



CPCI-CPU/5201

CompactPCI® PowerPC™ Board with CAN, ETHERNET and USB

Cost effective 3U/4HP CompactPCI Board

- MPC5121e CPU with e300 core and 400 MHz / 760 MIPS
- Flexible and fast storage via CompactFlash®-card and USB connector
- CAN, 1 Mbit/s, electrically isolated
- Linux®, QNX® and VxWorks® BSPs available
- CANopen® and DeviceNet™ available, on-board web server available

Longevity Program of Freescale™

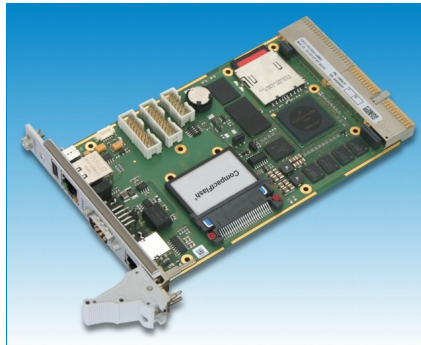
- Enhanced availability: the CPU is included in the longevity program of Freescale
- Low power consumption

Wide Storage Support (ATA, SDHC™)

- On request ATA devices and SDHC CLASS 10
- CompactFlash Card slot
- On-board storage options eMMC™ and Magnetoresistive RAM (MRAM)

CompactPCI PowerPC Board

This board is specially designed for cost sensitive applications with low power consumption and a long product availability.



The Freescale RISC microcontroller MPC5121e with FPU and fast flash memory support is best suited for data processing purposes.

Network Interfaces

The CPCI-CPU/5201 contains one ETHERNET interface for 10/100 Mbit/s nets that is accessible via a RJ45 connector in the front panel. The ISO11898 compatible CAN interface is accessible via a DSUB9 connector in the front panel.

The CAN interface is electrically isolated and supports bit rates up to 1 Mbit/s.

Additionally a second CAN and a serial interface (CAN1/SER1) could be connected via a 3U / 4HP add-on card.

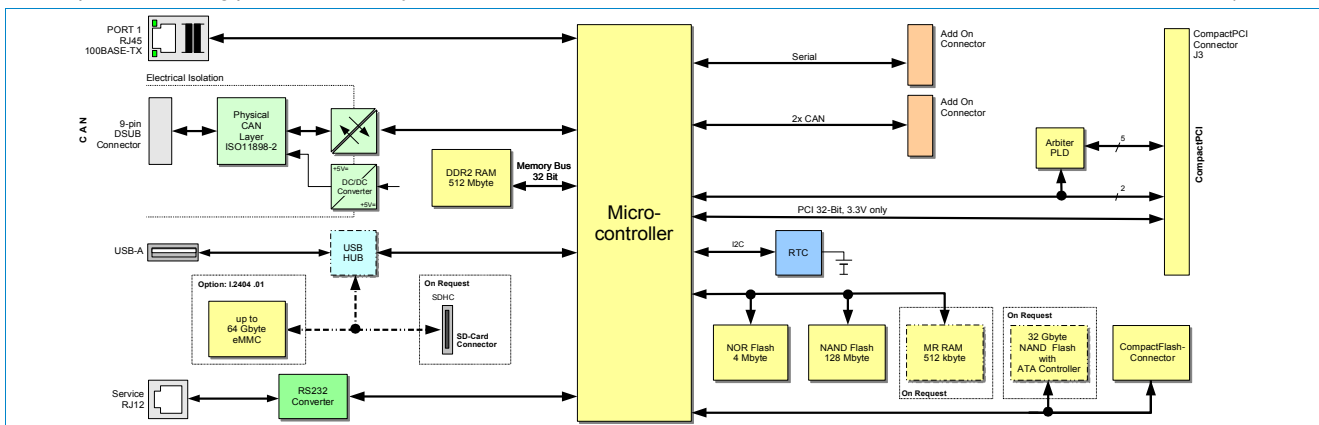
MPC5121 Integrated Processor

The MPC5121 CPU contains the e300 Power Architecture® technology processor core and operates with 400 MHz and up to 760 MIPS. It is equipped with 32-Kbyte instruction cache and 32-Kbyte data cache. The superscalar processor core comes with instruction and data MMU and integrated double-precision floating-point unit.

Software Support

The flash memory carries the standard 'U-Boot' program that enables the CPCI-CPU/5201 to boot various operating systems from network, on-board Flash or SD™ card. Thus Linux and Real-time OS like QNX 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 like CANopen, DeviceNet as well as an on-board web server available.

(This product is under development. It will be available Q2 2014.)



Technical Specifications:

CompactPCI Interface and Microcontroller	
Microcontroller	Freescale MPC5121e, 400 MHz, e300 core, cache: 32 KB / 32 KB, FPU
Memory	SDRAM: 512 Mbyte DDR2, 200 MHz, NOR Flash: 4 Mbyte; NAND Flash: 128 Mbyte; CF-card connector, eMMC (I.2024.01 only): up to 64 Gbyte On request: MRAM: 512 kbyte; NAND-Flash with ATA controller, 32 Gbyte; SDHC slot: more than 10 MB/s (r/w) capable
RTC	Battery buffered real-time clock
PCI	PCI 2.3, 32 bit, 33 / 66 MHz, 3.3V signaling environment (not 5V tolerant), 7x external bus master support
Interfaces:	
ETHERNET	1x 10BASE-T/100BASE-TX, IEEE 802.3, RJ45 connector with LEDs
USB	1x USB 2.0 controller, high-speed (480 Mbit/s), USB-A connector type
Service	1x RS-232 via RJ12 connector
CAN	1x CAN, 1 Mbit/s, electrically isolated, ISO11898, 9-pin DSUB

General:		
Ambient temperature	0 ... +55 °C, on request: -40 °C ... +75 °C convection cooled	
Relative humidity	Max. 90 % (non-condensing)	
Power supply	3.3V, tbd. W _{TYP} , tbd. W _{STANDBY} , 5 V, tbd. W _{TYP} , tbd. W _{STANDBY}	
Dimensions	3U / 4TE CompactPCI	
Order Information:		
Hardware		Order No.
CPCI-CPU/5201	MPC5121, 400 MHz	I.2404.02
CPCI-CPU/5201-eMMC	MPC5121, 400 MHz, eMMC	I.2404.01
Software Support		
CPCI-CPU/5201-Linux	Linux BSP/adaption	I.2404.32
CPCI-CPU/5201-QNX	QNX BSP/adaption	I.2404.36
CPCI-CPU/5201-VxW	VxWorks BSP/adaption	I.2404.30
Accessories		
CPCI-CAN-ISO-11898	CAN and RS-232 adapter, 3 U / 4 HP front panel	I.2301.03

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