ATEX ZONE 2/22 Approved

iPC-Series High Performance Industrial PCs



***i*PC1900-ATEX**
SXGA

***i*PC1200-ATEX**
SVGA

***i*PC1500-ATEX**
XGA

***i*PC1700-ATEX**
SXGA



***n*PC300-ATEX**
Node

Nematron is putting the "i" in "iPC" with the *i*PC-Series, now with Intel® i-Series Core™ embedded processors. The innovative *i*PC-Series continues to change the definition of traditional Industrial PCs, most notably by offering the latest in embedded processing power with the following CPU options: i7 Dual Core 620M, i5 Dual Core 520M, and Dual Core Celeron P4500.

Optional
64-Bit
Application Support

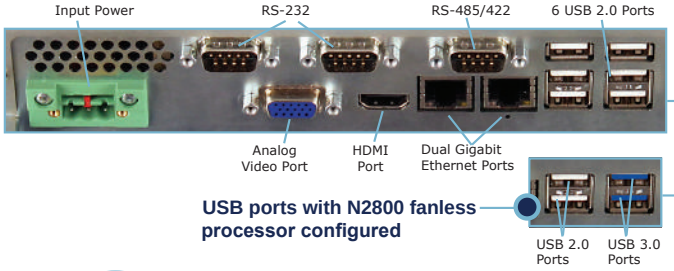
Standard Features

- 12.1" SVGA to 19" SXGA Color TFT LED backlit displays [1]
- Non-display Node PC version available - nPC300
- High Performance Processor options:
  - Intel® Dual Core ATOM N2800 *(1.86 GHz, 1 M cache, 4 Threads)*
  - 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
- 2 GB DRAM *(4 GB Optional)*
- 80 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 *(Two USB 3.0, two USB 3.0 ports on units with N2800 fanless CPU)*
  - 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)*
- NEMA 4/4x/12/IP66 front panel [1]
- Powder Coated Aluminum Front Panel [1]
  - Optional Stainless Steel
- Integrated isolated 24 VDC power supply
- ATEX ZONE 2/22 Approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X
- 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 XP Professional (32-bit, Windows 7 Ultimate (64-bit) [2], or No Operating System Installed optional
- 2-year Warranty

[1] Not applicable on the nPC300 Node Industrial PC.
[2] Windows 7 Ultimate 32-bit installed on units configured with N2800 Processor option.

Features & Benefits

Extensive I/O Connectivity



USB ports with N2800 fanless processor configured

Easily Removable SATA Solid State Drive
- 80GB, 160GB, or 300GB

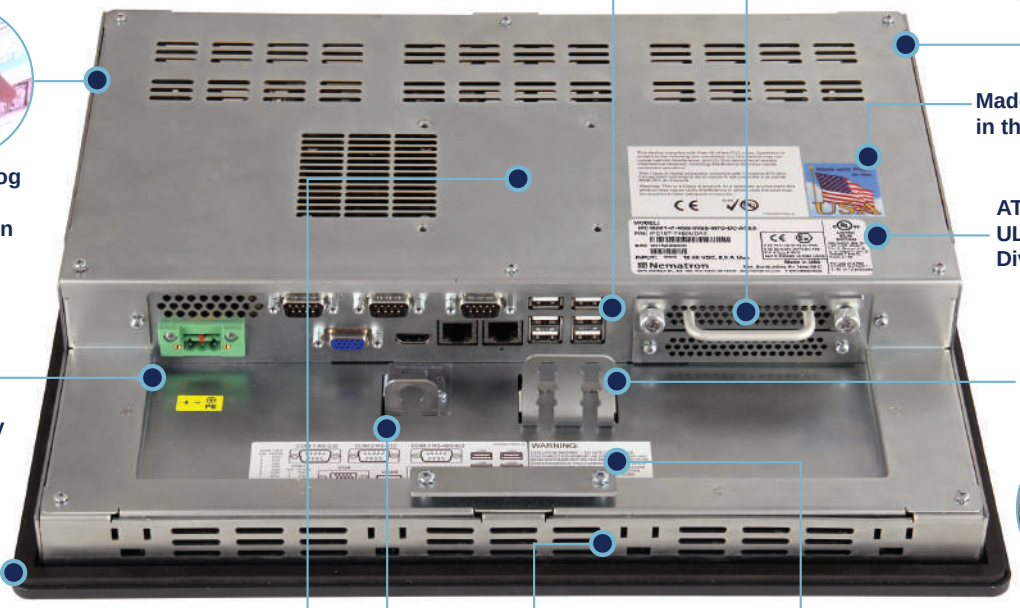


Ultra-thin, extremely compact design





5-wire Analog Resistive Touchscreen



Made with Pride in the USA

ATEX ZONE 2/22, UL/cUL 508, Class I Div 2, CE Approvals

Integrated Isolated 24 VDC Power Supply

USB Retention Bracket





Powder Coated Aluminum or Stainless Steel Front Panels



NEMA Panel Mounting via Clips



USB & Ethernet Cord Hold Down



VESA Mounting
- *i*PC1200/1500/1700: 75mm
- *i*PC1900: 100mm

HDMI Cable Retention Bracket
- Optional HDMI to DVI cable sold separately





High Performance Processor Options:
- Intel® Dual Core ATOM N2800 (fanless) *(1.86 GHz, 1 M cache, 4 Threads)*
- 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)*



Standard 2-year warranty
- Covers parts and service

iPC-Series ATEX Marking

CE Ex
II 3G Ex ic nA IIC T4 Gc IP66
II 3D Ex tc IIIC T67°C Dc IP66
0°C ≤ T_{AMB} ≤ 55°C
Cert #: DEMKO 14 ATEX 1374X

nPC300 ATEX Marking

CE Ex
II 3G Ex nA IIC T4 Gc
0°C ≤ T_{AMB} ≤ 55°C
Cert #: DEMKO 14 ATEX 1374X

- nPC300 is not Zone 22 approved. However, it can be contained inside an enclosure for use in Zone 22 installations.

For more details on Nematron ATEX markings, go to: http://www.nematron.com/atex/nematron_atex_markings_0415.pdf
Reference DEMKO 14 ATEX 1374X Certificate "Special Conditions for Safe Use", go to: http//www.nematron.com/atex/demko_1374x.pdf

Technical Specifications







Physical	iPC1200-ATEX	iPC1500-ATEX	iPC1700-ATEX	iPC1900-ATEX	nPC300-ATEX
Overall Dimensions *H x W x D*	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)	7.750" x 12.00" x 2.15" (196.8mm x 304.8mm x 54.61mm)
Overall Dimensions w/ Mounting Brackets	-	-	-	-	7.750" x 13.30" x 2.45" (196.8mm x 337.82mm x 62.23mm)
Panel Mounting Depth	3.165" (80.4mm)	2.70" (68.6mm)	2.85" (72.4mm)	3.00" (76.2mm)	-
Cutout Dimensions *H x W*	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 (6.80kg)	19.0 lbs (8.63kg)	22.5 lbs (10.22kg)	6.5 lbs (2.9 kg)
Shipping Weight	14.0 lbs (6.35kg)	19.5 lbs (8.84kg)	23.5 lbs (10.67kg)	27.5 lbs (12.49kg)	8.0 lbs (3.6 kg)
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-ATEX	iPC1500-ATEX	iPC1700-ATEX	iPC1900-ATEX	nPC300-ATEX
Display Diagonal	12.1" (307.34mm)	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)	-
Display Size *Active Area 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 / Contrast Ratio	450 nit / 600:1	400 nit / 600:1	350 nit / 1000:1	300 nit / 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	-

Typical* Power	iPC1200-ATEX	iPC1500-ATEX	iPC1700-ATEX	iPC1900-ATEX	nPC300-ATEX
Input Power	70W	80W	85W	90W	60W
Input Power w/ ATOM N2800	45W	45W	55W	65W	35W

** Typical power is measured with all possible I/O ports functioning.*

COMMON SPECS

Processor Options	ATOM N2800 (fanless)	Celeron P4500	i5 Dual Core	i7 Dual Core
Type & Processor	Intel Dual Core ATOM N2800	Intel Dual Core Celeron P4500	Intel i5 Dual Core 520M	Intel i7 Dual Core 620M
Core Speed	1.86 GHz	1.86 GHz	2.4 GHz	2.66 GHz
Threads / Bus/Core	4 / 2	2 / 14	4 / 18	4 / 20
L2 Cache	1MB	2MB	4MB	4MB
Chipset	Intel NM10 Express	Intel HM55 (BD82HM55 PCH)	Intel HM55 (BD82HM55 PCH)	Intel HM55 (BD82HM55 PCH)
Video RAM	Integrated Intel GMA 3650 [1]	64 MB System RAM Base [2]	64 MB System RAM Base [2]	64 MB System RAM Base [2]
Ethernet Controller	Intel 82574L Gigabit 10/100/1000 (2 ports)	Realtek 10/100/1000 (2 ports)	Realtek 10/100/1000 (2 ports)	Realtek 10/100/1000 (2 ports)

[1] Video RAM is allocated as needed with DVMT (Dynamic Video Memory Technology). [2] Additional Video RAM as needed with DVMT (Dynamic Video Memory Technology).

Memory & I/O	
DRAM	2GB Single Module *(204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz)*; Optional 4GB max
Standard Storage	80GB SATA Solid State Drive; Optional 160GB or 300GB Solid State Drive
Available I/O (non-fanless)	(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
Available I/O (fanless)	(1) HDMI Port, (2) USB 3.0, (2) 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

Touchscreen	
Technology	5-wire Analog Resistive *(Not applicable on the nPC300 model)*

Operating System	
Standard OS	Windows 7 Professional (32-bit); Optional Windows XP Professional (32-bit), Windows 7 Ultimate (64-bit) [3], or No OS installed

[3] Windows 7 Ultimate 32-bit will be installed when the N2800 fanless processor is configured.

Electrical	
DC Input Voltage/Max Current	18-36 VDC, 6.0 A Maximum

Environmental	Operating	Non-operating
Temperature [4] / Humidity	0°C to 55°C / 20% to 80% RH, noncondensing	-20°C to 70°C / 20% to 80% RH, noncondensing
Shock [5]	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration *(5-2000 Hz)* **[5]**	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration
Altitude [6]	Sea level to 10,000 feet	Sea level to 40,000 feet

[4] 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.
[5] Shock & Vibration specifications established with Solid State drives and no rotating media. [6] Altitude specification is established by using all internal component specifications.

Agency Approvals	
Front Panel NEMA Rating	NEMA 4/4X/12, IP66
FCC	47 CFR, Part 15, Class A
ATEX Compliance	ATEX Zone 2/22 approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X *(see product labeling on previous page)*
EU CE Marking Compliance	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1
Safety Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012, cUL Listed CSA C22.2, #142, cUL Listed CSA 22.2, #213 *(see notes below on model-specific HazLoc approvals)*

** **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.*
** **nPC300:** Class I Division 2, Groups A, B, C, D; Temp. Code: T6 , when installed on a flat surface of a Type 1 enclosure.*
** **iPC-Series (w/ N2800):** 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.*
** **nPC300 (w/ N2800):** Class I Division 2, Groups A, B, C, D; Temp. Code: T4A , when installed on a flat surface of a Type 1 enclosure.*

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

Order Number Generation

Nematron
A Division of COMARK

Base unit configuration: iPCxx00T-N2800-2GB-80SS-W7-DC-ATEX, where **xx** = 12, 15, 17, or 19 (for display size), includes a touchscreen, Intel ATOM N2800 fanless processor, 2 GB DRAM, 80 GB SATA Solid State Drive, isolated 24 VDC power supply, and Windows 7 Professional (32-bit).


iPC1200T


iPC1500T


iPC1700T


iPC1900T

iPC ___ T - ___ ___ ___ ___ -DC ___ -ATEX

Display Size:

1200	12.1" SVGA LCD
1500	15.0" XGA LCD
1700	17.0" SXGA LCD
1900	19.0" SXGA LCD

Input:

T	Touchscreen

Processor:

N2800	Intel ATOM N2800 (fanless)
CP45	Intel Celeron P4500
i5	Intel i5 520M
i7	Intel i7 620M

DRAM:

-2GB	2 GB DRAM
-4GB	4 GB DRAM

Hard Drive:

-80SS	80 GB SATA Solid State Drive [1]
-160SS	160 GB SATA Solid State Drive [1]
-300SS	300 GB SATA Solid State Drive [1]

Operating System:

-W7	Windows 7 Professional (32-bit)
-XP	Windows XP Professional (32-bit)
-W7U	Windows 7 Ultimate (64-bit) [2]
-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.
[2] Windows 7 Ultimate 32-bit will be loaded when the -N2800 Processor option is configured.

Base unit configuration: nPC300-N2800-2GB-80SS-W7-DC-ATEX, includes Intel ATOM N2800 fanless processor, 2 GB DRAM, 80 GB SATA Solid State Drive, isolated 24 VDC power supply, and Windows 7 Professional (32-bit).


nPC300

nPC300 - ___ ___ ___ ___ -DC -ATEX

Processor:

N2800	Intel ATOM N2800 (fanless)
CP45	Intel Celeron P4500
i5	Intel i5 520M
i7	Intel i7 620M

DRAM:

-2GB	2 GB DRAM
-4GB	4 GB DRAM

Hard Drive:

-80SS	80 GB SATA Solid State Drive [1]
-160SS	160 GB SATA Solid State Drive [1]
-300SS	300 GB SATA Solid State Drive [1]

Operating System:

-W7	Windows 7 Professional (32-bit)
-XP	Windows XP Professional (32-bit)
-W7U	Windows 7 Ultimate (64-bit) [2]
-NOS	No OS installed

Power Supply:

-DC	Isolated 24 Volt DC

[1] Solid State Drive options carry a 5-year (part-only) warranty.
[2] Windows 7 Ultimate 32-bit will be loaded when the -N2800 Processor option is configured.



MTG-DIN-nPC300

DIN Rail Mounting Kit - Mounting kit includes DIN Rail bracket that mounts nPC300 Nodes to M1500SRT Monitors using the 75mm VESA mounting pattern on the rear of the units.

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