

User Manual

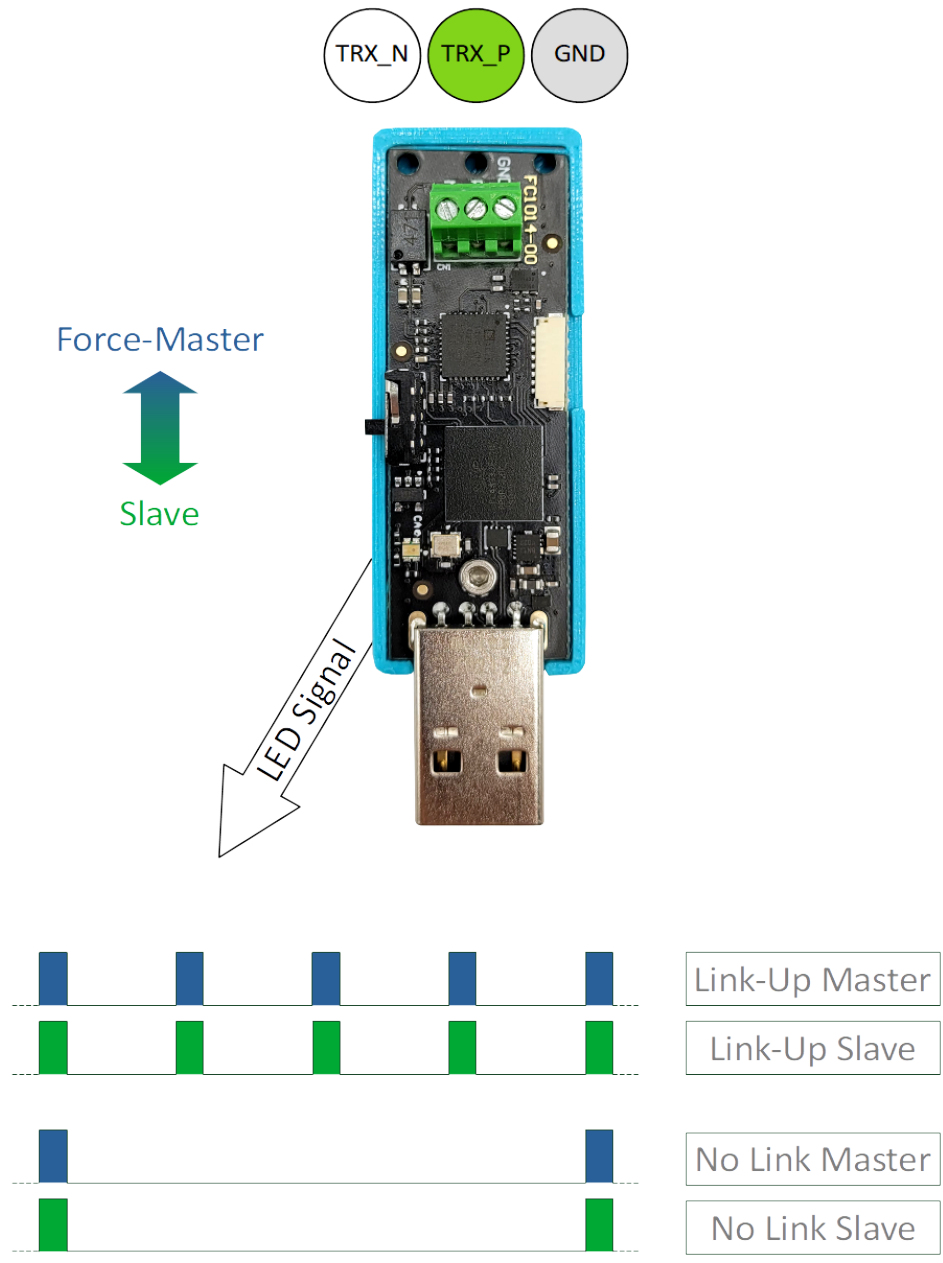
FC631 USB 10BASE-T1L Stick Raw
Version 1.0.0

November 22, 2022

Build 3

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1 Usage



2 Overview

The FC631 USB 10BASE-T1L Stick Raw is a new variant for USB to 10BASE-T1L adapter. In comparison to the network-adapter FC621, the FC631 supports raw-ethernet frames communication including precise timestamp and sequence counter for each received message. All functionality in using a USB network device is supported same way as 100BASE-T1 raw adapters. For 10BASE-T1L, ADI ADIN1100 is used for the Phy-Transceiver. The complete software package, called Broadway, is optimized and extended to Broadway2. As the firmware and API is improved and extended, Broadway2 only supports the new adapters.

In all cases, FC631 comes with standard USB2.0 class drivers to enable minimal changes to USB host systems.

To behave like a standard USB device, FC631 includes 2 classes:

- USB BULK
- USB BULK RAW

Using USB Control, all properties and functions of FC631 are accessible. In extension to these base functions, Raw-Ethernet Rx/Tx interfaces enables the usage of sending/receiving of Layer2 frames on 10BASE-T1L networks.

2.1 Deliverables

- FC631 USB 10BASE-T1L Stick Raw
- UTP-Cable 2m
- Broadway2 Software Package (separate zip-file)

3 Software

For complete software running 100BASE-T1, 10BASE-T1L and SPI/SMI-Adapters there is one common software installation Broadway2.

Details can be found in Broadway2 documentation, delivered together with Broadway2 download packages available for Windows (WSP) and Linux (LSP)

4 Firmware Update

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

Important: Update is NOT supported on Linux

For update of FC631, follow next steps:

1. Login to Windows 7 or Windows 10 PC
2. Unzip Firmware folder to folder like tmp
3. Connect exactly one FC631 to Windows
4. Open console in extracted firmware folder and enter:
`update_app_stick_FC631.cmd FC300109_V_xx_yy_zz-n.bin`

Note: In case of updating multiple sticks of same type connected via USB-Hub, use of `update_all_app_stick_FC631.cmd` in same folder supports this.