CPC520

CPCI PICMG 2.30 AMD Ryzen Based CPU Module

Features

- Processor: AMD Ryzen Embedded (V1404I) SOC APU 2.0GHz, Quad Core
- RAM: DDR4 SDRAM 1600 MHz, 8 GB, x64, ECC
- FLASH BIOS: 8 MB SPI-Flash
- SSD SATA Flash disk: 16 GB (SLC NAND Flash)
- Dimensions: No more than: 130.5 × 213.0 × 20.32 mm
- Power supply voltage: + 5 V ± 5%
- Software compatibility: Linux, QNX, Microsoft Windows Embedded Standard 7, Microsoft Windows 10
- MTBF: 100,000 hours

Overview

CPC520 CPU Module in the 3U CompactPCI Plus IO (PICMG 2.30) is used for high-performance computing and ensures high-speed information exchange.

Technical Specifications

Processor: AMD Ryzen Embedded (V1404I) SOC APU 2.0GHz, Quad Core

- 4x processor cores, 8x graphics cores (for V1000 series)
- Support of the 32/64-bit architecture
- L1 data cache, 96KB, per core
- L1 command cache, 32 KB per core
- L2 cache, 2 MB (for V1000 series)

RAM

- DDR4 SDRAM 1600 MHz, 8 GB, x64, ECC

Video output

- 2x Display Ports (4K resolution) routed to the front panel

PCI bus

- Routed to the J1 connector
- Support of the v2.3 specification
- 32 bit, 33/66 MHz
- Support of up to 8x bus master devices

LPC Bus

- Routed to mezzanine connector
- Support of up to 2x Master/DMA devices

PCIe Bus

- Routed to the J2 connector
- Compatibility with PCIe Base Spec. Rev 2.0
- Support of up to 4x PCIe devices in the x1 mode, or of 1x device in the x4 mode

FLASH BIOS

- 8 MB SPI-Flash

SSD SATA Flash disk

- 16 GB (SLC NAND Flash)

Connector for MiniPCI Express devices

- Support of PCI Express Rev. 2.0, USB 2.0

SATA II interface:

- Transfer rate up to 3 Gb/sec
- All the interfaces are routed to the J2 connector with capability of switching to mezzanine connector (MIC584) and SSD Nand

2x ports LAN 10/100/1000

- The both connectors are routed to the front panel with the capability of switching to J2 connector

USB ports

- 2x USB 3.0 ports are routed to the front panel
- 1x USB 2.0 port is routed to J2 connector
- 2x USB 2.0 ports are routed to the mezzanine connector
- 1x USB 2.0 port is routed to the MiniPCI Express connector

FRAM/EEPROM

- FRAM 32KB, for storing user data and SETUP settings

Real-Time Clock

- Powered from a CR2032 (3 V) lithium battery

Audio support

- HD Audio digital interface
- Routed to mezzanine connector

Watchdog Timer

- WDT with the programmable actuation interval

Hardware monitor

- Monitoring of power supply voltages
- Monitoring of CPU, PCB temperatures

LEDs

- Two-color power LED, LED for disk drive activities and two-color LED with software control by user

Dimensions

- No more than: 130.5×213.0×20.32 mm

Power supply voltage

- + 5 V ± 5%

Resistance to multiple shocks/vibration

- The modules should be resistant to sinusoidal vibrations for frequencies from 10 to 500 Hz, with acceleration of 5 g
- The modules should be resistant to single shocks with a peak acceleration of 100 g
- The modules should be resistant to multiple shocks with a peak acceleration of 50 g, number of shocks: 1000

Resistance to temperature changes at relative humidity up to 80%, non-condensing

- From –40 to +85 °C

Software Compatibility

- QNX
- Linux
- Microsoft Windows Embedded Standard 7
- Microsoft Windows 10

MTBF

- No less than 100,000 hours

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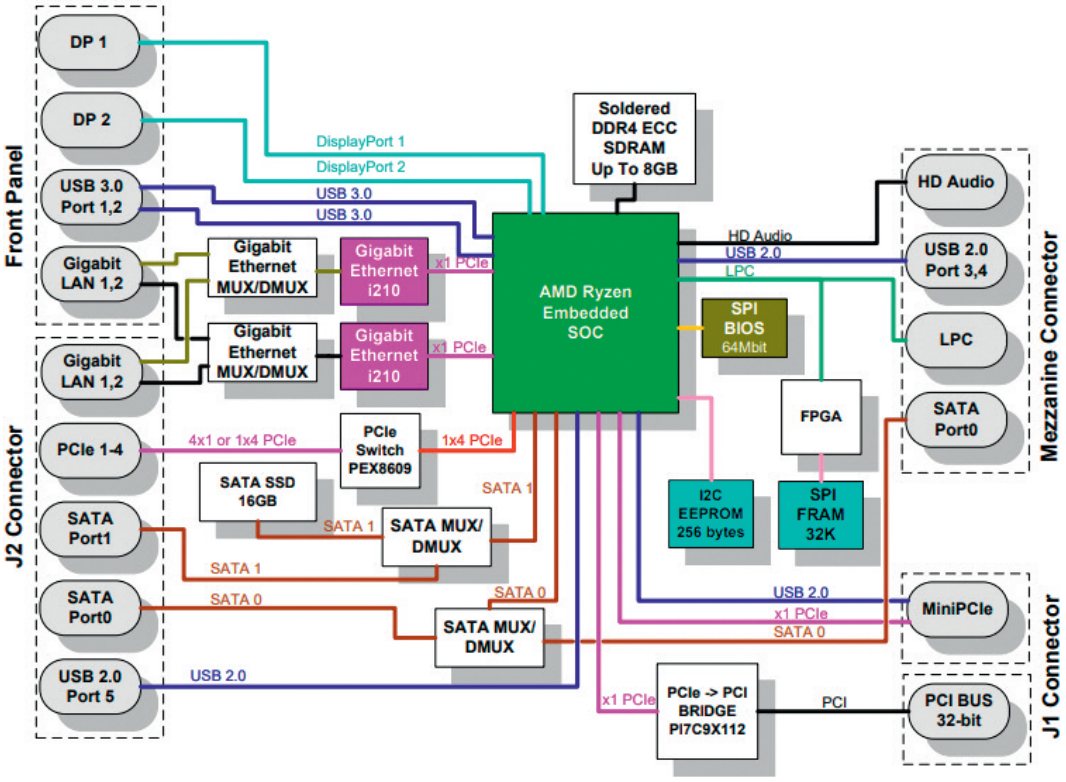
Board Layout



Ordering Information

CPC520 Configurations

CPC520 - 01 \ Options

Versions

CPC520-01	CPU Module, 8GB RAM, AMD Ryzen Embedded V1404I 2.0GHz (Quad Core)

* For conformal coating version of the module, "/COATED" option will be added.

Delivery checklist

1. CPC520 CPU Module;
2. Packaging.

Ver. 1.10.2019

Product specifications are subject to change without notice

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