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# ePC Fan-less Series

Embedded High Performance Ultra-Thin 12.1" to 19" TFT Industrial PCs without Fans or Rotating Media



**NEW!**



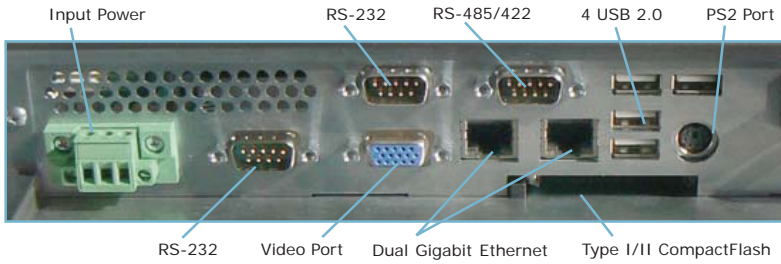
With the Nematron ePC Fan-less Series, performance no longer needs to be sacrificed. With an Intel® Atom N270 processor (1.6 GHz) and a high performance SATA Solid State drive, this series provides the performance of most conventional industrial PCs. This Series is the perfect solution for most high-end operator interface or SCADA applications where proprietary solutions do not supply the "open" connectivity desired in most of today's automation applications. The ePC Fan-less Series offers all the I/O and features of the standard ePC-Series without the use of fans or rotating media.

## Standard Features

- 12.1" SVGA to 19" SXGA Color TFT LCD Display
- Optional 5-wire Analog Resistive Touchscreen
- Ultra-Thin panel mounting depth, less than 3.2"
- High Performance/ Very Low Power Fan-less Processor
  - Intel® ATOM N270 (1.6 GHz, 512 K Cache, 533 MHz bus)
- DRAM up to 2 GB
- 40 and 80 GB High Performance SATA Solid State Drives
  - Conventional and High Reliability Rotating SATA Hard Drive options available
- Extensive I/O Connectivity
  - Dual Gigabit (10/100/1000) Ethernet ports
  - 4 USB 2.0 ports
  - 1 RS-485/422 serial port (jumper selectable)
  - 2 RS-232 serial ports
  - PS/2 port
  - Additional video port (supports dual video)
  - Rear accessible CompactFlash™ Type I/II socket
- VESA mountable (rear surface)
- Integral 100-240 VAC power supply
  - 24 VDC optional
- Powder Coated Aluminum Front Panel (optional Stainless Steel)
- NEMA 4/4x/12 front panel
- 2-year Warranty
- UL 508 and UL 1604 listed for Hazardous Locations: Class I, Division 2, Groups A, B, C, D and Class II, Division 2, Groups F and G when mounted in a NEMA enclosure (ePC1200 pending)
- FCC & European CE compliant
- RoHS compliant
- Windows® XP Professional (Windows 7 and Vista Business optional)

# Features & Benefits

## Extensive I/O Connectivity

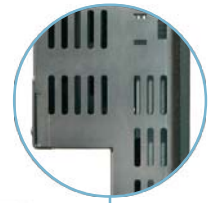


## Easily Removable SATA Solid State Drives

- Conventional & High Reliability Options



## Ultra-thin, extremely compact design

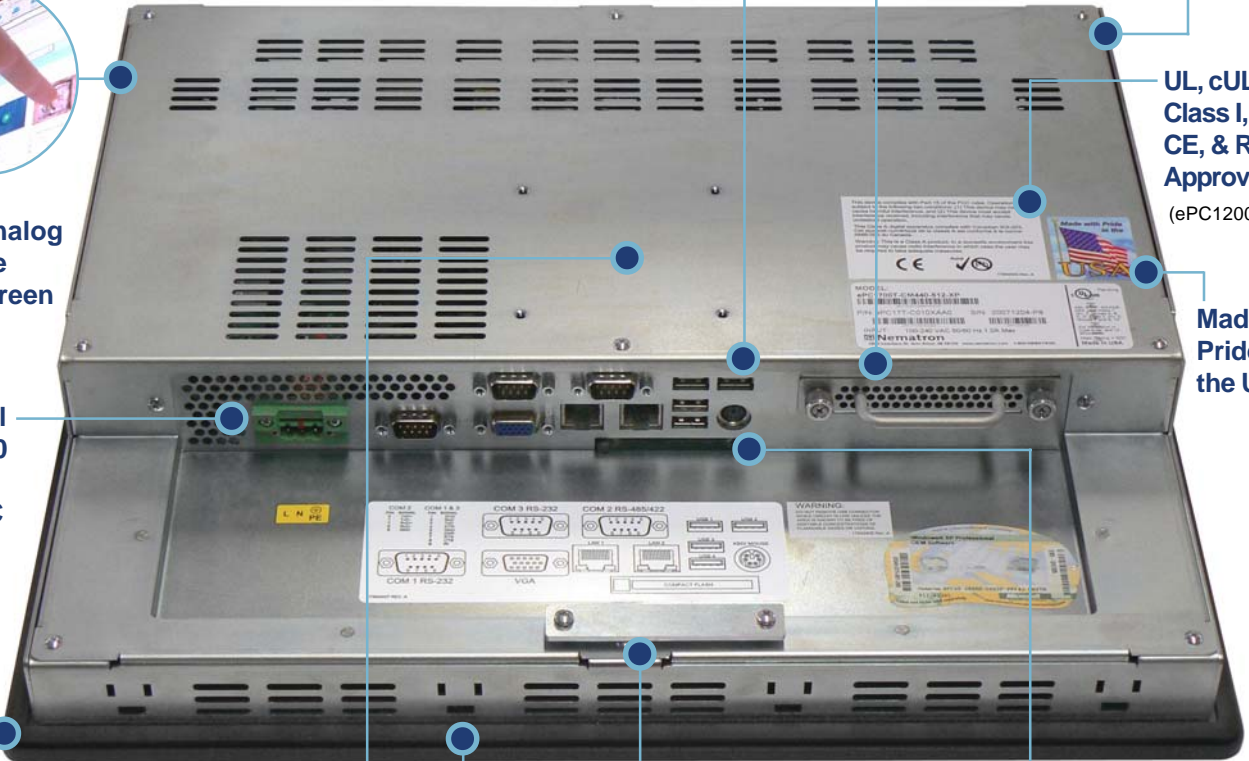


Optional 5-wire Analog Resistive Touchscreen

UL, cUL 508, Class I, Div 2, CE, & RoHS Approvals (ePC1200 pending)

Made with Pride in the USA

Integral 100-240 VAC or 24 VDC Power Supply



Powder Coated Aluminum or Stainless Steel Front Panels



USB, Ethernet, & PS/2 Hold Down



CompactFlash to replace CD-ROM and floppy drives



### VESA Mounting

- ePC1200/1500/1700: 75mm
- ePC1900: 100mm



### NEMA Panel Mounting via Clips



## High Performance/ Very Low Power Fan-less Processor **NEW!**

- Intel® ATOM N270 (1.6 GHz, 512 K Cache, 533 MHz bus)



Meet all RoHS Hazardous Safety Standards.



# Technical Specifications

## PERFORMANCE

NEW!

Chipset	Intel 945GSE + ICH7M
Video	Integrated in system chipset
Video RAM	8 MB - 128 MB (system RAM)
Processor	N270
Type	Intel ATOM
Core Speed	1.6 GHz
Front Side Bus	533 MHz
L2 Cache	512 K

## MEMORY

DRAM Type	200-pin DDR2 SO-DIMM, non-ECC, un-buffered
DRAM Bus Speed	533 MHz
DRAM Maximum	Single Module, 2 GB
Solid State Hard Drive	40 GB or 80 GB
Hard Drive Interface	2.5", SATA II
Conventional Hard Drive	160 GB Minimum (optional)
High Reliability Hard Drive	40 GB or 80 GB (optional)

## DISPLAY

	ePC1200 <b>NEW!</b>	ePC1500	ePC1700	ePC1900
Display Diagonal	12.1" (307.34mm)	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)
Display Sizes (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" (337.8mm x 270.3mm)	14.82" x 11.85" (376.4mm x 301.0mm)
Native Resolution	SVGA, 800 x 600	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Displayable Colors	262K	16M	16M	16M
Brightness, Typical	400 Nit	250 Nit	300 Nit	300 Nit
Contrast Ratio, Typical	500:1	800:1	800:1	1300:1
Horizon/Vertical View Angle, CR>5, Typical	130°/110°	150°/145°	176°/170°	178°/178°
Backlight Life, Typical	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs

## TOUCH SCREEN (all models)

Touch Screen Technology	5-wire Analog Resistive
Resolution	4096 x 4096
Positional Accuracy (Maximum Error)	0.18" (0.19" ePC1900) 4.57mm (4.83mm ePC1900)
Positional Accuracy (Standard Deviation of Error)	< 0.08" (< 2.0 mm)
Expected Life	>35,000,000 Activations

## ELECTRICAL

AC Input Voltage	100-240 VAC, 50/60 Hz
AC Input Current	1.0 A Maximum
DC Input Voltage (optional)	18-36 VDC
DC Input Current (optional)	4.5 A Max
Input Power	ePC1200/1500 - 30 W Typical* ePC1700 - 40 W Typical* ePC1900 - 50 W Typical*

\* Typical Power is measured without any additional I/O or expansion options. Any additional I/O installed during application can increase this value.

## ENVIRONMENTAL

Temp.	Operating 0°C to 50°C	Non-operating -20°C to 60°C
Humidity	20% to 80% RH, noncondensing	
Shock <sup>1</sup>	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration <sup>1</sup>	.006" peak to peak displacement 1.0g maximum acceleration	.015" peak to peak displacement 2.5g maximum acceleration
Altitude <sup>2</sup>	Sea level to 10,000 feet	Sea level to 40,000 feet

<sup>1</sup> Shock & Vibration specifications established with Solid State drives and no rotating media.

<sup>2</sup> Altitude specification is established by using all internal component specifications.

## AGENCY

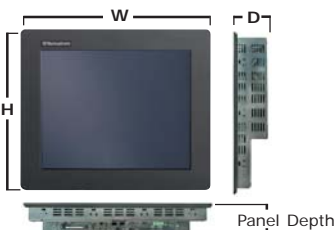
Front Panel NEMA Rating	NEMA 4/4X/12, IP65
FCC	47 CFR, Part 15, Class A
EU CE Marking Compliance	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1, RoHS compliant
Safety Agency Approvals (ePC1200 pending)	UL508 Listed, UL 1604 Listed *, cUL Listed CSA C22.2, #142, cUL Listed CSA C22.2, #143 *

\* Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T4A, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure.

## PHYSICAL

	ePC1200 <b>NEW!</b>	ePC1500	ePC1700	ePC1900
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 442.0mm 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 (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)
VESA Mount Pattern (M4 Threads)	75x75mm	75x75mm	75x75mm	100x100mm
Weight	10.5 lbs (4.76kg)	14.0 lbs (6.35kg)	19.0 lbs (8.63kg)	22.5 lbs (10.22kg)
Shipping Weight	14.0 lbs (6.35kg)	16.5 lbs (7.5kg)	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.

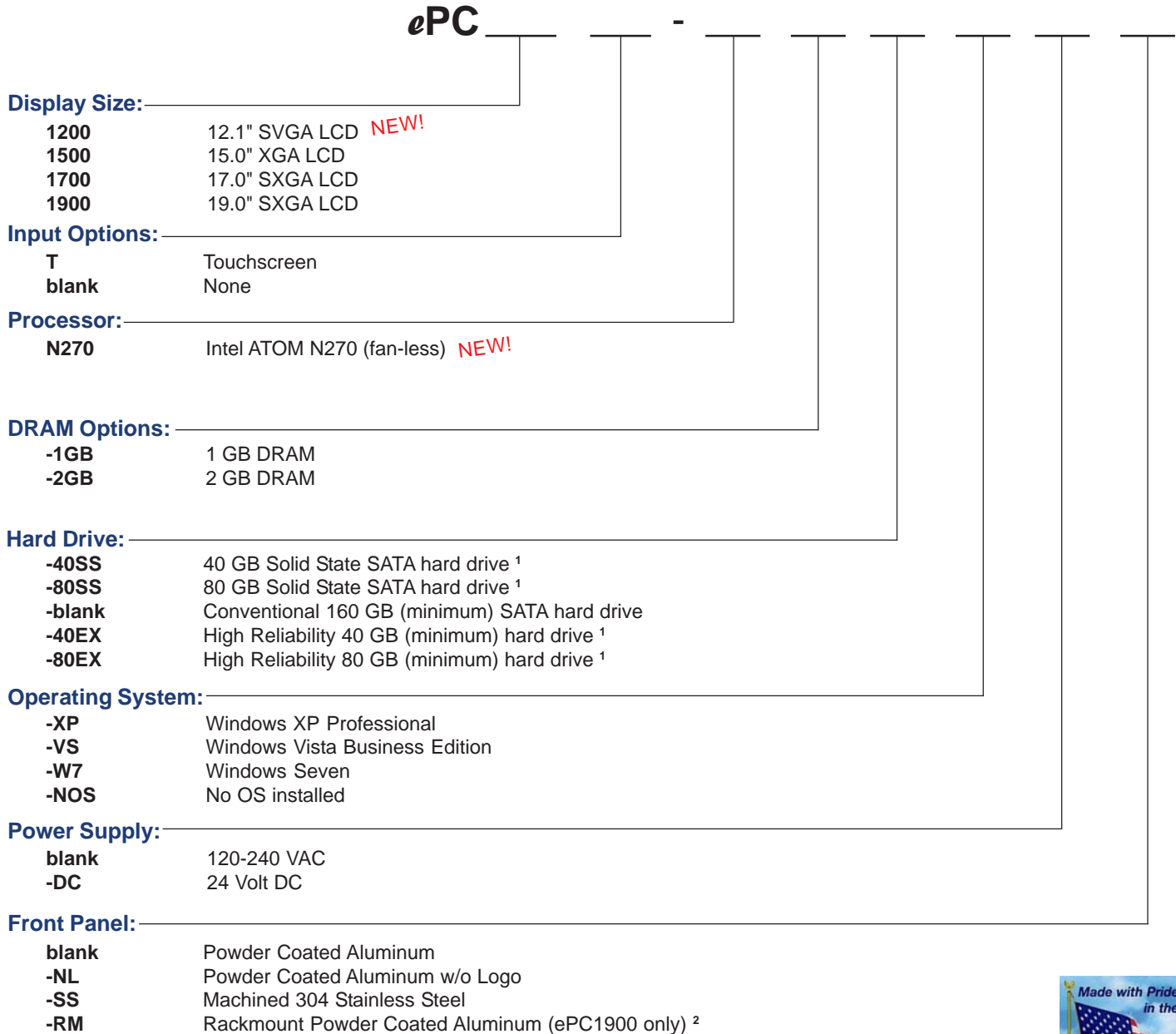


## Cutout Dimensions

Model	Width (W)	Height (H)
ePC1200	12.10" (307.3mm)	9.68" (245.9mm)
ePC1500	15.00" (381.0mm)	12.00" (305.0mm)
ePC1700	16.35" (415.3mm)	13.70" (348.0mm)
ePC1900	17.75" (450.9mm)	14.90" (378.5mm)

## Order Number Generation

**Base unit configuration: ePCx00T-N270-1GB-40SS-XP**, where **x** = 12, 15, 17, or 19 (for display size), includes a touchscreen, Intel ATOM N270, 1 GB DRAM, 40 GB Solid State Drive, and Windows XP Professional.



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

<sup>2</sup> Rackmount front panel is not NEMA 4/4x/12 and the unit is not approved for Hazardous Locations.



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