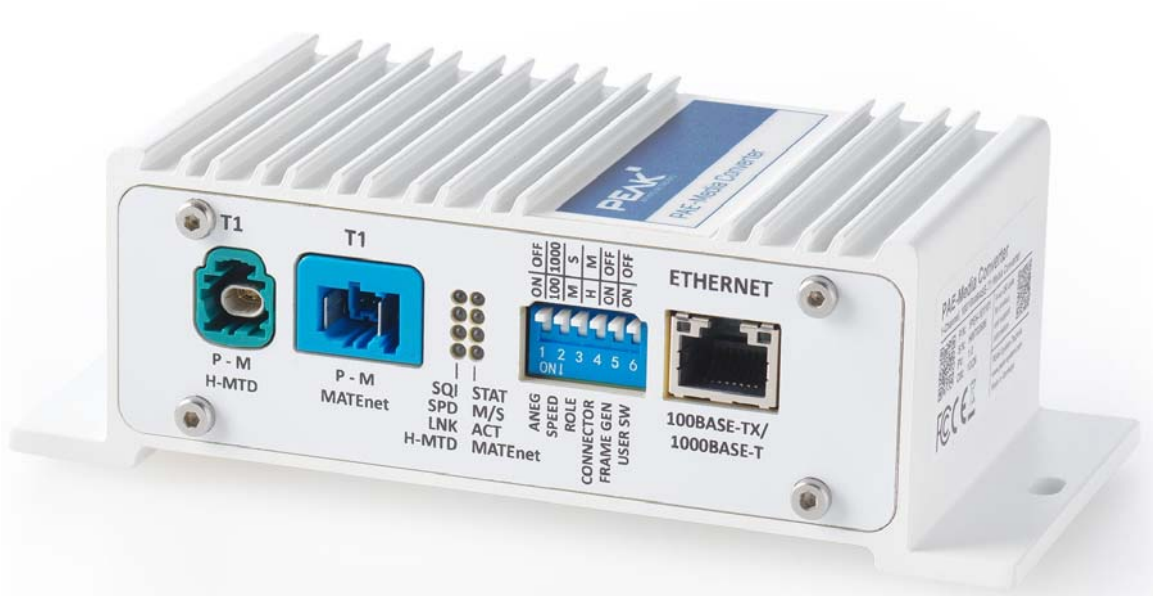
PAE-Media Converter (IPEH- 101101)



Product Description

The PAE-Media Converter allows conversion between Standard Ethernet and Single-Pair Ethernet (SPE), which is typically used in the automotive and industrial sectors.

This, for example, enables a PC to easily communicate with a vehicle control unit.

The converter provides transparent bit-level communication with support for Fast Ethernet and Gigabit Ethernet. The speeds of 100/1000 Mbit/s can be set manually or determined via auto-negotiation. Thanks to the dual-interface design with H-MTD and MATEnet connectors for Single-Pair Ethernet, as well as power supply via USB or Phoenix connector, the device can be flexibly integrated into various application environments.

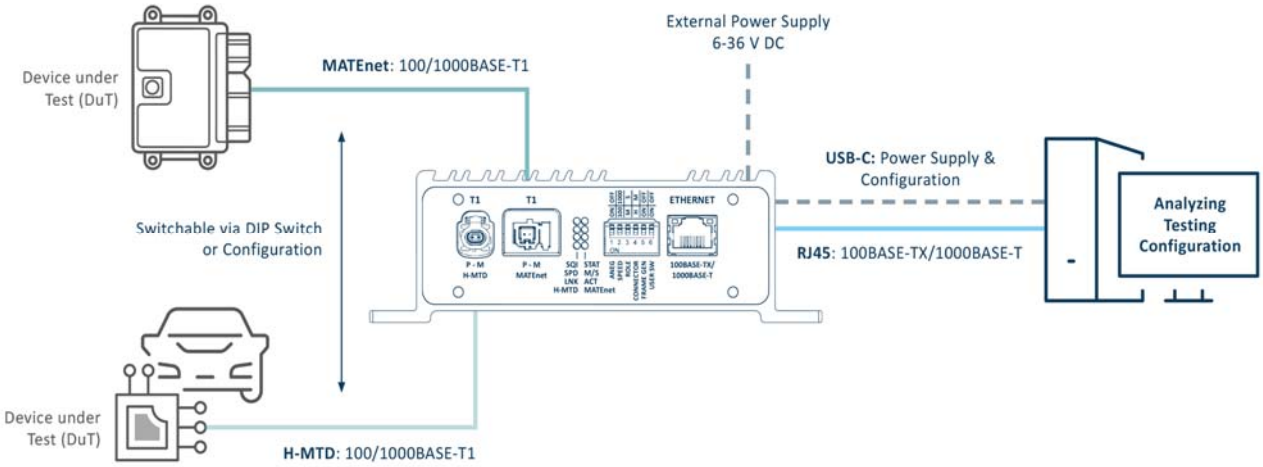
The device is configured using DIP switches, also during operation. Furthermore, the PAE Media Converter supports software-based configuration over the USB connection via a USB API. This allows, for example, SPE communication failures to be generated automatically in order to validate vehicle behavior on test benches. Technical

Specifications

- Standard Ethernet connection:
  - 100BASE-TX / 1000BASE-T according to IEEE 802.3u / 802.3ab
  - RJ45 connector
- Single-Pair Ethernet connection:
  - 100BASE-T1 / 1000BASE-T1 according to IEEE 802.3bw / 802.3bp
  - Switchable between H-MTD- and MATEnet connector
- 100/1000 Mbit/s transfer rates, configurable manually or via auto-negotiation
- Configuration with DIP switches, also during operation
- Optional software-based configuration and status queries via USB API, effective until reset
- Voltage supply 6 to 36 V via supply connector or 5 V via USB-C connector
- Monitoring of internal temperature, shut-off in case of overtemperature
- Aluminum profile housing with flange, front and rear panels made of composite materials
- LEDs for device status and power supply
- Extended operating temperature range from -40 to +85 °C (to +70 °C for product version 1.0)

Application

The PAE Media Converter is ideally suited for development, testing, and validation environments in automotive electronics. It enables engineers to seamlessly connect Automotive Ethernet networks (100/1000BASE-T1) with standard Ethernet equipment, thereby allowing them to utilize existing analysis tools directly. The integrated controlled link interruption function facilitates realistic fault simulations within reproducible test scenarios – without the need to physically disconnect the connection. Thanks to its plug-and-play operation, the device can be immediately integrated into existing test benches, while an optional USB API enables its integration into automated test environments.



Scope of Supply

- IPEH-101101: PAE-Media Converter in aluminum profile housing
- Mating connector with screw terminals for voltage supply, type Phoenix Contact MC1,5/2-STF-3,81 1827703
- Manual in PDF format
- Printed quick start guide