

100BASE-T1 Media Gateway

User Manual



CHANGES

Date	Description	Created By	Review By
4.6.2026	Initial release	PK	MM
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1 About

This document describes the usage of the **100BASE-T1 Media Gateway**.

Product number: 100BASE-T1-MG

Product page: <https://www.machsystems.cz/en/products/embedded-networking/gateways-and-bus-converters/100base-t1-media-gateway>



Figure 1: 100BASE-T1 Media Gateway

2 Introduction

The **100BASE-T1 Media Gateway** is a configurable Automotive Ethernet switch and communication bridge. The device can be used as frame sniffer (Active TAP), employing the packet forwarding function, as well as Ethernet – CAN(/FD) gateway, allowing data to be bi-directionally passed between any of the Ethernet ports and the CAN or CAN FD network.

The gateway features three 100BASE-T1 ports, one Gigabit Ethernet (1000BASE-T or 10/100BASE-TX) port, two CAN(/FD) channels, LIN bus, and a USB port. All Ethernet ports are internally connected to a switch circuit. A microSD card slot, two digital outputs, and two analogue inputs are also available.

100BASE-T1 Media Gateway Specification:

- 3x 100BASE-T1 port
- 1x 1000BASE-T port (gigabit Ethernet)
- All Ethernet ports are „switched“ (including the MCU)
- 2x CAN(/FD)
- LIN bus
- USB 2.0
- MicroSD card slot
- 2x Digital output (1x high-side 5V/0.5A, 1x low-side 40V/1A)

- 2x Analogue input (0-30 V)
- Embedded web server for configuration and status information
- User-programmable MCU (C language SDK available free-of-charge)

The device uses an internal Ethernet switch that interconnects the three 100BASE-T1 ports, one 10/100/1000BASE-T port, and the MCU.

The media gateway functionality can be used as a 100BASE-T1 - Ethernet switch with possible media converter functionality enabling a communication between the 100BASE-T1 ports and the standard Ethernet port. The Ethernet-CAN(/FD) (2 channels) interface function enables to access the CAN(/FD) channels from Ethernet. Gateway function for bridging a 100BASE-T1 network and a CAN/CAN FD bus can be easily configured over the embedded web server. The device also featured with the LIN interface, configurable over communication protocol.



Figure 2: Front and rear side

3 Device Description

3.1 Overview

The Media gateway features five connectors, fourteen LEDs, four DIP switches and a microSD slot.

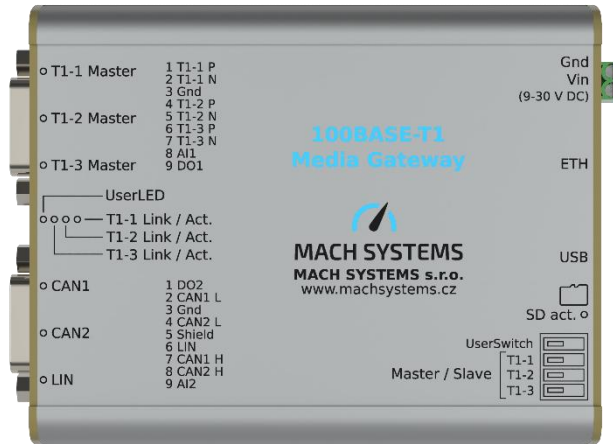
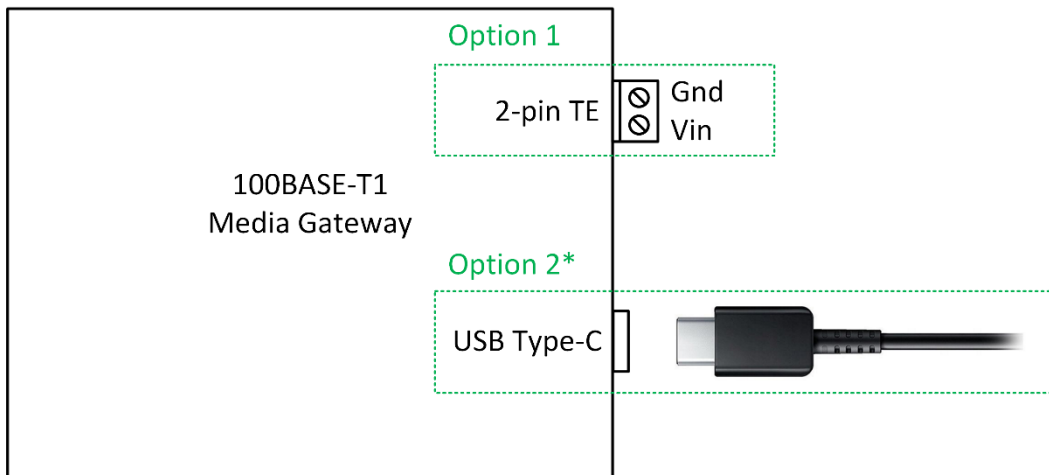


Figure 3: Top view

3.2 Power

The 100BASE-T1 Media Gateway can be powered over the 2-pin terminal block (9 – 30 V DC) or over USB. All grounds are connected.

Note: When powered over USB, the LIN channel cannot be used, and the user needs to make sure the current drawn by digital outputs does not exceed the USB host limits.



*) LIN bus cannot be used when the device is powered from USB

Figure 4: Power options

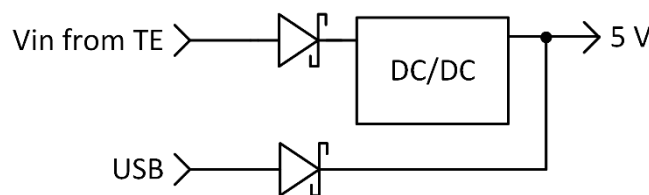


Figure 5: Power diagram

3.3 Connectors

3.3.1 Left DSUB9

The DSUB9M connector is used for 100BASE-T1 channel and I/O.

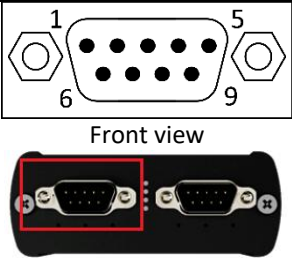
	Pin	Name	Note
 <p>Front view</p>	1	T1-1 P	100BASE-T1 Port 1
	2	T1-1 N	
	3	GND	Ground
	4	T1-2 P	100BASE-T1 Port 2
	5	T1-2 N	
	6	T1-3 P	100BASE-T1 Port 3
	7	T1-3 N	
	8	AI1	Analogue input 0-30 V
	9	DO1	Low-side digital output 30V/1A

Table 1 Left DSUB9 connector - pin assignment

3.3.2 Right DSUB9

The DSUB9M connector is used for CAN(/FD), LIN, and I/O.

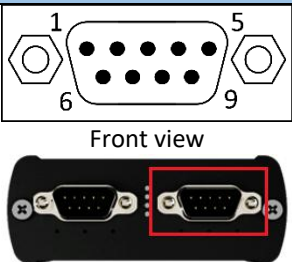
	Pin	Name	Note
 <p>Front view</p>	1	DO2	High-side digital output 5V/1A
	2	CAN1_L	
	3	GND	Ground
	4	CAN2_L	
	5	Shield	
	6	LIN	
	7	CAN1_H	
	8	CAN2_H	
	9	AI2	Analogue input 0-30 V

Table 2 Right DSUB9 connector - pin assignment

3.3.3 Removable Terminal Block

The removable 2-pin terminal block (TE Connectivity p/n: 284512-2) is used for powering the device.

Mating connector p/n: 284506-2

Note: The mating connector is included in the scope of delivery.

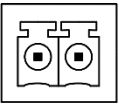
	Pin	Name	Description
 <p>Front view</p>	1	Vin	Power input positive (7 – 30 V DC)
	2	Gnd	Power input negative

Table 3 TE power - pin assignment

3.3.4 USB

USB Type-C connector uses the standard USB 2.0 pinout and can be used for firmware upload or as a virtual COM port (see **Chyba! Nenalezen zdroj odkazů.**).

3.4 Switches

There are 4 DIP switches, three of them are used for 100BASE-T1 Master/Slave configuration. Last one is the User switch, and its function can be configured.

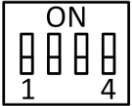
	No.	Name	Description
 <p>Front view</p>	1..3	100BASE-T1 Master/Slave	Enable Master on 100BASE-T1 channel 1..3.
	4	User switch	


Table 4 Switches

3.5 LEDs

The 100BASE-T1 Media Gateway contains 14 status LEDs.

3.5.1 Front Side

4 LEDs are on the front side.

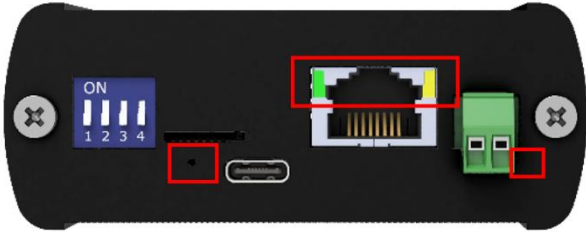
		
Position	LED Name	Note
Under left DSUB connector	T1-1..3 Master	Green on: Port is configured as Master Off: Port is configured as Slave
Vertically	T1-1..3 Link/Activity	Green on: 100BASE-T1 link active Green blinking: 100BASE-T1 activity Red blinking: 100BASE-T1 error Off: No link
	User	User LED
Under right DSUB connector	CAN-1..2	Green on: CAN channel on Green blinking: CAN activity Red blinking: Error frame received Red on: Bus error Off: CAN bus off
	LIN	Green on: LIN channel on Green blinking: LIN activity

		Red blinking: Bus error Off: LIN bus off
--	--	---

Table 5 Status LEDs on front panel

3.5.2 Rear Side

4 LEDs are on the rear side.



LED Name	Note
User LED	User specific function
RJ-45 Left LED	Orange On: 1000BASE-T link Green On: 100BASE-TX link Red On: 10BASE-T link Off: No link
RJ-45 Right LED	Orange blinking: Ethernet activity Off: No Ethernet activity
Power LED	Green on: The device is powered Off: The device is not powered

Table 6 Status LEDs on rear panel

3.6 CAN Bus Termination

There are no internal termination resistors inside the device. Therefore, the user has to make sure the CAN bus is properly terminated at both ends of the network.

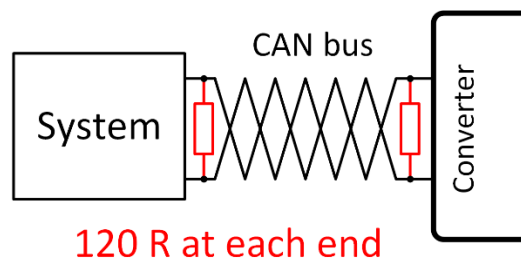


Figure 6: CAN bus termination

3.7 Galvanic Isolation

The device does **not** have any galvanic isolation. All ground signals are connected. The user has to make sure there are no ground loops in his setup.

4 Usage

4.1 Quick Start

The **100BASE-T1 Media Gateway** can be easily used like this:

- **Connect cables** to the D-SUB connector (100BASE-T1) and the standard Ethernet port (RJ-45 connector)
- **Configure the device – by built-in DIP switches:**
 - Set the PHY role Master/Slave for correct channel with DIP switch
- **Power the device – either over:**
 - USB
 - 2-pin terminal block

4.2 Media Gateway

The 100BASE-T1 Media Gateway can realize the connection between 100BASE-T1 ports, 10/100/1000BASE-T, USB protocol and CAN(/FD) bus. The CAN Gateway functionality is described in the CAN Gateway Protocol Specification document.

The conversion from 100BASE-T1 to 10/100BASE-TX is done through the internal Ethernet switch. All packets receive on 100BASE-T1 ports are switched by switch to 10/100/1000BASE-T (RJ-45 port), other 100BASE-T1 channel or MCU. Also, all packets received by 10/100/1000BASE-T (RJ-45 port) are switched to MCU or 100BASE-T1.

4.3 Embedded Web Server

Note: the HTTP interface was tested with the Chrome browser. Use of this interface with other browsers is not recommended and it can lead to unpredicted results.

On the device runs a webserver and after accessing device IP address via a browser, the device web page is shown (the default IP address is 192.168.1.100). This can be used for configuration and control of the device. Here we describe the website in detail.

On all the pages, there is a navigation panel.

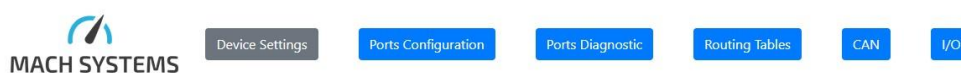


Figure 7: Website Header

At the bottom of all pages, there is a link to help page which shortly describes all the available pages.

4.3.1 Device Settings Page

The page is for basic device information and configuration.

Product number: 100BASE-T1 MEDIA GATEWAY
 Serial number: 05010107
 MAC address: FC:61:79:90:01:DF
 Firmware version: 1.0
 HW version: v1.0
 HW configuration: Standard

Figure 8: Device Information

After this there are settings of device Ethernet configuration (IP address, mask, default gateway, and the TCP/UDP port used for protocol communication). Settings are automatically saved to non-volatile memory when you click the “Save” button but that they take effect only **after device reboot**. You can reboot the device (software reset) using the button below. Last buttons in this section are for USB and ETH bootloader respectively. Going to USB bootloader disables the webserver. You can then update the device firmware using STM32CubeProgrammer (normally not used). ETH bootloader is another web page on the device that allows firmware update over web browser (see 4.4.1).

DHCP enable (changes IP address, mask, default gateway):

Off

Configured IP address:

Configured mask:

Configured default gateway:

Current TCP/UDP port:

Note: You must reboot after changing the configuration.

Figure 9: Ethernet configuration

4.3.2 100BASE-T1 Switch Configuration Page

100BASE-T1 Media Gateway internal switch configuration, are changed here. The switch has 5 ports. In each column, you can set up different ports. The 100BASE-T1 Master/Slave setting is configurable by DIP switches, but this can be override here. Note that clicking “Write Configuration” writes settings to the volatile memory only. Configuration options are described in Description collum.

On the bottom of the page, switch configuration can be load to default settings and read / write it from / to non-volatile memory.

Switch Ports						
Property	T1-1 Port 1	T1-2 Port 2	T1-3 Port 3	RJ-45 Port 4	MCU Port 5	Description
General						
Link	down	down	down	up	up	This indicates if the link on the port is established.
Ingress enabled	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	This flag enables input on the respective port when set.
Egress enabled	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	This flag enables output on the respective port when set. If this flag is disabled, frames will not be dispatched to the egress port and normal L2 forwarding to this port stops.
Address learning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	This flag enables address learning at the respective port when set. Note that learning is independent of whether input traffic is enabled.
Port speed	100 Mbps	100 Mbps	100 Mbps	Actual speed: 1000 [Auto]	100 Mbps	Port speed is fixed for 100Base-T1 and MCU ports to 100Mbps, only port 4 can be set or it can be negotiated with a link partner.
Master Selection	Actual setting: Slave [Set by switch]	Actual setting: Slave [Set by switch]	Actual setting: Slave [Set by switch]	N/A	N/A	Select if PHY connected to port is configured as Master/Slave for 100Base-T1 only
VLAN ID	555	555	555	555	555	Defines the VLAN ID used to tag untagged incoming frames on this port. Values can be chosen arbitrarily in the range 0 to 4095.
Mirroring						
Egress mirroring enabled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If this flag is set, all traffic forwarded to this port is forwarded to the mirror port. Note that this does not apply to locally generated PCs, Time-Triggered Ethernet.
Ingress mirroring enabled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If this flag is set, all traffic received on this port is forwarded to the mirror port.
VLAN tag mirrored ingress	0	0	0	0	0	VLAN tag added to ingress mirrored frames. And ingress mirrored frame is tagged with an additional outer tag if this field is non-zero. It is not applicable when mirroring double tagged frames.
Mirror Port	None					Traffic to be mirrored flows to this port. Note that mirroring will be faithful only if the switch operates lossless. The decision to mirror a frame is taken when the frame is dispatched to the destination port. The frame will still be mirrored if the destination port does not accept it, e.g. because the respective priority queue is full.
VLAN tag mirrored egress	0					VLAN tag added to egress mirrored frames. If this field is non-zero, then an egress mirrored frame will be tagged with an additional outer tag. Not applicable when mirroring double-tagged frames.
[Write Configuration]					[Read Configuration] [Config loaded]	
Device Configuration						
[Load Default] [Read from EEPROM] [Write to EEPROM]						
MACH SYSTEMS s.r.o. www.machsystems.cz						[Help]

Figure 10: Ethernet switch configuration

4.3.3 Ports Diagnostic Page

The Ports Diagnostic page is divided into two tables. The first table displays 100BASE-T1 status information, including signal quality, error counters and more. Error flags indicate that an event has occurred, and they can be reset if triggered. Additionally, this section enables users to run cable tests or configure the test mode.

100BASE-T1 Diagnostic

Property	T1-1	T1-2	T1-3	Description
Link	down	down	down	This indicates if the link on the port is established.
Master Selection	Slave	Slave	Slave	Select if PHY connected to port is configured as Master/Slave for 100Base-T1 only
Signal Quality	0	0	0	Signal quality indicator: 0. no link 1. worse than class A SQ (unstable link) 2. class A SQ (unstable link) 3. class B SQ (unstable link) 4. class C SQ (good link) 5. class D SQ (good link; bit error rate < 1e-10) 6. class E SQ (good link) 7. class F SQ (very good link) 8. class G SQ (very good link)
Reverse Polarity	-	-	-	Reverse polarity is valid only if selected mode is a slave.
Error Counter	0	0	0	This counter read errors on T1. It stops at 4 294 967 295.
T1 test mode	<input type="button" value="No Mode"/>	<input type="button" value="No Mode"/>	<input type="button" value="No Mode"/>	Can be used to generate Test symbols on the 100BASE-T1 channel.
Cable Test	<input type="button" value="Test result: ?"/> <input type="button" value="Run Cable Test"/>	<input type="button" value="Test result: ?"/> <input type="button" value="Run Cable Test"/>	<input type="button" value="Test result: ?"/> <input type="button" value="Run Cable Test"/>	Cable test can diagnose open circuit or short circuit on T1 cable.

Figure 11: 100BASE-T1 MG switch configuration

The second table provides Ethernet switch statistics. The first section details counters for ingress and dropped frames, with the dropped frames further categorized by the reason for the drop. The second section presents statistics on corrupted frames accepted by the switch, distinct by error type. The final section displays the temperature of the switch.

Switch Statistics

Property	T1-1 Port 1	T1-2 Port 2	T1-3 Port 3	RJ-45 Port 4	MCU Port 5	Description
Statistic Counters						
Packets	11480	11480	11480	22756	22751	Number of Packets
Octets	1156101	1156101	1156101	5262130	5261810	Number of Octets
VLAN Error	0	0	0	0	0	Number of frames that were dropped since power on or reset because the VLAN ID was either not found in the VLAN Lookup table, the respective port is not listed in the port vector of the configured VLANID.
Not Reach	0	0	0	0	0	Number of frames that produced a match in the L2 Lookup table since power on or reset, but were not routed to the port this counter is assigned to because the port is not reachable.
Ingress Drop	0	0	0	0	0	Number of frames that were dropped on ingress because the respective memory partition of the port had no space left after power-on or reset.
Egress Drop	0	0	0	0	0	Number of frames that were dropped on egress because the respective priority queue of the destination port did not have any space left since power on or reset.
MAC Level Errors						
Runt	0	0	0	0	0	Number of frames that do not have a SOF, alignment or MII error, but are shorter than 64 bytes. The counter will not wrap.
SOF Error	0	0	0	0	0	Number of frames that have a SOF error. The field will not wrap.
Align Error	0	0	0	0	0	This field counts the number of frames that started with a valid start sequence (preamble plus SOF delimiter byte) but whose length is not a multiple of eight bits. The field will not wrap.
MII Error	0	0	0	0	0	This field counts the number of frames that started with a valid start sequence (preamble plus SOF delimiter byte) but terminated with the MII error input being asserted. The field will not wrap.
Switch temperature						
Switch temperature	42 °C					Temperature of switch

Figure 12: Ethernet switch statistics

4.3.4 Routing Tables

There are two tables on this page. First table is the Address Lookup Table which controls TCAM address lookup and frame forwarding. Rows in Address Resolution Table are added automatically if they are learned by switch (**Dynamic Learned** is set to 1). Row can be also added by filling the fields (Dynamic Learned field is set automatically and cannot be changed). The rows can be removed by clicking on Remove button. If a new row with the existing index is added the existing row is updated. In the Address resolution table, the rows with lower index have higher priority. If the enforce MAC flag is set, the value from MAC address will be enforced as source MAC address on ports set in Ports. The **MAC Address Mask** is used by TCAM memory for search operations. Bits that are one are evaluated during search operation.

Address Lookup Table

Index	Ports	MAC Address	MAC Address Mask	Enforce MAC	Dynamic Learned	
0	5	fc61799001df	00000000ff#	0	1	Remove
1	4	489ebd326751	00000000ff#	0	1	Remove
0	0	0	0	0	n/a	Add

Ports order

1. T1-1
2. T1-2
3. T1-3
4. RJ45
5. MCU

Import Export

VLAN Tagging Table

Index	VLAN ID	Egress Ports	Ingress Ports	Send Tag	
n/a	0	0	0	0	Add

Import Export

Figure 13: Routing tables

The second is VLAN Tagging Table its entries define the ports that are members of a specific VLAN. It also defines the broadcast domain, together with the set of ports on which a VLAN tag must be inserted or removed on egress. The maximum ID VLAN is 4094. For VLAN Tagging table the entries have the same priority.

The entries to / from both tables can be imported / exported by clicking on import / export format. The file has JSON format.

4.3.5 CAN Configuration

The first section allows user to set up CAN fundamental parameters like protocol, baud Rates and sample points. When Data Baud Rate of 8M is selected, Arbitration Baud Rate should be set to 1M. For Data Baud Rate 4M, data sample point is rounded to lower multiple of 5 %. For Data Baud Rate 8M, data sample point is rounded to lower multiple of 10%.

CAN Configuration

The configuration is written to the non-volatile memory.

CAN 1

CAN FD

Arb. Baud Rate: 500K ▾ Arb. Sample Point: 80 % ▾

Data Baud Rate: 2M ▾ Data Sample Point: 80 % ▾

[Change Baud Rate](#)

CAN - Ethernet / VCP Frame Forwarding

UDP TCP USB

If nothing is selected CAN is used for Communication Protocol Messages.

CAN ID Filtering:

Set permitted CAN ID, hexadecimal format separated by comma.

Source IP: 192.168.1.100 Source port: 8001

Destination IP: 192.168.1.10 Destination port: 8001

Destination IP and Destination port are relevant only for UDP.

[Set CAN Gateway](#)

Communication Protocol CAN Identifiers

Device Tx ID 0x: 321 Ext. ID CAN FD BRS

Device Rx ID 0x: 123 Ext. ID CAN FD

[Set IDs](#)

CAN 2

CAN FD

Arb. Baud Rate: 500K ▾ Arb. Sample Point: 80 % ▾

Data Baud Rate: 2M ▾ Data Sample Point: 80 % ▾

[Change Baud Rate](#)

CAN - Ethernet / VCP Frame Forwarding

UDP TCP USB

If nothing is selected CAN is used for Communication Protocol Messages.

CAN ID Filtering:

Set permitted CAN ID, hexadecimal format separated by comma.

Source IP: 192.168.1.100 Source port: 8001

Destination IP: 192.168.1.10 Destination port: 8001

Destination IP and Destination port are relevant only for UDP.

[Set CAN Gateway](#)

Communication Protocol CAN Identifiers

Device Tx ID 0x: 321 Ext. ID CAN FD BRS

Device Rx ID 0x: 123 Ext. ID CAN FD

[Set IDs](#)

Figure 14: CAN Configuration

CAN bus can be routed to the devices connected to the device by Ethernet or USB. The set of the CAN to Ethernet forwarding can be found in the second section. In the first row, you can set up the protocol by which the messages are transmitted. The message format and the way how to send the CAN message by these protocols are described in the 100BASE-T1 Media Gateway Communication Protocol Specification document. If no protocol is selected the CAN messages are used for device configuration.

The CAN frame forwarding can be restricted to permitted CAN IDs set up in CAN ID Filtering, following a format consisting of a hexadecimal number with a leading "0x" separated by commas.

4.3.6 I/O Read and Write

Analogue Input

AI1: 8 mV

AI2: 7 mV

Digital Output

DO1: 0 - low side switch

[Set 1](#) [Set 0](#)

DO2: 0 - high side switch

[Set 1](#) [Set 0](#)

Figure 15: I/O Status

Input values are in millivolts and are automatically updated (read from device) every one second. There may be some inaccuracy in the read value.

First digital output is low side switch and can be set to 0 (tied to GND) or set to 1 (released). Second digital output and can be set to 1 (tied to 5V) or released.

4.4 Firmware Update

The device's firmware can be updated over web (web bootloader). Further, the STM32H7 MCU contains the system bootloader which enables to flash firmware over USB.

Please note that Web bootloader resides within the first flash sector (0x8000000 to 0x801FFFF), and the application is loaded at address 0x8020000.

4.4.1 Web Bootloader

With the web bootloader, new firmware can be easily update over a web browser. No additional software is needed. Recommended web browser for firmware upload is Google Chrome. After entering the web bootloader, the page in Figure 16 is shown. Users can select a file with firmware and upload it. The file with firmware must be in binary format (.bin).

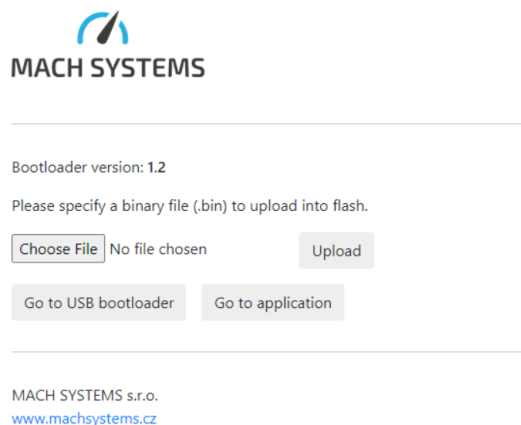
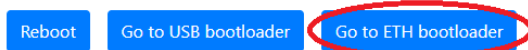


Figure 16: Web bootloader

There are four ways of entering the web bootloader:

- **With web browser:** Simplest way to go to the bootloader is by clicking “Go to ETH bootloader” on the website title page:



Intermediate loading page will be shown:

Device reset or reboot to bootloader requested. You will be redirected shortly.

Device will then reboot to bootloader and user is redirected to its page. Binary file can be loaded.

- **Send protocol message:** Web bootloader can be started using Mach Systems' communication protocol with appropriate message ID (0xFE). See the Communication Protocol Specification for more information.

- **By hardware**

To enter the web bootloader open the enclosure to access the located on the top layer of the PCB. There are two pads one for the system bootloader (BOOT) second for the Web bootloader (ETH B).



Figure 17: Boot pads

The steps for entering web bootloader:

- Disconnect the USB and the external power supply
 - Open the enclosure
 - Connect the power supply - either USB or external
 - Connect the Ethernet cable
 - Short the ETH B and GND pads together (a pair of tweezers can be used)
 - The device will enter the Web bootloader
 - Release the boot pads
 - Firmware can be flashed
 - Close the enclosure
- **Programmatically from application:** If the user wants to load his own firmware to the device, he can jump to the address of Web bootloader (0x8000000) from his program.

4.4.2 System Bootloader

The STM32CubeProgrammer application is used to flash firmware into the device. The application is available from [1]. The application shall be installed before plugging the device into the computer.

It should be noted that flashing the firmware over the system bootloader also rewrites the Web bootloader. That means the firmware updated over web will not be available any more.

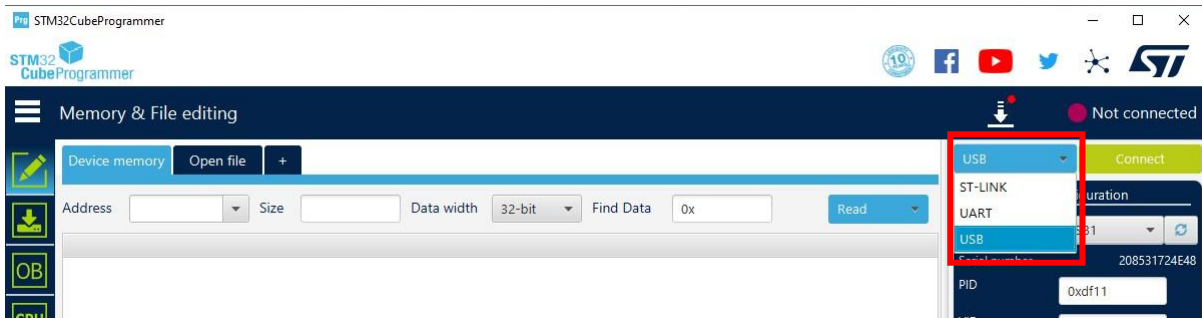
The device contains a system bootloader which is pre-programmed in ROM during manufacture. The steps for **entering the system bootloader**:

- Disconnect the USB and the external power supply so that the device is powered off
- Open the enclosure
- Short the BOOT and 3V3 pads together (a pair of tweezers can be used)
- The device will enter the System bootloader
- Connect the USB cable
- Release the boot pads
- Firmware can be flashed
- Close the enclosure

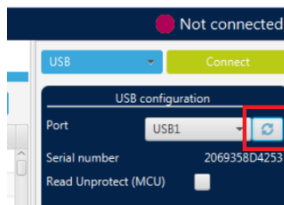
Steps for firmware update:

1. Open the *STM32CubeProgrammer* application

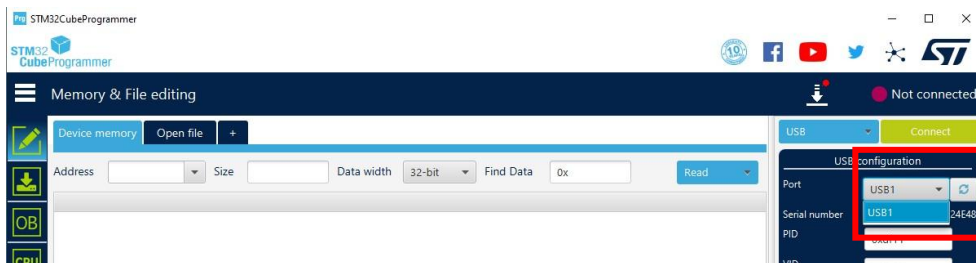
2. Turn the device off
3. Enter the system bootloader as described above
4. In the *STM32CubeProgrammer*:
 - a. Select the USB interface from drop-down



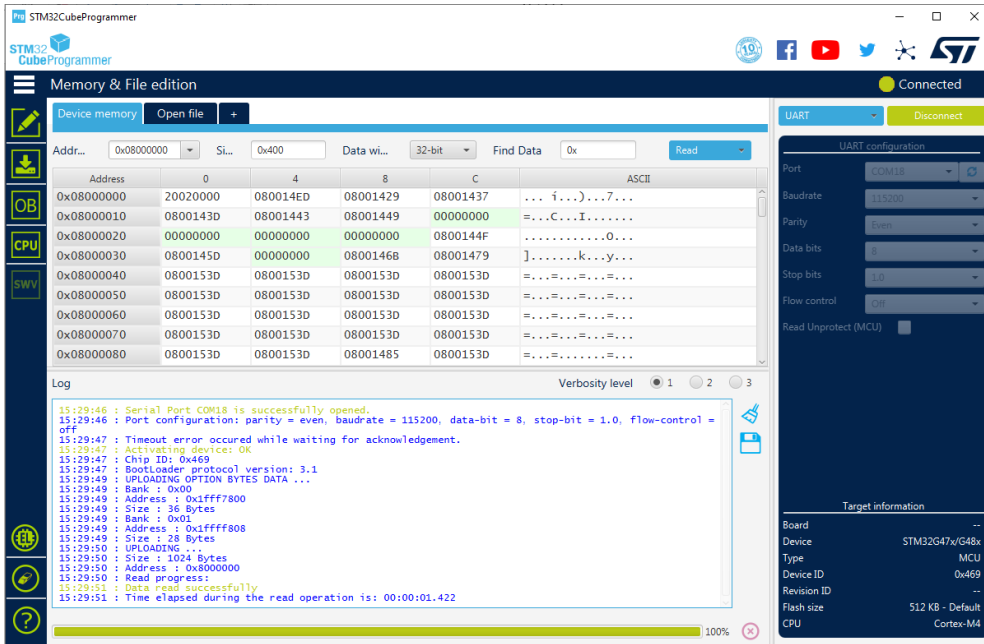
- b. Click on the refresh arrows button to see available ports



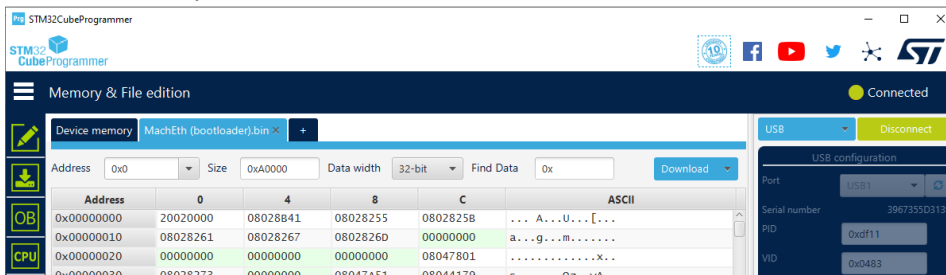
- c. Select the correct port



- d. Click connect. You will see a screen similar to this one. The device's bootloader is connected to the PC.



- In order to flash a new firmware, open an .elf file by „Open file“ button and press the „Download“ button. A .bin file can be used also but the Address of 0x8000000 has to be chosen manually.



The device shall be powered off in order to exit the bootloader mode.

5 Legal Information

5.1 Usage Warning

WARNING FOR ALL USERS

WARNING! - YOUR USE OF THIS DEVICE MUST BE DONE WITH CAUTION AND A FULL UNDERSTANDING OF THE RISKS!

THIS WARNING IS PRESENTED TO INFORM YOU THAT THE OPERATION OF THIS DEVICE MAY BE DANGEROUS. YOUR ACTIONS CAN INFLUENCE THE BEHAVIOR OF A DISTRIBUTED EMBEDDED SYSTEM, AND DEPENDING ON THE APPLICATION, THE CONSEQUENCES OF YOUR IMPROPER ACTIONS COULD CAUSE SERIOUS OPERATIONAL MALFUNCTION, LOSS OF INFORMATION, DAMAGE TO EQUIPMENT, AND PHYSICAL INJURY TO YOURSELF AND OTHERS. A POTENTIALLY HAZARDOUS OPERATING CONDITION IS PRESENT WHEN THE FOLLOWING TWO CONDITIONS ARE CONCURRENTLY TRUE: THE PRODUCT IS PHYSICALLY INTERCONNECTED TO A REAL DISTRIBUTED EMBEDDED SYSTEM; AND THE FUNCTIONS AND OPERATIONS OF THE REAL DISTRIBUTED EMBEDDED SYSTEM ARE CONTROLLABLE OR INFLUENCED BY THE USE OF THE CAN NETWORK. A POTENTIALLY HAZARDOUS OPERATING CONDITION MAY RESULT FROM THE ACTIVITY OR NON-ACTIVITY OF SOME DISTRIBUTED EMBEDDED SYSTEM FUNCTIONS AND OPERATIONS, WHICH MAY RESULT IN SERIOUS PHYSICAL HARM OR DEATH OR CAUSE DAMAGE TO EQUIPMENT, DEVICES, OR THE SURROUNDING ENVIRONMENT.

WITH THIS DEVICE, YOU MAY POTENTIALLY:

- CAUSE A CHANGE IN THE OPERATION OF THE SYSTEM, MODULE, DEVICE, CIRCUIT, OR OUTPUT.
- TURN ON OR ACTIVATE A MODULE, DEVICE, CIRCUIT, OUTPUT, OR FUNCTION.
- TURN OFF OR DEACTIVATE A MODULE, DEVICE, CIRCUIT, OUTPUT, OR FUNCTION.
- INHIBIT, TURN OFF, OR DEACTIVATE NORMAL OPERATION.
- MODIFY THE BEHAVIOR OF A DISTRIBUTED PRODUCT.
- ACTIVATE AN UNINTENDED OPERATION.
- PLACE THE SYSTEM, MODULE, DEVICE, CIRCUIT, OR OUTPUT INTO AN UNINTENDED MODE.

ONLY THOSE PERSONS WHO:

(A) ARE PROPERLY TRAINED AND QUALIFIED WITH RESPECT TO THE USE OF THE DEVICE,

(B) UNDERSTAND THE WARNINGS ABOVE, AND

(C) UNDERSTAND HOW THIS DEVICE INTERACTS WITH AND IMPACTS THE FUNCTION

AND SAFETY OF OTHER PRODUCTS IN A DISTRIBUTED SYSTEM AND THE APPLICATION FOR WHICH THIS DEVICE WILL BE APPLIED, MAY USE THE DEVICE.

PLEASE NOTE THAT YOU CAN INTEGRATE THIS PRODUCT AS A SUBSYSTEM INTO HIGHER-LEVEL SYSTEMS. IN CASE YOU DO SO, MACH SYSTEMS s.r.o. HEREBY DECLARES THAT MACH SYSTEMS s.r.o.'s WARRANTY SHALL BE LIMITED TO THE CORRECTION OF DEFECTS, AND MACH SYSTEMS s.r.o. HEREBY EXPRESSLY DISCLAIMS ANY LIABILITY OVER AND ABOVE THE REFUNDING OF THE PRICE PAID FOR THIS DEVICE, SINCE MACH SYSTEMS s.r.o. DOES NOT HAVE ANY INFLUENCE ON THE IMPLEMENTATIONS OF THE HIGHER-LEVEL SYSTEM, WHICH MAY BE DEFECTIVE.

5.2 Disposal and Recycling Information



When this product reaches its end of life, please dispose of it according to your local environmental laws and guidelines.

5.3 Declaration of Conformity


MACH SYSTEMS

EU Declaration of Conformity (DoC)

We

Company Name	MACH SYSTEMS s.r.o.	City	Prague
Postal Address	Pocernicka 272/96	Country	Czech Republic
Postcode	108 00		

declare that the DoC is issued under our sole responsibility and belongs to the following product:

100BASE-T1 Media Gateway

Objects of the declaration:

Product	Product Number
100BASE-T1 Media Gateway	100BASET1-MG

The objects of the declaration described above is in conformity with the relevant Union harmonisation legislation:

2014/30/EU: EMC Directive
 2011/65/EU + 2015/863/EU: RoHS 2 + amendment


The following harmonised standards and technical specifications have been applied:

EN 61326-1:2022-11	EN 61000-6-3:2020
EN IEC 63000	

Signed for and on behalf of: MACH SYSTEMS s.r.o.

Place of issue: Prague, Czech Republic

Date of issue: September 30th 2024

Signature: 

Name, function: Miroslav Machacek, Managing Director

MACH SYSTEMS s.r.o.
www.machsystems.cz

5.4 Patents, Copyrights and Trademarks

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6 References

[1] “STM32CubeProgrammer Web Site,” [Online]. Available: <https://www.st.com/en/development-tools/stm32cubeprog.html>.

7 Ordering Information

Product Number	Description
100BASE-T1-MG	100BASE-T1 Media Gateway
DIN-BRACKET-UNI	Universal bracket for mounting many types of enclosures on a DIN rail

Table 7 Product Numbers

8 Contact

MACH SYSTEMS s.r.o.

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info@machsystems.cz

Czech Republic



Company registration: 29413893

EU VAT number: CZ29413893