Industrial Panel PC
X12/X15/X17/X21

NOVAKON
X SERIES

Intel® Celeron® Processor J1900 Panel PC
HMI / SCADA

Features

- 12.1" XGA ~ 21.5" FHD LED Panel with Resistive or Projected Capacitive Touch Display
- Low power consumption
- Fanless design, Panel and VESA Mounting
- 9~36V Wide input voltage range support
- Suitable for HMI / SCADA applications with iFACE Designer®

FANLESS IP54 Wide Voltage Low Power

- X21 front view

I/O View

X12

X15

X17

X21

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Model No.		X12P	X12R	X15P	X15R	X17P	X17R	X21P
Processor System	CPU	Intel® Celeron® Processor J1900						
	Frequency	Quad-Core up to 2.0 GHz						
	L2 Cache	2 MB						
	BIOS	UEFI						
Memory	Technology	DDR3L 1333 MHz SDRAM						
	Max. Capacity	8 GB (Default 4GB)						
	Socket	1 (204-pin SO-DIMM)						
Display	Panel Size	12.1" LED Panel		15" LED Panel		17" LED Panel		21.5" LED Panel
	Resolution	1024 x 768 (XGA)				1280 x 1024 (SXGA)		1920 x 1080 (FHD)
	Viewing Angle	80 x 80 (H) x 80 x 80 (V)				80 x 80 (H) x 60 x 80 (V)		85 x 85 (H) x 80 x 80 (V)
	Luminance (cd/m²)	450		300		350		250
	Color Support	16.2M				16.7M		
	Contrast Ratio	700:1		800:1				1000:1
	Response Time	35 (msec)		8 (msec)		30 (msec)		5 (msec)
	VGA	Up to 1920 x 1200						
	HDMI	HDMI 1.4a up to 1920 x 1200						
	Dual Display	LCD + VGA or LCD + HDMI						
Touchscreen	Type	Projected Capacitive	5-Wire Resistive	Projected Capacitive	5-Wire Resistive	Projected Capacitive	5-Wire Resistive	Projected Capacitive
	Surface Hardness	7 Mohs	3 Mohs	7 Mohs	3 Mohs	7 Mohs	3 Mohs	7 Mohs
	Durability	-	10 million times	-	36 millions times	-	36 millions times	-
	Transparency	90% (±3%)	80% (±3%)	90% (±3%)	80% (±3%)	90% (±3%)	80% (±3%)	90% (±3%)
I/O Interface	USB	2 USB 3.0, 2 USB 2.0						
	Serial Port	4 X COM (3 X RS-232, 1 X RS-232/422/485)						4 X COM (3 X RS-232, 1 X RS-232/422/485)
	Digital I/O	Optional : 8-pin Digital I/O (DB-9 connector, Option)						
	Expansion	2 Mini PCIe (1 full-size Mini PCIe or mSATA, selected by jumper setting; 1 half-size Mini PCIe)						
Ethernet	Controller	Dual GbE, 10/100/1000 Mbps (Realtek RTL8111G-CG)						
Audio	Chipset	Realtek ALC662 High Definition Audio (HD)						
	Connector	Line out						
Storage	mSATA	Supports either mSATA or full-size Mini PCIe, selected by jumper setting						
	SATA II	1 Internal 2.5" HDD/SSD						
Power	Power Input	Supports 9-36 V DC input(Phoenix Connector)						
	Power Consumption (Typical)	1.45A @ 12V (17.4W)		1.53A @ 12V (18.4W)		2.5 A @ 12 V (30 W)		1.6 A @ 12 V (19.2 W)
	Power Consumption (Max)	1.72A @ 12V (20.7W)		1.8A @ 12V (21.6W)		3 A @ 12 V (36 W)		2.75 A @ 12 V (33 W)
Environment	Operating Temperature	0~50°C (-20~60°C w/ Extended Operation Temp. RAM and Storage)						
	Storage Temperature	-20~60° C						
	Humidity	5~95% @ 40° C, Non-condensing						
	Vibration	5-500 Hz, 0.026 G²/Hz, 2.16 Grms, X, Y, Z, 1 hour per axis						
	Certification	CE, FCC Class A		CE, FCC Class A, CCC		CE, FCC Class A		-
General	Ingress Protection	Front Panel IP54 Protection						
	Dimensions (mm)	319.6 x 253.6 x 60.28		364.6 x 290.6 x 58.7		411.4 x 337.5 x 70.1		524.3 x 323.8 x 64.9
	Weight (kg)	3.30	3.26	4.37	4.31	6.58	6.50	6.99
	Software	iFace Designer® (Optional)						
	Operating System	Windows 7/8.1/10, WES7-E/P, WE8S, Ubuntu 14.04						

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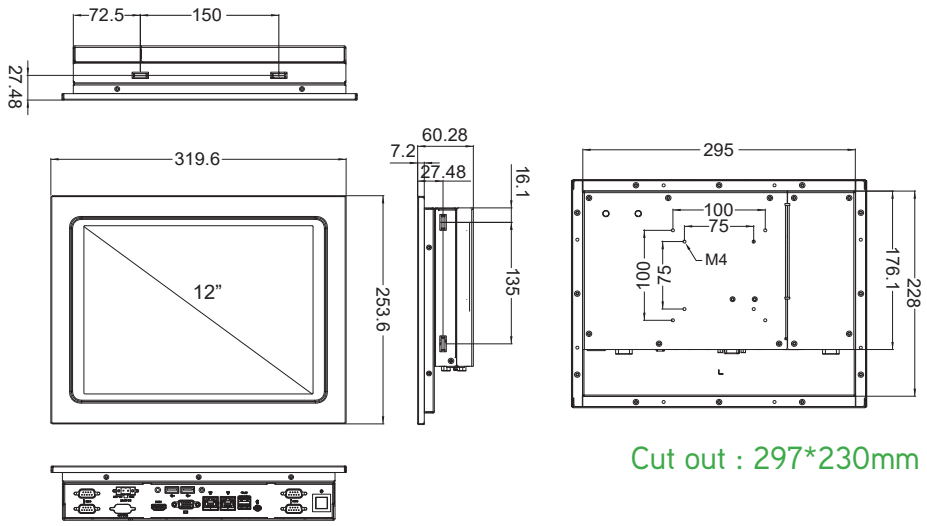
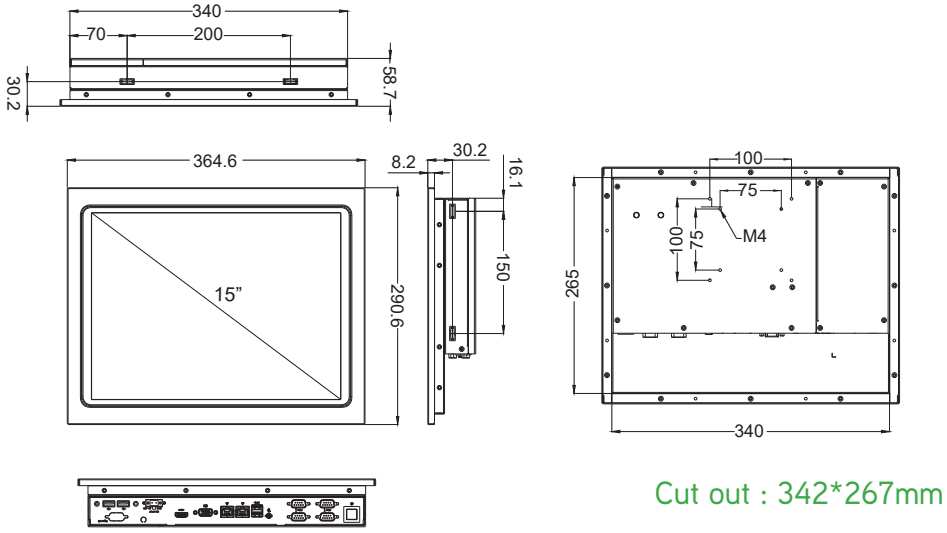
X12



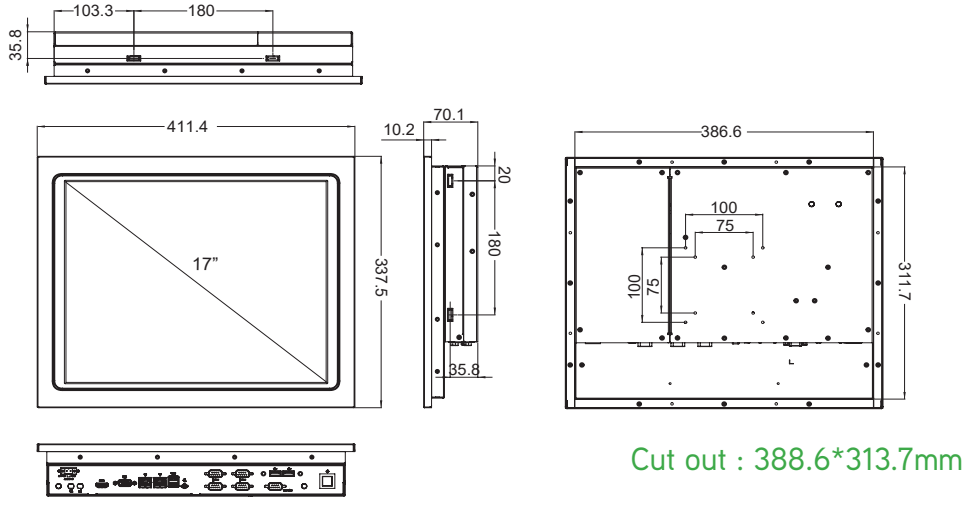
Cut out : 297*230mm

X15



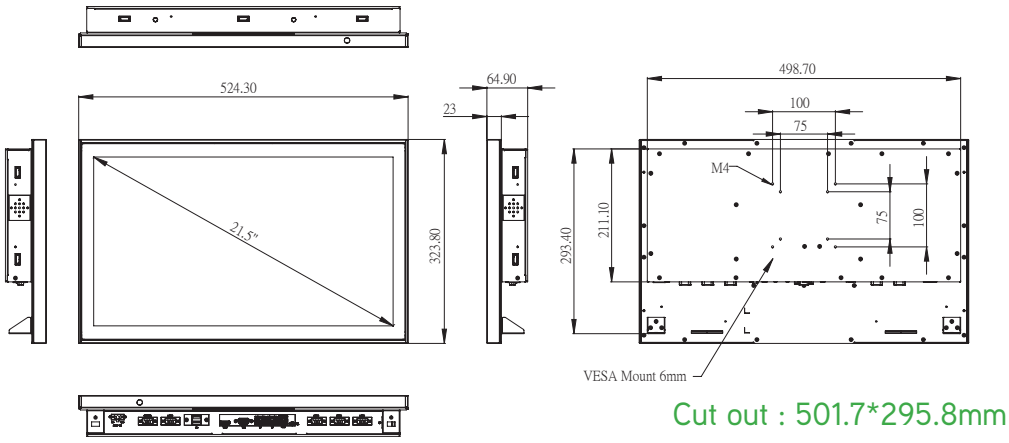
Cut out : 342*267mm

X17



Cut out : 388.6*313.7mm

X21



Cut out : 501.7*295.8mm

Ordering Information

X12R	12.1" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X12P	12.1" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X12R-i	12.1" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X12P-i	12.1" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X15R	15" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X15P	15" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X15R-i	15" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X15P-i	15" (1024 x 768) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X17R	17" (1280 x 1024) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X17P	17" (1280 x 1024) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter
X17R-i	17" (1280 x 1024) Fanless Panel PC with Intel® Celeron® J1900, 5-wire Resistive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X17P-i	17" (1280 x 1024) Fanless Panel PC with Intel® Celeron® J1900, Projected Capacitive Touch, 4GB DDR3 RAM, 64GB SSD, 100~240V AC-DC power adapter, Ubuntu OS, iFace Designer® HMI Software Runtime License
X21P	21.5" (1920 x 1080) Panel PC, Intel® Celeron® Processor J1900 2.42GHz, 4GB RAM, 64GB SSD, PCI-E (x1) and PCI riser card, resistive touch screen, 24V power adaptor
X21P-i	21.5" (1920 x 1080) Panel PC, Intel® Celeron® Processor J1900 2.42GHz, 4GB RAM, 64GB SSD, PCI-E (x1) and PCI riser card, resistive touch screen, 24V power adaptor, Ubuntu OS, iFace Designer® HMI Software Runtime License