



Features

- CPU: Baikal-T1, MIPS32 P5600 core with 900 MHz, 2 physical cores
- DDR3-1600 SDRAM 4 GB, soldered, with ECC support (8 bit)
- Flash drive: up to 16 GB
- StackPC extension connector
- PCI/104 extension connector
- Real-time clock with integrated lithium battery 3V
- Watchdog timer
- Operating temperature: 40°C ... + 85°C
- Weight: no more than 200 g
- Software compatibility: Linux (Debian 7.x)

Overview

CPC 313 is a highly-integrated and power-efficient solution on MIPS32 platform designed for the use in real-time systems, manufacturing control, data acquisition and processing systems for harsh environments and mission-critical applications.

Technical Specifications

CPU: Baikal-T1

- MIPS32 P5600 core
- Clock frequency: 900 MHz
- Number of physical cores: 2
- L1 cache 64 KB
- L2 cache 1 MB

RAM

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

Video ports

- Analog RGB up to 1920×1080 @ 50Hz
- LVDS 18 / 24 bit up to 1366×768 @ 60Hz

Audio ports

- Linear stereo input / output
- Stereo input for microphone connection

Flash Drive

- Up to 16 GB;
- Support of 1.5 Gb Gen I / 3 Gb Gen II / 6 Gb Gen III

StackPC extension connector

- Compatibility with PCIe/104
- 4×ports PCIe x1 Gen2 5 Gb/sec
- 1×PCIe port x4 Gen3 8 Gb/sec
- 2×ports USB 2.0 (Host)
- 1×SATA III port
- 2×Gbit Ethernet ports
- SMBus

PCI/104 extension connector

- PCI 32 bit / 33 MHz
- Compatibility with Rev 2.3 specification
- Support of up to 4-x Bus Master Devices

LAN ports

- 1×10Gbit Ethernet port
- 2×Gbit Ethernet ports
- individual insulation of each port against the system 1000V

USB ports (hosts)

- Support of USB 1.1, USB 2.0 (HS, FS, LS)
- Exchange speed up to 480 Mb/sec
- Connection of up to 6 devices

Serial ports

- COM1, COM2: RS-232 (Rx, Tx) up to 460 Kb/sec

GPIO port

- 8×lines, compatibility with the level 5 V

Watchdog timers

- Hardware watchdog timer, integrated into the CPU microchip with a programmable interval from 1 μs to 10 min

Real-Time Clock with integrated lithium battery 3 V

Software compatibility

- Linux (Debian 7.x)

Power supply voltage

- +5 B ± 5%

Consumption current

- 3000 mA

Operating temperature range

- -40...+85°C

Humidity

- 5...95%, at + 25°C, non-condensing

Shock-/Vibration resistance

- 50g / 5g

MTBF

- No less than 100 000 hours

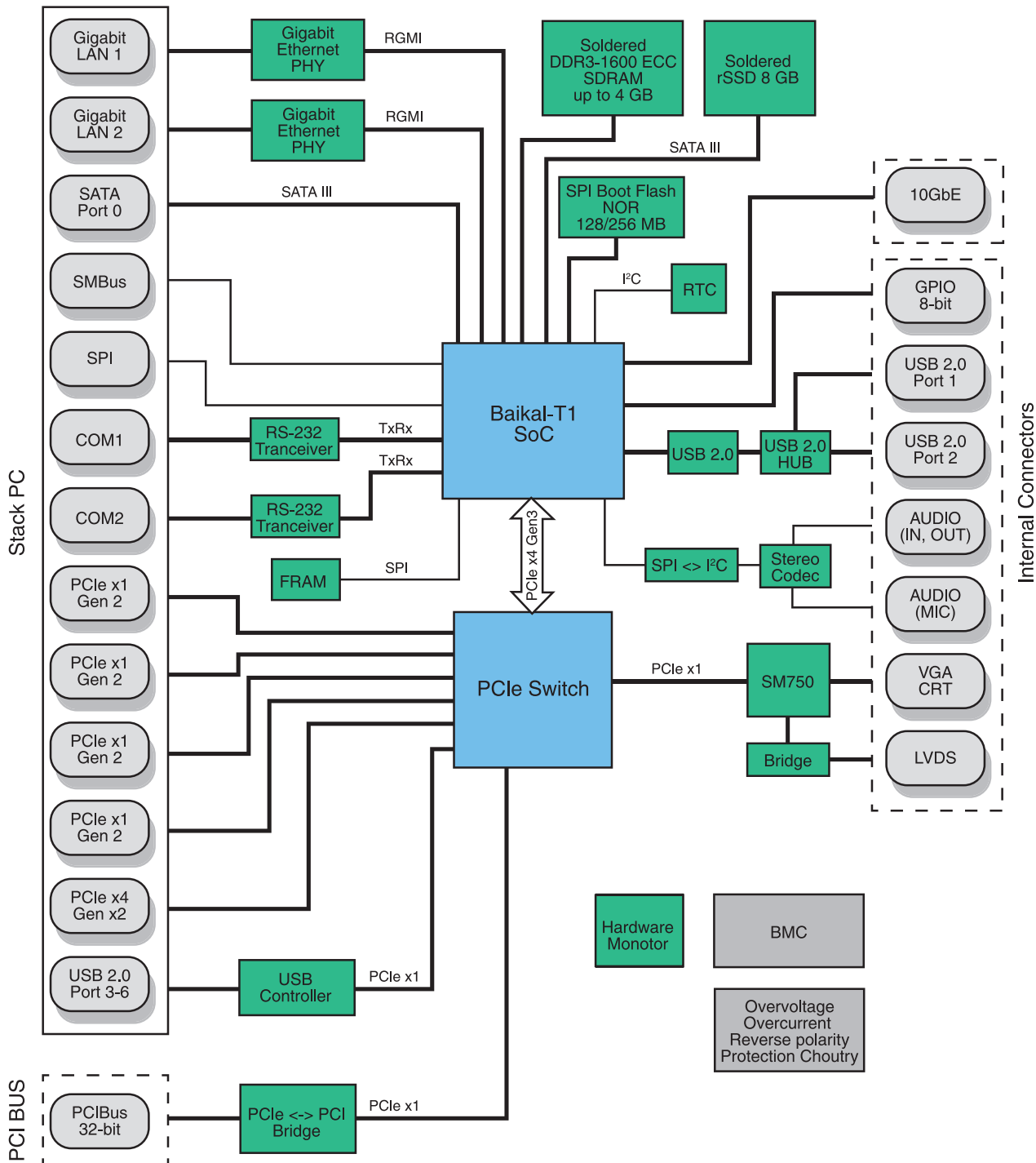
Dimensions:

- No more than 115,8 × 96,0 × 23,7 mm

Module weight

- No more than 200 g (including thermal distribution plate)

Board Layout



CPC313

PCI104 Baikal-T1 based SBC with StackPC extension connector



Ordering Information

CPC313 Configuration

CPC313 - 01 - \Options

Configurations

01 CPC313 CPU Module (StackPC-PCI),
Baikal-T1 CPU MIPS32 P5600 core,
1,2 GHz, 4 GB DDR3 SDRAM,
10Gb Ethernet, 2xUSB 2.0, SSD 16 GB,
2xRS-232, 8xGPIO, AUDIO

Options

\COATED Conformal coating
\LNX Linux (Debian 7.x)

CPC313 Available Options

Coating	
\COATED	Conformal coating
Operating System Presetting	
\LNX	Linux (Debian 7.x)

Delivery checklist

1. CPC313 CPU Module
2. Heatspreader
3. Packaging

Corporate Offices

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Product specifications are subject to change without notice



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