

PATI

PowerPC controlled intelligent PC/104-Plus I/O-Module

General Description

The PowerPC controlled Analog- and Timer-I/O Intelligence (PATI) board is based on the widely used MPC555 PowerPC from Motorola. This CPU is combined with a PCI bus bridge making the superb MPC555 peripherals available on any PC/104-Plus host system. So firmware update, parameter passing to the on board SDRAM and debugging via the PCI bus is possible. Further more the MPC555 gets access to the host memory via PCI bus master cycles. Up to 8MB Flash and 16MB SDRAM enables the PATI to run complex and memory consuming applications. Allowing to control various processes over 8 Analog/Digital channels, 32 timing channels, 2 serial lines and 2 CAN interfaces.

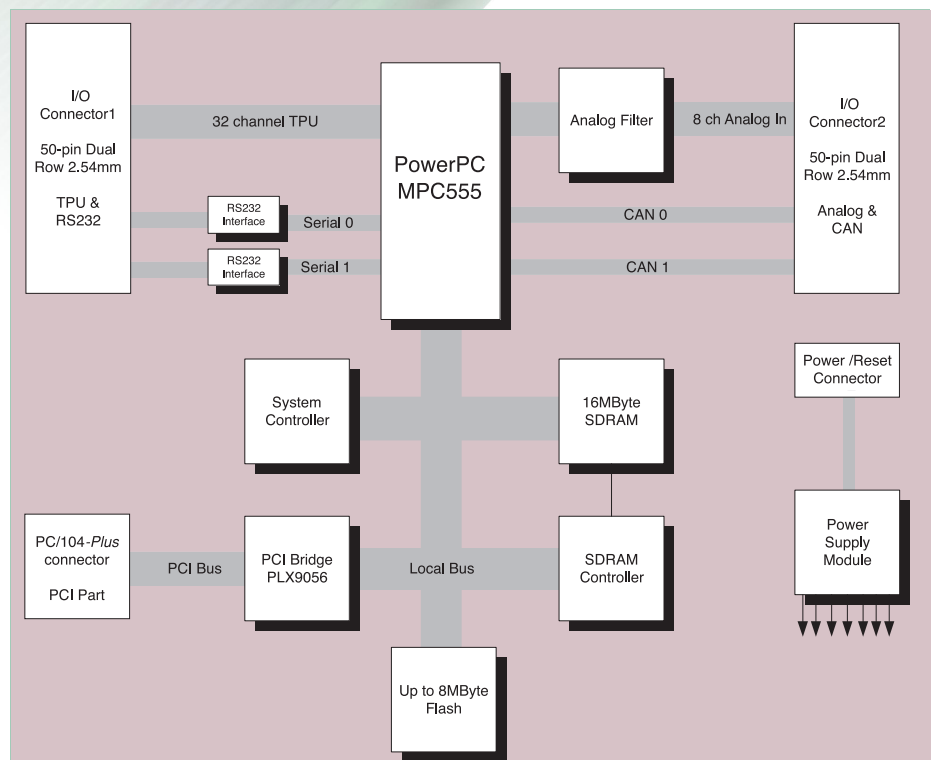
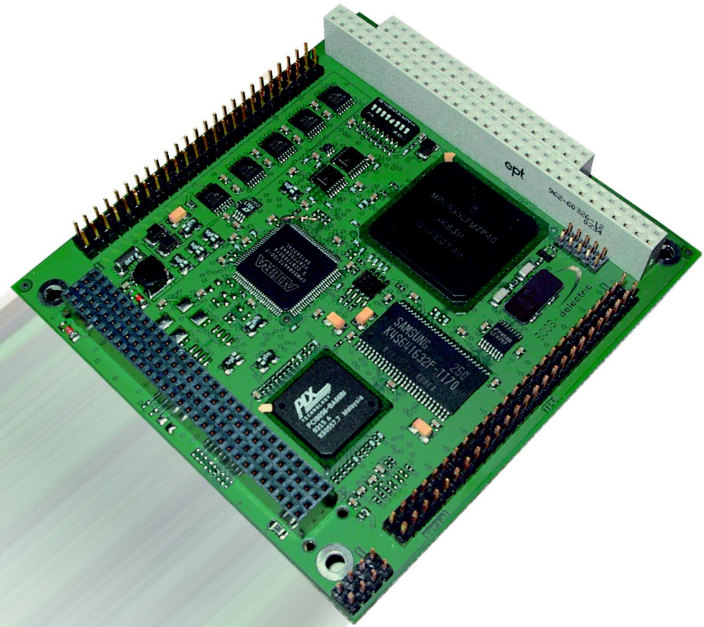
Applications developed and tested in a host environment can be executed on the PATI in the stand-alone mode without any code modification.

PATI specialties

- MPC555 PowerPC™ with FPU (40MHz)
- 8 differential 10-bit ADC channels
- 32 timing channels (TPU3)
- 2 x Serial RS232 interfaces
- 2 x CAN 2.0B (TouCAN) interfaces
- Extended temp. -40°C to + 85°C
- 32-bit 33MHz PCI Interface
 - PATI is PCI Bus Master capable

Those features make

PATI an ideal choice if you need an intelligent I/O-module for controlling and/or supervising various processes. The integration of the PCI bridge brings the MPC555 peripherals to a fast and widely used interface, which enables features like process visualization, online parameter adjusting, event logging etc. on a standard host system.



For further versions please contact MPL.

Technical Features PATI

Board Key Data

Processor	Motorola MPC555 (40 MHz)	with FPU
SDRAM	16 MB	soldered onboard
Flash	up to 8 MB	soldered onboard
PCI Bridge	PLX PCI9056	PCI Bus Master capable
ADC	10-bit, 8 differential channels	25 kHz sampling rate each
Time Process Unit	32 channel	2 independent TPU3
Serial lines	2 ports (only Rx/Tx)	RS232 level
CAN	2 ports CAN2.0B	TouCAN
Host Interface	32-bit, 33 MHz PCI Rev. 2.2 compliant	Master/Slave Target only
Power	Runs with 5V input power only	3.3V converter onboard

Physical / Power

Size (length x width x height)	90.2 x 95.9 x 11 mm 3.550 x 3.775 x 0.435 inch	PC/104-Plus compliant stackthrough module
Weight	90g / 0.2 lbs	fully equipped
Power	+5VDC ± 5%	input over PCI connector
Power consumption	Typically 2.5W	
Temperature Range	-20°C up to 70°C	optional -40°C up to 85°C
Humidity	5% - 95% non condensing	optional coating available

Operating Systems

Real Time Systems (e.g. eCos)

Other MPL PC/104 Peripherals

Product Family	Function	Form Factor
LAN104	Single & dual 10/100 Mbit Ethernet modules	PC/104-Plus
SPIDERLAN	Ethernet-Switch modules with up to 8 ports	PC/104-Plus
OSCI	Four or eight RS232/RS485/RS422 serial lines	PC/104-Plus
PCCARD	PCMCIA PC Card adapter with two slots	PC/104-Plus
IDE2CF / IDE2PCC	IDE to CompactFlash or IDE to PC Card adapter	PC/104

Other MPL Products

Embedded CPU Boards	Embedded, rugged Industrial CPU boards with PowerPC, x86 and ARM CPU's. Products with lowest power consumption, long-term availability and highest reliability.
Industrial PCs	Fanless, rugged Packed Industrial PCs with Intel CPUs in various housings and with many accessories. Products for extended temperature (-40° up to +75°C) and with long-term availability.
Panel PCs	Fanless, IP65/NEMA4 protected Panel PCs (all around). Solutions with 6" - 19" LCDs and Touch in special aluminum or stainless steel case.
Engineering & Support	Professional engineering, support and consulting through MPL engineers on Hardware and Software.

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