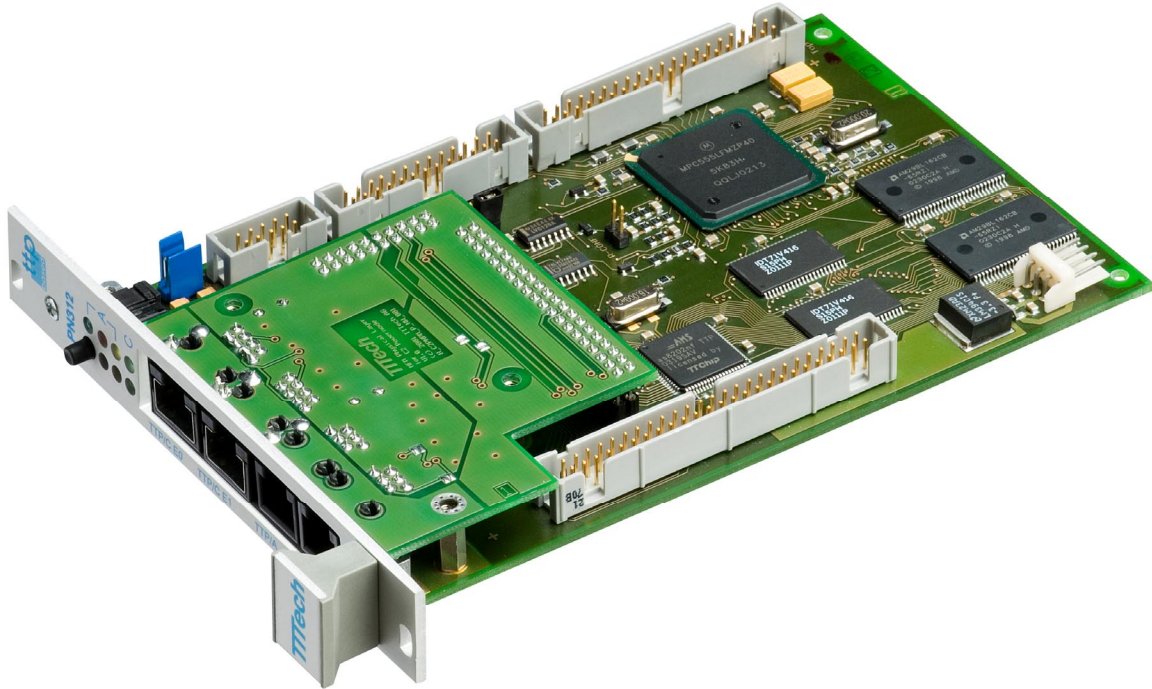


Distributed Real-Time System Development



TTP Powernode – The TTP Development Board

TTP Powernode is a high-performance, state-of-the-art single-board solution for distributed real-time systems. It supports a broad range of interfaces.

TTP Powernode works perfectly with tools such as TTP Matlink, because its CPU (Freescale MPC555) contains an on-chip floating point unit. The code generated by Real-Time Workshop® Embedded Coder via TTP Matlink is able to use the native floating point unit of the microprocessor.

Hardware Basics

TTP Powernode is equipped with austriamicrosystems AS8202NF TTP communication controller and a Freescale MPC555 PowerPC® microprocessor.

Physical layer connectors (TTP, ISO 9141, CAN) are mounted on separate physical layer boards stacked onto the TTP Powernode. This allows a flexible choice of interface connectors on the front panel.

The TTP Powernode can be supplied with or without housing and power supply. Application-specific adaptations can be provided.

Host CPU

- Freescale MPC555 PowerPC core with floating point running at 40 MHz
- 1 Mbyte RAM (256 K x 32 bit) plus 26 Kbyte internal unit static RAM
- 4 Mbyte (1024 K x 32 bit) burstable Flash plus 448 Kbyte internal Flash memory

Physical Layer Boards

Type MFM/Manchester

- MFM on RS 485 physical layer (5 Mbit MFM/Manchester) for TTP (2 channels)
- ISO 9141 physical layer suitable for LIN
- ISO 11898 physical layer for CAN (2 channel, Philips 82C250, RJ-11 connector)

Type MII

- IEEE 802.3 100BASE-TX physical layer (25 Mbit MII) for TTP (2 channels, requires 100Base-TX hub and star architecture)
- ISO 9141 physical layer suitable for LIN
- ISO 11898 physical layer for CAN (2 channel, Philips 82C250, RJ-11 connector)

Additional Interfaces

- Serial communication interface (PCB-mounted connectors)
- 32 analog inputs (PCB-mounted connectors)
- 16 channel timer system, 2 TPU units (PCB-mounted connectors)
- 8 PWM channels (PCB-mounted connectors)
- 30 digital I/O pins (PCB-mounted connectors)
- On-line debug interface (BDM)
- 2 communication status LEDs and 5 application LEDs on the front panel
- Reset button on the front panel configurable as input

Physical Specifications

- Single height standard Euro PCB
- Dimensions: 160 x 100 x 20, with housing and power supply 220 x 145 x 26 (in mm)
- Weight: 720 g; without housing 130 g
- Operating temperature: 0 °C – +70 °C, industrial grade (-40 °C – +85 °C) on request
- Storage temperature: -40 °C – +85 °C

Power Requirements

- 5 V DC, +/- 5% at 1 A plus 12 V DC, +/- 5 % at 150 mA (without housing)
- Input voltage 9 - 60 V DC at max. 10 Watt and max. 1.2 A (with housing and power supply)

Subject to changes and corrections.

For further information, including price and availability, contact products@tttech.com.

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