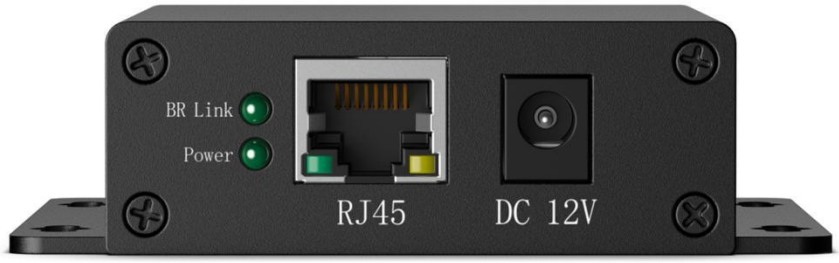
100BASE-T1-TX



Menu

1. General Description:

1. Establishes a direct point-to-point conversion between automotive ECU's using 100BASE-T1/BroadR-Reach(100 Mbit/s Fullduplex,) and any standard Fast Ethernet (100 Mbit/s, 100BASE-TX) device with an standard ethernet RJ45 connector.

2. Comes with 1x Unshielded Twisted Pair (UTP) cable and 1x 12V power adapter.

3. By using the Broadcom BroadR-Reach PHY BCM89811B1AWMLG, ensure a trustworthy and effective tool to customers that are looking for a cost-efficient, quick and manageable solution for testing requirements, with no latency and no packet loss.

4. Features with 100BASE-T1 Master / Slave configuration and link LED.

5. Plug and Play, No need to install the drivers.

2. Features

The device features bi-directional conversion between Standard Ethernet (100BASE-TX) and Automotive Ethernet (100BASE-T1). A massive stainless-steel housing, coupled with switches for ease of configuration enables the user to interact with the converter, effortlessly.

No customized driver is needed to interact with our 100BASE-T1 Media Converter. The device communicates with standard Ethernet through an RJ-45 connector.
It comes with a BR connector and a standard Ethernet RJ-45 connector.

Its design makes it portable and easy to install in test racks. The galvanized sheet steel with black powder coating housing makes it robust.
The device is capable to function in a variating temperature range from 0 Celsius to +70 Celsius. With the in-built link LEDs, the operation of the device is transparent and aids the tester to detect Link up and data transmission visually.

No extra hardware or software is needed to connect the device with a PC or a Laptop. The device can be coupled with any hardware or software tool that runs on standard Ethernet with an RJ-45 connector.

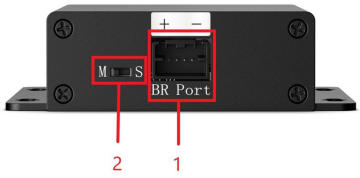
Thus, the 100BASE-T1 to 100BASE-TX Media Converter is the ideal solution for working quickly and efficiently with the new 100BASE-T1 technology without the hustle of extra- wiring, customized connectors, and vendor-specific tools.

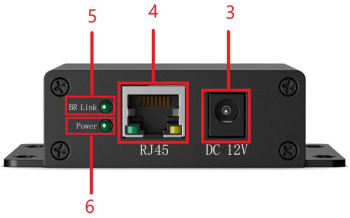
3. Hardware Description

3.1 General Information

Items	Description
Power Input Requirement	6~36V/2A(nominal 12/24 Volt DC)
Power Consumption	＜1W
Size W* L * H	97mm x 69mm x 26mm
Weight	0.16kg
Operating Temperature	0-70 Celsius
PHY Chip	BCM89811B1AWMLG

3.2 Interface

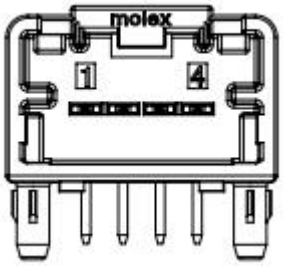




(1) BR Connector

Manufactory: Molex

Part Number: 34793-0040



Pin (from left to right)	Description
1	NC
2	Data Line Plus (Positive)
3	Data Line Minus (Negative)
4	NC

(2) Master / Slave configuration Key

In a 100BASE-T1 Link one device has to be set as Master, the other has to be set as Slave. If you don’ t know the mode of DUT, you could switch the mode of 100BASE-T1-TX for testing. The BR Link led will be lit when the 100BASE-T1-TX is paired with the DUT.

(3) Power Input

6~36V/2A(nominal 12/24 Volt DC)

(4) RJ-45 Ethernet Port

There is one RJ45 Standard Ethernet connector for Fast Ethernet (100BASE-T

(5) BR Link

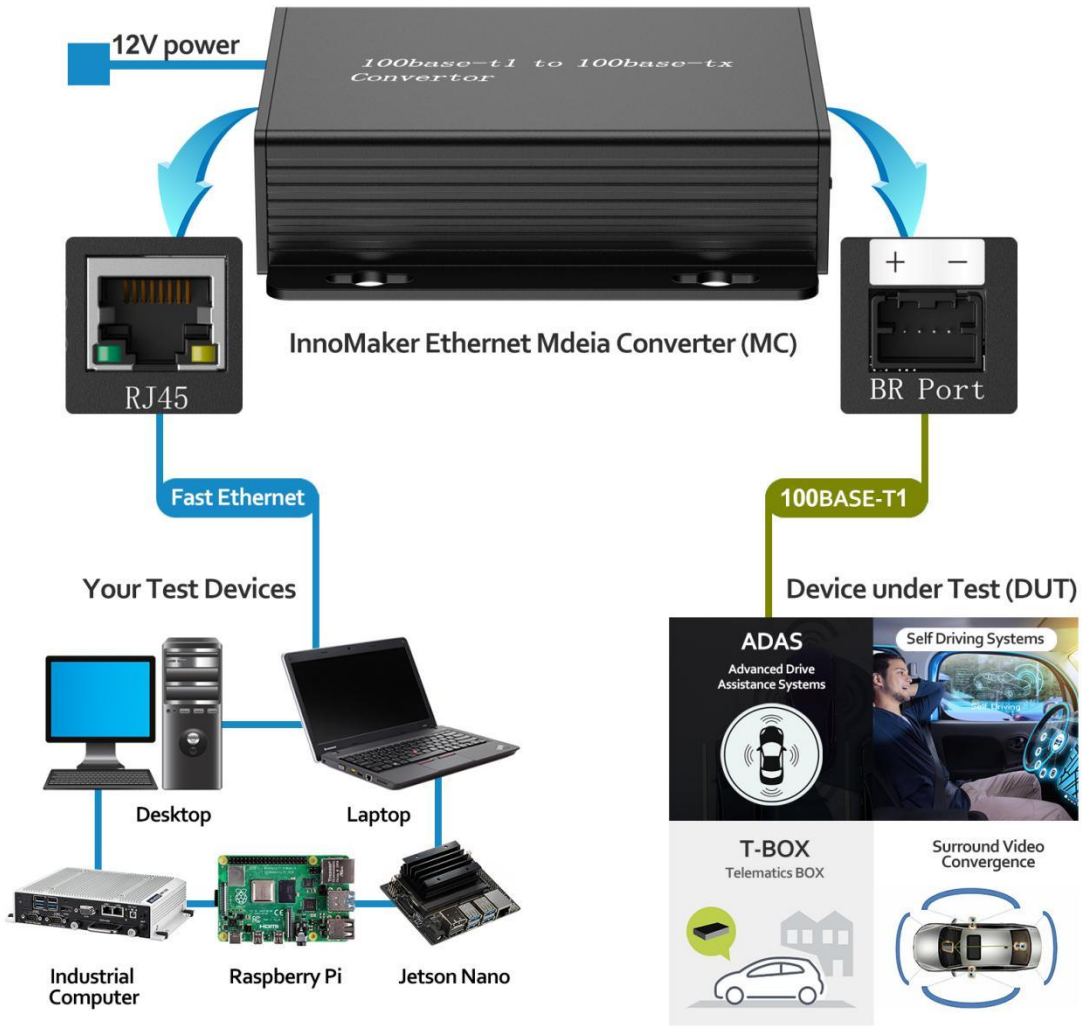
The BR Link led will be lit when the 100BASE-T1-TX is paired with the DUT.

(6) Power Link

A green power LED that lights up when power is supplied to the board.

4.Usecase

4.1 Standard Usecase

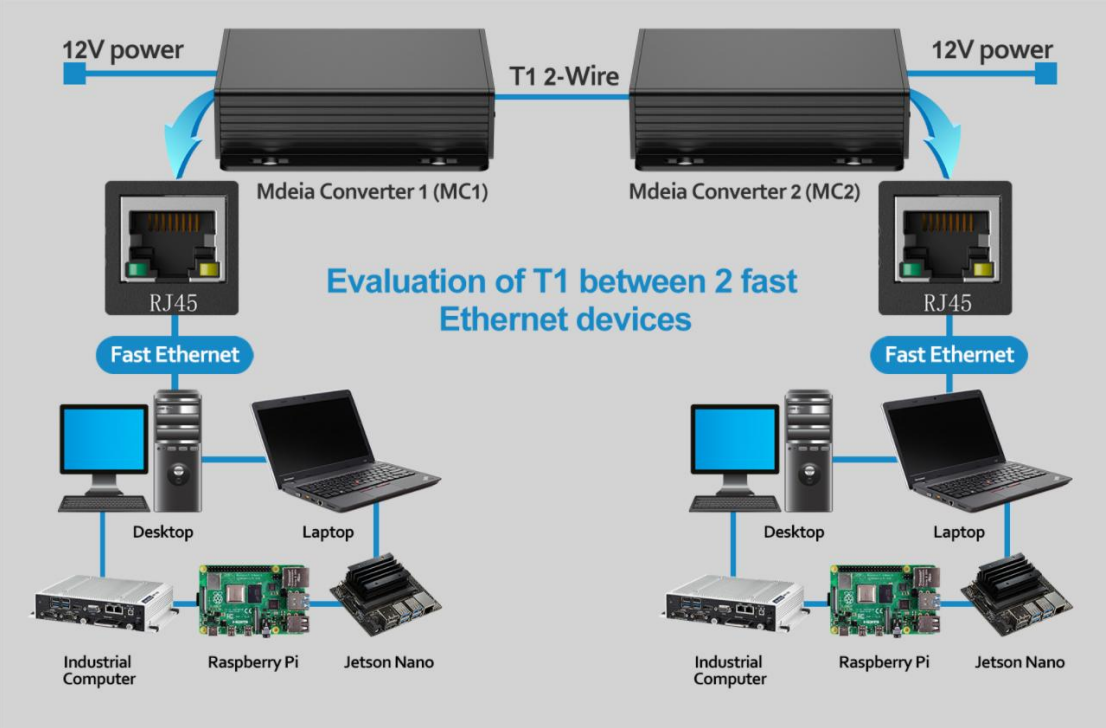


100BASE-T1-TX device is used to connect a PC/SBC to a T1 peripheral.

The mode of device is dependent on the DUT. If DUT is Master, MC must be configured as Slave (DIP-switch : S) and vice versa. If you don't know the mode of DUT, you could switch the mode of 100BASE-T1-TX for testing. The BR Link led will be lit when the 100BASE-T1-TX is paired with the DUT.

4.2 Evaluating T1 between two 100BASE-TX devices

You could use two 100BASE-T1-TX and two standard PCs/SBC with RJ45 connectors together over a 2-wire T1 network. The converters communicate with each other via T1 2-Wire.



5.User Manual Version Descriptions

Version	Description	Date	E-mail
V1.0		2023.01.06	support@inno-maker.com sales@inno-maker.com calvin@inno-maker.com

If you have any suggestions, ideas, codes and tools please feel free to email to me. Look forward to your letter and kindly share.