



- **6th Gen Intel® Core™**
- **Low Profile, Mini-ITX**
- **Three Displays, RAID, SIM, mPCIe**
- **Wide Operating Temperature**
- **Fanless**
- **Customization Options**
- **IoT Middleware and Platform**

## Features

- Powerful** - Comes with 6th Gen Intel Core CPUs: Core i7, i5, i3 and Celeron dual core configurations, up to 2.6GHz (3.4GHz burst)
- Versatile** - Fits easily everywhere, with the low profile Mini-ITX form factor, while offering a wide range of standard interfaces
- Rich** - Delivers multiple interfaces, including three independent video ports, two Mini PCIe sockets, two SATA interfaces with RAID, a SIM slot and much more
- Rugged** - Supports wide operating temperature (-20 to +70°C), soldered-down CPU and conformal coating options
- Low Power** - Enables fanless designs with DDR3L and a CPU TDP of only 15W
- Professional Services** - Cuts Time-To-Market with Eurotech Professional Services, which include deep module customization, BIOS personalization, carrier board and system design and production
- IoT Native** - Provides native support for IoT, including IoT middleware and access to Eurotech IoT Integration Platform

## Description

The CPU-521-17 is a rugged Mini-ITX Single Board Computer designed to deliver intense computation while meeting the requirements for industrial and rugged fanless applications.

Low-profile at just 16.5mm, the CPU-521-17 offers the 6th Generation Intel Core processor family (i7, i5, i3 and Celeron), with two cores and up to 16GB SO-DIMM RAM.

Other features include high speed interfaces: two Gbit Ethernet, two SATA 3.0 with RAID support, four USB 3.0 and four USB 2.0, two full-size Mini PCIe sockets, four PCIe Gen 3 lanes, and three independent video ports (LVDS, DP++ and HDMI supporting up to 4096x2304@60Hz).

The CPU-521-17 is a solid building block for projects where reliability in harsh conditions is mandatory, and long term availability is a must, thanks to an operating temperature of -20 to +70°C, a soldered-down CPU, support for RAID 0/1, optional conformal coating and long term support/lifecycle programs.

Supported operating systems include Windows 10 IoT Enterprise and Linux; moreover, the CPU-521-17 supports Everyware Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT gateways. Distributed and supported by Eurotech, ESF adds advanced security, diagnostics, provisioning, remote access and full integration with Everyware Cloud (EC), Eurotech's IoT integration platform (separately available).

Professional Services are available for the CPU-521-17, starting from BIOS personalization and including carrier board design, system development and production. Deep module customization, such as feature changes are also available.

### Ordering code: CPU-521-17-XX

XX		- 01	- 02	- 03
<b>PROCESSOR</b>	CPU	Celeron 3955U 2.0GHz, 2 Cores	Core i5 6300U 2.4GHz (3.4GHz), 2 Cores	Core i7 6600U 2.6GHz (3.4GHz), 2 Cores
<b>BIOS</b>	Type	Insyde		
	Size	SPI 128Mbit		
<b>MEMORY</b>	RAM	2x SODIMM Sockets - Up to 16GB DDR3L 1600MHz - Dual Channel		
<b>STORAGE</b>	SATA	2x SATA 3.0 (up to 6Gb/s), 1x Mini SATA Slot (Shared with PCIe/USB)		
	RAID	RAID 0/1		
<b>I/O INTERFACES</b>	Ethernet	2x 10/100/1000Mbps (I210AT + I219LM)	2x 10/100/1000Mbps (I210AT + I219LM - With iAMT Support)	
	USB	4x USB 3.0 (Type A), 4x USB 2.0 (Header)		
	Serial	2x RS-232/RS-422/RS-485 (RS-232 With Power, Header), 2x RS-232 (Header)		
	Digital I/O	8x DI/O		
	Video	Intel HD Graphics GT Series, Triple Independent Displays: 1x HDMI (up to 4096x2160 @24Hz / 2560x1600 @60Hz), 1x LVDS (up to 1920x1200 @60Hz, Dual Channel, 48 bit), 1x DP++ (up to up to 4096x2304 @60Hz)		
	Display	1x LVDS LCD Connector, 1x LCD Inverter Power		
	Audio	1x Line-out, 1x Mic-in		
	PCI Express	1x PCIe x4 (Gen 3) Slot – 1x Full/Half Size Mini PCIe Slot (PCIe/USB/mSATA Signals) – 1x Full/Half Size Mini PCIe Slot (PCIe/USB/SIM Signals)		
	LPC	Yes		
	I2C	Yes		
	SMBus	Yes		
<b>OTHER</b>	RTC	Yes (Lithium 3V 210mAh Battery)		
	Watchdog	Software Programmable (From 1 to 255s)		
	TPM	Factory Option		
	SIM Slot	Yes		
<b>POWER</b>	Input	12V (DC-in, Screw-lock Jack)		
<b>ENVIRONMENT</b>	Operating Temp	- 20 to +70°C (Temperature Screened)		
	Storage Temp	- 40 to +85°C		
<b>CERTIFICATIONS</b>	Environmental	RoHS2, REACH		
	Compliance	Mini-ITX		
<b>MECHANICAL</b>	Dimensions	170x170mm (LxW) - Height: 3.5/1.6/16.5mm (Bottom, PCB, Top Sides)		

### Supported Software

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