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# ePC-Plus Series

Embedded High Performance Ultra-Thin 15" to 19" TFT Industrial PCs with PCI/Serial Expansion and Easily Removable Storage Media



## Making A Great Series Even Better...

The Nematron ePC-Plus Series further enhances the ultra-thin, yet powerful ePC-Series by now providing exciting new features including PCI expansion (two ¾-length cards), two easily removable hard drives and a hot swappable, easily removable DVD-R/W drive. All this is accomplished in a mere 1.0" deeper unit than the successful PC-Series.

The ePC-Plus offers unparalleled value and superb quality at a competitive price while eliminating the "big, bulky and expensive" stereotype usually associated with Industrial PCs. All ePC-Plus models are available with 5-wire Analog Resistive touchscreens and NEMA sealed panel mount front panels. Their compact size and thin panel mounted depth of 4.0" (101.6mm) make them ideal for installation in most industrial applications.



## Display Sizes Available...



There are currently three sizes in ePC-Plus series - 15", 17", and 19", with more additions to follow.

## New Features Available...



Two Easily Removable Hard Drive Bays



Hot-swappable, Easily Removable DVD-RW drive



PCI Expansion:  
Two ¾ Card Slots



## Standard Features

- 15" XGA to 19" SXGA Color TFT LCD Display
- Optional 5-wire Analog Resistive Touchscreen
- Ultra-Thin 4.0" panel mounting depth
- High Performance / Low Power Processor options
  - Intel® Mobile Celeron® 550  
(2.0 GHz, 1 M cache, 533 MHz bus)
  - Intel® Core Duo™ T7500  
(2.2 GHz, 4 M cache, 800 MHz bus)
- 80 GB easily removable SATA hard drives
- Solid State and High Reliability options available
- Second hard drive options
- Optional easily removable SATA DVD-R/W drive
- DRAM up to 4 GB
- Extensive I/O Connectivity
  - Dual Gigabit (10/100/1000) Ethernet ports
  - 4 USB 2.0 ports
  - 1 RS-485/422/232 serial port (jumper selectable)
  - 2 RS-232 serial ports
  - PS/2 mouse & keyboard ports
- Additional video port (supports dual video)
- PCI expansion (two ¾-length cards)
- Integrated 100-240 VAC power supply (24 VDC optional)
- Powder Coated Aluminum Front Panel (optional Stainless Steel)
- NEMA 4/4x/12 front panel
- VESA mountable (rear surface)
- UL, cUL
- FCC & European CE compliant
- RoHS compliant
- Windows® XP Professional (Windows 2000 and Vista Business optional)

# Features & Benefits



## High Performance / Low Power Processor Options

- Intel® Mobile Celeron® 550 (2.0 GHz, 1 M cache, 533 MHz bus)
- Intel® Core Duo™ T7500 (2.2 GHz, 4 M cache, 800 MHz bus)



## VESA Mounting M4 Threads

- All models: 100mm



## Powder Coated Aluminum or Stainless Steel Front Panels



## Optional 5-wire Analog Resistive Touchscreen



## Two PCI-card expansion slots now available

Made with Pride in the USA

UL, cUL 508, CE, & RoHS Approvals

Integrated 100-240 VAC or 24 VDC Power Supply



Thin panel mounted depth of 4.0" (101.6mm)

(4.125" - ePC1950)



NEMA Panel Mounting via Clips



## Two Easily Removable SATA Hard Drives

- Solid State options
- High Reliability with 5 yr. part warranty options

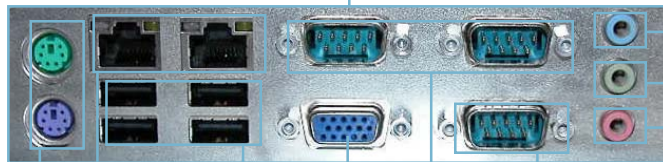


USB, Ethernet, & PS/2 Hold Down



Hot-Swappable, Easily Removable DVD-R/W Drive

## Extensive I/O Connectivity



Video & Keyboard Ports

Dual Gigabit Ethernet Ports

Four USB 2.0 Ports

Add'l Video Port

Two RS-232 Ports

RS-485/422 Port

Line In

Audio Out

Microphone



Meet all RoHS Hazardous Safety Standards.

# Technical Specifications

## PERFORMANCE

Chipset	Intel 965GME + ICH8M	
Video	Integrated in system chip set	
Video RAM	Up to 384MB (System RAM)	
Processor	550	T7500
Type	Intel Mobile Celeron	Intel Core Duo
Core Speed	2.0 MHz	2.2 GHz
Front Side Bus	533 MHz	800 MHz
L2 Cache	1MB	4MB

## DISPLAY

	ePC1550	ePC1750	ePC1950
Display Diagonal	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)
Display Sizes (Active Area H x V)	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	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Displayable Colors	16M	16M	16M
Brightness, Typical	250 Nit	300 Nit	300 Nit
Contrast Ratio, Typical	800:1	800:1	1300:1
Horizon/Vertical View Angle, CR>5, Typical	150°/145°	176°/170°	178°/178°
Backlight Life, Typical	50,000 hrs	50,000 hrs	50,000 hrs

## TOUCH SCREEN (all models)

Touch Screen Technology	5-wire Analog Resistive
Interface	Internally via USB
Resolution	4096 x 4096
Positional Accuracy (Maximum Error)	0.18" (0.19" ePC1950) 4.57mm (4.83mm ePC1950)
Positional Accuracy (Standard Deviation of Error)	< 0.08" (< 2.0 mm)
Expected Life	>35,000,000 Activations

## ENVIRONMENTAL

Operating Temperature	0°C to 50°C
Operating Humidity	20% to 80% RH, noncondensing
Operating Shock*	15g peak acceleration, 11msec
Operating Vibration	0.006" peak to peak, 1g max
Operating Altitude	Sea level to 10,000 feet

\* With optional Solid State hard drive.

## PHYSICAL

	ePC1550	ePC1750	ePC1950
Overall Dimensions (H x W x D)	12.80" x 15.80" x 4.25" (325.1mm x 401.3mm x 108.0mm)	14.48" x 17.14" x 4.25" (367.8mm x 442.0mm x 108.0mm)	15.70" x 18.66" x 4.375" (398.8mm x 474.0mm x 111.1mm)
Panel Mounting Depth	4.0" (101.6mm)	4.0" (101.6mm)	4.125" (104.8mm)
Cutout Dimensions (H x W)	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	100mm	100mm	100mm
Weight	20.0 lbs (9.07kg)	24.0 lbs (10.88kg)	28.0 lbs (12.70kg)
Shipping Weight	25.0 lbs (11.33kg)	29.0 lbs (13.15kg)	33.0 lbs (14.96kg)
Option Weight (SS)*	+3.5 lbs (1.58kg)*	+3.75 lbs (1.70kg)*	+4.0 lbs (1.81kg)*

\* Additional weight for Stainless Steel option.

## MEMORY

DRAM Type	200-pin DDR2 SO-DIMM, non-ECC, un-buffered
DRAM Bus Speed	667 MHz
DRAM Maximum	Two Modules (4 GB max)
Hard Drive Type	2.5", SATA II
Hard Drive Speed	5400 RPM
Hard Drive Size	80 GB Minimum
Solid State Hard Drive	8 GB or 16 GB (optional)
High Reliability Hard Drive	40 GB or 80 GB (optional)

## ELECTRICAL

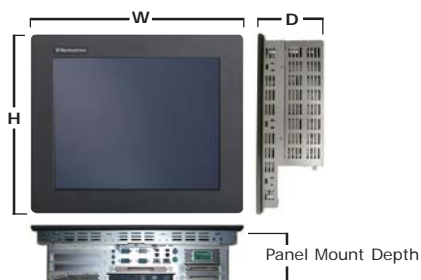
AC Input Voltage	100-240 VAC, 47-63 Hz
AC Input Current	2.0 A Maximum
DC Input Voltage (optional)	18-36 VDC
DC Input Current (optional)	7.5 A Maximum
Input Power	ePC1550 - 70 W Typical* ePC1750 - 80 W Typical* ePC1950 - 90 W Typical*

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

## 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 61000-3-2: Class A, EN 61000-3-3, EN 61000-6-2, RoHS compliant
Safety Agency Approvals	UL508 Listed, cUL Listed CSA C22.2, #142

## Cutout Dimensions



Model	Width (W)	Height (H)
ePC1550	15.00" (381.0mm)	12.00" (305.0mm)
ePC1750	16.35" (415.3mm)	13.70" (348.0mm)
ePC1950	17.75" (450.9mm)	14.90" (378.5mm)

## Order Number Generation

**Base unit configuration: ePCx50T-MC550-1GB-HD-DVD-XP**, where **x** = 15, 17, or 19 (for display size), with touchscreen, Mobile Celeron 550, 1 GB DRAM, 80 GB (min) SATA Hard Drive, SATA DVD-R/W drive and Windows XP Professional.

**ePC** -

**Display Size:**

<b>1550</b>	15.0" XGA LCD
<b>1750</b>	17.0" SXGA LCD
<b>1950</b>	19.0" SXGA LCD

**Input Options:**

<b>T</b>	Touchscreen
<b>blank</b>	None

**Processor Options:**

<b>MC550</b>	Mobile Celeron 550
<b>T7500</b>	Core 2 Duo T7500

**DRAM Options:**

<b>-1GB</b>	1 GB DRAM
<b>-2GB</b>	2 GB DRAM
<b>-4GB</b>	4 GB DRAM

**Hard Drive 1:**

<b>-HD</b>	80 GB (minimum) SATA hard drive
<b>-8SS</b>	8 GB Solid State SATA hard drive <sup>1</sup>
<b>-16SS</b>	16 GB Solid State SATA hard drive <sup>1</sup>
<b>-40EX</b>	40 GB (minimum) Extreme High Reliability SATA hard drive <sup>3</sup>
<b>-80EX</b>	80 GB (minimum) Extreme High Reliability SATA hard drive <sup>3</sup>

**Hard Drive 2:**

<b>blank</b>	No second Hard Drive installed (cover plate only)
<b>-HD</b>	80 GB (minimum) SATA hard drive
<b>-8SS</b>	8 GB Solid State SATA hard drive <sup>1</sup>
<b>-16SS</b>	16 GB Solid State SATA hard drive <sup>1</sup>
<b>-40EX</b>	40 GB (minimum) Extreme High Reliability SATA hard drive <sup>3</sup>
<b>-80EX</b>	80 GB (minimum) Extreme High Reliability SATA hard drive <sup>3</sup>

**Optical Drive:**

<b>blank</b>	No optical drive installed (cover plate only)
<b>-DVD</b>	SATA DVD-R/W drive installed

**Operating System:**

<b>-XP</b>	Windows XP Professional
<b>-2K</b>	Windows 2000 Professional <sup>2</sup>
<b>-VS</b>	Windows Vista Business
<b>-NOS</b>	No OS installed

**Power Supply Options:**

<b>blank</b>	100-240 VAC
<b>-DC</b>	24 Volt DC <sup>1</sup>

**Front Panel:**

<b>blank</b>	Powder Coated Aluminum
<b>-NL</b>	Powder Coated Aluminum w/o Logo
<b>-SS</b>	Machined 304 Stainless Steel
<b>-RM</b>	Rack Mount Front Panel (ePC1950 only) <sup>4</sup>

<sup>1</sup> Consult factory for availability and/or additional options

<sup>2</sup> Windows 2000 Professional will be loaded on the hard drive and the unit will be licensed with a Windows XP Professional COA. Due to Microsoft Licensing regulations backup software can no longer be distributed for this operating system. It is required that when purchasing this option that you already have a valid Windows 2000 installation disk and product key in your possession. Microsoft Downgrade rights allow the legal use of Windows 2000 Professional when a valid Windows XP Professional license is in place.

<sup>3</sup> Extreme High Reliability Hard Drive options carry a 5-year (part only) warranty. Consult factory for availability and/or other options.

<sup>4</sup> Rackmount Front Panel is not NEMA 4/4x/12.



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