PMC-CPU/405-DE

PowerPC^{TM} PrPMC Module for EtherCAT Masters

- PowerPC^{TM} AMCC PPC405EP
- Designed for EtherCAT Masters
- Low Power Consumption
- 2x 100BASE-TX Ethernet
- 33/66 MHz PCI Interface
- Console via USB Device Port
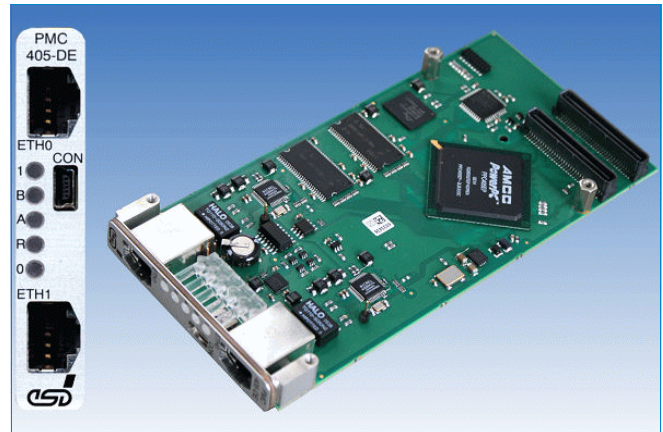
PMC PowerPC^{TM} Board

The PMC-CPU/405-DE is a PCI Mezzanine Card that is automatically switched to monarch (PrPMC) or non-monarch mode according to the system's requirements. The PowerPC^{TM} AMCC PPC405EP with 333 MHz provides a high performance low power solution. The board is equipped with 64 Mbyte SDRAM and 32 Mbyte Flash.

Connectivity

The PMC-CPU/405-DE comes with two Ethernet interfaces that are accessible as 100BASE-TX via an RJ45 connector at the front panel.
Both ports support MDI/MDI-X auto crossover.

The console port is accessible on front panel as USB device port via Mini-USB connector. The USB device port uses a USB/UART bridge to connect to the PPC405EP's serial port.
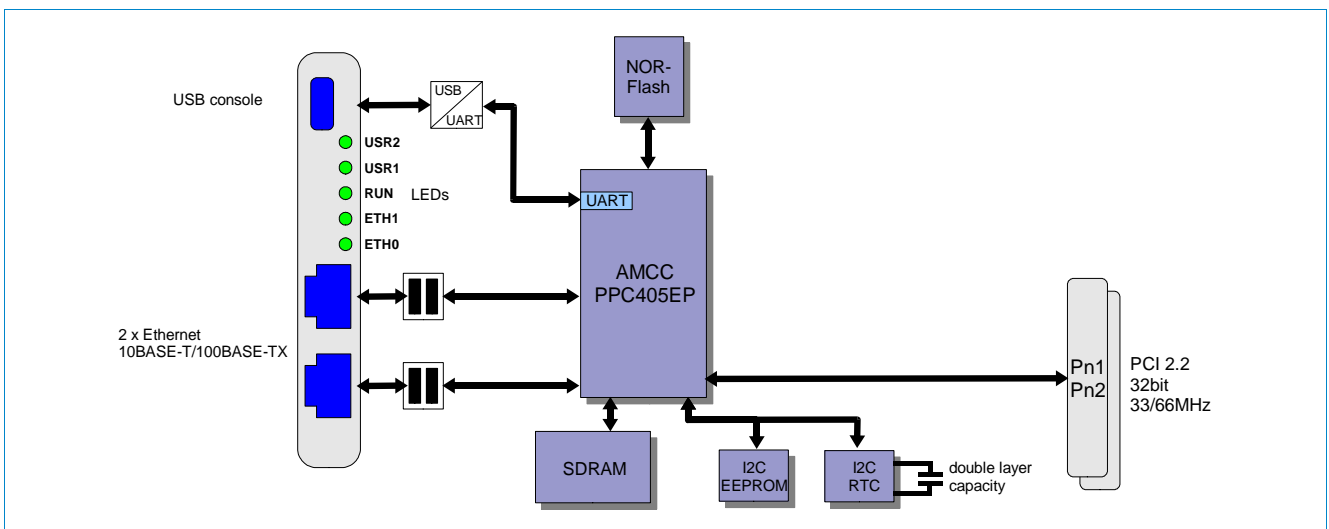

Software Support

The flash memory carries the open source firmware 'U-Boot' that enables the PMC-CPU/405-DE to boot various operating systems from network and on-board flash. Thus Linux, VxWorks and QNX are directly supported with full support of on-board devices by esd.

Featured by two Fast Ethernet ports the PMC-CPU/405-DE is an ideal platform for redundant EtherCAT Master interfaces.

(This product is not recommended for new designs.)

Technical Specifications:

PMC interface and microprocessor:	
Microprocessor:	AMCC PPC405EP, 333 MHz, 32 bit
Memory:	16M x 32 bit SDRAM (64 MB), 32 Mbyte flash
PCI:	PCI 2.2, 32 bit 33/66 MHz, PrPMC acc. to Vita 32, monarch and non-monarch operation

Interfaces:	
Ethernet:	2x 10BASE-T/100BASE-TX, IEEE802.3, RJ45-connector
Serial:	console via USB/UART bridge (FTDI) (drivers for UNIX and Windows OS available)
RTC:	RX8025, EPSON

General:	
Ambient temp.:	-20 ˚C ...+85 ˚C
Humidity:	max. 90 %, non-condensing
Power supply:	5 V, 3.3 V, power consumption < 4 W
Connectors:	Pn1 + Pn2, 2x RJ45, Mini USB

Order information:		
Designation		order no.
PMC-CPU/405-DE	PMC-CPU/405-DE Dual Ethernet AMCC PPC405EP, 333 MHz 64 MB RAM, 32 MB Flash	V.2020.03
PMC-CPU/405-DE-VxW	VxWorks BSP/adaption	tbd.
PMC-CPU/405-DE-Linux	Linux BSP/adaption	tbd.
PMC-CPU/405-DE-QNX	QNX BSP/adaption	tbd.
PMC-CPU/405-DE-EtherCAT	EtherCAT Master	tbd.