



# MODEL. PIF SERIES

## Fanless Design Industrial Panel PC



### Introduction

PIF Series of new generation industrial Panel PC have a modular design, capacitive touch/resistive touch options, and a molded back cover. PIF SERIES of products has high anti interference design and strong scalability, which can meet the requirements for use in harsh industrial environments. It has good dustproof, heat dissipation, vibration resistance, and EMC performance. It has high system reliability and strong environmental applicability. The connection between the panel and the host adopts a reliable modular design and wireless relay link. Through flexible matching, it can realize the selection of multi-specification all-in-one computers and single hosts without changing the original site. It is a product for industrial automation industry, medical informatization, and industrial field control applications.



# Specification

## Mother Board Specification

MODEL	PIF Series				
Size	7.0-10.1 inch		10.4-27.0 inch		
CPU	J1900 i5-4260U	N95 / N100 / J6412 i3-7100U i5-6200U/7200U/ 8260U/10210U i7-7500U/10610U	J1900 i3-4010U i5-4260U i7-4650U	J6412 i3-7100U/ 8130U/10110U i5-7200U/ 8250U/10310U i7-7500U/ 8550U/10710U	N95/N100 i3-1215U/1315U i5-1235U/1335U i7-1255U/1270P/ 1355U
Memory <sup>[1]</sup>	1*DDR3 RAM Slot, Up to 8GB	1*DDR4 RAM Slot, Up to 16GB	2*DDR3 RAM Slots, Up to 16GB	2*DDR4 RAM Slots, Up to 32GB	2*DDR4 RAM Slots, Up to 64GB
Storage	1*MSATA SSD Slot		1*MSATA SSD Slot 1*SATA SSD Slot		1*M.2 NVME SSD Slot
Display <sup>[2]</sup>	None		1*HDMI: Resolution up to 4096*2106@60Hz		
Expansion	1*Mini PCIE Slot		1*Mini PCIE Slot		2*M.2 Slots
	Support 4G and WIFI module		Support 4G / 5G and WIFI Module		
Ethernet	2*Intel i210v LAN Chip (10/100/1000 Mbps, RJ-45 Type)		2*Intel LAN Chip (10 / 100 / 1000 Mbps, RJ-45 Type)		
USB	4*USB 3.0 (Type-A)		4*USB 3.0 (Type-A) + 1*USB 2.0 (Type-A, Built-in)		
COM	1*RS-232/485 (DB9 type) 1*RS-232/485 (Phoenix Terminal type) 4*RS-232 (Phoenix Terminal type)		2*RS-232 / 422 / 485 (DB9 type) 4*RS-232 (DB9 type)		
Audio	1*Line-Out		1*Line-Out		
Daughter Card	None		Support expansion more I/O interfaces and functional slots		

### Note:

[1]: The maximum memory capacity and the maximum capacity per strip supported by this motherboard depend on the CPU.

[2]: The maximum resolution and frame rate of the display interface output depends on the CPU.



# Screen Specification

MODEL	Screen Size (inch)	Resolution	Brightness	Contrast	Largest Colorful	Touch Screen Type	Transmittance	Touch Life	Response Time	Touch Hardness	Protection	
I070-PIF	7 inch TFT LED (4:3)	800 x 480	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	6 Mohs	Front Panel IP65 Water Proof	
						Resistive		35M times	<5ms	6 Mohs		
I080-PIF	8 inch TFT LED (4:3)	800 x 600	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	6 Mohs		
						Resistive		35M times	<5ms	6 Mohs		
I101-PIF	10.1 inch TFT LED (16:9)	1280 x 800	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	6 Mohs		
						Resistive		35M times	<5ms	6 Mohs		
I104-PIF	10.4 inch TFT LED (4:3)	1024 x 768	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I121-PIF	12.1 inch TFT LED (4:3)	1024 x 768	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I133-PIF	13.3 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I150-PIF	15.0 inch TFT LED (4:3)	1024 x 768	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I156-PIF	15.6 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I170-PIF	17.0 inch TFT LED (4:3)	1280 x 1024	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I173-PIF	17.3 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		Front Panel IP65 Water Proof
I185-PIF	18.5 inch TFT LED (16:9)	1366 x 768	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
I190-PIF	19.0 inch TFT LED (4:3)	1280 x 1024	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I215-PIF	21.5 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
						Resistive		35M times	<5ms	7 Mohs		
I238-PIF	23.8 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		
I270-PIF	27.0 inch TFT LED (16:9)	1920 x 1080	350nits	800:1	16M	Capacitive	More than 95%	50M times	<5ms	7 Mohs		



## Device Specification

MODEL	Power Input			Installation				Size
	DC 12V (DC 9-36V)	Support Auto Start	2 Pin Phoenix Terminal (type DC)	Desktop	Embedded	Wall Mount	Rack Mount	
I070-PIF	DC 12V (DC 9-36V)	✓	✓	✓	✓	✓	✗	212mm*144mm*55mm
I080-PIF	DC 12V (DC 9-36V)	✓	✓	✓	✓	✓	✗	224mm*178mm*53.5mm
I101-PIF	DC 12V (DC 9-36V)	✓	✓	✓	✓	✓	✗	258mm*172mm*53.5mm
I104-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	271.46mm*219.96mm*67mm
I121-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	298.3mm*238.3mm*68mm
I133-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	343.5mm*214mm*68mm
I150-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	370mm*290mm*68mm
I156-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	390mm*247.6mm*68mm
I170-PIF	DC 9-36V	✓	✓	✓	✓	✓	✓	400mm*333mm*68mm
I173-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	435mm*265.5mm*71mm
I185-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	463.5mm*287.5mm*68mm
I190-PIF	DC 9-36V	✓	✓	✓	✓	✓	✓	435.5mm*360.5mm*68mm
I215-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	531mm*327mm*68mm
I238-PIF	DC 9-36V	✓	✓	✓	✓	✓	✗	584mm*355.5mm*70mm
I270-PIF	DC 9-36V	✓	✓	✓	✗	✓	✗	652mm*390mm*75.8mm

### Additional Device Specifications :

- [1] Working Temperature : -20°C - 70°C
- [2] Storage Temperature : -30°C - 70°C
- [3] Humidity : 90% (20±50°C)

- [4] Structure : Fully Enclosed Aluminum Alloy Material
- [5] Heat Dissipation : Fanless Design, Conduction Heat Dissipation
- [6] OS : Windows and Linux



## Optional Specification

Screen	Brightness	Optional 1000 nits LED screen
		Optional brightness auto adjustment function
	Anti-Glare	Optional
	Camera	Optional 200w or 500w camera (Built-in front panel)
	Full Lamination	Optional

## Daughter Card Specification

COM Port-2	2*RS-232 / 485 (DB9 type)
COM Port-6	4*RS-232 / 485+2*RS-232 (Phoenix terminal type)
Ethernet Port-2	2*Intel i211V LAN Chip (RJ-45 type)
Ethernet Port-4	4*Intel i211V LAN Chip (RJ-45 type,POE function optional)
10G Ethernet Port-2	2*10Gbps Ethernet Ports
USB Port-4	4*USB 3.0 (Type-A)
GPIO Port-14	14 ports GPIO, 7*GPI+7*GPO, 0-3.3V (Phoenix terminal type)
Mini PCIE Slot-2	2*Mini PCIE slots, Support 4G and WIFI module
M.2 Slot-1	1*M.2 Key-B slot, Support 5G module
M.2 NVME SSD Slot-1	1*M.2 NVME SSD slot
SATA SSD Slot-1	1*SATA 3.0 SSD Slot, Support RAID 1
CAN Port-2	2*CAN interfaces (Phoenix terminal type)
UPS battery	1.2AH or 4.8AH
DIDO Port-16	16 ports DIDO, 8*DI+8*DO, 24V, Isolation (Phoenix terminal type) Comes with 4*RS-485 COM ports (Phoenix terminal type)

### Note:

[1] Models I070-PIF to I101-PIF (7–10.1") do not have a daughter card slot, while models I104-PIF to I270-PIF (10.4–27.0") are equipped with a slot and can support additional daughter cards.





6-way COM



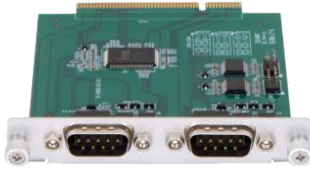
2.5-inch SSD



UPS power supply



4-channel USB



2-channel COM



14 GPIO channels



Dual Gigabit Ethernet ports



Four Gigabit Ethernet port



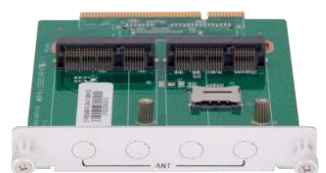
CAN+GPIO



DIDO



M.2 SSD



4G WIFI GPS

## Ordering Information

MODEL	PIF Series											
Size	7.0-10.1 inch						10.4-27.0 inch					
CPU	J1900 4th	6th / 7th 8th / 10th	N95 N100	J6412	J1900	4th	J6412	7th 8th	10th	N95 N100	12th 13th	
LAN	2						2					
USB	4						4					
COM	2*RS-232/485 + 4*RS-232						2*RS-232/422/485 + 4*RS-232					
RAM	1*DDR 3 Up to 8GB	1*DDR 4 Up to 16GB				1*DDR 3 Up to 8GB	2*DDR 3 Up to 16GB	2*DDR 4 Up to 32GB	2*DDR 4 Up to 64GB	1*DDR 4 Up to 16GB	2*DDR 4 Up to 64GB	
Display	None			1*HDMI	1*HDMI							
SSD	1*MSATA				1*MSATA 1*SATA				1*M.2 NVME			
Expansion	1*Mini PCIE			1*Mini PCIE 1*M.2	1*Mini PCIE				1*M.2 1*Mini PCIE	2*M.2		
Power	DC 12V	DC 9-36V	DC 12V		DC 9-36V							



## CPU Information

CPU	Core	Threads	Frequency	Cache	Graphics
N95	4	4	3.40GHz	6 MB	UHD Graphics
N100	4	4	3.40GHz	6 MB	UHD Graphics
J1900	4	4	2.00-2.42GHz	2MB	HD Graphics
J6412	4	4	2.00-2.60GHz	1.5 MB	UHD Graphics
i3-4010U	2	4	1.70GHz	3 MB	HD Graphics 4400
i5-4260U	2	4	1.40-2.70GHz	3 MB	HD Graphics 5000
i7-4650U	2	4	1.70-3.30GHz	4 MB	HD Graphics 5000
i5-6200U	2	4	2.30-2.80GHz	3 MB	HD Graphics 520
i3-7100U	2	4	2.40GHz	3 MB	HD Graphics 620
i5-7200U	2	4	2.50-3.10GHz	3 MB	HD Graphics 620
i7-7500U	2	4	2.70-3.50GHz	4 MB	HD Graphics 620
i3-8130U	2	4	2.20-3.40GHz	4 MB	UHD Graphics 620
i5-8250U	4	8	1.60-3.40GHz	6 MB	UHD Graphics 620
i5-8260U	4	8	1.60-3.90GHz	6 MB	UHD Graphics 620
i7-8550U	4	8	1.80-4.00GHz	8 MB	UHD Graphics 620
i3-10110U	2	4	2.10-4.10GHz	4 MB	UHD Graphics
i5-10210U	4	8	1.60-4.20GHz	6 MB	UHD Graphics
i5-10310U	4	8	1.70-4.40GHz	6 MB	UHD Graphics
i7-10610U	4	8	1.80-4.90GHz	8 MB	UHD Graphics
i7-10710U	6	12	1.10-4.70GHz	12 MB	UHD Graphics
i3-1215U	6	8	1.20-4.40GHz	10 MB	UHD Graphics
i5-1235U	10	12	1.30-4.40GHz	12 MB	Iris Xe Graphics
i7-1255U	10	12	1.70-4.70GHz	12 MB	Iris Xe Graphics



CPU	Core	Threads	Frequency	Cache	Graphics
i7-1270P	12	16	2.20-4.80GHz	18 MB	Iris Xe Graphics
i3-1315U	6	8	1.20-4.50GHz	10 MB	UHD Graphics
i5-1335U	10	12	1.30-4.60GHz	12 MB	Iris Xe Graphics
i7-1355U	10	12	1.70-5.00GHz	12 MB	Iris Xe Graphics

## System Information

CPU	Specification
J1900	Windows 7 / 10 and Linux
4th / 6th / 7th	
J6412 / N95 / N100	Windows 10 / 11 and Linux
8th / 10th / 12th / 13th	

## Fittings Information

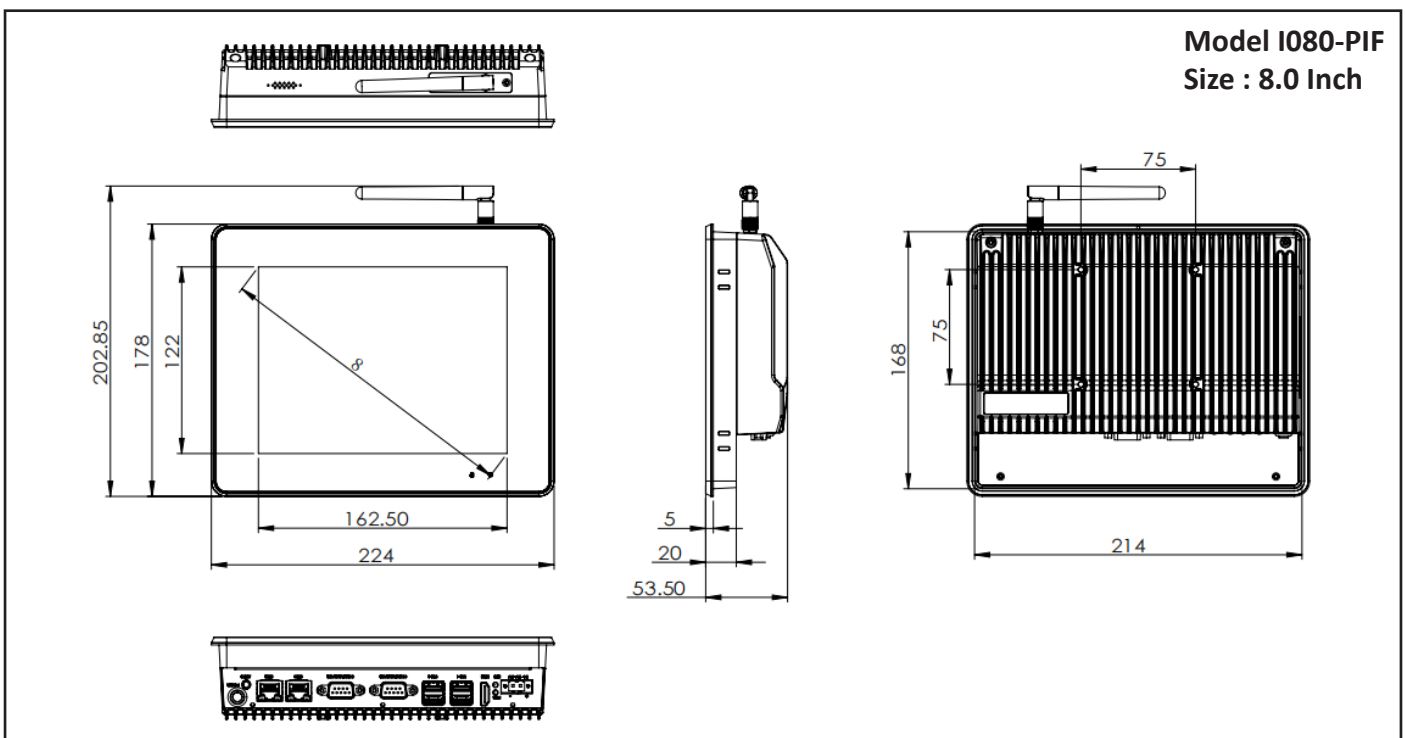
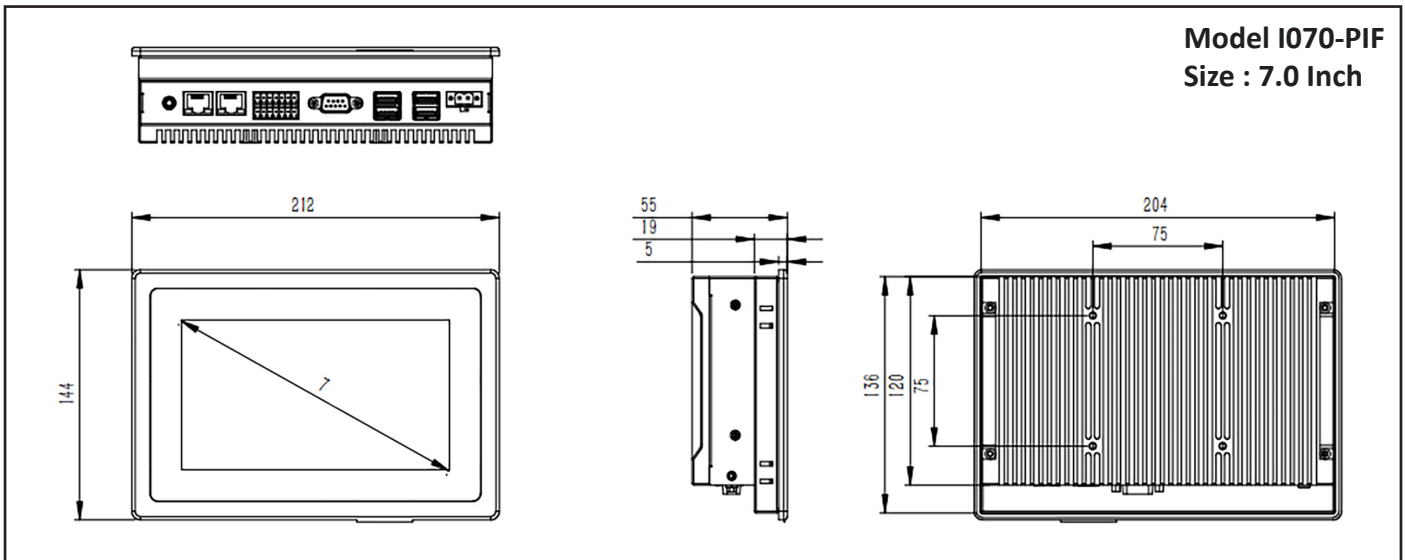
<b>Model</b>	PIF Series	
<b>Size</b>	7.0-10.1 inch	10.4-27.0 inch
<b>RAM</b>	DDR3	4GB / 8GB
	DDR4	4GB / 8GB / 16GB / 32GB
<b>SSD</b>	MSATA	64GB / 128GB / 256GB / 512GB / 1TB
	M.2 NVME	None
	SATA	None
<b>GSM Module</b>	4G	4G+GPS
	5G	5G+GPS
<b>WIFI Module</b>	7260AC / AX210	7260AC / AX210
<b>CAN BUS Module</b>	None	2 ports CAN BUS interfaces

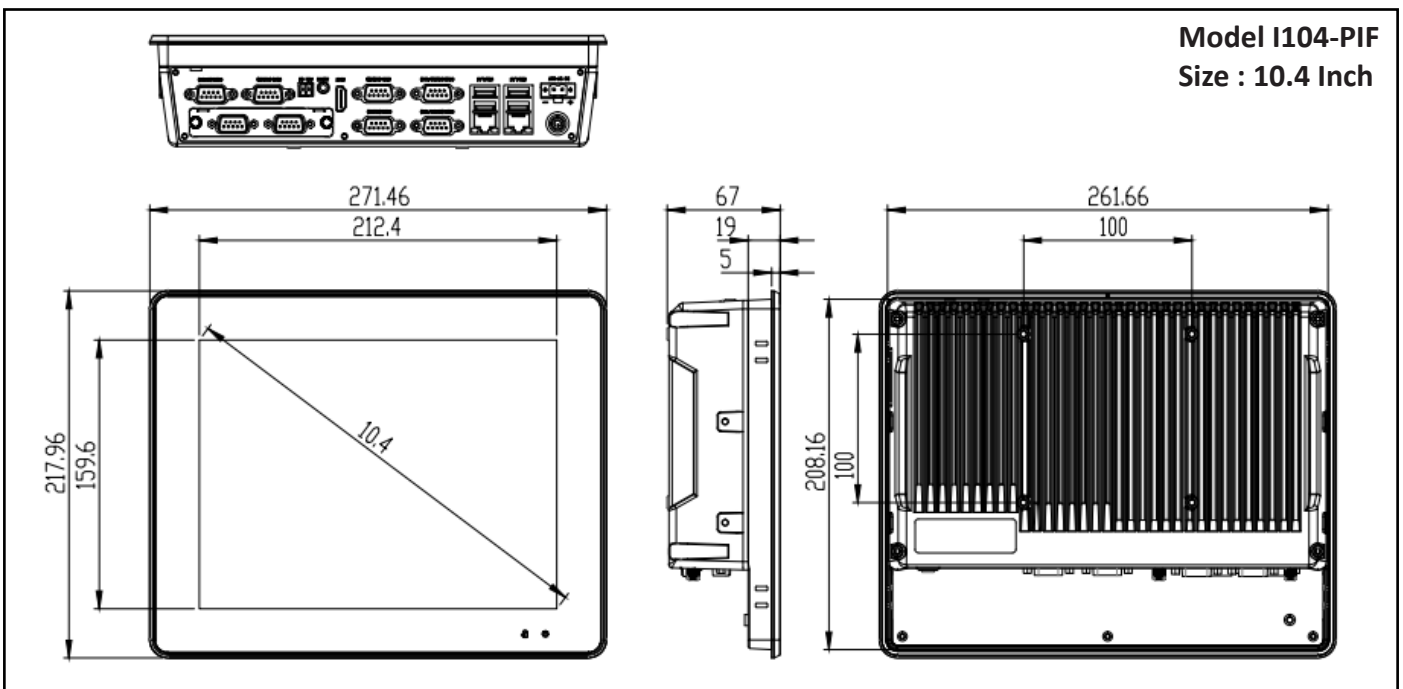
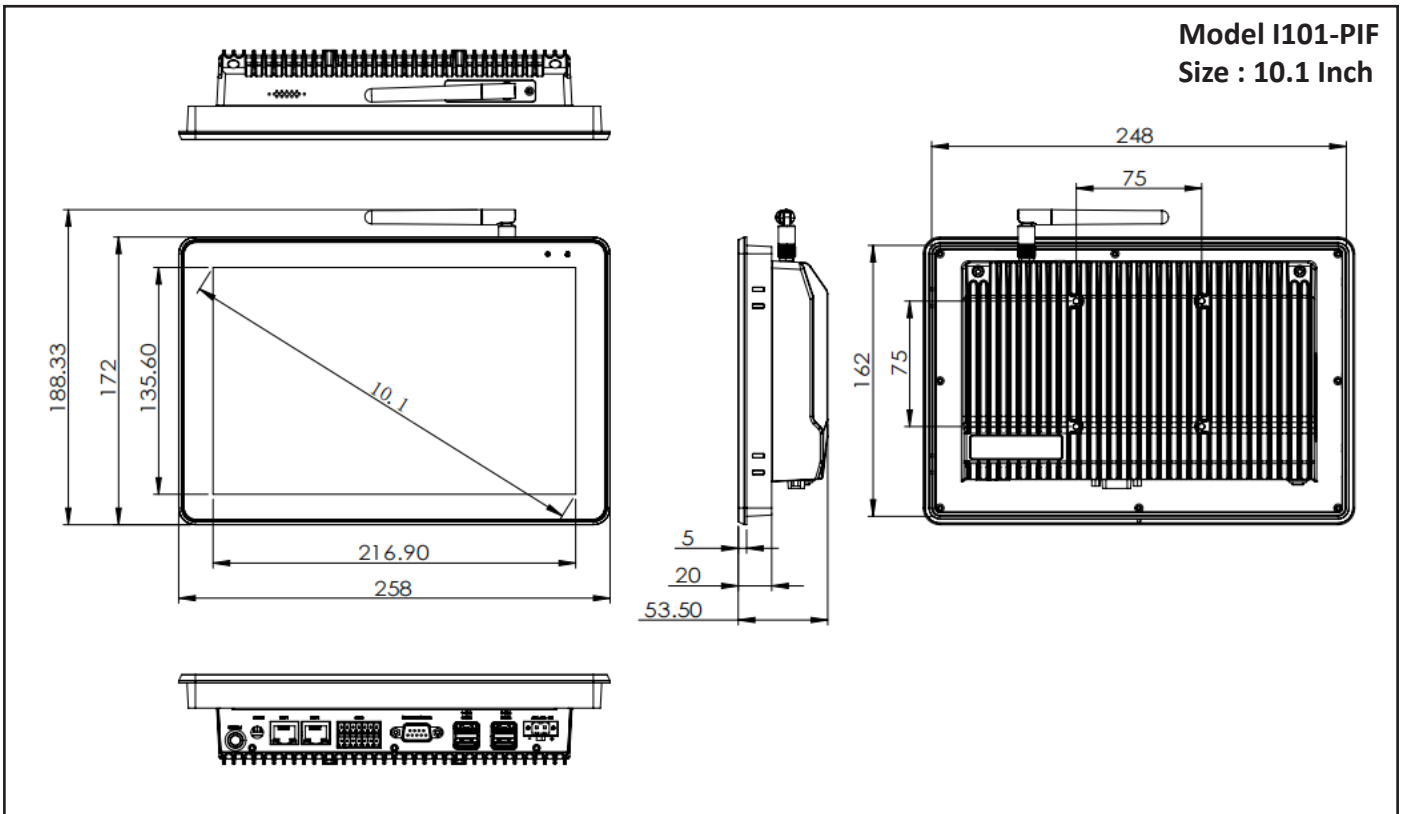


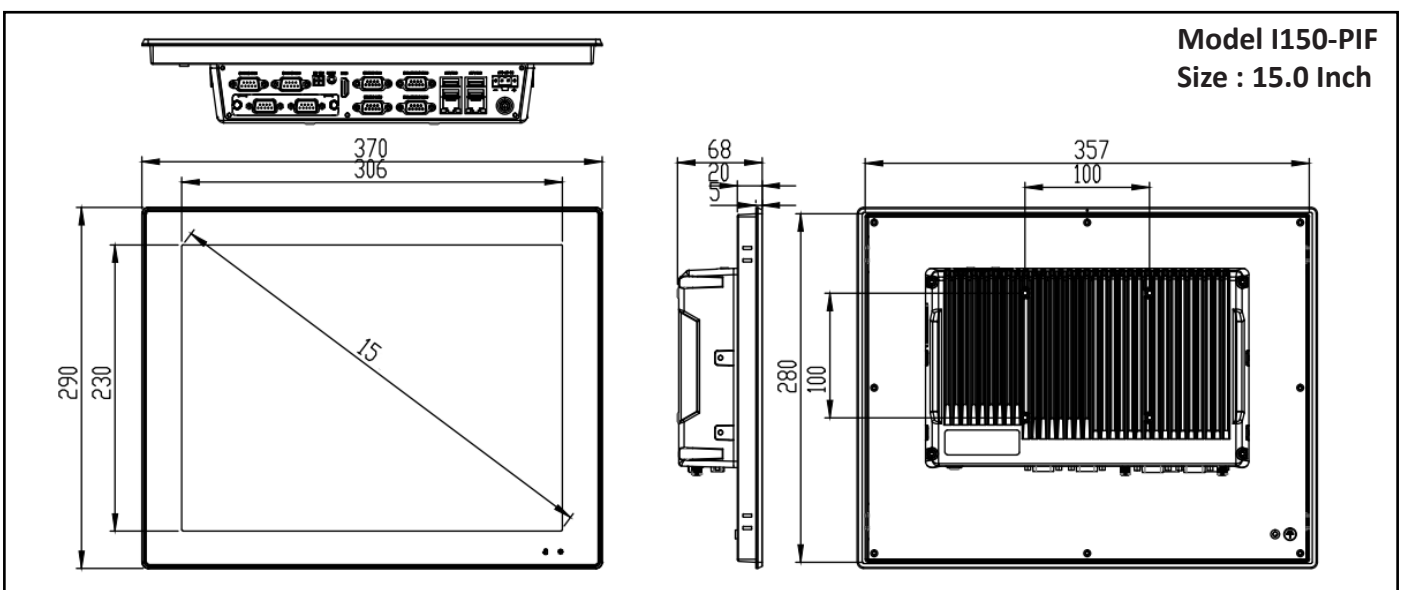
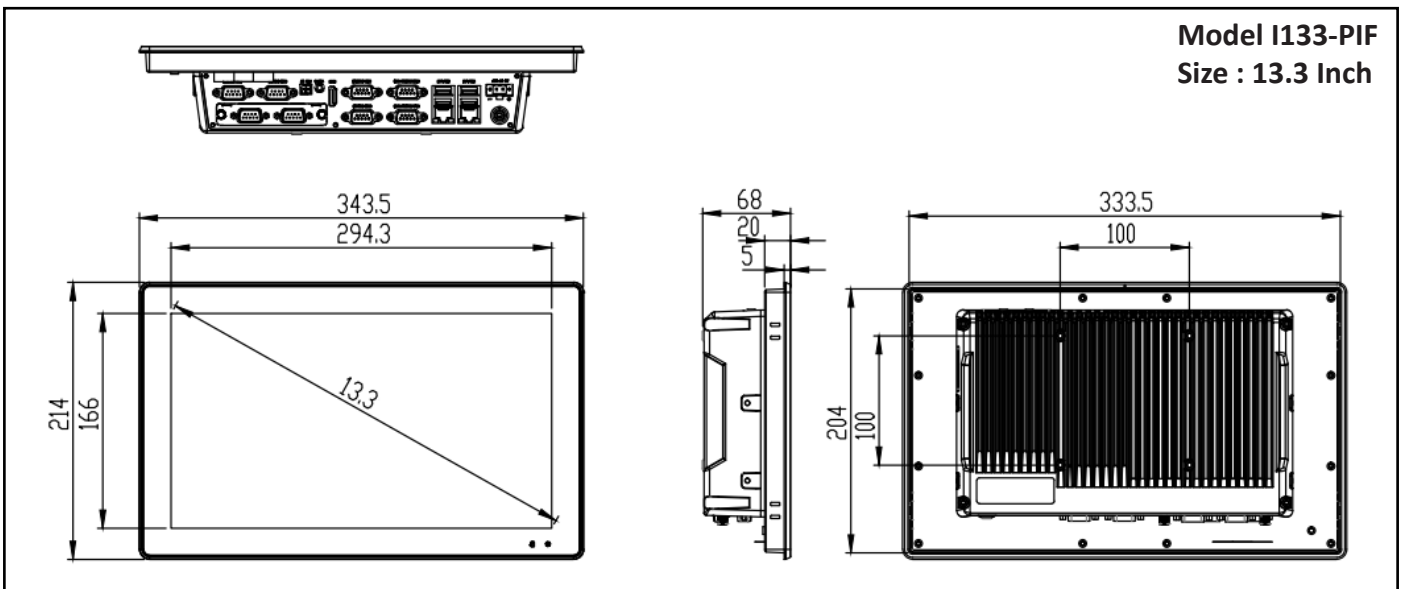
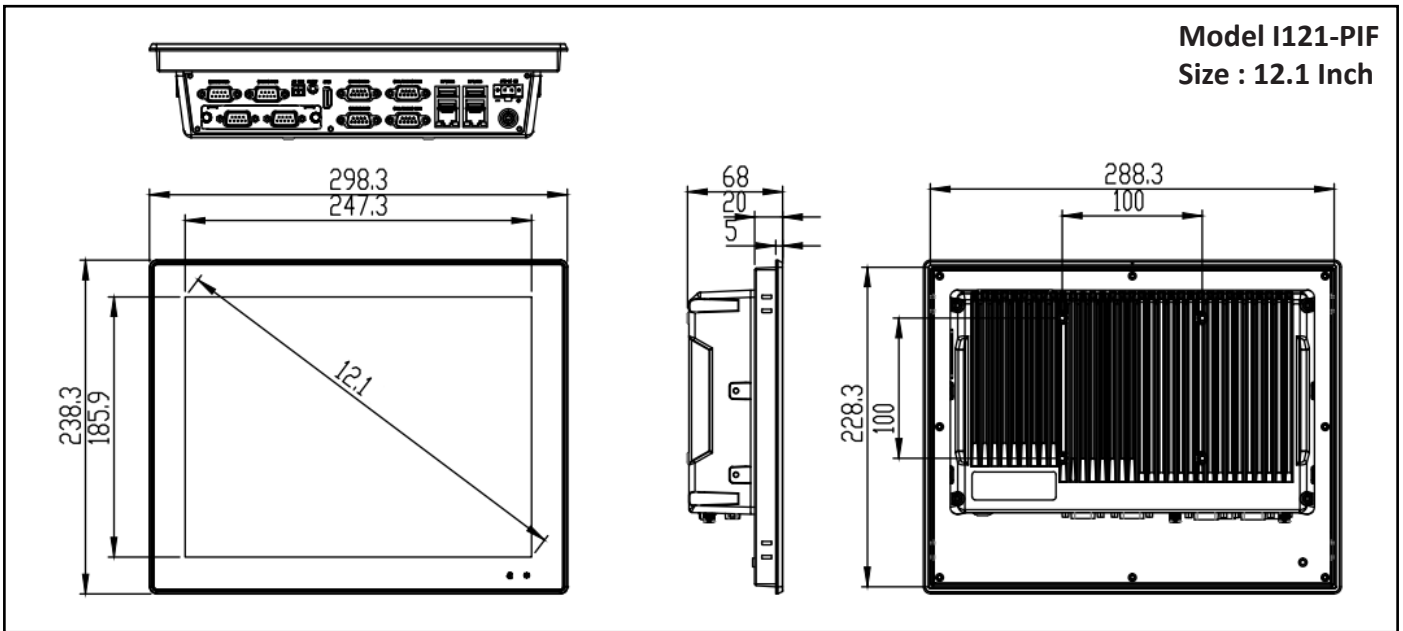
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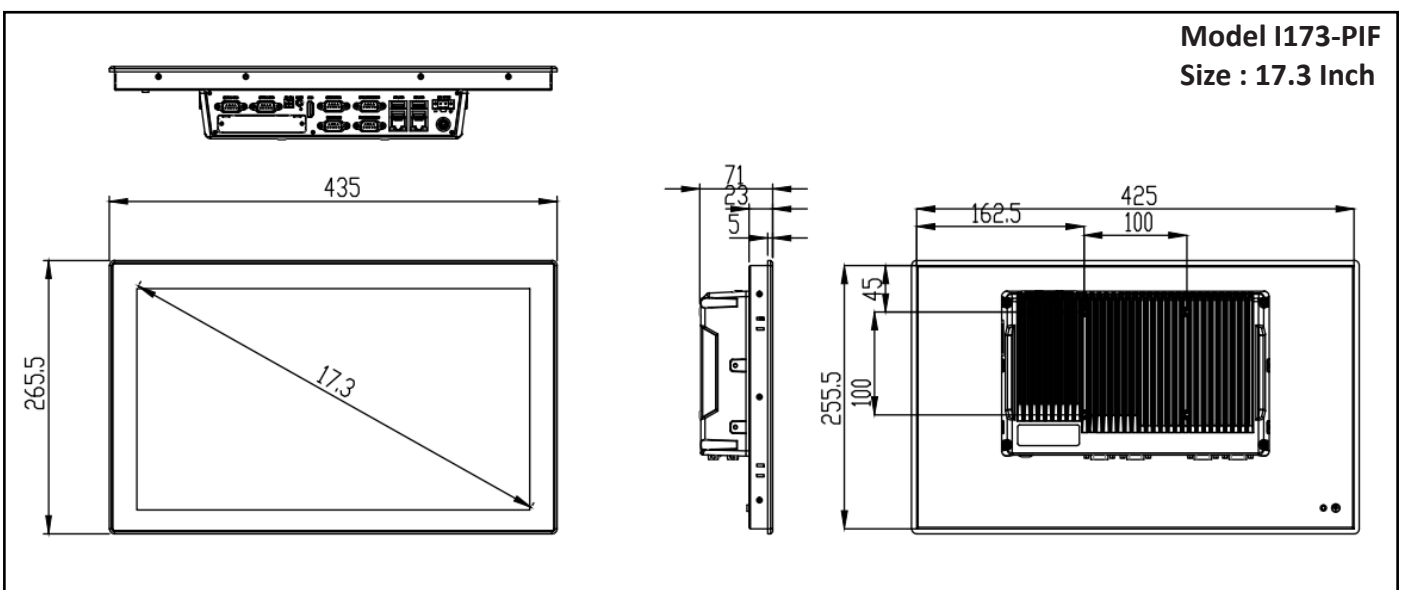
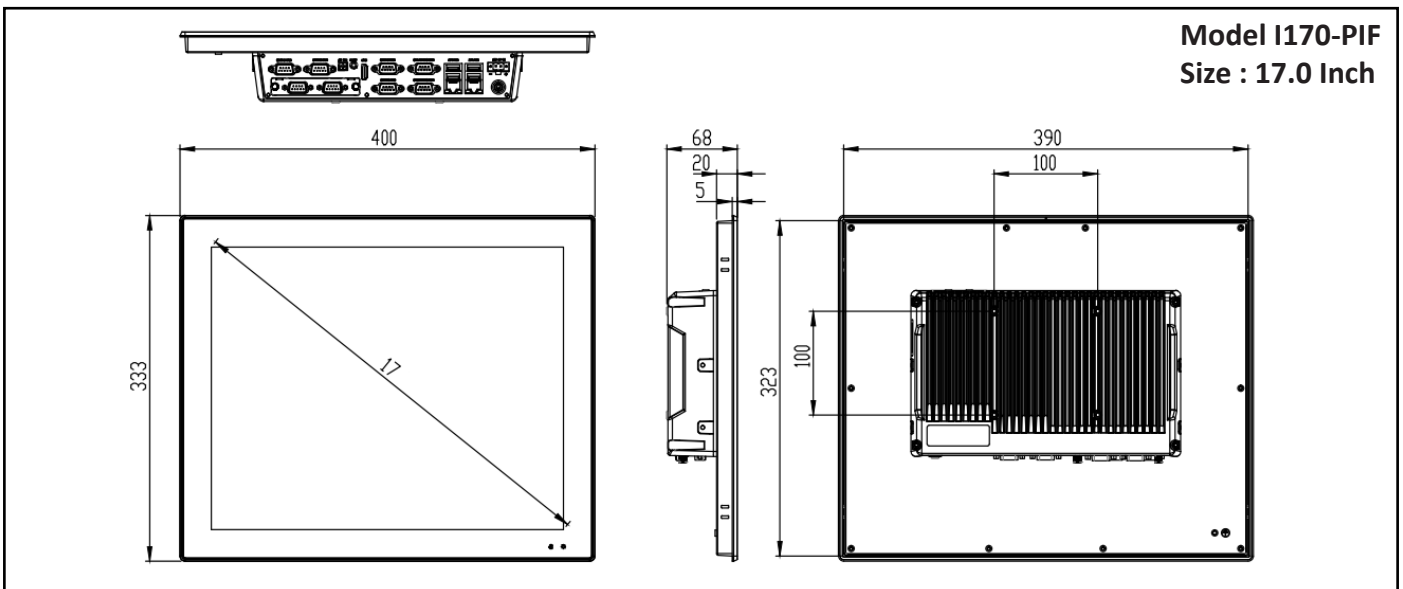
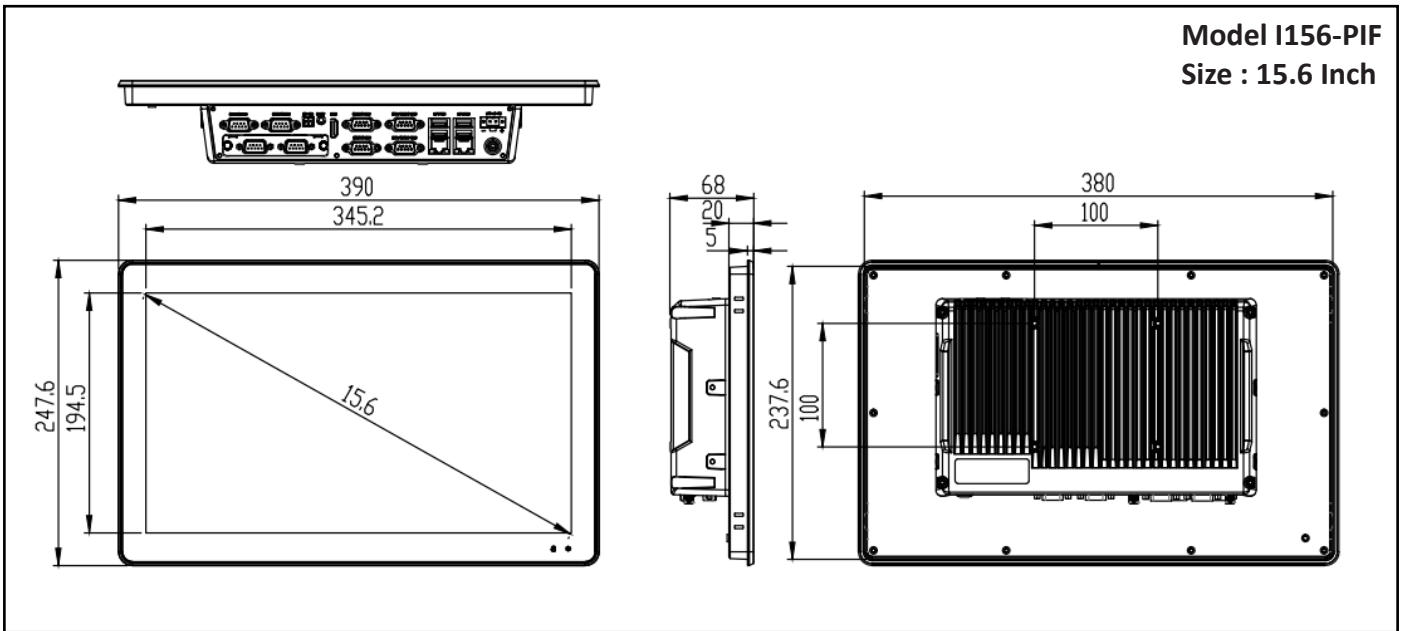
Adapter	1*12V 5A adapter
Power Cable	1*Power Cable
Mount Clamp	4*Mount Clamp

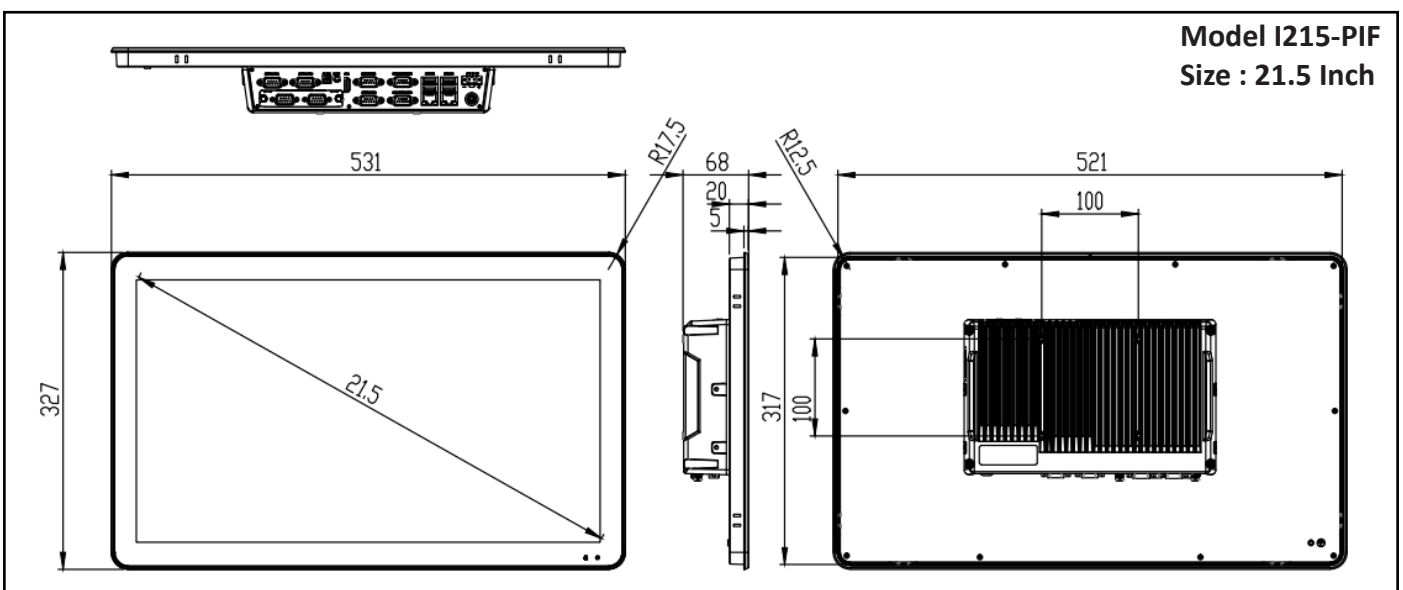
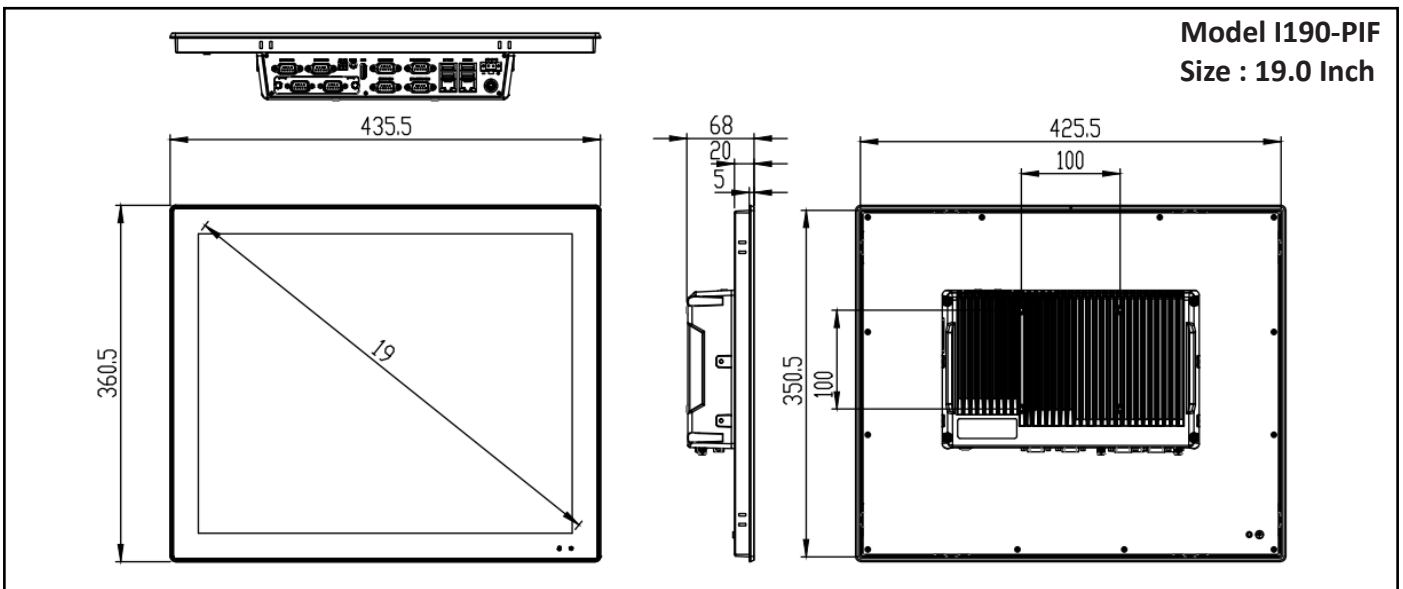
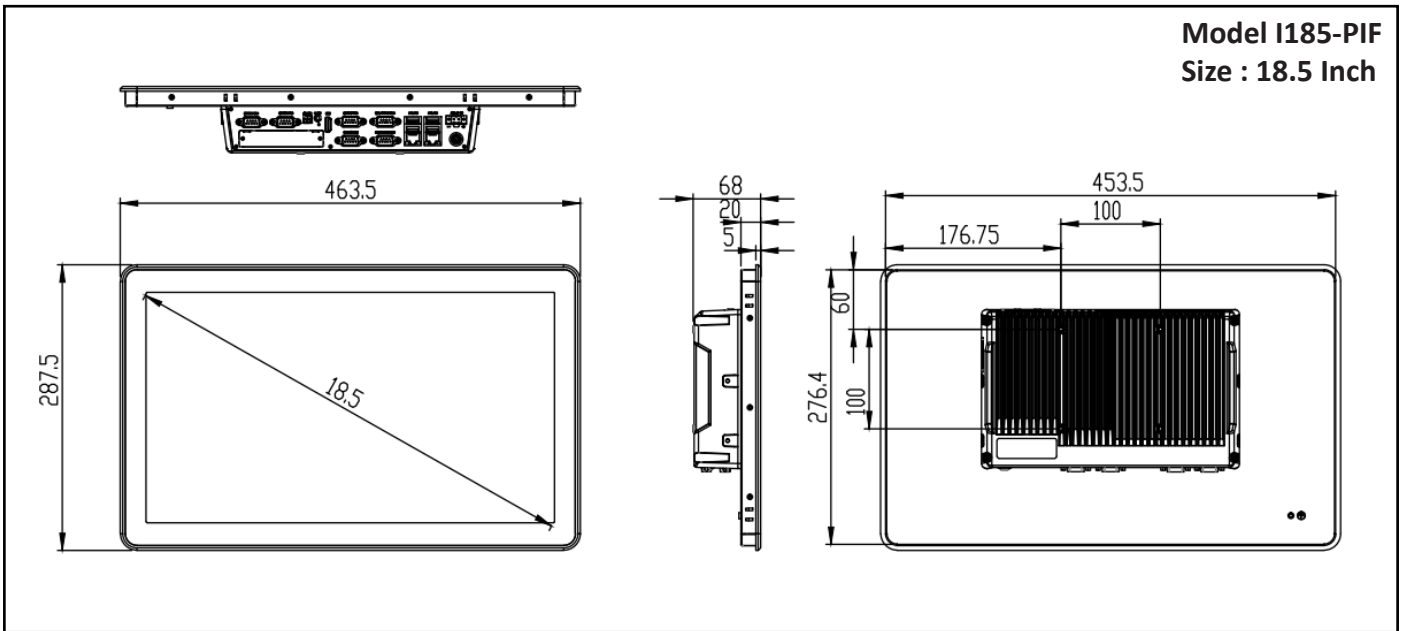
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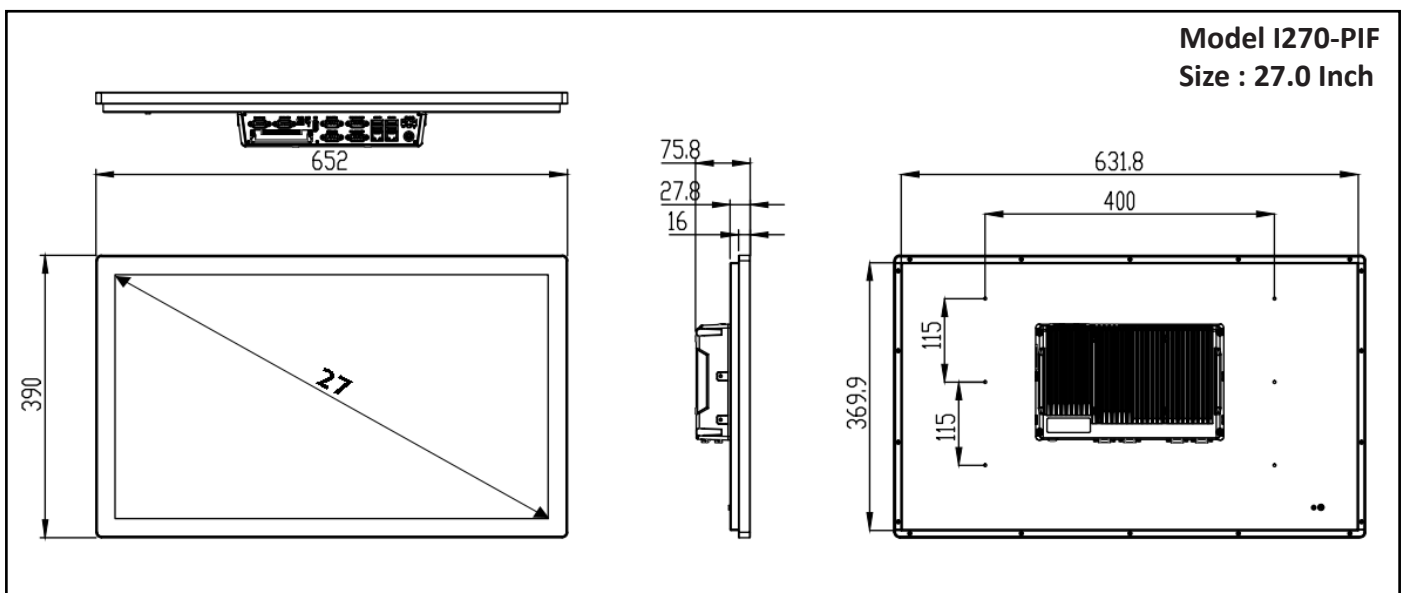
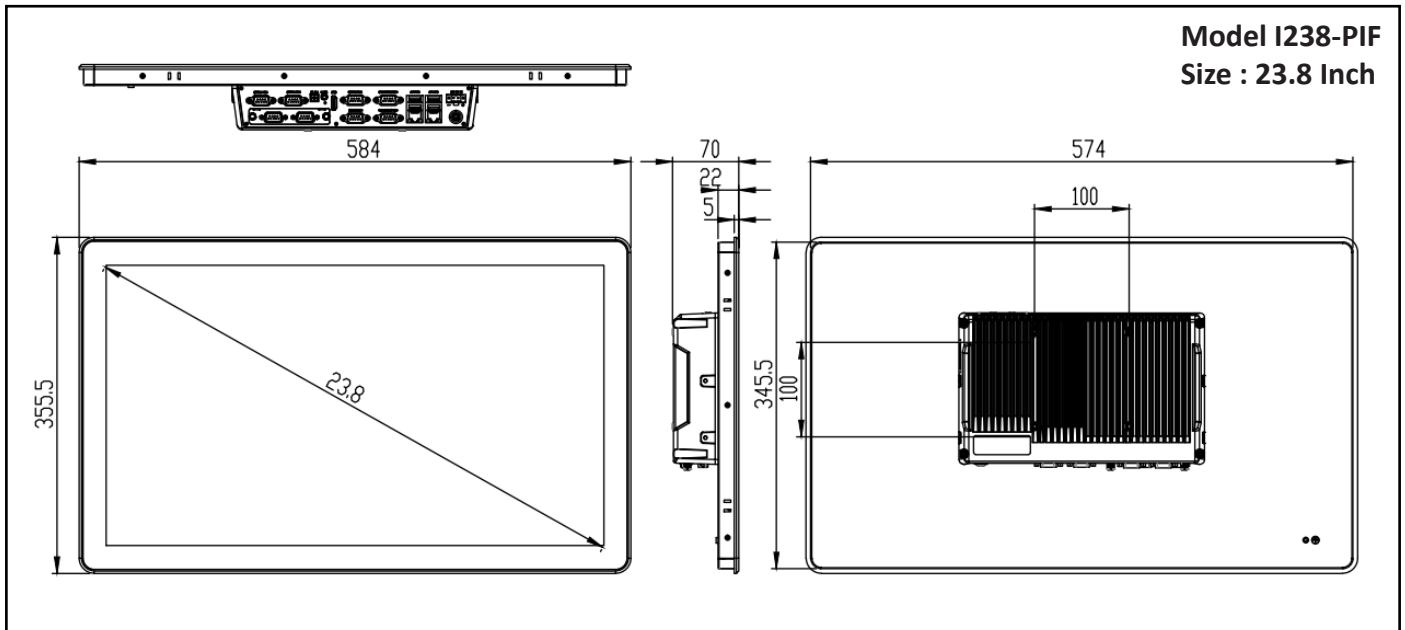












## Applications



**Industrial Factory**



**Industrial Robot**



**Self-Service Systems**

