

INDUSTRIAL PC

Nematron® iPC-Series IECEx

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
- 4 GB DRAM (8 GB & 16 GB optional)
- 240 GB Easily Removable SATA Solid State Drive
 - Optional larger SSD sizes
- 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 isolated 24 VDC power supply
- Powder Coated Aluminum Front Panel (optional Stainless Steel)
- NEMA 4/4x/12 front panel
- IECEx and ATEX Zone 2/22 approved when installed in an ATEX approved enclosure as described in DEMKO 14 ATEX 1374X and UL 16.0058X
- 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	5-wire Analog Resistive	5-wire Analog Resistive	5-wire Analog Resistive

Power	IPC1200	IPC1500	IPC1700	IPC1900
Input Power	70W	80W	85W	90W
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	¹ 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 ¹	64 MB System RAM Base ¹	64 MB System RAM Base ¹
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 (DDR4 SO-DIMM, non-ECC, unbuffered, 2133 MHz); optional 8GB and 16GB DRAM
Standard Storage	240GB SATA Solid State Drive; Optional 480GB or 960GB Solid State Drive
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

Environmental

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

³ 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.

⁴ Shock & Vibration specifications established with Solid State drives and no rotating media.

⁵ 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
IECEX Compliance	UL 16.0058X
ATEX Compliance	ATEX Zone 2/22 approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X
Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012, cUL Listed CSA C22.2, #142, cUL Listed CSA 22.2, #213

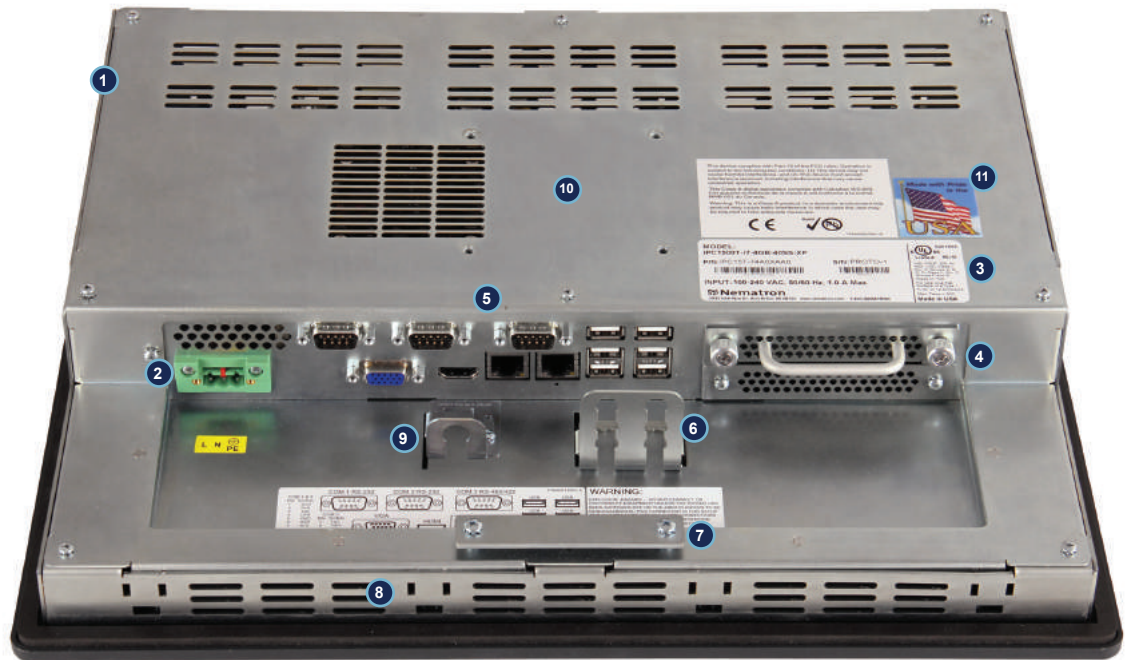
* IPC-Series: Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F & G; Class III; Temp. Code: T6, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure.

Front Panel

Front Panel Options	Powder-Coated Aluminum Front Panel; with No Logo; Machined 304 Stainless Steel
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Features

1. 5-wire Analog Resistive Touchscreen
2. Integrated Isolated 24 VDC Power Supply
3. IECEX, ATEX ZONE 2/22, UL/cUL 508, Class I Div 2, CE Approval Label
4. Easily Removable SATA Solid State Drive
5. Extensive I/O Connectivity
6. USB Retention Bracket
7. USB & Ethernet Cord Hold Down
8. Panel Mounting via Clips
9. HDMI Cable Retention Bracket
10. VESA Mounting
11. 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-DC-IECEX, 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, isolated 24 VDC power supply, powder Coated aluminum front panel, and Windows 7 Professional (32-bit).

iPC		-	-DC	-IECEX
Display Size:				
1200	12.1" SVGA LCD			
1500	15.0" XGA LCD			
1700	17.0" SXGA LCD			
1900	19.0" SXGA LCD			
Input Options:				
T	Touchscreen			
Processor:				
iC6	Intel G3902E Celeron			
i56	Intel i5-6442EQ			
i76	Intel i7-6822EQ			
DRAM:				
-4GB	4 GB DRAM			
-8GB	8 GB DRAM			
-16GB	16 GB DRAM			
Hard Drive:				
-240SS	240 GB SATA Solid State Drive ¹			
-480SS	480 GB SATA Solid State Drive ¹			
-960SS	960 GB SATA Solid State Drive ¹			
Operating System:				
-W7	Windows 7 Professional (32-bit)			
-W7U	Windows 7 Ultimate (64-bit)			
-W1032	Windows 10 Enterprise IoT (32-bit)			
-W1064	Windows 10 Enterprise IoT (64-bit)			
-NOS	No OS installed			
Power Supply:				
-DC	Isolated 24 Volt DC			
Front Panel:				
blank	Powder Coated Aluminum			
-NL	Powder Coated Aluminum w/o Logo			
-SS	Machined 304 Stainless Steel			

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