COMARK

Nematron by COMARK

INDUSTRIAL NODE PC

Nematron® nPC300

High Performance "Node" Industrial PC with 6th Generation Intel® Processing



Key Standard Features

- High Performance / Low Power Processor options to choose from:
  - Intel G3902E Celeron *1.6GHz, 2/2 cores, 2MB cache*
  - Intel i5-6442EQ *1.9GHz,4/4 cores,6MB cache*
  - Intel i7-6822EQ *2.0GHz,4/8 cores,8MB cache*
- 4 GB DRAM *(8 GB & 16 GB optional)*
- 240 GB Easily Removable SATA Solid State Drive
  - Optional larger SSD sizes and Rotating Hybrid Hard Drive
- Extensive I/O Connectivity
  - Dual Gigabit *(10/100/1000)* Ethernet ports
  - 6 USB ports *(four 3.0, two 2.0)*
  - 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)*
- Integrated 100-240 VAC power supply
  - 24 VDC optional
- 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 7 Ultimate (64-bit), Windows 10 Enterprise IoT (32- & 64-bit), or No OS installed optional
- 2-year Warranty

Technical Specifications



nPC300

Physical

Overall Dimensions	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)
Weight	6.5 lbs (2.9 kg)
Shipping Weight	8.0 lbs (3.6 kg)

Processor

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

Type & Processor	Intel Celeron G3902E	Intel i5-6442EQ	Intel i7-6822EQ
Core Speed	1.6 GHz	1.9 GHz	2.0 GHz
Core / Virtual	2 / 2	4 / 4	4 / 8
Smartcache	2MB	6MB	8MB
Chipset	Intel QM170 series	Intel QM170 series	Intel QM170 series
Video RAM	64 MB System RAM Base [1]	64 MB System RAM Base [1]	64 MB System RAM Base [1]
Ethernet Controller	Intel 210 series (2 ports)	Intel 210 series (2 ports)	Intel 210 series (2 ports)

Storage & Peripherals

Operating System	Windows 7 Professional (32-bit); Optional Windows 7 Ultimate (64-bit), Windows 10 Enterprise IoT (32- & 64-bit), or No OS installed
DRAM	4GB Single Module (DDR4 SO-DIMM, non-ECC, unbuffered, 2133 MHz); optional 8GB and 16GB DRAM
Standard Storage	240GB SATA Solid State Drive; Optional 480GB or 960GB Solid State Drive; 1TB SATA Hybrid Hard Drive [2]
Available I/O	(1) HDMI Port, (2) USB 2.0, (4) USB 3.0, (2) RS-232, (1) RS-485/422, (1) Analog Video Port (supports dual video with integrated display), (2) Ethernet 10/100/1000 Ports

[2] Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.

Power

Input Power	60W
AC Input Voltage	100-240 VAC, 50-60 Hz, 1.0 A Maximum
DC Input Voltage	18-36 VDC, 6.0 A Maximum

Environmental

	Operating	Non-operating
Temperature [3]	0°C to 55°C	-20°C to 70°C
Humidity	20% to 80% RH, noncondensing	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

[3] 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.
[4] Shock & Vibration specifications established with Solid State drives and no rotating media.
[5] Altitude specification is established by using all internal component specifications.

Compliance

FCC	47 CFR, Part 15, Class A
EU CE Marking	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1
Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012, cUL Listed CSA C22.2, #142, cUL Listed CSA 22.2, #213

* nPC300: Class I Division 2, Groups A, B, C, D; Temp. Code: T6 , when installed on a flat surface of a Type 1 enclosure.

Features

1. Integral 100-240 VAC or 24 VDC Power Supply
2. UL/cUL 508, Class I Div 2, CE Approvals
3. Easily Removable SATA Solid State Drive
4. Extensive I/O Connectivity
5. USB Retention Bracket
6. Mounting Brackets
7. HDMI Cable Retention Bracket
8. Made with Pride in the USA



2YR. WARRANTY

Standard 2-year warranty
- Covers parts and service

ORDER NUMBER GENERATION

Base unit configuration: nPC300-iC6-4GB-240SS-W7, includes Intel Celeron G3902E, 4 GB DRAM, 240 GB SATA Solid State Drive, and Windows 7 Professional (32-bit).

nPC300 - ____ ____ ____ ____ ____

Processor:

iC6	Intel G3902E Celeron
i56	Intel i5-6442EQ
i76	Intel i7-6822EQ

DRAM:

-4GB	4 GB DRAM
-8GB	8 GB DRAM
-16GB	16 GB DRAM

Hard Drive:

-240SS	240 GB SATA Solid State Drive [1]
-480SS	480 GB SATA Solid State Drive [1]
-960SS	960 GB SATA Solid State Drive [1]
-HD	1 TB (minimum) SATA Hybrid Hard Drive [2]

Operating System:

-W7	Windows 7 Professional (32-bit)
-W7U	Windows 7 Ultimate (64-bit)
-W1032	Windows 10 Enterprise IoT (32-bit)
-W1064	Windows 10 Enterprise IoT (64-bit)
-NOS	No OS installed

Power Supply:

blank	100-240 VAC
-DC	24 Volt DC

[1] Solid State Drive options carry a 5-year (part-only) warranty.
[2] Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance. These are rotating hard drives and do not carry any extra part warranty.

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