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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 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 ePC-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.

Standard Features Available...



Two Easily Removable Hard Drive Bays



Hot-swappable, Easily Removable DVD-R/W 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)
- 160 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
- 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
- FCC & European CE compliant
- RoHS compliant
- Windows® XP Professional (Windows 7 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, Class I, Div 2, 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

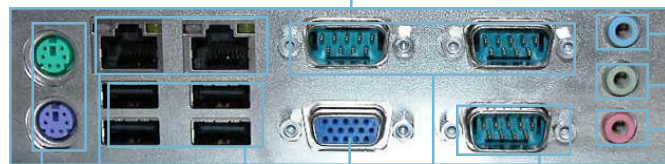


USB, Ethernet, & PS/2 Hold Down



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

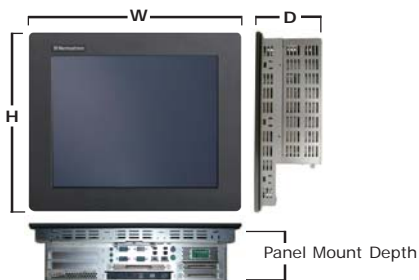
¹ Shock & Vibration specifications established with Solid State drives and no rotating media.

² Altitude specification is established by using all internal component specifications.

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.



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)

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 Size	160 GB Minimum
Solid State Hard Drive	40 GB or 80 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 61000-3-3, EN 61000-6-2, IEC 60950-1, RoHS compliant
Safety Agency Approvals	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.

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, 160 GB (min) SATA Hard Drive, SATA DVD-R/W drive and Windows XP Professional.

ePC -

Display Size:

1550	15.0" XGA LCD
1750	17.0" SXGA LCD
1950	19.0" SXGA LCD

Input Options:

T	Touchscreen
blank	None

Processor Options:

MC550	Mobile Celeron 550
T7500	Core 2 Duo T7500

DRAM Options:

-1GB	1 GB DRAM
-2GB	2 GB DRAM
-4GB	4 GB DRAM

Hard Drive 1:

-HD	160 GB (minimum) SATA hard drive
-40EX	40 GB (minimum) High Reliability hard drive ¹
-40SS	40 GB Solid State SATA hard drive ¹
-80EX	80 GB (minimum) High Reliabilityhard drive ¹
-80SS	80 GB Solid State SATA hard drive ¹

Hard Drive 2:

blank	No second Hard Drive installed (cover plate only)
-HD	80 GB (minimum) SATA hard drive
-40EX	40 GB (minimum) High Reliability hard drive ¹
-40SS	40 GB Solid State SATA hard drive ¹
-80EX	80 GB (minimum) High Reliabilityhard drive ¹
-80SS	80 GB Solid State SATA hard drive ¹

Optical Drive:

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

Operating System:

-XP	Windows XP Professional
-W7	Windows 7 Professional
-VS	Windows Vista Business
-NOS	No OS installed

Power Supply Options:

blank	100-240 VAC
-DC	24 Volt DC

Front Panel:

blank	Powder Coated Aluminum
-NL	Powder Coated Aluminum w/o Logo
-SS	Machined 304 Stainless Steel
-RM	Rackmount Powder Coated Aluminum (ePC1950 only) ²

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

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



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