

# Intel® Core™ 2 Duo cPCI x86 Processor Blade

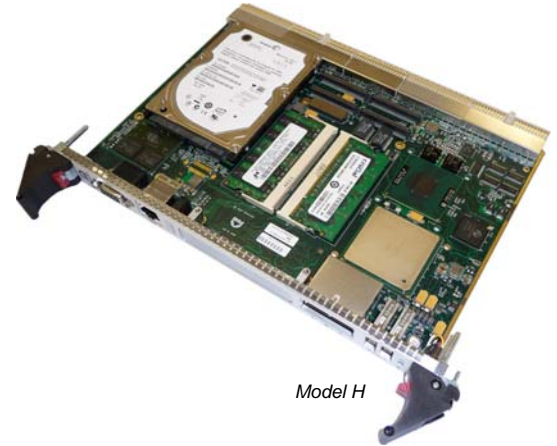


## Product Datasheet

**ComputeNode™**  
Carrier-grade cPCI solutions

PDSi's **Intel-based CompactPCI x86 Processor Blade (CP86-N1)** provides a robust, high-performance general purpose compute platform for use in CompactPCI PICMG 2.16 systems. This latest addition to PDSi's **ComputeNode™** family of carrier-grade CompactPCI solutions is built around Intel's 45nm technology "Penryn" Core 2 Duo processor and server-grade "Eagle Lake" chipset (5100 MCH / ICH9R) supporting ECC memory. This powerful, compact blade offers the highest performance and dependability in its class.

The ComputeNode CP86-N1 blade includes a standard PMC/XMC site for I/O expansion and is offered in two alternate models, one featuring an onboard SATA drive plus high resolution graphics, the other providing a second PMC expansion site. On-blade options include a USB Flash drive. Rear I/O capability covers a very broad range of interfaces that can be accessed through one of PDSi's companion rear transition modules such as CP86-RT01. Two 1000Base-T Ethernet ports provide the PICMG 2.16-compliant fabric interfaces, making the CP86-N1 fully compatible with any ComputeNode cPSB chassis.



Model H

PDSi gives telecom, aerospace, and military OEMs the ability to deploy configurable, scalable, high-reliability cPCI solutions using this powerful compute blade based on the latest Intel technology. Extended availability from PDSi is assured as key components are supported by embedded roadmaps. PDSi can also provide customization, turnkey integration and support of cPCI systems, as well as extended warranty and repair services.

### Key Features

- Server-grade Compact PCI compute blade
  - Intel T9400 Core 2 Duo 2.53 GHz
  - Intel 5100 MCH / ICH9R
- Up to 8GB Registered ECC DDR2 667 Memory
- 1 PMC/XMC mezzanine site
- 2 alternate models, offering:
  - 2nd PMC site, or
  - ATI Radeon™ graphics & 2.5" SATA drive
- 2 x 1Gb Ethernet links (Front panel)
- 2 x USB 2.0 (Front panel)
- Rear I/O interfaces
- Optional USB Flash drive
- Pigeon Point IPMC
- Extended availability assured



### The ComputeNode Family

PDSi's ComputeNode platforms are trusted by OEMs and ISVs to deliver mission critical solutions across the globe.

Typical applications include:

- Telco Servers
- Gateways
- Security Platforms
- VOIP Servers
- Network Controllers
- Digital Transcoding Systems



- Processors** Intel "Penryn" Core 2 Duo, T9400
  - o 2.53 GHz, 1067 FSB, 6MB cache
  - o Low power 45nm technology
- Chipset** Intel 5100 MCH  
Intel ICH9R
- Memory** 2 SORDIMM sockets (533/667 MHz)  
Up to 8GB DDR2 ECC Registered Memory
- NV Storage** Optional USB uDOC Flash drive, up to 8 GB
- PMC/XMC** 1 PMC/XMC mezzanine site with rear I/O pass-through
  - o XMC – PCIe x 4
  - o PMC - PCI-X 64-bit/100 MHz
- Model P – PMC I/O** 2nd PMC site - PCI-X 64-bit/100 MHz  
*Model P*



- Model H – SATA drive plus Graphics** 1 - 2.5 inch SATA drive, up to 320 GB.  
*plus*  
ATI Radeon E2400 3D graphics controller, up to 1600x1200 resolution at 24 bit color depth. 2 channels of VGA - front and rear.
- Serial** COM1 selectable to front with Model H. (COM 1 & 2 to rear I/O standard.)



**Front Panel - Standard**

- Ethernet** 2 - Gigabit Ethernet RJ-45 ports
- USB** 2 - USB 2.0 Type A ports
- LEDs** Hot-swap, OK, Alarm LEDs

**Optional Front Panel – Model H adds:**

- Video** 1 - HD-15 D-sub socket
- Serial** 1 - RJ-45 Serial COM1 (selectable)

**Rear I/O - Standard**

- USB** 4 - USB 2.0 ports
- Serial** COM1 and COM2 ports
- PCI-e** 1- PCIe x4, 2-PCIe x1 ports
- SATA** 4 – SATA II ports
- PMC/XMC** I/O pass-through from Pn4 connector(s)
- Other** IPMI, SMBus, PS2, Battery, Fan

**Optional Rear I/O – Model H adds:**

- Video** 1 – VGA port

- Compatible RTMs** PDSi CP86-RT01

**Switched Fabric Interface**

- Gb Ethernet** 2x 1000 Base-T (PICMG 2.16 R1.0)

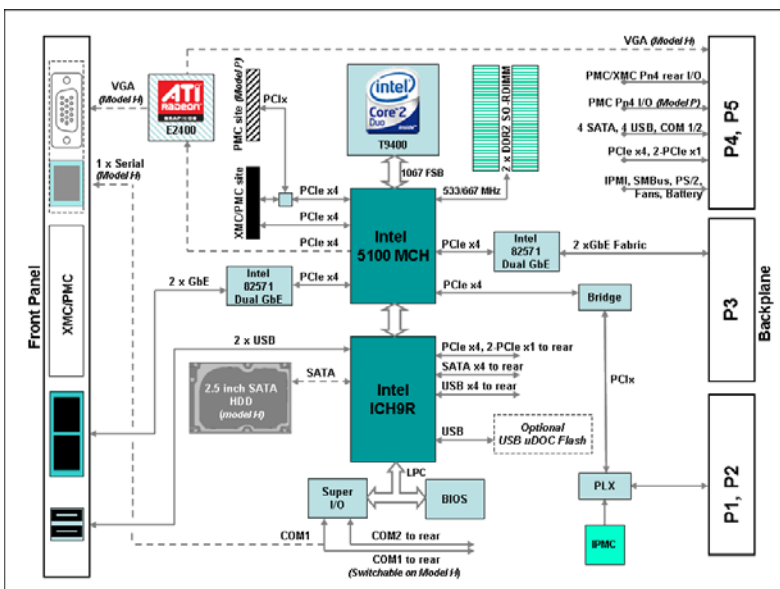
- Compliance** PICMG Core 2.0 R3.0 / ECN002  
PICMG cPSB 2.16 R1.0 / ECN001  
RoHS Directive 2002/95/EC

- Operating Systems** Linux, Windows (XP, Server2003)

- Form Factor/Dimensions** 6U / 4HP board  
160mm(D) x 233mm(H) x 20.5mm(W)

- Temperature** Operation : -5 to 55 degC

- Humidity** 5% - 90% non-condensing



**Ordering Guide**

CP86-N1	x	x	x	x	6U cPCI Intel Core 2 Duo Processor Blade with:
					<u>USB Flash Storage</u>
				0	none
				1	1 GB
				2	2 GB
				3	4 GB
				4	8 GB
					<u>Onboard HDD (only available with I/O Model "H")</u>
				0	none
				1	160GB, HDD, 7.2K, Extended Availability ("EA")
				2	250GB, HDD, 7.2K, Extended Availability ("EA")
				3	320GB, HDD, 7.2K, Extended Availability ("EA")
				4	80GB, SSD, Intel X25-M (Mainstream, MLC)
				5	160GB, SSD, Intel X25-M (Mainstream, MLC)
				6	32GB, SSD, Intel X25-E Model (Extreme, SLC)
				7	64GB, SSD, Intel X25-E Model (Extreme, SLC)
					<u>Memory</u>
				A	2GB DDR2 ECC Reg (667 MHz) SORDIMM
				B	4GB DDR2 ECC Reg (667 MHz) SORDIMM
				C	8GB DDR2 ECC Reg (667 MHz) SORDIMM
					<u>I/O Models</u>
				H	1- XMC/PMC site, plus Graphics, Serial, HDD
				P	1- XMC/PMC and 1- PMC site