

INDUSTRIAL NODE PC

Nematron® Fanless nPP25 Node PC

High Performance FANLESS Computer with 6th/7th 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
 - 4GB DRAM (8GB & 16GB optional)
 - 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)
 - 240GB Solid State Drive
 - Optional larger SSD sizes and Rotating Hybrid Hard Drive
 - 12VDC input
 - Optional AC power supply sold separately
 - Simple, easy-to-use DIN Rail and Shelf Mounting Brackets included
- for mounting in multiple orientations
 - 0° to 60°C Operational temperature rating *
 - Windows 7 Professional (32-bit) pre-installed
 - Windows 7 Ultimate (64-bit) with Multilanguage support, Windows 10 Enterprise IoT (32-bit or 64-bit), or No OS Installed optional
 - FCC & CE Compliant (pending final approval, please contact factory for clarification)

* Please consult factory for specific models and operating ranges.

Technical Specifications

Physical	
Overall Dimensions	7.5" x 7.5" x 3.0" (190.5mm x 190.5mm x 76.2mm)
Overall Dimensions w/ Mounting Brackets	7.5" x 8.5" x 3.48" (190.5mm x 215.9mm x 88.39mm)
Weight	6.0 lbs. (2.7 kg)
Shipping Weight	+2.0 lbs. (0.9 kg)
Processor	
Type & Processor	Intel Celeron G3902E Intel i5-6442EQ Intel i7-6822EQ
Core Speed	1.6GHz 1.9GHz 2.0GHz
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 RAMBase ¹ 64 MB System RAMBase ¹ 64 MB System RAMBase 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-bit or 64-bit), or No OS installed
DRAM	4GB Single Module (204-pin DDR3 SO-DIMM, non-ECC, unbuffered, 1066 MHz); Optional 8GB and 16GB ¹
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 ¹ 8GB and 16GB DRAM only available with Windows 7 Ultimate (-W7U) 64-bit or Windows 10 (-W1064) 64-bit) operating systems. ² Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance.
Power	
Input Power	66W max 5.5A
DC Input Voltage	12VDC, A Maximum
Environmental	
Temperature ²	Operating 0°C to 60°C * Non-operating -20°C to 70°C
Humidity	20% to 80% RH, noncondensing 20% to 80% RH, noncondensing
Shock ³	10g peak acceleration, 11msec 30g peak acceleration, 11msec
Vibration (50-500 Hz) ³	.006" peak to peak displacement, 1.0g maximum acceleration .015" peak to peak displacement, 2.5g maximum acceleration
Altitude ⁴	Sea level to 10,000 feet Sea level to 40,000 feet
² 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.	
³ Shock & Vibration specifications established with Solid State drives and no rotating media.	
⁴ Altitude specification is established by using all internal components specifications.	
Compliance	
FCC	Pending final approval, please contact factory for clarification
EU CE Marking	Pending final approval, please contact factory for clarification



ORDER NUMBER GENERATION

Base Unit Configuration: nPP25-iC6-4GB-240SS-W7-12, nPP25 Fanless Node PC with Intel Celeron G3902E processor, 4GB DRAM, 240GB Solid State Drive, Windows 7 Professional (32-bit) operating system, and 12VDC power supply.

nPP25-		-12
Processors:		
iC6	Intel G3902E Celeron	
i56	Intel i5-6442EQ	
i76	Intel i7-6822EQ	
DRAM:		
-4GB	4GB DRAM	
-8GB	8GB DRAM ¹	
-16GB	16GB DRAM ¹	
Solid State Drive Storage:		
-240SS	240GB Solid State Drive	
-480SS	480GB Solid State Drive	
-960SS	960GB Solid State Drive	
-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 Operating System	
Power Supply:		
-12	12VDC non-isolated input	

¹ 8GB & 16GB DRAM only available with Windows 7 Ultimate (-W7U) 64-bit or Windows 10 (-W1064) 64-bit operating systems.

² Hybrid Hard Drives have a solid state adaptive memory cache to significantly increase read/write performance.