

INDUSTRIAL NODE PC

Nematron® nPC300 IECEx

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
- 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 isolated 24 VDC power supply
- IECEx and ATEX Zone 2/22 approved when installed in an ATEX approved enclosure as described in DEMKO 14 ATEX 1374X and UL 16.0058X
- 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
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

Power

Input Power	60W
DC Input Voltage	18-36 VDC, 6.0 A Maximum

Environmental

Temperature ³	Operating 0°C to 55°C	Non-operating -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.

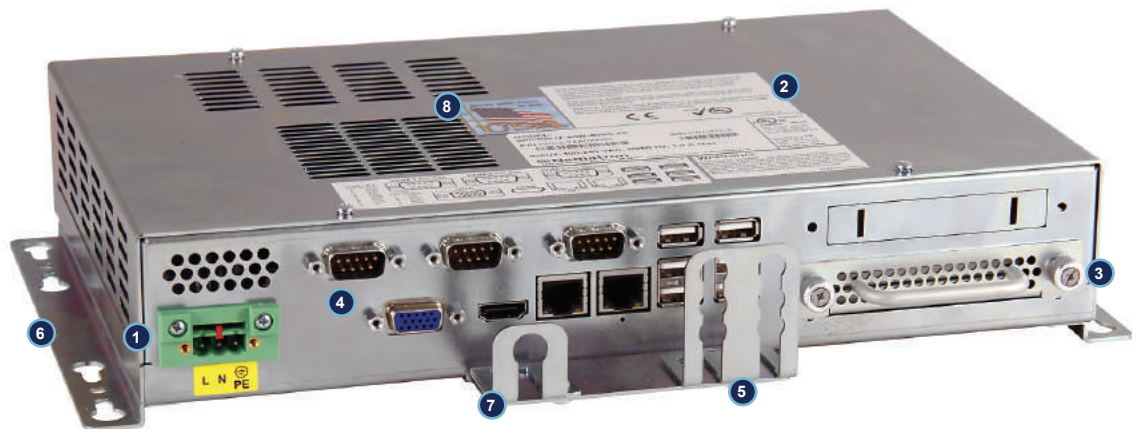
Compliance

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
IECEX Compliance	UL 16.0058X
ATEX Compliance	ATEX Zone 2 approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X
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. Integrated Isolated 24 VDC Power Supply
2. IECEX, ATEX ZONE 2, UL/cUL 508, Class I Div 2, CE Approval Label
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

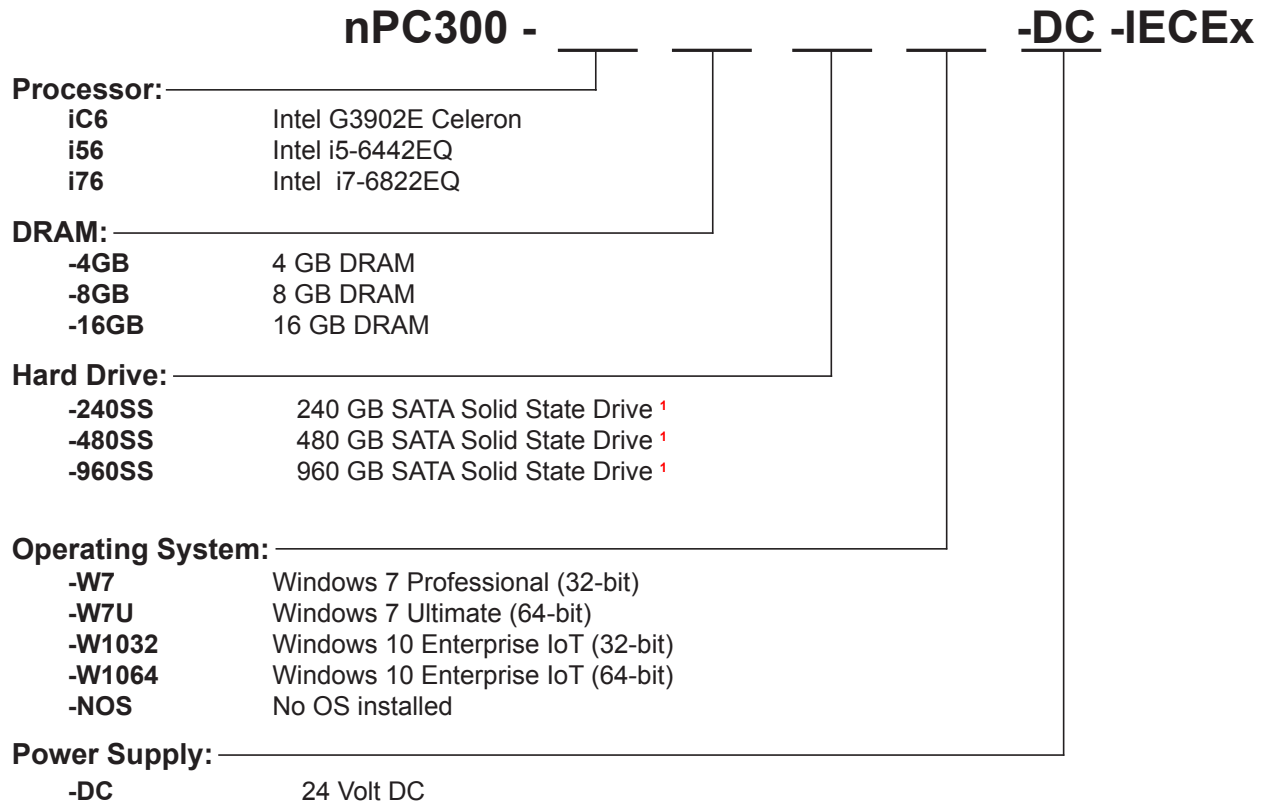


Standard 2-year warranty
- Covers parts and service



ORDER NUMBER GENERATION

Base unit configuration: nPC300-iC6-4GB-240SS-W7-DC-IECEEx, includes Intel Celeron G3902E, 4 GB DRAM, 240 GB SATA Solid State Drive, isolated 24 VDC power supply, and Windows 7 Professional (32-bit).



¹ Solid State Drive options carry a 5-year (part-only) warranty.