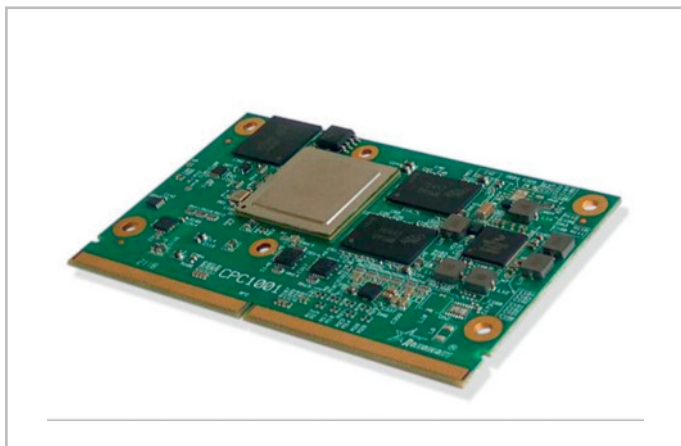


# CPC1001

## SMARC v.1.1 i.MX6 Quad Core 1 ARM Cortex-A9 Based CPU Module



### Features

- CPU i.MX6 Quad Core 1 ARM Cortex-A9
- RAM: 4 GB DDR3LP
- Video input 24-bit Parallel RGB LVCMOS, one/two 18/24-bit LVDS, MIPI DSI Lane, HDMI 1.4
- Flash-drive 32 GB eMMC, SDIO-interface
- SATA II interface
- Gigabit Ethernet interface
- Serial interfaces: 3×COM-ports, 3×I<sup>2</sup>C, 2×SPI
- Software compatibility: Linux, Android, QNX Neutrino
- MTBF: no less than 450 000 h

### Overview

Form-factor SMARC v1.1.

CPU Module CPC1001 is meant to be used as a high-performance compute core with a wide range of input/output interfaces when building real-time control systems for mission-critical applications with strict requirements to dimensions, power consumption and operating conditions.

### Technical Specifications

#### Form-factor SMARC v.1.1

- Size (without heat-spreader) – 82.0 × 50.0 × 5.5 mm
- Weight (without heat-spreader) – 20 g

#### CPU NXP i.MX6

- 4×cores ARM Cortex-A9 with a clock frequency of 1 GHz
- 2D and 3D graphics processing units
- wide range of I/O interface controllers

#### RAM

- DDR3L SDRAM
- 4 GB

#### Flash memory

- eMMC 32 GB
- SPI 4 MB
- I<sup>2</sup>C 4 KB

#### I/O interfaces (on SMARC connector)

- PCIe x 1 Lane
- GbE x 1 (external transformer is required)
- SATA Gen.II x 1
- USB OTG x 1
- USB 2.0 Host x 1
- UART x 3
- CAN x 2 (external transceivers are required)
- SPI x 2
- I<sup>2</sup>C x 3
- GPIO
- 24-bit parallel LCD video interface
- 18/24-bit LVDS video interface
- HDMI 1.4 video interface
- 8-bit parallel video camera interface
- MIPI CSI-2 x 2 Lane video camera interface
- 4-bit SDIO interface
- 8-bit MMC interface
- I2S x 2 + SPDIF audio interfaces

#### OS boot interfaces

- Selection of eight alternating sources using three configuration inputs

#### Watchdog timer

#### Real-time clock

#### Software compatibility

- Linux
- Android
- QNX Neutrino

#### Power supply

- from 3,3 to 5.25 V for the CPC1001-01 version
- from 3,3 to 4.5 V for the version CPC1001-02
- Power consumption
  - extreme load scenario: up to 9 W (complies with the artificially created, heavily used memory, video, SD and GBE)
  - heavy load average-case scenario – up to 5 W
  - Sleep mode – approx. 100 mW

#### Resistance to environmental exposure

- Operating temperature range: from –40 to +85°C
- Sinusoidal vibration: 5g for the frequencies from 10 to 500 Hz
- Multiple shocks: 50g
- Single shocks: 100g

#### Electromagnetic compatibility

- CPC1001 is resistant to electromagnetic interference in accordance with the requirements of the GOST standard CISPR 24
- Level of radio interference generated during operation of CPC1001 does not exceed the values set by the GOST R standard 30805.22 for A-class industrial plants

#### MTBF

- 450 000 h



# CPC1001

SMARC v.1.1 i.MX6 Quad Core 1 ARM Cortex-A9 Based CPU Module

## Ordering Information

### CPC1001 Configuration

#### CPC1001 - 01

##### Configurations

- |    |  |
|----|--|
| 01 | Power supply voltage from 3.3 to 5.25 V, with the heat-spreader installed. |
| 02 | Power supply voltage from 3.3 to 4.5 V, without heat-spreader              |

#### Delivery checklist

**CPC1001 delivery checklist contains:**

1. CPC1001 CPU Module
2. Packaging

## Corporate Offices

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Product specifications are subject to change without notice



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