



- Intel® Atom™ E3800 Series
- COM Express® Mini Type 10
- ECC Memory
- Extended Temperature
- Fanless
- Customization Options
- IoT Middleware and Platform

Features

Powerful - Comes with Intel Atom E3800 CPU: one, two and four core configurations, up to 1.91GHz

Mini - Complies with PICMG COM Express R2.1, with a 84x55mm (Mini) form factor and a Type 10 pinout

Reliable - Offers memory configurations up to 4GB with ECC

Rugged - Supports wide operating temperature (-40 to +85°C), conformal coating options, soldered memory and flash storage

Low Power - Enables fanless designs with a CPU TDP starting from 5W

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-163-15 is a rugged COM Express module designed to meet the requirements for industrial and rugged fanless applications. Compliant with PICMG COM Express R2.1, Type 10, the CPU-163-15 is a 84x55mm (Mini) form factor module based on the Intel Atom E3800 processor family, with 1 to 4 cores, up to 4GB ECC RAM and up to 32GB eMMC.

With ECC soldered down memory and flash storage, the CPU-163-15 is the ideal hardware platform for applications requiring long life cycle, resistance to vibration and reliable data storage, even in extended temperature.

Supported operating systems include Windows 10 IoT Enterprise and Linux; moreover, the CPU-163-15 supports [Everyware Software Framework \(ESF\)](#), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/ OSGi middleware for [IoT Edge Gateways](#).

Professional Services are available for the CPU-163-15, 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-163-15-XX

| XX | | - 01 | - 02 | - 03 |
|-----------------------|----------------|---|-----------------------------|-----------------------------|
| PROCESSOR | CPU | Atom E3815 1.46GHz, 1 Core | Atom E3827 1.75GHz, 2 Cores | Atom E3845 1.91GHz, 4 Cores |
| BIOS | Type | AMI BIOS | | |
| | Size | 64Mbit SPI BIOS | | |
| MEMORY | RAM | 2GB 1067MHz (DDR3L-ECC) | 2GB 1333MHz (DDR3L-ECC) | 4GB 1333MHz (DDR3L-ECC) |
| STORAGE | Embedded | 8GB eMMC | | |
| | SATA | 2x SATA 2.0 | | |
| I/O INTERFACES | Ethernet | 1x 10/100/1000Mbps with Integrated Transceiver | | |
| | USB | 1x USB 3.0, 8x USB 2.0 (4x Native, 4x via USB HSIC) | | |
| | Serial | 2x Serial (TX/RX) | | |
| | Digital I/O | 8x DI/O | | |
| | Video | 1x LVDS (18/24bit, Single Channel, Resolution up to 1366x768@60Hz), 1x DDI (HDMI, DVI: Resolution up to 1920x1080@60Hz, DP Resolution up to 2560x1600@60Hz) – Hardware Acceleration for DirectX 11, OCL 1.2, OGL 4.0, H.264, MPEG2, MVC, VC-1, WMV9 and VP8 | | |
| | Audio | High Definition Audio Interface | | |
| | PCI Express | 3x PCIe x1 (Gen 2) | | |
| | LPC | Yes | | |
| | I2C | Yes | | |
| OTHER | SMBus | Yes | | |
| | RTC | Yes | | |
| POWER | Watchdog | Software Programmable (From 1 to 255s) | | |
| | Input | 4.75V~20V, 5VSB, VCC_RTC (ATX Mode) – 4.75V~20V, VCC_RTC (AT Mode) | | |
| ENVIRONMENT | Consumption | 5W (CPU TDP) | 8W (CPU TDP) | 10W (CPU TDP) |
| | Operating Temp | - 20 to +70°C | - 40 to +85°C | |
| CERTIFICATIONS | Storage Temp | - 40 to +85°C | | |
| | Environmental | RoHS2, REACH | | |
| MECHANICAL | Compliance | PICMG COM Express R2.1, Type 10 | | |
| | Dimensions | 84x55mm (LxW) - COM Express Mini | | |

Supported Software

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