

## Nematron iPC1700-IECEx Industrial PC

17.0" High-Performance, Panel Mount, Touchscreen Computer

IECEx / ATEX Zone 2/22 Approved

Intel® Processing

LED Backlit Display

Analog Resistive Touchscreen

Solid State Drive Storage

NEMA 4/4X/12, IP66

55°C Operating Temp

64-bit Application Support



**Nematron**  
by COMARK

DS iPC1700-IECEx, Rev B



Optional  
**64-Bit**  
Application  
Support



Made in USA

### Standard Configuration

- 17.0" SXGA Color TFT LED backlit display
- High Performance / Low Power Processor options to choose from:
  - Intel® Dual Core Celeron® P4500 (1.86 GHz, 2 M cache, 2 Threads)
  - Intel® i5 Dual Core 520M (2.4 GHz, 3 M cache, 4 Threads)
  - Intel® i7 Dual Core 620M (2.66 GHz, 4 M cache, 4 Threads)
- 5-wire Analog Resistive Touchscreen
- 4 GB DRAM
- 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 2.0 ports
  - 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) or No OS installed optional
- 2-year Warranty

# Technical Specifications



## Physical

Overall Dimensions	14.48" x 17.14" x 3.10" (367.8mm x 435.4mm x 78.7mm)
Panel Mounting Depth	2.85" (72.4mm)
Cutout Dimensions	13.70" x 16.35" (348.0mm x 415.3mm)
Weight	19.0 lbs (8.63kg)
Shipping Weight	23.5 lbs (10.67kg)
Option Weight (SS)*	+3.75 lbs (1.70kg)*

\* Additional weight for Stainless Steel option.

## Display

Display Diagonal	17.0" (431.8mm)
Display Size H x V	13.30" x 10.64" (337.9mm x 270.3mm)
Native Resolution	SXGA, 1280 x 1024
Brightness	350 nit
Contrast Ratio	1000:1
Horz/Vert Viewing Angle	170°/170°
Backlight Life / Typical	50,000 hrs
Touchscreen	5-wire Analog Resistive

## Processor

<sup>1</sup> Additional Video RAM as needed with DVMT (Dynamic Video Memory Technology).

Type & Processor	<b>Celeron P4500</b> Intel Dual Core Celeron P4500	<b>i5 Dual Core</b> Intel i5 Dual Core 520M	<b>i7 Dual Core</b> Intel i7 Dual Core 620M
Core Speed	1.86 GHz	2.4 GHz	2.66 GHz
Threads / Bus/Core	2 / 14	4 / 18	4 / 20
L2 Cache	2MB	4MB	4MB
Chipset	Intel HM55 (BD82HM55 PCH)	Intel HM55 (BD82HM55 PCH)	Intel HM55 (BD82HM55 PCH)
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	Realtek 10/100/1000 (2 ports)	Realtek 10/100/1000 (2 ports)	Realtek 10/100/1000 (2 ports)

## Storage & Peripherals

Operating System	Windows 7 Professional (32-bit); Optional Windows 7 Ultimate (64-bit), or No OS installed
DRAM	4GB Single Module (204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz)
Standard Storage	240GB SATA Solid State Drive; Optional 480GB or 960GB Solid State Drive
Available I/O	(1) HDMI Port, (6) USB 2.0, (2) RS-232, (1) RS-485/422, (1) Analog Video Port (supports dual video with integrated display), (2) Ethernet 10/100/1000 Ports

## Power

Input Power	85W
DC Input Voltage	18-36 VDC, 6.0 A Maximum

The DEMKO certificate is available online for downloading: [http://www.comarkcorp.com/atex/demko\\_1374x\\_r2.pdf](http://www.comarkcorp.com/atex/demko_1374x_r2.pdf)

The IECEX UL certificate is available online for downloading at: [http://www.comarkcorp.com/iecex/ul\\_16\\_0058x\\_r0.pdf](http://www.comarkcorp.com/iecex/ul_16_0058x_r0.pdf)

# Technical Specifications

## Environmental

Temperature <sup>2</sup>	<b>Operating</b> 0°C to 55°C	<b>Non-operating</b> -20°C to 70°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock <sup>3</sup>	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration (5-2000 Hz) <sup>3</sup>	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration
Altitude <sup>4</sup>	Sea level to 10,000 feet	Sea level to 40,000 feet

<sup>2</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>3</sup> Shock & Vibration specifications established with Solid State drives and no rotating media.

<sup>4</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
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

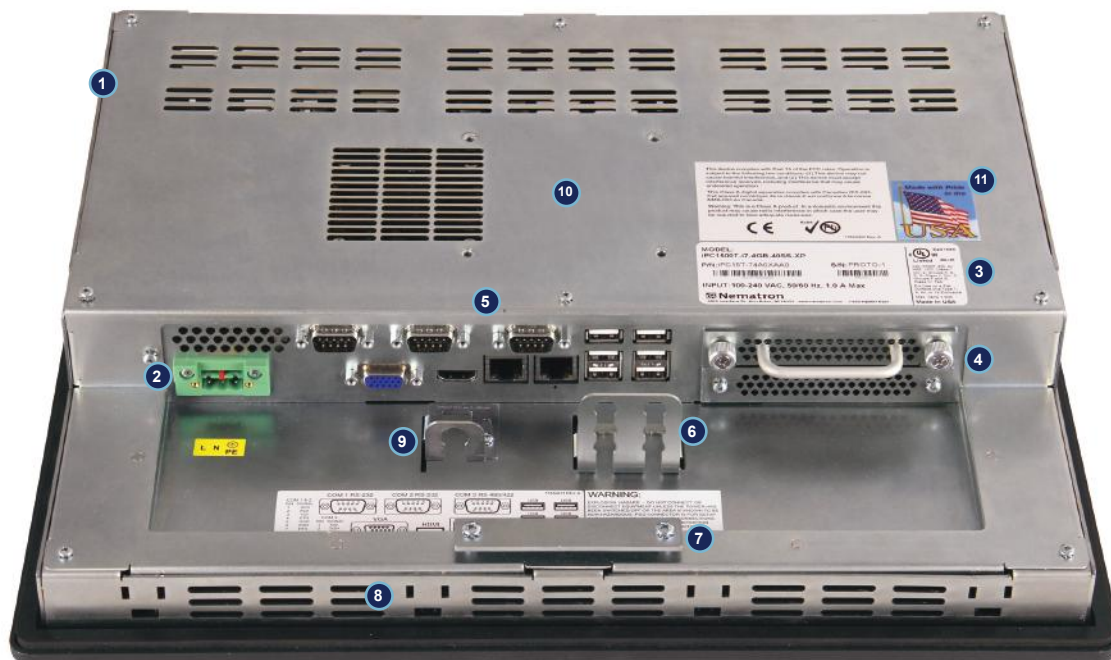
\* IPC-Series: Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F & G; Class III; Temp. Code: T6, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure.

## 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 iPC1700 - 75mm
11. Made with Pride in the USA



Standard 2-year warranty  
- Covers parts and service



# Order Number Generation

**Base unit configuration: iPCxx00T-CP45-4GB-240SS-W7-DC-ATEX**, where xx = 12, 15, 17, or 19 (for display size), includes a touchscreen, Intel Celeron P4500 processor, 4 GB DRAM, 240 GB SATA Solid State Drive, isolated 24 VDC power supply, and Windows 7 Professional (32-bit).



	iPC1700	T	-	-	-	-	-DC	-IECEX
<b>Display Size:</b>	1700	17.0" SXGA LCD						
<b>Input:</b>	T	Touchscreen						
<b>Processor:</b>	CP45 i5 i7	Intel Celeron P4500 Intel i5 520M Intel i7 620M						
<b>DRAM:</b>	-4GB	4 GB DRAM						
<b>Hard Drive:</b>	-240SS -480SS -960SS	240 GB SATA Solid State Drive <sup>†</sup> 480 GB SATA Solid State Drive <sup>†</sup> 960 GB SATA Solid State Drive <sup>†</sup>						
<b>Operating System:</b>	-W7 -W7U -NOS	Windows 7 Professional (32-bit) Windows 7 Ultimate (64-bit) No OS installed						
<b>Power Supply:</b>	-DC	Isolated 24 Volt DC						
<b>Front Panel:</b>	blank -NL -SS	Powder Coated Aluminum Powder Coated Aluminum w/o Logo Machined 304 Stainless Steel						

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