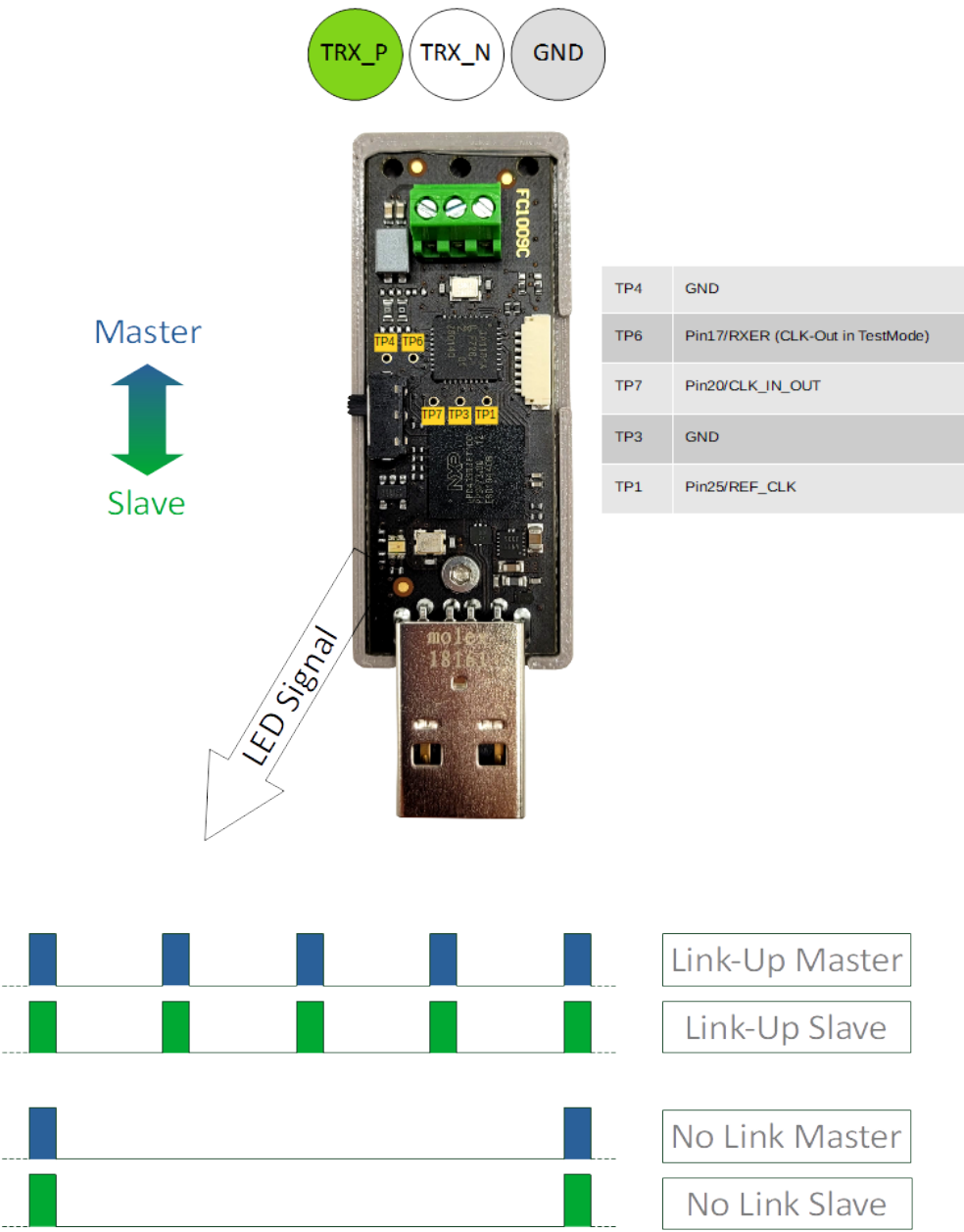


# User Manual

*FC612 USB 100BASE-T1 Stick Raw*  
*Version 1.1.0*

*February 10, 2024*  
*Build 7*  
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# 1 Usage



## 2 Overview

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

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

**Please note:**

To behave like a standard USB device, FC612 includes 2 classes:

- USB BULK
- USB BULK RAW

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, etc.

### 2.1 Deliverables

- FC612 USB 100BASE-T1 Stick
- UTP-Cable 2m
- Software
  - Broadway2 API for Windows/Linux
  - Python3 Broadway2 package and source examples

## 3 Software

Starting with next generation of USB-100BASE-T1 Adapters, like FC602, FC611 and FC612, there is now one common software installation which supports all of these new variants.

Details can be found in new Broadway2 documentation, delivered together with Broadway2 download package.

In addition, USB Raw-Adapters are supported by command-line tool SteamTo which can be downloaded separately and is supported on Windows 10, Linux and Raspberry Pi.

## 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 FC612, follow next steps:

1. Login to Windows 7 or Windows 10 PC
2. Unzip WFP\_FC612\_XXXX.zip to local 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`