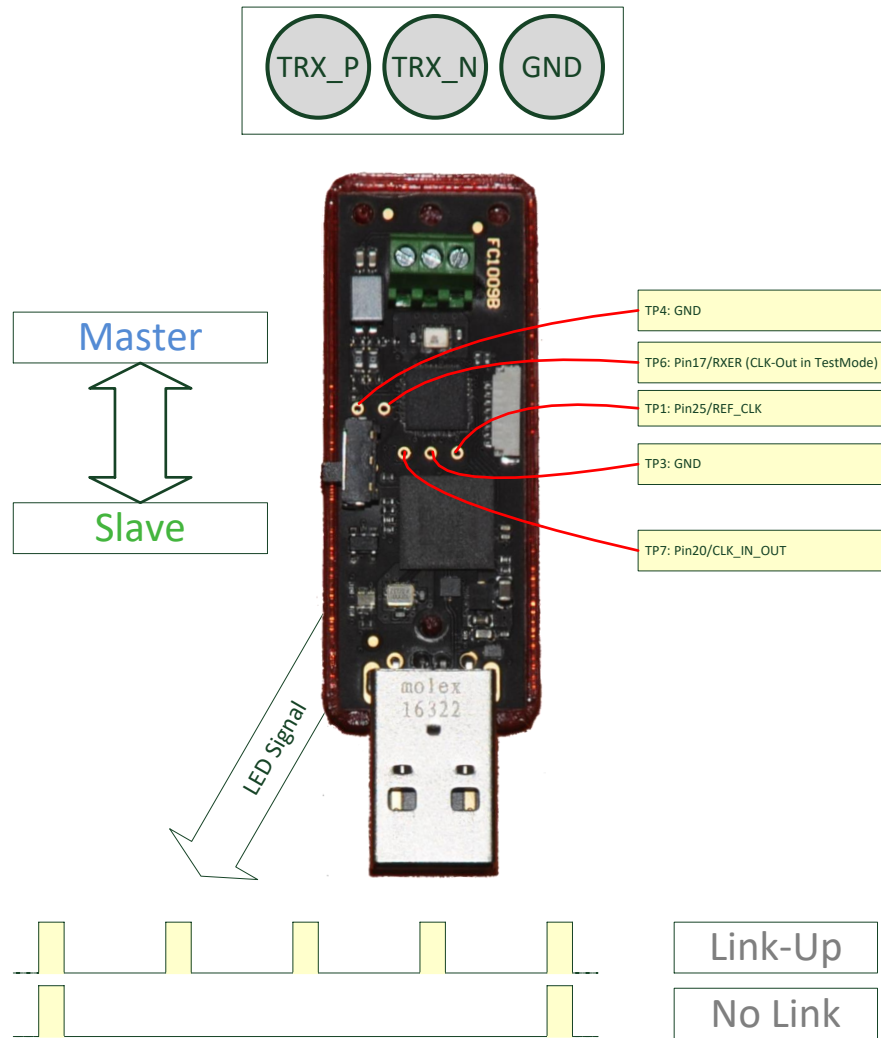


User Manual

FC612
Version 1.0.0

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Build 2
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1 Usage



2 Overview

The FC612 is a compact, powerful and flexible USB to 100Base-T1 adapter. In comparison to network-adapter FC602, the FC612 supports raw-ethernet frames communication including precise timestamp and sequence counter for each received message.

Started with FC611, `broadway2` software package was introduced and is now extended to support:

- FC611 - USB OABR Stick Raw (TJA1100 based)
- FC602 - USB OABR Stick (TJA1101 based)
- FC612 - USB OABR Stick Raw (TJA101 based)

The software package is improved and supports still USB2 high-speed connectivity to Windows 7/10 and Linux without additional kernel drivers.

Please note:

In case of using FC601 and new FC602, FC611 and FC612, there are 2 different APIs. Both can be used in parallel, but have different low-level API.

To behave like a standard USB device, FC612 includes:

- USB Control
- USB Raw-Ethernet Rx
- USB Raw-Ethernet Tx

Using USB Control, all properties and functions of FC612 are accessible. In extension to these base functions, Raw-Ethernet Rx/Tx interfaces enables the usage of sending/receiving of Layer2 frames on 100Base-T1 networks.

So, this variant fits perfect for analyze and test Automotive Ethernet node and switch designs. It speeds up development time and is ideal suited to verify all kind of MAC-level data including VLANs, double-tagged VLANs, gPTP-traffic, TSN related Layer2 protocols, ...

2.1 Deliverables

- FC612 - USB to 100Base-T1 adapter

- UTP-Cable 1m
- Software
 - Broadway2 API for Windows/Linux
 - Python3 `broadway2` package and source examples

3 Software

Starting with next generation of USB-OABR Adapters, like FC602, FC611 and FC612, there is now one common software installation which supports all of these new variants.

For FC601, the existing software stays on `broadway`, but latest CDC-ECM driver supports all adapters including FC601.

Details can be found in new `broadway2` documentation, delivered together with `broadway2` download package.

4 Firmware Update

For each variant, FibreCode supports easy USB update package which is always found in latest `WFP_xxxx.zip` file under Firmware.

Important: Update is NOT supported on Linux

For update of FC602, follow next steps:

1. Login to Windows 7 or Windows 10 PC
2. Unzip `WFP_FC612_xxxx.zip` to localö folder like `tmp`
3. Connect exactly one FC612 to Windows
4. Open console in extracted firmware folder and enter:
`update_app_stick_FC612.cmd FC300106_V_xx_yy_zz-n.bin`