# **Nematron**

DS ePC-Lite, Rev D

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# ePC-Lite Series





### **Embedded Low-Cost & Fanless TFT Flat Panel Industrial PCs**





nPC10





ePC15T

### **Overview**

The ePC "Lite" Series is Nematron's economy line of industrial PCs, equipped with standard features to handle applications where a full offering of traditional features are not required. The "Lite" Series is offered at a significantly lower cost than the popular iPC-Series, while still providing the reliability, ruggedness and support that come with Nematron products. The ePC "Lite" Series comes standard with an Intel N2800 fanless CPU and 30GB on-board mSATA storage, eliminating many of the reliability issues associated with industrial PCs due to rotating media or CPU cooling fans.

### **Standard Features**

- Choice of: 15.0" XGA & 19.0" SXGA Color TFT LED-backlit Displays 1
- High Performance/ Very Low Power Fanless Processor
  - Intel® Dual Core ATOM N2800 (1.86 GHz, 1 MB Cache, 4 Threads)
- 2 GB DRAM (4 GB optional)
- Internal onboard 30 GB mSATA Solid State Drive (60 GB optional)
  - Replaces need for Traditional drives or Solid State drives
- 5-wire Analog Resistive Touchscreen <sup>1</sup>
- I/O Connectivity

- One 10/100/1000 Ethernet port
- Two USB 2.0 ports
- Two USB 3.0 Ports
- One RS-232 serial port
- Audio in/out
- Additional Analog and HDMI ports (supports dual video modes with integrated LCD)
- NEMA 4/4x/12 powder coated aluminum front panel <sup>1</sup> (optional no logo front panel)
- Optional NEMA1 powder coated rear enclosure <sup>1</sup> (vented, not water or dust proof)
- Ultra-Thin panel mounting depth of 2.4" on ePC15T (2.7" - ePC19T)

- External 100-240 VAC power supply included
  - Regulated 12 VDC, 3.75 A Max output (ePC15T); 3.85 A Max output (ePC19T); 1.9 A (nPC10) (can also be powered by other Listed ITE power supplies or Class 2 power sources)
- UL and cUL Ordinary Locations Listed
- FCC, CE, & RoHS compliant
- Windows® 7 Professional 32-bit
  - Windows XP Professional 32-bit optional
- 2-year Warranty

<sup>&</sup>lt;sup>1</sup> Not applicable on the nPC10 Node Industrial PC.

### **Features & Benefits**

#### I/O Connectivity (nPC10 Node I/O shown below)





# **Coated Rear Enclosure**

- Vented, Not Water or Dust Proof
- Shown with optional mounting arm (sold separately)



# **Power Fanless Processor**

- Intel® Dual Core ATOM N2800 (1.86 GHz, 1 MB Cache, 4 Threads)



#### **External 100-240 VAC Power Supply**

- ePC15T: Regulated 12 VDC, 3.75 A Max output
- ePC19T: Regulated 12 VDC, 3.85 A Max output
- nPC10: Regulated 12 VDC, 1.9 A Max output



Meet all RoHS Hazardous Safety Standards.



### Standard 2-year warranty

Covers parts and service







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# **Technical Specifications**

Options
Front Panel Options







Physical	ePC15T	ePC19T	nPC10
Overall Dimensions	12.80" x 15.80" x 2.65"	15.70" x 18.66" x 2.95"	7.750" x 7.750" x 1.30"
H x W x D	(325.1mm x 401.3mm x 67.3mm)	(398.8mm x 474.0mm x 75.0mm)	(196.8mm x 196.8mm x 33.02mm)
Overall Dimensions w/	-	-	7.750" x 9.06" x 1.61"
Mounting Brackets			(196.8mm x 230.12mm x 40.89mm)
Panel Mounting Depth	2.4" (61.0mm)	2.7" (68.6mm)	-
Cutout Dimensions	12.00" x 15.00"	14.90" x 17.75"	-
H x W	(305.0mm x 381.0mm)	(378.5mm x 450.9mm)	
Weight	14.0 lbs (6.35kg)	22.5 lbs (10.21kg)	2.7 lbs (1.2 kg)
Shipping Weight	19.0 lbs (8.62kg)	27.5 lbs (12.47kg)	4.2 lbs (1.9 kg)
Display	ePC15T	ePC19T	nPC10
Display Diagonal	15.0" (381.0mm)	19.0" (482.6mm)	-
Display Size	11.97" x 8.98"	14.82" x 11.85"	-
Active Area H x V	(304.0mm x 228.1mm)	(376.3mm x 301.1mm)	
Native Resolution	XGA, 1024 x 768	SXGA, 1280 x 1024	-
Brightness / Contrast Ratio	400 nit / 600:1	300 nit / 2000:1	-
Horz/Vert Viewing Angle	140°/120°	178°/178°	-
Backlight Life / Typical	50,000 hrs	50,000 hrs	-
Electrical			
AC Power Supply	100-240 VAC, 47-63 Hz, 1.1 A Maximum	100-240 VAC, 47-63 Hz, 1.5 A Maximum	100-240 VAC, 47-63 Hz, 1.1 A Maximum
DC Input Voltage/Max Current	12 VDC, Regulated ± 5%, 3.75 A Maximum 1	12 VDC, Regulated ± 5%, 3.85 A Maximum <sup>1</sup>	12 VDC, Regulated ± 5%, 1.9 A Maximum <sup>1</sup>
	· ·	<sup>1</sup> Output of included AC power supply. Can also be	powered by other Listed ITE power supply or Class 2 Power sources.
Typical* Power	ePC15T	ePC19T	nPC10
Input Power	30W	50W	20W
		* Typical power is measure	ed per model/per processor with all possible I/O ports functioning.

COMMON SPEC	CS CS			
Processor Options				
Type & Processor	Intel Dual Core ATOM N2800			
Core Speed	1.86 GHz			
Cores / Threads	2/4			
L2 Cache	1MB			
Chipset	Intel NM10 Express			
Graphics Controller	Integrated Intel GMA 3650 <sup>2</sup>			
Ethernet Controller	Intel 82574L Gigabit 10/100/1000 (1 port)			
	<sup>2</sup> Video Memory is allocated as needed with Intel DVMT (Dynamic Video)	deo Memory Technology).		
Memory & I/O				
DRAM	2GB Single Module (204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz); Optional 4GB max			
Standard Storage	30GB mSATA; Optional 60GB mSATA			
Available I/O	(1) HDMI Port, (2) USB 2.0, (2) USB 3.0, (1) RS-232, (1) Analog Video Port (supports dual video), (1) Ethemet 10/100/1000 Port, (2) Audio In/Out Ports			
Touchscreen				
Technology	5-wire Analog Resistive (Not applicable on the nPC10 model)			
Operating System				
Standard OS	Windows 7 Professional (32-bit); Optional Windows XP Profession	onal (32-bit)		
Environmental	Operating	Non-operating		
Temperature <sup>3</sup> / Humidity	0°C to 50°C / 20% to 80% RH, noncondensing	-20°C to 60°C / 20% to 80% RH, noncondensing		
Shock 4	15g peak acceleration, 11msec	30g peak acceleration, 11msec		
Vibration (5-2000 Hz) 4	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration		
Altitude 5	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. inst <sup>4</sup> Shock & Vibration specifications established with Solid State drives and	de any enclosure being utilized). no rotating media. <sup>5</sup> Altitude specification is established by using all internal component specifications		
Agency Approvals				
Front Panel NEMA Rating	NEMA 4/4X/12, IP65			
Enclosure Rating <sup>6</sup>	NEMA 1 (vented, not dust or water proof, for stand-alone VESA mounting)			
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 609	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1, RoHS compliant		
Safety Agency Approvals *	UL508 Listed, cUL Listed CSA C22.2, #142			
	<sup>6</sup> NEMA 1 only, not recommended for environments with high levels	of moisture and/or particulate matter.		

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Powder-Coated Aluminum Front Panel; with No Logo



## **Order Number Generation**

**Base unit configuration: ePC15T-N2800-2GB-30mS-W7**, includes a 15" touchscreen, Intel Dual Core ATOM N2800, 2 GB DRAM, 30 GB On-board mSATA storage, Windows 7 Professional, and External AC Power Supply.



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ePC191



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Display Size:		
15T 19T	15.0" XGA LCD 19.0" SXGA LCD	
DRAM:		
-2GB	2 GB DRAM	
-4GB	4 GB DRAM	

On-board Storage:

**-30mS** 30 GB On-board mSATA Storage **-60mS** 60 GB On-board mSATA Storage

Operating System:

-W7 Windows 7 Professional (32-bit)-XP Windows XP Professional (32-bit)

Front Panel: -

**blank** Powder Coated Aluminum

**-NL** Powder Coated Aluminum w/o Logo

Enclosure: 1

**blank** Panel Mount front panel w/o rear enclosure

**-EN** Vented rear enclosure for stand-alone VESA mounting

**Base unit configuration:** nPC10-N2800-2GB-30mS-W7, includes Intel ATOM Dual Core N2800, 2 GB DRAM, 30 GB On-board mSATA Storage, Windows 7 Professional, and External AC Power Supply.





## nPC10-N2800

Storage:	
-2GB	2 GB DRAM
-4GB	4 GB DRAM
Storage:	
-30mS	30 GB On-board mSATA Storage

-30mS-60mS30 GB On-board mSATA Storage60 GB On-board mSATA Storage

**Operating System:** 

-W7 Windows 7 Professional (32-bit)-XP Windows XP Professional (32-bit)

#### **Contact Information**

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<sup>&</sup>lt;sup>1</sup> NEMA 1 only, not recommended for environments with high levels of moisture and/or particulate matter.