MACH SYSTEMS

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100/1000BASE-T1 USB Interface MATEnet

Fast/Gigabit Automotive Ethernet USB Network Interface with Advanced Features

FEATURES

- Automotive Ethernet to USB 3.1/2.0 network interface card
- 1000BASE-T1 and 100BASE-T1 support
- 100/1000 Mbit full-duplex communication
- Master/slave auto-negotiation or manual selection
- Speed auto-negotiation or manual selection
- IEEE and Legacy mode
- USB 3.1 Type-C connector
- USB-powered
- Frame generator mode
- Automatic polarity detection on T1 port
- USB virtual COM port for configuration, status and port diagnostic
- Free-of-charge PC application for management
- Can be used as a USB to CAN(/FD) interface
- Aluminium enclosure
- DIN rail mounting possibility

The 100/1000BASE-T1 USB Interface MATEnet realizes a connection between a 1000BASE-T1/100BASE-T1 network and a USB port. The device acts as a standard network interface card when plugged into a PC's USB port, and features TE MATEnet and USB 3.1 Type-C connectors.

The 100/1000BASE-T1 USB Interface is an ideal tool for connecting a 100BASE-T1/1000BASE-T1 ECU or network to a computer or laptop without an internal network card, such as ultrabooks, mini PCs etc.

Communication speed and master/slave settings can be auto-negotiated with a link partner or can be set manually by the user. A Virtual COM port is available to read the device status and port diagnostic. The device can also be used as a USB-CAN(/FD) interface.

The in-built status LEDs and dip switches allow to visualize the port status and configure its parameters. The interface offers advanced features such as frame generator and cable diagnostic.

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TECHNICAL SPECIFICATION

FEATURES

Media conversion	100/1000BASE-T1 to USB 3.1/2.0 network interface card
Status information	Link status / activity / error
Configuration	Speed: 100 / 1000 / Auto-negotiation Mode: Master / Slave / Auto-negotiation Frame generator: On / Off Link mode: IEEE / Legacy
Integration	Open communication protocol over USB VCP or CAN(/FD) allows to configure port parameters, read port status, and run cable diagnostic
USB-CAN(/FD) Interface	Possibility to use the device as a USB-CAN(/FD) interface (open communication protocol over USB VCP) – simultaneously to the media conversion function
PC application	Free-of-charge PC application to read status information, configure the converter, run cable diagnostic, use USB-CAN(/FD) function
Firmware update	Over USB

COMMUNICATION CHANNELS

Automotive Ethernet	1000BASE-T1 (IEEE 802.3bp) or 100BASE-T1 (IEEE 802.3bw) *Note: When plugged into a USB 2.0 port, the throughput for 1000BASE-T1 will be limited.*
USB	USB 3.1 Gen 1 network interface card (backward compatible with USB 2.0) USB 2.0 Virtual COM port for diagnostic
CAN	CAN-HS channel with CAN FD support (ISO 11898-1:2015; CAN2.0A/B; ISO CAN FD)

ELECTRICAL

Power	USB-powered
Consumption	1000 Mbit: 400 mA 100 Mbit: 220 mA
LEDs	4 Dual-colour LEDs 1 Power LED
Transceivers	1000BASE-T1: 88Q2110 A2 CAN bus: TCAN337GD

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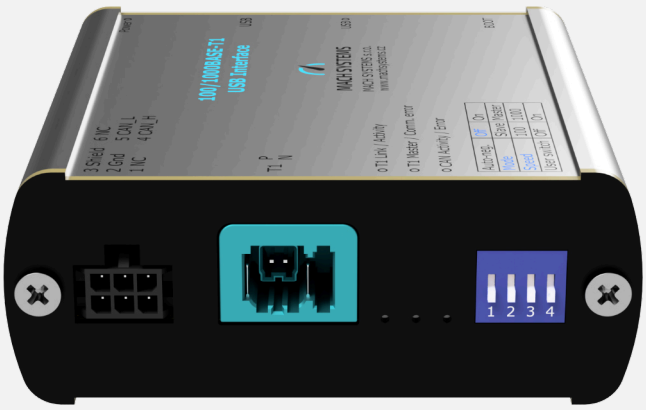
MECHANICAL

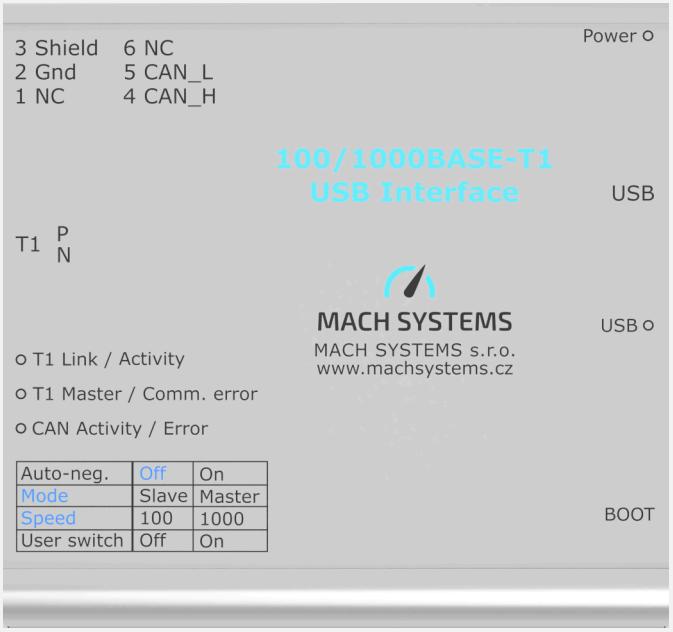
Connectors	1000BASE-T1: TE MATEnet USB: USB Type-C (USB 3.1) CAN bus and power: 6-pin terminal block (Molex Micro-Fit)
Switches	4 DIP switches 1 Push button
Dimensions (L x W x H)	84 x 82 x 33 mm
Weight	142 g
Operating temperature	-20 to 70 °C
Enclosure	Aluminium profile
Protection	IP20
Placement	Table (adhesive pads included) DIN-rail mount (clip sold separately)

ORDERING INFORMATION

PRODUCT NUMBER	DESCRIPTION
1000BASET1-USB-MATENET	100/1000BASE-T1 USB Interface MATEnet
HARNESS-MATENET-MATENET-0M5	TE MATEnet female to MATEnet female UTP cable; length 0.5 m
HARNESS-MATENET-MATENET-2M	TE MATEnet female to MATEnet female UTP cable; length 2 m
HARNESS-MATENET-MATENET-5M	TE MATEnet female to MATEnet female UTP cable; length 5 m
HARNESS-MATENET-MATENET-10M	TE MATEnet female to MATEnet female UTP cable; length 10 m
ADAPTER-MATENET-DSUB9-0M25	TE MATEnet female to DSUB9 female adapter; length 25 cm
ADAPTER-MATENET-HMTD-M	TE MATEnet male to Rosenberger H-MTD male PCB adapter
ADAPTER-MATENET-TERMINAL-M	TE MATEnet male to terminal block PCB adapter
HARNESS-MOLEX6-OPEN-1M	6-pin Molex Micro-Fit to open end; length 1 m
HARNESS-MOLEX6-OPEN-5M	6-pin Molex Micro-Fit to open end; length 5 m
1000BASET1-NET-SDK	.NET SDK API (DLL) to access the device over USB (VCP) or CAN/FD. The API allows to read the status and configure the device, run cable test, and to use the device as a USB-CAN(FD) interface.
DIN-BRACKET-UNI	Universal holder for mounting any enclosure on a DIN rail

PRODUCT IMAGES





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