



- 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, 48bit), 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)