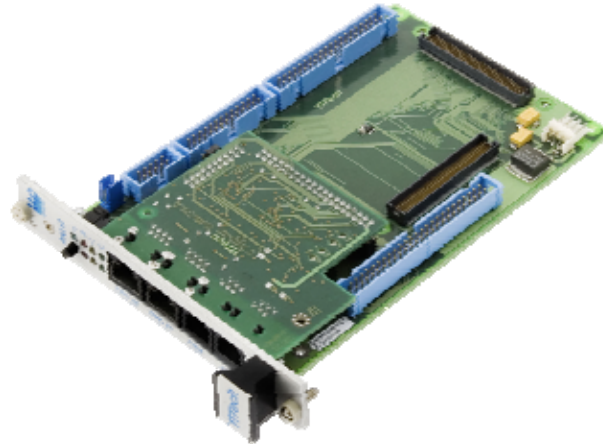


TTP^{Power}node

The TTP Development Board



TTP^{Power}node is a high-performance, state-of-the-art single-board solution for distributed real-time systems. It supports a broad range of interfaces. The TTP development board is the basis to build up a distributed real-time network with TTP. Full embedded software and tool support is available.

Hardware Basics

TTP^{Power}node has a rich set of integrated peripheral devices well suited for demanding prototyping applications. It is equipped with an austriamicrosystems AS8202NF TTP communication controller. An integrated CAN controller provides features to design gateway units for coupling the CAN field bus with TTP.

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

The TTP^{Power}node can be supplied with or without housing and power supply.

KEY FEATURES/BENEFITS

- Full embedded software support
- Full tool support
- Freescale MPC555 PowerPC
- Exchangeable physical layer
- Broad range of interfaces
- austriamicrosystems AS8202NF TTP communication controller
- Available with or without housing

Software Support

The board is supported by a wide range of embedded software and tools.

It works perfectly with tools such as TTP^{Matlink}. The code generated by the Real-Time Workshop[®] Embedded Coder via TTP^{Matlink} supports rapid application development with automatic code generation.

A bootloader, an operating system, different communication layer options, and a powerful library for the MPC555 I/O are available for the board.

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 to +70 °C, industrial grade (-40 °C to +85 °C) on request
- Storage temperature: -40 °C to +85 °C

Power Requirements

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

Physical Layer Boards

There are 2 types of physical layer boards:

- MFM/Manchester on RS 485 physical layer (5 Mbit MFM/Manchester) for TTP
- MII: IEEE 802.3 100BASE-TX physical layer (25 Mbit MII) for TTP, requires 100Base-TX hub and star architecture

Both types support:

- ISO 9141 physical layer suitable for LIN
- ISO 11898 physical layer for CAN (1 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

Host CPU

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

Order Number

- H09.02.2: ^{TTP} Powernode and MFM/Manchester physical layer
- H09.03.2: ^{TTP} Powernode and MFM/Manchester physical layer; with housing and power supply
- H09.06.2: ^{TTP} Powernode and MII physical layer
- H09.07.2: ^{TTP} Powernode and MII physical layer; with housing and power supply

TTTech contact information

Headquarters Europe, Austria
Tel.: +43 1 585 34 34-0
E-mail: products@tttech.com

North America, USA
Tel.: +1 760 603 9393
E-mail: products@tttech.com

Asia, Japan
Tel.: + 81 45 470 1867
E-mail: products@tttech.com

www.tttech.com