

## INDUSTRIAL PC

# Nematron® iPC-Series

High Performance, Panel Mount, Touchscreen Industrial Computers  
with 6th Generation Intel® Processing



iPC1200 - 12.1"



iPC1500 - 15.0"



iPC1700 - 17.0"



iPC1900 - 19.0"

## Key Standard Features

- 12.1" to 19.0" Color TFT LED backlit displays
- High Performance / Low Power Processor options to choose from:
  - Intel G3902E Celeron  
1.6GHz, 2/2 cores, 2MB cache
  - Intel i5-6442EQ  
1.9GHz, 4/4 cores, 6MB cache
  - Intel i7-6822EQ  
2.0GHz, 4/8 cores, 8MB cache
- 5-wire Analog Resistive Touchscreen
  - Optional non-Touch clear polycarbonate window
- 4 GB DRAM (8 GB & 16 GB optional)
- 240 GB Easily Removable SATA Solid State Drive
  - Optional larger SSD sizes and Rotating Hybrid Hard Drive
- Ultra-Thin panel mounting depth, less than 3.2"
- Extensive I/O Connectivity
  - Dual Gigabit (10/100/1000) Ethernet ports
  - 6 USB ports (four 3.0, two 2.0)
  - One RS-485/422 serial port
  - Two RS-232 serial ports
  - Additional Analog Video port or HDMI port - supports dual video with internal LCD and one port (Optional HDMI to DVI cable available - sold separately)
- Integrated 100-240 VAC power supply
  - 24 VDC optional
- Powder Coated Aluminum Front Panel (optional Stainless Steel)
- NEMA 4/4x/12 front panel
- Optional Rack Mount Front Panel (iPC1900 only)
- UL and cUL Ordinary Locations Listed
- UL and cUL Hazardous Locations Listed
  - Class I Division 2, Groups A, B, C, & D; Class II Division 2, Groups F & G; Class III when mounted in a NEMA enclosure
- FCC & European CE compliant
- Windows® 7 Professional (32-bit) pre-installed
  - Windows 7 Ultimate (64-bit), Windows 10 Enterprise IoT (32- & 64-bit), or No OS installed optional
- 2-year Warranty

# Technical Specifications



Physical	iPC1200	iPC1500	iPC1700	iPC1900
Overall Dimensions (HxWxD)	10.475" x 12.9" x 3.42" (266.1mm x 327.7mm x 86.75mm)	12.80" x 15.80" x 2.95" (325.1mm x 401.3mm x 74.9mm)	14.48" x 17.14" x 3.10" (367.8mm x 435.4mm x 78.7mm)	15.70" x 18.66" x 3.25" (398.8mm x 474.0mm x 82.6mm)
Panel Mounting Depth	3.165" (80.4mm)	2.70" (68.6mm)	2.85" (72.4mm)	3.00" (76.2mm)
Cutout Dimensions (HxW)	9.68" x 12.10" (245.9mm x 307.3mm)	12.00" x 15.00" (305.0mm x 381.0mm)	13.70" x 16.35" (348.0mm x 415.3mm)	14.90" x 17.75" (378.5mm x 450.9mm)
Weight	10.5 lbs (4.76kg)	15.0 lbs (6.8kg)	19.0 lbs (8.63kg)	22.5 lbs (10.22kg)
Shipping Weight	14.0 lbs (6.35kg)	19.5 lbs (8.84kg)	23.5 lbs (10.67kg)	27.5 lbs (12.49kg)
Option Weight (SS)*	+2.5 lbs (1.13kg)*	+3.5 lbs (1.58kg)*	+3.75 lbs (1.70kg)*	+4.0 lbs (1.81kg)*

\* Additional weight for Stainless Steel option.

Display	iPC1200	iPC1500	iPC1700	iPC1900
Display Diagonal	12.1" (307.34mm)	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)
Display Size (H x V)	9.69" x 7.26" (246.0mm x 184.5mm)	11.97" x 8.98" (304.0mm x 228.1mm)	13.30" x 10.64" (337.9mm x 270.3mm)	14.82" x 11.85" (376.3mm x 301.1mm)
Native Resolution	SVGA, 800 x 600	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Brightness	450 nit	400 nit	350 nit	300 nit
Contrast Ratio	600:1	600:1	1000:1	2000:1
Horz/Vert Viewing Angle	140°/120°	140°/120°	170°/170°	178°/178°
Backlight Life / Typical	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs
Touchscreen	5-wire Analog Resistive; No Touchscreen optional	5-wire Analog Resistive; No Touchscreen optional	5-wire Analog Resistive; No Touchscreen optional	5-wire Analog Resistive; No Touchscreen optional

Power	iPC1200	iPC1500	iPC1700	iPC1900
Input Power	70W	80W	85W	90W
AC Input Voltage	100-240 VAC, 50-60 Hz, 1.0 A Maximum	100-240 VAC, 50-60 Hz, 1.0 A Maximum	100-240 VAC, 50-60 Hz, 1.0 A Maximum	100-240 VAC, 50-60 Hz, 1.0 A Maximum
DC Input Voltage	18-36 VDC, 6.0 A Maximum	18-36 VDC, 6.0 A Maximum	18-36 VDC, 6.0 A Maximum	18-36 VDC, 6.0 A Maximum

Processors	<sup>1</sup> Additional Video RAM as needed with DVMT (Dynamic Video Memory Technology).		
Type & Processor	Intel Celeron G3902E	Intel i5-6442EQ	Intel i7-6822EQ
Core Speed	1.6 GHz	1.9 GHz	2.0 GHz
Core / Virtual	2 / 2	4 / 4	4 / 8
Smartcache	2MB	6MB	8MB
Chipset	Intel QM170 series	Intel QM170 series	Intel QM170 series
Video RAM	64 MB System RAM Base <sup>1</sup>	64 MB System RAM Base <sup>1</sup>	64 MB System RAM Base <sup>1</sup>
Ethernet Controller	Intel 210 series (2 ports)	Intel 210 series (2 ports)	Intel 210 series (2 ports)

Storage & Peripherals	
Operating System	Windows 7 Professional (32-bit); Optional Windows 7 Ultimate (64-bit), Windows 10 Enterprise IoT (32- & 64-bit), or No OS installed
DRAM	4GB Single Module (204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz); optional 8GB and 16GB DRAM
Standard Storage	240GB SATA Solid State Drive; Optional 480GB or 960GB Solid State Drive; 1TB SATA Hybrid Hard Drive <sup>2</sup>
Available I/O	(1) HDMI Port, (2) USB 2.0, (4) USB 3.0, (2) RS-232, (1) RS-485/422, (1) Analog Video Port (supports dual video with integrated display), (2) Ethernet 10/100/1000 Ports

<sup>2</sup> Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.

## Environmental

	Operating	Non-operating
Temperature <sup>3</sup>	0°C to 55°C	-20°C to 70°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock <sup>4</sup>	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration (5-2000 Hz) <sup>4</sup>	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration
Altitude <sup>5</sup>	Sea level to 10,000 feet	Sea level to 40,000 feet

<sup>3</sup> Temperature specifications are for air temp surrounding the unit (i.e. inside any enclosure being utilized). Meets US Federal Requirements specified in 46 CFR 111.01-15 (d) for offshore electrical systems.

<sup>4</sup> Shock & Vibration specifications established with Solid State drives and no rotating media.

<sup>5</sup> Altitude specification is established by using all internal component specifications.

## Compliance

NEMA Rating	NEMA 4/4X/12, IP66
FCC	47 CFR, Part 15, Class A
EU CE Marking	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1
Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012, cUL Listed CSA C22.2, #142, cUL Listed CSA 22.2, #213

\* IPC-Series: Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F & G; Class III; Temp. Code: T6, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure.

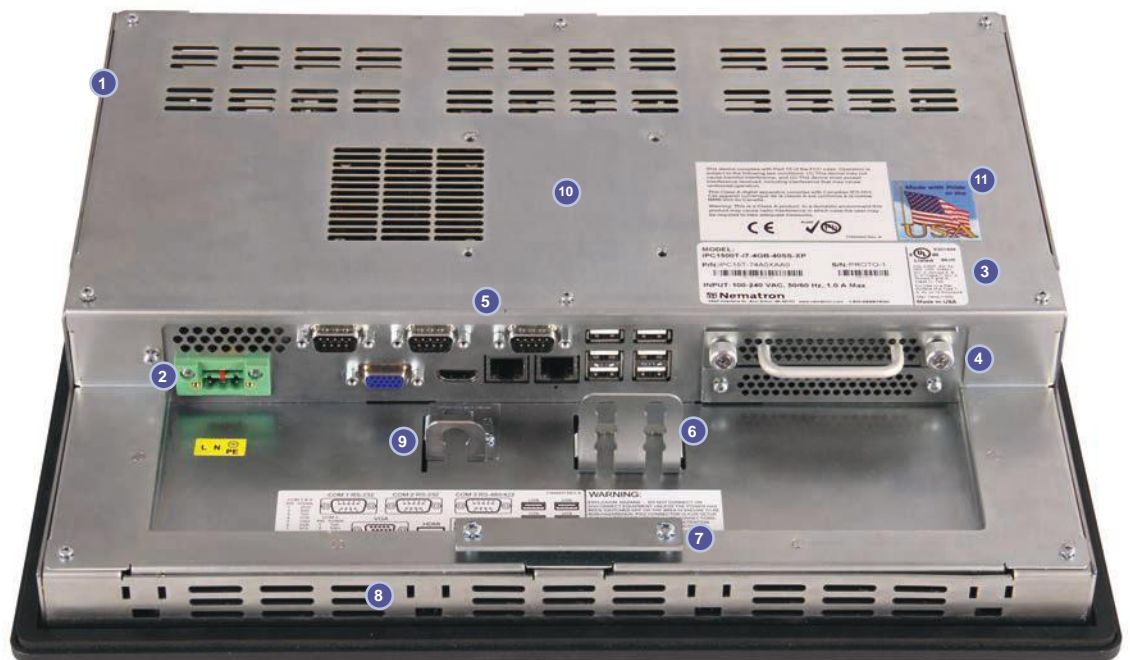
## Front Panel

Front Panel Options	Powder-Coated Aluminum Front Panel; with No Logo; Machined 304 Stainless Steel; Rackmount Powder Coated Aluminum (iPC1900 only) <sup>6</sup>
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<sup>6</sup> Rackmount front panel is not NEMA 4/4X/12 and the unit is required to be installed on a rack in a Type 1 enclosure.

## Features

- Optional 5-wire Analog Resistive Touchscreen
- Integral 100-240 VAC or 24 VDC Power Supply
- UL/cUL 508, Class I Div 2, CE Approvals
- Easily Removable SATA Solid State Drive
- Extensive I/O Connectivity
- USB Retention Bracket
- USB & Ethernet Cord Hold Down
- Panel Mounting via Clips
- HDMI Cable Retention Bracket
- VESA Mounting
- Made with Pride in the USA



Standard 2-year warranty  
- Covers parts and service



## ORDER NUMBER GENERATION

**Base unit configuration: iPCxx00T-iC6-4GB-240SS-W7**, where **xx** = 12, 15, 17, or 19 (for display size), includes a touchscreen, Intel Celeron G3902E, 4 GB DRAM, 240 GB SATA Solid State Drive, and Windows 7 Professional (32-bit).

<b>iPC</b>		-						
<b>Display Size:</b>								
<b>1200</b>	12.1" SVGA LCD							
<b>1500</b>	15.0" XGA LCD							
<b>1700</b>	17.0" SXGA LCD							
<b>1900</b>	19.0" SXGA LCD							
<b>Input Options:</b>								
<b>T</b>	Touchscreen							
<b>blank</b>	None							
<b>Processor:</b>								
<b>iC6</b>	Intel G3902E Celeron							
<b>i56</b>	Intel i5-6442EQ							
<b>i76</b>	Intel i7-6822EQ							
<b>DRAM:</b>								
<b>-4GB</b>	4 GB DRAM							
<b>-8GB</b>	8 GB DRAM							
<b>-16GB</b>	16 GB DRAM							
<b>Hard Drive:</b>								
<b>-240SS</b>	240 GB SATA Solid State Drive <sup>1</sup>							
<b>-480SS</b>	480 GB SATA Solid State Drive <sup>1</sup>							
<b>-960SS</b>	960 GB SATA Solid State Drive <sup>1</sup>							
<b>-HD</b>	1 TB (minimum) SATA Hybrid Hard Drive <sup>2</sup>							
<b>Operating System:</b>								
<b>-W7</b>	Windows 7 Professional (32-bit)							
<b>-W7U</b>	Windows 7 Ultimate (64-bit)							
<b>-W1032</b>	Windows 10 Enterprise IoT (32-bit)							
<b>-W1064</b>	Windows 10 Enterprise IoT (64-bit)							
<b>-NOS</b>	No OS installed							
<b>Power Supply:</b>								
<b>blank</b>	100-240 VAC							
<b>-DC</b>	24 Volt DC							
<b>Front Panel:</b>								
<b>blank</b>	Powder Coated Aluminum							
<b>-NL</b>	Powder Coated Aluminum w/o Logo							
<b>-SS</b>	Machined 304 Stainless Steel							
<b>-RM</b>	Rackmount Powder Coated Aluminum (iPC1900 only) <sup>3</sup>							

<sup>1</sup> Solid State Drive options carry a 5-year (part-only) warranty.

<sup>2</sup> Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.

<sup>3</sup> Rackmount front panel is not NEMA 4/4x/12 and the unit is required to be installed on a rack in a Type 1 enclosure.