



10BASE-T1S Media Gateway

Flexible 10BASE-T1S switch with CAN(/FD) gateway and user programming features

SPECIFICATION

- 10BASE-T1S port
 - Supports CSMA/CD and PLCA modes
 - Supports PLCA coordinator and follower
 - Point-to-point or multi-drop topology
 - Configurable end-node termination
 - Test mode generator
- 10/100BASE-TX port
- CAN(/FD) channel
- Analogue input and digital output
- 8x Status LED
- 11x Switch for configuration
- USB Type-C connector
- Power over USB or externally

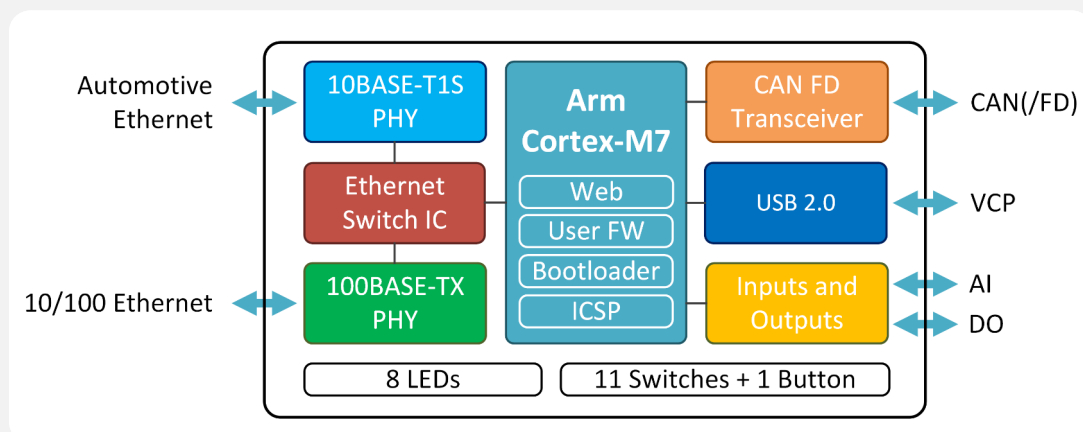


FEATURES

- 10BASE-T1S Automotive Ethernet switch
- 10BASE-T1S – CAN(/FD) gateway
- On-board switches for basic configuration
- Embedded web server for advanced configuration and status information
- User-programmable firmware (C language SDK)

USE-CASES

- Media conversion between 10BASE-T1S and 10/100BASE-TX
- Gateway between 10BASE-T1S and CAN(/FD)
- Ethernet – CAN(/FD) interface
- USB – CAN(/FD) interface
- 10BASE-T1S test mode generator
- Custom functions and network bridging thanks to a





The **10BASE-T1S Media Gateway** features one 10BASE-T1S port, one Fast Ethernet port, a CAN channel with CAN FD support, and a USB 2.0 port.

The media gateway can be used as a 10BASE-T1S - Ethernet switch (media converter) enabling a bi-directional communication between the 10BASE-T1S port, the standard Ethernet port, and the MCU, or as an Ethernet-CAN(/FD) gateway providing a data bridge between the Ethernet ports (10BASE-T1S and 100BASE-TX) and the CAN(/FD) channel. Gateway function for bridging a 10BASE-T1S network and a CAN/CAN FD bus can be configured over the embedded web server. The device can also be used as a USB to CAN(/FD) and an Ethernet - CAN(/FD) interface.

The Single-Pair Ethernet 10BASE-T1S port supports both CSMA/CD and PLCA modes, and allows for point-to-point and multi-drop network topologies. The port configuration, such as mode, BEACON transmission (PLCA coordinator), Node ID / Node count, and bus termination, can be easily set by on-board DIP switches. Further, 10BASE-T1S test modes can be generated.

TECHNICAL SPECIFICATION

GENERAL

Web	Web interface for configuration and status information
Gateway function	Data between 10BASE-T1S network and CAN(/FD) bus can be bridged in both directions
Interface function	Open communication protocol for realizing an Ethernet - CAN(/FD) and a USB - CAN(/FD) interface
Firmware	Upgradable over web

COMMUNICATION CHANNELS

Automotive Ethernet	10BASE-T1S (IEEE 802.3cg) CSMA/CD and PLCA modes supported Coordinator and Follower supported Node ID/Node Count and BEACON transmission configurable End-node termination can be switched on and off by on-board switch Test modes can be generated
CAN	CAN-HS with ISO CAN FD support (ISO 11898-1:2015; CAN2.0A/B)
USB	USB 2.0 VCP

MECHANICAL

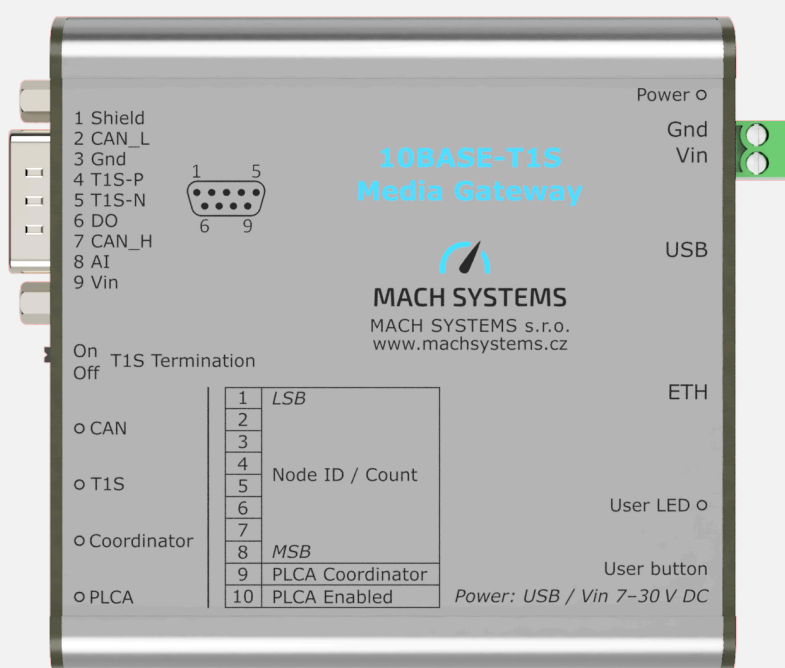
Connectors	10BASE-T1S, CAN bus and power: D-SUB 9 Male 100BASE-TX: RJ-45 Power: 2-pin removable terminal block USB 2.0 : USB Type-C
Dimensions (L x W x H)	88 x 82 x 33 mm
Weight	150 g
Operating temperature	-20 to 70 °C
Enclosure	Aluminium profile
Protection	IP20
Placement	Table (adhesive pads included) DIN-rail mount (bracket sold separately)

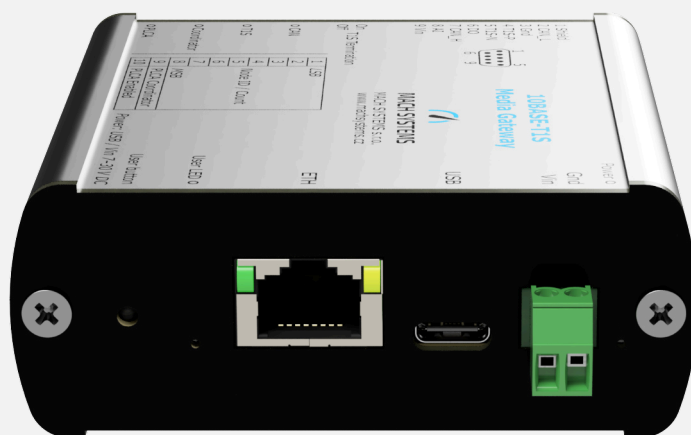
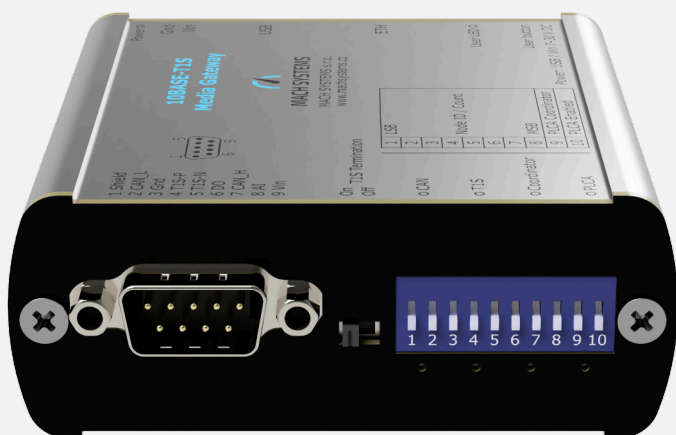


ELECTRICAL

Power	USB-powered over USB Type-C External 7 - 30 V DC power input (polarity and surge protection) over a 2-pin terminal block or DSUB9 connector
Consumption	150 mA @ 12V
Transceivers	10BASE-T1S: LAN8670 10/100BASE-TX: LAN9355 CAN: TCAN337G
LEDs	5x Dual-colour LED 2x ETH LEDs (RJ-45 connector) 1x Power LED
Buttons and switches	10x DIP switches 1x Switch (T1S termination) 1x Push button
I/O	1x Analogue input (0-30 V) 1x Digital output (open-drain, 35 V / 1 A)
MCU	STM32H7 (1 MB Flash, 564 KB RAM)

PRODUCT IMAGES





ORDERING INFORMATION

Product Number	Description
10BASE-T1S-MG	10BASE-T1S Media Gateway
DIN-BRACKET-UNI	Universal bracket for mounting many types of enclosures on a DIN rail

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