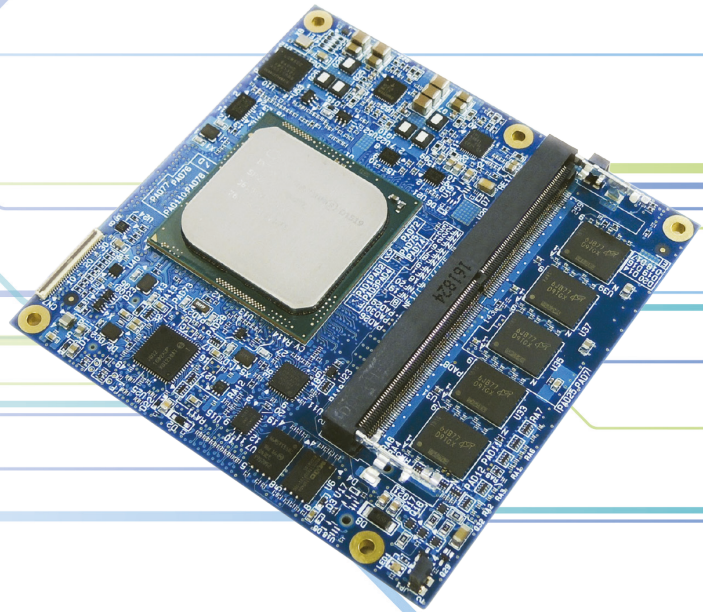


## CPU-161-18

- HPEC and Microserver Ready
- Intel® Xeon® D-15xx
- Hybrid RAM Architecture
- Compact Size with PCIe x16 Port
- Rugged and Fanless
- Customizable
- Professional Services



## FEATURES

**HPeC and Microserver Ready** - Combines computational power with a rugged design to enable High Performance applications even in-the-field

**Powerful** - Supports the latest generation of embedded Intel Pentium® and Xeon D-15xx CPUs to deliver a server-class module

**Hybrid RAM Architecture** - Innovates by offering the reliability of soldered-down RAM and the expandability of SO-DIMMs

**Compact Size with PCIe x16 Port** - Complies with COM Express® Type 6 Rev 2.1, including support for a PCIe x16 port

**Rugged and Fanless** - Allows robust, fanless designs thanks to 100% soldered-down components and with a range of energy efficient CPUs

**Customizable** - Comes with optional personalization and full customization services, ranging from factory options to deep HW/SW configuration changes

**Professional Services** - Provides the foundation for Eurotech Professional Services that span from carrier board development to complete system design, certification and manufacturing

The CPU-161-18 combines a high performance and truly embedded CPU with an innovative hybrid RAM architecture that offers the ruggedness of soldered memory and the expandability of SO-DIMMs. The standard configuration provides 8GB of memory soldered directly on the PCB and supports up to 24GB DDR4 RAM with ECC error correction through a SO-DIMM slot, targeting use cases where extreme ruggedness is required, and those that need a large memory.

The CPU-161-18 can be configured with any member of the Xeon/Pentium D 15xx family; standard versions support extended temperature CPUs, such as the Pentium D-1519 and the Xeon D-1559, closing the gap between traditional embedded applications and servers.

Compatible with existing Type 6 carrier boards, the CPU-161-18 is a headless unit that provides a fast upgrade path to existing projects and that allows the creation of new high-performance ones: a notable feature of this Compact size module is the availability of a x16 PCIe Gen 3 port in addition to the x8 one, a characteristic that is more commonly found only on larger modules; other features include: Gigabit Ethernet, 4x SATA 3.0 ports, 4x USB 3.0 and 7x USB 2.0 interfaces.

Supported operating systems include Yocto Linux and CentOS; moreover, the CPU-161-18 supports Everywhere Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT gateways.

Professional Services are available for the CPU-161-18, starting from BIOS personalization and including carrier board design, system development and production. Deep module customization, such as feature changes are also available.

# CPU-161-18

## Specifications

## Rugged Intel Xeon D-15xx COM Express Compact Type 6

Ordering code: CPU-161-18-XX					
XX		- 05	- 06	- 07	- 08
PROCESSOR	<b>CPU</b>	Pentium D-1519 1.50GHz, 4 Cores	Xeon D-1529 1.30GHz, 4 Cores (IEC 61508 Safety Integrity Compliant)	Xeon D-1539 1.60GHz, 8 Cores	Xeon D-1559 1.50GHz, 12 Cores
MEMORY	<b>On-board</b>	8GB DDR4 ECC Memory Down (2133-2400MT/s)			
	<b>On-socket</b>	1x DDR4 ECC SODIMM up to 16GB			
STORAGE	<b>Embedded</b>	2x SPI-Flash (16MB + 32MB) 1x EEPROM (8kB)			
	<b>SATA</b>	4x SATA 3.0 (up to 6Gb/s)	2x SATA 3.0 (up to 6Gb/s)	4x SATA 3.0 (up to 6Gb/s)	
	<b>RAID</b>	Factory Option			
I/O INTERFACES	<b>Ethernet</b>	1x 10/100/1000Mbps			
	<b>USB</b>	4x USB 3.0 7x USB 2.0 (EHCI supported)	7x USB 2.0 (EHCI supported)	4x USB 3.0 7x USB 2.0 (EHCI supported)	
	<b>Serial</b>	2x UART (TX/RX)			
	<b>Digital I/O</b>	1x 8bit Digital I/O			
	<b>PCI Express</b>	1x PCIe x16 (Gen 3) 4x PCIe x1 (Gen 2) 1x PCIe x4 (Gen 2) Non-transparent bridge or Transparent bridge (Switchable)	1x PCIe x16 (Gen 2) Non-transparent bridge or Transparent bridge (Switchable)	1x PCIe x16 (Gen 3) 4x PCIe x1 (Gen 2) 1x PCIe x4 (Gen 2) Non-transparent bridge or Transparent bridge (Switchable)	
	<b>LPC</b>	Yes			
	<b>I2C</b>	Yes			
OTHER	<b>SMBus</b>	Yes			
	<b>RTC</b>	Yes			
	<b>Watchdog</b>	Yes			
	<b>Security</b>	Intel AES-NI Intel Secure Key			
POWER	<b>Sensors</b>	Temperature Sensor			
	<b>Input</b>	12V, 5VSBY, 3V_RTC			
	<b>Consumption</b>	25W (CPU TDP)	20W (CPU TDP)	35W (CPU TDP)	45W (CPU TDP)
ENVIRONMENT	<b>Operating Temp</b>	- 40 to +85°C			
	<b>Storage Temp</b>	- 40 to +85°C			
	<b>Humidity</b>	35% to 85%			
CERTIFICATIONS	<b>Environmental</b>	RoHS (2011/65/EU)			
	<b>Compliance</b>	PICMG COM Express R2.1, Type 6			
MECHANICAL	<b>Dimensions</b>	95x95mm (LxW) - COM Express Compact			

### SUPPORTED SOFTWARE

<b>OS</b>	Yocto Linux, CentOS 7 (Professional Services: Windows 10 IoT Enterprise, Fedora, Other Linux and RTOS)
<b>IoT Framework</b>	Everyware Software Framework (Java/OSGi)

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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