

PMC-CPU/405

PowerPC™ PrPMC Module with Ethernet and CAN

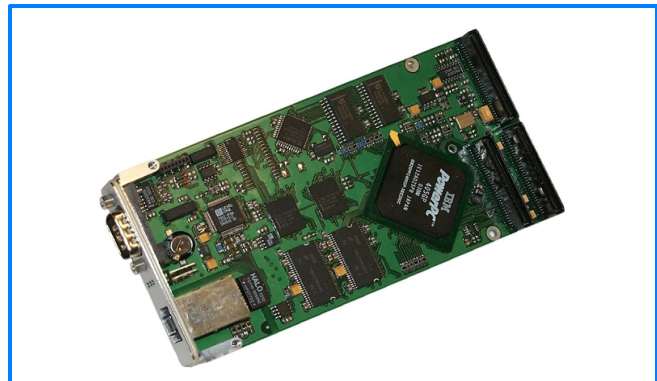
- PowerPC™ AMCC PPC405GPr
- 100BaseT Ethernet
- 2x CAN interface, TTL-level signals
- 1x RS-232 access via PMC-I/O connector
- 1x RS-232 access via DSUB9 in front panel
- IRIG-B time code interface

PMC PowerPC™ Board

The PMC-CPU/405 is a PCI Mezzanine Card that is automatically switched to monarch (PrPMC) or non-monarch mode according to the systems requirements. The PowerPC™ AMCC PPC405GPr with 400 MHz enables a performance of 608 MIPS. The board is equipped with 64 Mbyte SDRAM and 32 Mbyte Flash. System time can be supported by RTC (with Gold Cap) or IRIG-B. For CAN bus synchronisation tasks a high resolution CAN hardware timestamp is supported.

Connectivity

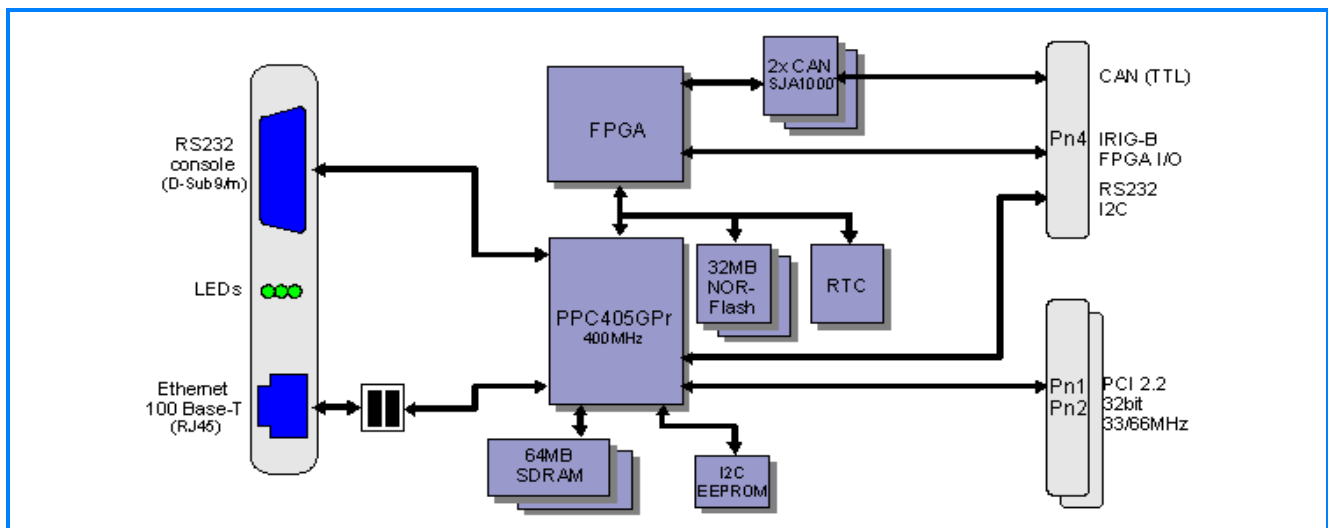
The PMC-CPU/405 comes with an Ethernet interface that is accessible as 100BaseT via a RJ45 connector at the front panel. The PMC-CPU/405 provides 2 CAN interfaces based on SJA1000 CAN controllers. The CAN signals are available as TTL only via PMC connector. External converters from CAN-TTL to CAN-ISO11898 are available. Both CAN allow data transfer rates of 1 Mbit/s.



One of two RS-232 serial ports is available at the front panel via a DSUB9 connector, the other one via PMC-I/O connector.

Software Support

The flash memory carries the open source firmware 'U-Boot' that enables the PMC-CPU/405 to boot various operating systems from network and on-board Flash. Thus Linux and VxWorks are directly supported with full support of on-board drivers by esd, others on request. There is also a bunch of higher layer protocols available like CANopen and DeviceNet.



Technical Specifications:

PMC interface and microprocessor:	
Microprocessor:	AMCC PPC405GPr, 400 MHz, 32 bit
Memory:	from 16M x 32 bit SDRAM (64MB) up to 32M x 32 bit SDRAM (128 MB), 32 Mbyte flash
RTC:	DS1685, backup by Gold Cap
PCI:	PCI 2.2, 32 bit 33/66 MHz, PrPMC acc. to Vita 32, monarch and non-monarch operation
Interfaces:	
Ethernet:	100BaseT, IEEE802.3, RJ45-connector
Serial:	1x RS-232 at front panel (DSUB9), 1x RS-232 at PMC-I/O connector Pn4 (4-pin)
CAN:	2x CAN, controller SJA1000, CAN 2.0A/B, TTL-level signals, 1 Mbit/s, high resolution CAN-hardware timestamp (FPGA), PMC-connector
IRIG-B:	digital differential physical layer, IRIG B100 time code format, decoding and time code generation

General:	
Ambient temp.:	0 ... +70 °C
Humidity:	max. 90 %, non-condensing
Power supply:	5 V, 3.3 V
Connectors:	PMC-connector Pn4: 2x CAN, Serial, IRIG-B, PC front panel: Serial (console), 1000BaseT
Order information:	
Designation	order no.
PMC-CPU/405	PrPMC processor AMCC PPC405GPr, 400MHz 64 MB RAM, 32 MB Flash V.2020.02
PIM-CPU/405	PIM I/O module (acc. to Vita 36) with 2x CAN physical layer, electrically isolated, ISO11898, 2x DSUB9 connector V.2025.02
PMC-CPU/405-VxW	VxWorks BSP V.2020.30
PMC-CPU/405-Linux	Linux BSP/adaption V.2020.32