



- Intel® Atom™ E3800 Series
- 6U VMEbus SBC
- Up to 4GB of ECC DRAM
- High Resolution Video and Graphics
- Dual PMC Sites
- Extended Operating Temperature
- Conduction Cooling Option

## Features

**VME Compatible** - Tundra Universe IID PCI-VMEbus interface provides VME64 compatibility and backward compatibility with older VME backplanes; needs only a single 5V power supply

**Low Power and Performant** - Based on Intel Atom E3800 Series, it supports up to 4GB of soldered DDR3 1333MHz SDRAM with ECC

**High Reliability** - Error Correcting Code (ECC) and virtualization for data integrity and system uptime

**Graphic Capabilities** - HD graphics support through standard interfaces

**IoT Ready** - The CPU-71-18 supports Eurotech Everywhere Cloud, the end-to-end cloud solution that offers open fieldbus protocols, cloud-based databases, brokers, and easy to use REST APIs

**Operating Systems** - Windows 7, Windows Embedded Standard 7, Linux, QNX, VxWorks are supported

## Description

The CPU-71-18 is a high performance Single Board Computer (SBC) based on the VMEbus 6U form factor. It is based on Intel Atom E3800 series (code name Bay Trail), which offers extremely low power consumption in its system on chip (SoC) format, without a companion chip. The SoC offers a broad variety of I/O on a single chip, including USB, SATA, two graphics ports, SD interface and UART; as well as a DRAM controller.

The CPU-71-18 is designed to perform reliably in systems that operate in harsh environments, and supports an extended temperature range (-40 to +85°C).

The CPU-71-18 further reduces the power consumption of the chipset with microcontroller-based technology, making it the ideal platform for fanless, power constrained systems. The CPU-71-18 also supports two 10/100/1000Mbps Ethernet ports. Conduction-cooled versions are available.

## Specifications

|                       |                    |                                                                                                                                                                         |
|-----------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PROCESSOR</b>      | CPU                | Atom E3815 1.46GHz, 1 Core – Atom E3827 1.75GHz, 2 Cores – Atom E3845 1.91GHz, 4 Cores                                                                                  |
| <b>MEMORY</b>         | RAM                | Up to 4GB 1333MHz (DDR3L-ECC) – Factory Option: up to 8GB 1333MHz (DDR3L Dual Channel w/o ECC)                                                                          |
| <b>STORAGE</b>        | Embedded           | Up to 64GB eMMC Soldered Down                                                                                                                                           |
| <b>I/O INTERFACES</b> | Front Panel I/O    | 1x DisplayPort, 2x USB 2.0 ports, 1x CFast Slot, 2x PMC 32-bit Slot, 1x SPI Port, 1x XDP Debug Port (JTAG Port)                                                         |
|                       | P0 I/O             | Up to 2x SATA 2.0 Ports, 1x LPC Bus, 1x DVI-I (Analog plus Digital) Port, 2x 1Gbps Ethernet Ports in Compliance with VITA 31.1 via two Industrial Temp i210s from Intel |
|                       | P2 I/O             | 1x I/O Interface to Second PMC Site (J24 Third PMC Connector) – 1x RS-232 Full Port, 1x LPC Bus, 2x Two USB 2.0 Ports, 1x SERIRQ line                                   |
|                       | JTAG               | JTAG Interface for Debug                                                                                                                                                |
| <b>POWER</b>          | Input              | 5VDC Input                                                                                                                                                              |
| <b>ENVIRONMENT</b>    | Operating Temp     | - 40 to +85°C                                                                                                                                                           |
|                       | Storage Temp       | - 40 to +85°C                                                                                                                                                           |
|                       | Operating Humidity | Up to 95% RH (No Condensation)                                                                                                                                          |
| <b>MECHANICAL</b>     | Compliance         | 6U Size 4HP (1 Slot)                                                                                                                                                    |
|                       | Cooling            | Available in Convection or Conduction Cooled Versions                                                                                                                   |
| <b>SOFTWARE</b>       | OS                 | Support for Windows 8, Windows 7, Linux, Wind River VxWorks, QNX 6.6                                                                                                    |