

## Nematron iPC1900 Fanless Industrial PC

19.0" High-Performance, Panel Mount, Touchscreen Computer

UL/cUL Class I Div 2 Approved

Intel® Fanless Processing

LED Backlit Display

Analog Resistive Touchscreen

Solid State Drive Storage

NEMA 4/4X/12, IP66

55°C Operating Temp



**Nematron**  
by COMARK

DS iPC1900-N2800, Rev B



Made in USA

### Standard Configuration

- 19.0" SXGA Color TFT LED backlit display
- High Performance / Very Low Power Fanless Processor
  - Intel® Dual Core ATOM N2800 (1.86 GHz, 1 MB cache, 4 Threads)
- 5-wire Analog Resistive Touchscreen
  - Optional Non-Touch with clear Lexan window (polycarbonate)
- 4 GB DRAM
- 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
  - Two USB 2.0 ports
  - Two USB 3.0 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 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 (32-bit) or No OS installed optional
- 2-year Warranty

# Technical Specifications



## Physical

Overall Dimensions	15.70" x 18.66" x 3.25" (398.8mm x 474.0mm x 82.6mm)
Panel Mounting Depth	3.00" (76.2mm)
Cutout Dimensions	14.90" x 17.75" (378.5mm x 450.9mm)
Weight	22.5 lbs (10.22kg)
Shipping Weight	27.5 lbs (12.49kg)
Option Weight (SS)*	+4.0 lbs (1.81kg)*

\* Additional weight for Stainless Steel option.

## Display

Display Diagonal	19.0" (482.6mm)
Display Size H x V	14.82" x 11.85" (376.3mm x 301.1mm)
Native Resolution	SXGA, 1280 x 1024
Brightness	300 nit
Contrast Ratio	2000:1
Horz/Vert Viewing Angle	178°/178°
Backlight Life / Typical	50,000 hrs
Touchscreen	5-wire Analog Resistive; No Touchscreen option

## Processor

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

Type & Processor	<b>ATOM N2800</b> Intel Dual Core ATOM N2800
Core Speed	1.86 GHz
Threads / Bus/Core	2 / 4
L2 Cache	1MB
Chipset	Intel NM10 Express
Graphics Controller	Integrated Intel GMA 3650 <sup>1</sup>
Ethernet Controller	Intel 82574L Gigabit 10/100/1000 (2 ports)

## Storage & Peripherals

Operating System	Windows 7 Professional (32-bit); Optional Windows 7 Ultimate (32-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; 1TB SATA Hybrid Hard Drive <sup>2</sup>
Available I/O	(1) HDMI Port, (2) USB 2.0, (2) USB 3.0, (2) RS-232, (1) RS-485/422, (1) Analog Video Port (supports dual video), (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.

## Power

Input Power	65W
AC Input Voltage	100-240 VAC, 50-60 Hz, 1.0 A Maximum
DC Input Voltage	18-36 VDC, 6.0 A Maximum

# Technical Specifications

## 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: T4A, 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 iPC1900 - 100mm
- Made with Pride in the USA



Standard 2-year warranty  
- Covers parts and service



# Order Number Generation

**Base unit configuration: iPCxx00T-N2800-4GB-240SS-W7**, where xx = 12, 15, 17, or 19 (for display size), includes a touch-screen, Intel Dual Core ATOM N2800, 4 GB DRAM, 240 GB SATA Solid State Drive, and Windows 7 Professional (32-bit).



iPC1900		-N2800	
<b>Display Size:</b>	1900	19.0" SXGA LCD	
<b>Input Options:</b>	T blank	Touchscreen None	
<b>DRAM:</b>	-4GB	4 GB DRAM	
<b>Hard Drive:</b>	-240SS -480SS -960SS -HD	240 GB SATA Solid State Drive <sup>1</sup> 480 GB SATA Solid State Drive <sup>1</sup> 960 GB SATA Solid State Drive <sup>1</sup> 1 TB (minimum) SATA Hybrid Hard Drive <sup>2</sup>	
<b>Operating System:</b>	-W7 -W7U -NOS	Windows 7 Professional (32-bit) Windows 7 Ultimate (32-bit) <sup>3</sup> No OS installed	
<b>Power Supply:</b>	blank -DC	100-240 VAC 24 Volt DC	
<b>Front Panel:</b>	blank -NL -SS -RM	Powder Coated Aluminum Powder Coated Aluminum w/o Logo Machined 304 Stainless Steel Rackmount Powder Coated Aluminum (iPC1900 only) <sup>4</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> 64-bit Windows operating systems are not supported by the Intel ATOM N2800 chipset.

<sup>4</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.