CEC4

Rugged Industrial Embedded Computer

General Description

The CEC4 expands the MPL Embedded Computer product range with a headless industrial solution. The CEC4 comes with 3 Gigabit Ethernet interfaces. The specifically designed CEC housing allows the CEC to operate in harsh environments without the need of fans or ventilation holes, and can easily be mounted on a 35mm DIN-Rail or with a flange on a wall. The compact housing offers sufficient space to add a SSD or SATA DOM, a 5-port switch (MAGBES) with copper only or mixed with fiber, or other peripherals. The CEC4 can be tailor made to your needs, even with IP67 housing and MIL connectors.

CEC4 Highlights

The operation temperature range is from -20°C to +60°C and optionally even -40°C to +85°C without fan or case openings. The internal miniPCIe slot allows various extensions (WLAN, GPRS...). Additional available are 3 USB connectors and a microSD Memory Card Slot for easy logging and/or configuration capabilities. The CEC4 can be customized over an optional back-plane for additional interfaces.
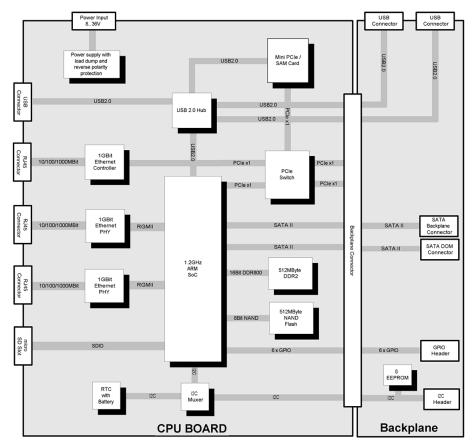
Key features are:

- Input range (8 – 36VDC)
- Reverse polarity protection
- Extreme low power consumption
- 3x 1GBit Ethernet ports
- Optional RS232 interfact to connect a console

These features make

the CEC4 to the ideal solution for headless rugged industrial and defense applications, where security, quality, reliability, low power consumption, and long-term availability are key. The CEC4 can be used just to name a few; for data logger, communications, gateways, etc..

left: Wall mount - right: DIN_Rail mount
CEC4 dimensions: 62 x 162 x 118mm (W x H x D)

Technical Features CEC4

Board Key Data

Processor	RISC SoC 1.2GHz	Low Power ARM CPU
Memory	512MByte DDR2	Soldered OnBoard
Firmware	512MByte NAND Flash	Soldered OnBoard

Interfaces

3 x Ethernet	10BaseT /100BaseTX / 1000BaseTX	3 x RJ45 connector, auto negotiation, auto MDI MDIX
3 x USB2	External ports	Type A connectors, ESD protected
1 x microSD Slot	For microSD Memory Card	Can be used as external storage (configuration, logging)
Mini PCI-Express	For WLAN, GPRS, UMTS, or FLASH	Minicard Slot
2 x SATA ports	Data transfer rates up to 300Mbyte/s	Micro SATA receptacle connectors

Physical / Power

Chassis	Compact rugged chromated Aluminum with stainless steel plates	DIN-rail or flange mounting, no ventilation holes
Size & Weight	62.1 x 162.1 x 118mm	0.94kg / 2lb including housing
Power	8 – 36VDC input power	Power consumption < 9 W, reverse polarity protection
Temperature Range	-20°C up to +60°C optionally -40°C to +85°C	No fan, no openings, values at full CPU load
Humidity	5% - 95% none condensing	Optional coating available

Standard Compliance

The CEC4 is designed to meet or exceed the most common standards. Particular references are:

EMC	EN 55022, EN 55024, EN 61000, MIL-STD-461E
Shock & Vibration	EN 60068
Environmental & Safety	EN 50155, MIL-STD-810-F, EN 60601, EN 60950, EN 60945

Software

OS-Support: Linux (Debian, BuildRoute, . . .)

Options

- SATA-DOM (DiskOnModule)
- SATA 2.5" disks (SSD or HD)
- TX2FX media converter (copper - fiber)
- MAGBES 5-port manageable switch (copper and fiber)
- Minicard PCI-Express modules (WLAN, GPRS, ...)
- XTEST extended temperature test -40°C to +85°C
- Coated versions
- RS232 interface to connect a console

CEC Versions

	CPU	Ethernet	USB 2.0	Serial	Graphics	ext. Temperature
CEC4-10	RISC SoC 1.2GHz	3x GigE	3x	-	-	-40°C to +85°C
CEC5-10	Z510PT 1.1GHz	2x GigE	3x	1x	yes	-40°C to +85°C *
CEC5-11	Z510PT 1.1GHz	4x GigE	7x	2x	yes	-40°C to +85°C *
CEC6-10	Z520PT 1.33GHz	2x GigE	3x	1x	yes	-40°C to +85°C *
CEC6-11	Z520PT 1.33GHz	4x GigE	7x	2x	yes	-40°C to +85°C *
CEC7-10	Z530P 1.6GHz	2x GigE	3x	1x	yes	-40°C to +75°C
CEC7-11	Z530P 1.6GHz	4x GigE	7x	2x	yes	-40°C to +75°C

* by design

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