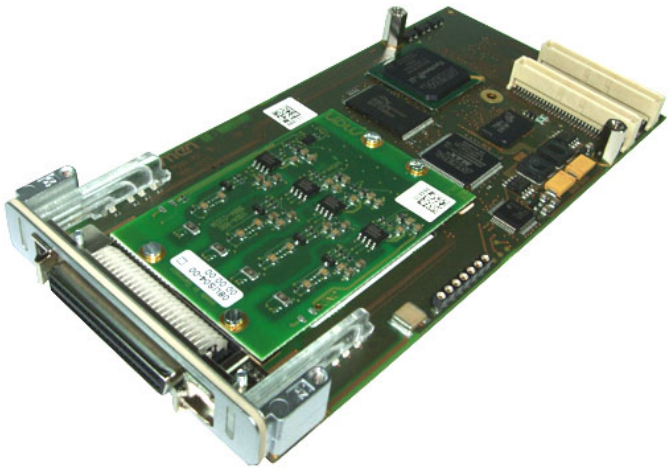
P506

Quad CAN Bus Interface PMC

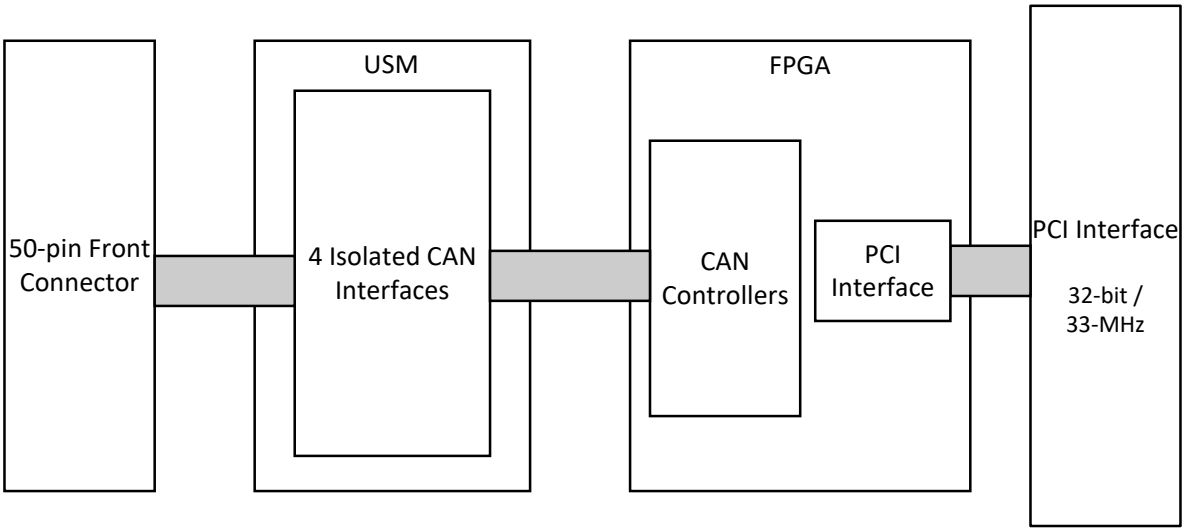
PCI Mezzanine Card

- *32-bit/33-MHz PMC*
- *Full CAN/Extended CAN*
- *4 independent channels*
- *ISO high-speed coupling*
- *Up to 1 Mbit/s data transfer rate*
- *CANopen master and slave support*
- *CAN Layer 2 support*
- *Isolation between channels*
- *Compliant to ISO 11898-1 and ISO 11898-2*
- *-40 °C to +85 °C*



The P506 is a 32-bit/33MHz PMC with four CAN interfaces. They support CAN Protocol Version 2.0A/B, standard and extended data frames, remote frames, 0..8 bytes data length and a programmable data rate of up to 1 Mbit/s.
The P506 is based on the USM concept. USM Universal Submodules make PMC modules more flexible than ever. The CAN bus interfaces are realized via four IP cores implemented inside its onboard FPGA. This function can be changed at any time through implementation of different IP cores.

The corresponding line drivers are realized on the USM which is simply plugged on the P506. The I/O mezzanine module is suitable for any PMC compliant host carrier board in any type of bus system, i. e. CPCI, VME or on any type of stand-alone SBC in telecommunication, industrial, medical, transportation or aerospace applications.
It offers long-term availability for at least 10 years and is qualified for operation in the extended temperature range.



Data Sheet

CAN Interface

- Compliant to ISO 11898-1 and ISO 11898-2
- Four channels
- CAN Protocol Version 2.0A/B
  - Standard and extended data frames
  - 0 to 8 bytes data length
  - Programmable data rate up to 1 Mbit/s
- Support for remote frames
- 5 receive buffers (FIFO-scheme)
- 3 transmit buffers with prioritization
- Maskable identifier filter
- Programmable loop-back mode for self-test operation
- Signaling and interrupt capabilities for receiver and transmitter error states

Memory

- 32 MB SDRAM memory
  - Soldered
  - DDR2
  - 132 MHz memory bus frequency
  - FPGA-controlled
- 2 MB non-volatile Flash
  - For FPGA data
  - FPGA-controlled

FPGA

- Standard factory FPGA configuration:
  - Main bus interface
  - Interrupt controller, SMBus controller
  - 16Z029_CAN - CAN Controller
  - 16Z043_SDRAM - SDRAM controller
  - 16Z045_FLASH - Flash interface
  - 16Z034_GPIO - GPIO controller
  - 16Z034_PWM - PWM Pulse Width Modulation
- The FPGA offers the possibility to add customized I/O functionality. Contact duagon for more information.

PMC Characteristics (PCI)

- Compliant with PCI Specification 2.2
- 32-bit/33-MHz, 3.3 V V(I/O)
- Target

Peripheral Connections

- Via front panel on a shielded 50-pin HP D-Sub SCSI 2 receptacle connector
- Via Pn4 rear I/O connector (on request)

Electrical Specifications

- Isolation voltage:
  - 500 VAC
- Supply voltage/power consumption:
  - +5 V (-3%/+5%), 240 mA
  - +3.3 V (-5%/+5%), 15 mA

Mechanical Specifications

- Dimensions: conforming to IEEE 1386.1
- Weight: 78 g

Environmental Specifications

- Temperature range (operation):
  - -40 °C to +85 °C
  - Airflow: min. 1.0 m/s
  - Conduction cooling (on request)
- Temperature range (storage): -40 °C to +85 °C
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300 m to +3000 m
- Shock: 15 g / 11 ms
- Bump: 10 g / 16 ms
- Vibration (sinusoidal): 1 g / 10 Hz to 150 Hz

MTBF

- 957 834 h @ 40 °C according to IEC/TR 62380 (RDF 2000)

Safety

- Flammability (PCBs): UL 94 V-0

EMC

- Conforming to EN 55022 (radio disturbance), IEC 61000-4-2 (ESD) and IEC 61000-4-4 (burst)

Software Support

- Windows
- Linux
- VxWorks
- QNX
- See section Software on the product web page for available packages.

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www.duagon.com/products/p506/

Contact