



- 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 |
|-----------------------|----------------|---|--|--|
| PROCESSOR | 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 |
| BIOS | Type | Insyde | | |
| | Size | SPI 128Mbit | | |
| MEMORY | RAM | 2x SODIMM Sockets - Up to 16GB DDR3L 1600MHz - Dual Channel | | |
| STORAGE | SATA | 2x SATA 3.0 (up to 6Gb/s), 1x Mini SATA Slot (Shared with PCIe/USB) | | |
| | RAID | RAID 0/1 | | |
| I/O INTERFACES | 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 | | |
| OTHER | RTC | Yes (Lithium 3V 210mAh Battery) | | |
| | Watchdog | Software Programmable (From 1 to 255s) | | |
| | TPM | Factory Option | | |
| | SIM Slot | Yes | | |
| POWER | Input | 12V (DC-in, Screw-lock Jack) | | |
| ENVIRONMENT | Operating Temp | - 20 to +70°C (Temperature Screened) | | |
| | Storage Temp | - 40 to +85°C | | |
| CERTIFICATIONS | Environmental | RoHS2, REACH | | |
| | Compliance | Mini-ITX | | |
| MECHANICAL | Dimensions | 170x170mm (LxW) - Height: 3.5/1.6/16.5mm (Bottom, PCB, Top Sides) | | |

Supported Software

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