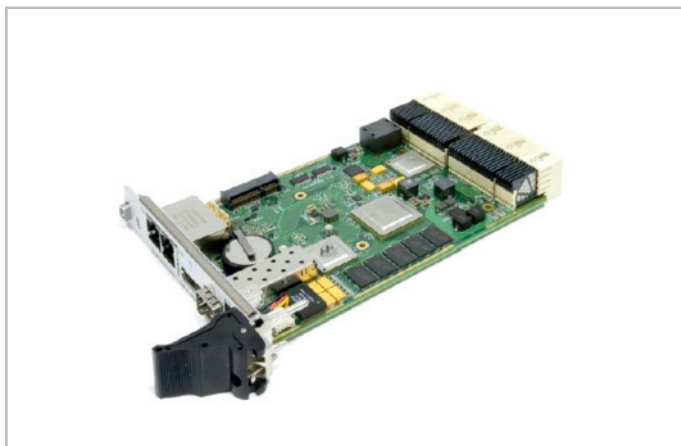


CPC516

3U CompactPCI Serial Baikal-T CPU Module



Overview

CPC516 CPU Module is a highly integrated and energy-efficient solution based on the MIPS32 platform for the use in real-time systems, manufacturing control systems and other systems for data acquisition and processing for harsh environments and mission critical applications.

Features

- Baikal-T CPU: MIPS32 P5600 core with up to 1.2 GHz
- DDR3-1600 SDRAM 4 GB, soldered
- Display Port up to 1920x1080 @ 50 Hz
- SSD: 8 GB
- Real-Time Clock with integrated lithium battery 3 V
- Operating temperature range: from -40 to + 85°C
- Software compatibility: Linux (Debian 8.x)
- MTBF: no less than 100 000 h

Technical Specifications

Baikal-T CPU

- MIPS32 P5600 core
- Clock frequency up to 1.2 GHz
- Number of physical cores: two
- L1 cache 64 KB
- L2 cache 1 MB

RAM

- soldered, DDR3-1600 SDRAM 4 GB
- 32-bit data bus
- ECC support (8 bit)

Video port

- Display Port up to 1920x1080 @ 50 Hz

SSD

- volume 8 GB;
- support of 1.5 Gb Gen I / 3 Gb Gen II / 6 Gb Gen III

PCI-E

- support of PCI-E 3.0 (up to 8 GT/s):
 - Routed via PCI-E switch Gen 3.0 to J1 CPCI Serial connectors, with support of a single device x4;
 - Support of Non-Transparent operation mode for FatPipe#1 x4 port;
- Routed to J4 CPCI Serial connector with support of four devices x2
- Interface for the connection of drives is routed to J5 CPCI Serial connector
- Support of DMA mode for x8 ports
- 2x 1 Gbit Ethernet ports, routed to J6 connector (multiplexed from the front panel)

Ethernet ports

- Single port 10 Gbit Ethernet (CPC516-02)
- Two ports 1 Gbit Ethernet
- Individual insulation of each port from system 1000 V

USB ports (host)

- support of USB 1.1, USB 2.0 (HS, FS, LS)
- exchange rate up to 480 Mb/sec.

Serial ports

- COM1, COM2: RS-232 (Rx, Tx) up to 460 Kb/s
- Routed to the board for process connection

SMBUS

- Compatibility with 2.0 specification
- rate up to 100 kbps

Watchdog timers

- Hardware watchdog timer, integrated into CPU chip with a programmable interval from 1 μ s to 10 min

Real-Time Clock with integrated lithium battery 3 V

Power supply voltage

- Supply voltage +12V
- Standby voltage +5V

Consumption current: TBD

Humidity

- from 5% to 95%, at +25°C, no condensation

Shock/Vibration resistance: 50 g/ 5g

Operating temperature range

- From -40 to + 85°C

MTBF

- No less than 100 000 h

Software compatibility

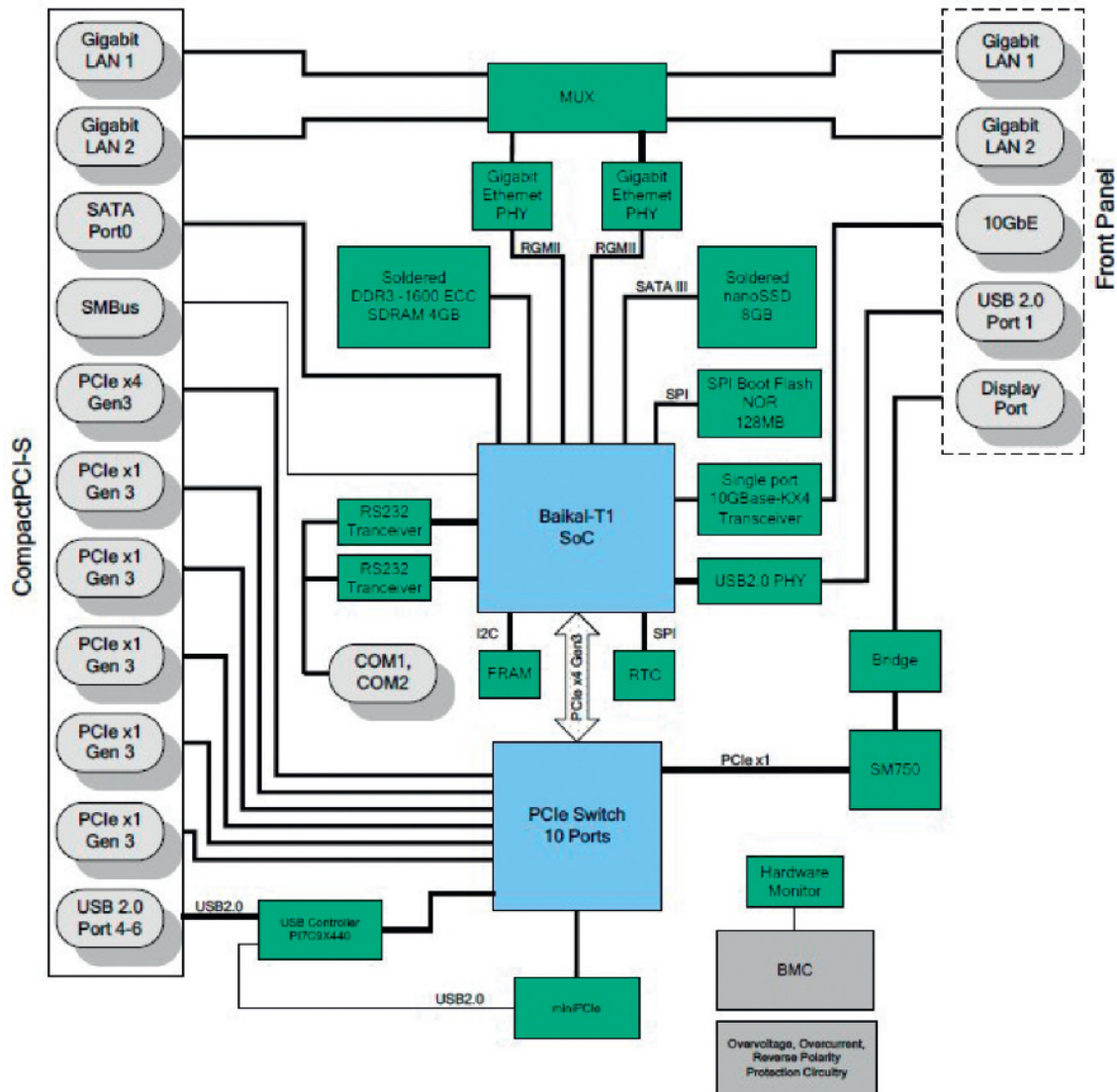
- Linux (Debian 8.x)



CPC516

3U CompactPCI Serial Baikal-T CPU Module

Board Layout



CPC516

3U CompactPCI Serial Baikal-T CPU Module

Ordering Information

CPC516 Configuration

CPC516 - 01 \ Options

Versions

CPC516-01	CPU Module CPC516 (CPCI-S), Baikal-T MIPS32 P5600 1.2 GHz, 4 GB DDR3 SDRAM, 2 x 1 Gbit Ethernet, USB 2.0, Display Port, SSD 8 GB, miniPCIe connector
CPC516-02	CPU Module CPC516 (CPCI-S), Baikal-T MIPS32 P5600 1.2 GHz, 4 GB DDR3 SDRAM, 10 Gbit Ethernet, 2 x 1 Gbit Ethernet, USB 2.0, Display Port, SSD 8 GB, miniPCIe connector

Options

\Coated Conformal coating

Delivery checklist

CPC516 delivery checklist contains:

1. CPC516 CPU Module
2. Packaging

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Product specifications are subject to change without notice



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