resistive touchscreen, 2-mgeapixel camera, microphone, 2GB DDR3 RAM, R20

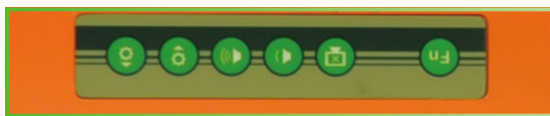
Packing List

Item	P/N	Q'ty
IR Remote Controller	72000-SLPCB005-RS	1
RJ-45 to DB-9 COM Port Cable	32005-000200-200-RS	4
M8 Screw	44325-080081-RS	8
M4 Screw	44005-040082-RS	8
Mounting Bracket	41003-0433C2-00-RS	2
Screw Driver	45019-001004-00	1
Power Adapter	63040-010090-101-RS	1
Power Cord (European Standard)	32702-000401-100-RS	1
Power Transfer Cord	32702-000300-100-RS	1
M8 to M4 Screw	44300-040061-RS	8

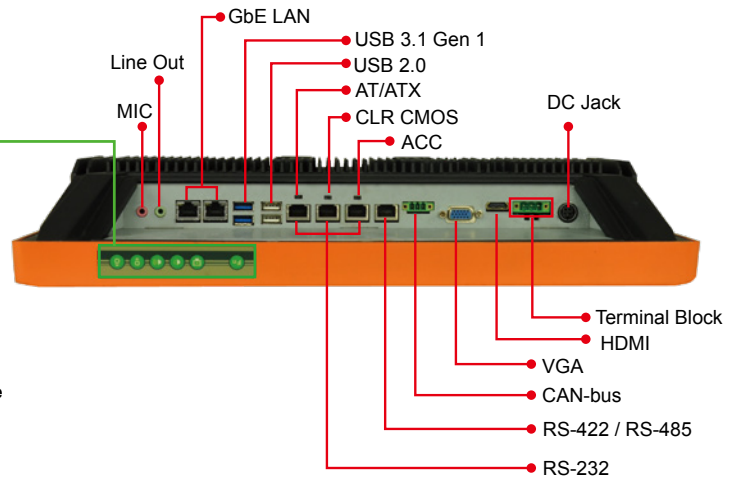
Options

Item	P/N
Arm	ARM-31-RS
Wall Mounting Kit	AFLWK-19B
Stand	STAND-C19-R10/STAND-100/STAND-210
EM RFID Kit	UPC-EM-RFID-KIT01-R10
Mifare RFID Kit	UPC-MF-RFID-KIT01-R11
OS: Win XPE (CD-ROM)	UPC-V315-XPE-R10
OS: Win 7 Embedded (DVD-ROM)	UPC-V315-W7E-R10

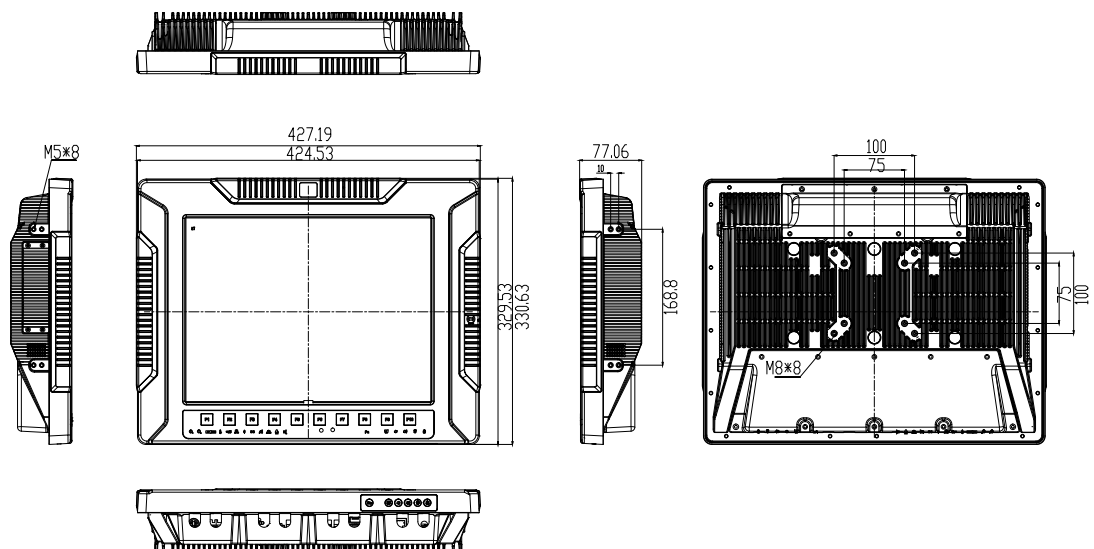
IO and Human Machine Interface



Fn	Fn		
	Backlight On/Off	Fn +	RFID enable / disable
	Audio -	Fn +	Audio mute
	Audio +	Fn +	Camera enable / disable
	Brightness -	Fn +	Right side USB enable / disable
	Brightness +	Fn +	Power on / off



Dimensions (Unit: mm)



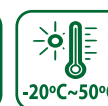
INOX-F15C-ULT3

Intel® Core™ i5 and Celeron® ULT Processor



Features

- 15" fanless panel PC with Intel® Skylake ULT processor
- IP69K high pressure, high temperature protection
- SUS304 stainless steel housing
- Operating temperature : -20°C ~ 50°C
- Flat glass PCAP touch with 6H hardness, resistive touch window
- Accessible HDD Bay
- M12 connections



Specifications

Model		INOX-F15C-ULT3
LCD	LCD Display	15"
	Max Resolution	1024(W) x 768(H)
	Brightness (cd/m ²)	450
	Contrast Ratio	800:1
	LCD Color	16.2M
	Pixel Pitch (mm)	0.297(H) x 0.297(V)
	Viewing Angle (H-V)	160° / 150°
	Backlight MTBF (Hrs)	70000
Motherboard	CPU	6th generation Intel® Core™ i5 and Celeron® ULT processor
	RAM	2 x 260-pin 2133/1867 MHz dual-channel DDR4 SO-DIMMs (system max. 32 GB)
	Ethernet	2 x PCIe GbE by Intel® I210 controller
Touchscreen		Resistive Touch / PCAP Touch
Input Interfaces	I/O Ports	2 x 8-pin M12 connector for RS-232/422/485 2 x 8-pin M12 X-Code connector for GbE LAN 2 x 8-pin M12 connector for two USB 2.0 1 x 5-pin M12 connector for DC jack (9-36V DC) 1 x Power switch with power LED indicator 1 x Pressure relief valve
	Expansions	1 x Full-size PCIe Mini card slot (SATA 6Gb/s) 1 x Full-size/half-size (PCIe x1 and USB 2.0 signals) 1 x M.2 B-key slot (2242/2260/2280 with USB 3.1 Gen 1 (5Gb/s), PCIe x2 and SATA signals)
Storage		1 x 2.5" SATA SSD bay / 1 x mSATA / 1 x M.2 B-key (2242/2260/2280)
Physical	ME Construction	SUS304 stainless steel housing
	Mounting	VESA 100mm x 100mm with M8 screw
	Dimensions (WxHxD) (mm)	414 x 328.4 x 51.9
Environment	Operating Temperature (with air flow)	-20°C ~ 50°C
	Storage Temperature	-30°C ~ 60°C
	IP Level	Front: IP69K; Others: IP66
	Safety	CE / FCC
Power	Adapter	60 W; 63000-CLG6012IC-RS 60W/12V waterproof power adapter VAC:90V~264V; 12V/5A; 60W
	Requirement	9-36V DC
	Consumption	43W

Ordering Information

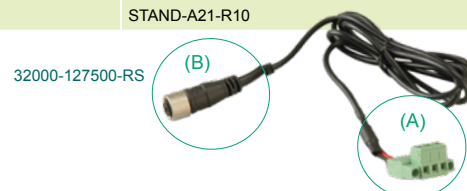
Part No.	Description
INOX-F15C-ULT3-C/R/4G-R10	15" 450cd/m ² XGA fanless stainless panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, resistive touch, R10
INOX-F15C-ULT3-C/PC/4G-R10	15" 450cd/m ² XGA fanless stainless panel PC with Intel® 14nm 6th generation mobile Celeron® 3955U (15W) on-board processor (ULT), one 4GB DDR4 RAM, PCAP touch, R10
INOX-F15C-ULT3-i5/R/4G-R10	15" 450cd/m ² XGA fanless stainless panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, resistive touch, R10
INOX-F15C-ULT3-i5/PC/4G-R10	15" 450cd/m ² XGA fanless stainless panel PC with Intel® 14nm 6th generation mobile Core™ i5-6300U (15W) on-board processor (ULT), one 4GB DDR4 RAM, PCAP touch, R10

Packing List

Item	P/N
Power Cable	32000-127500-RS
USB Cable	CB-M12USB02-R20
Touch Pen	Resistive Touch only

Options

Item	P/N
Arm	ARM-31-RS
Stand	STAND-A19-RS STAND-C19-R10 STAND-A21-R10

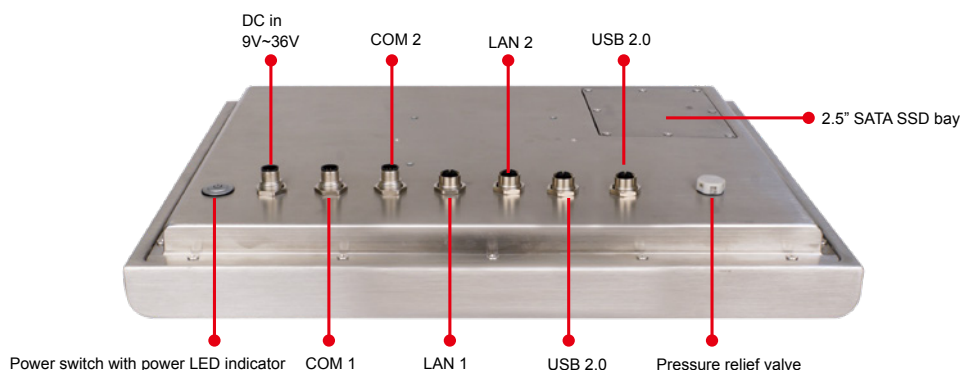


Optional Cables and Adapter

Item	P/N
USB Cable	CB-M12USB02-R20
RJ-45 LAN Cable	CB-M12RJ45X-R10
DB-9 COM Port Cable	CB-M12COM-R20
Water-proof Power Adapter	63040-030080-000-RS



I/O Interface



INOX-F15C Dimensions (Unit: mm)

