



## Using the LAVA TL002 Adapter

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Revision A00

The LAVA TL002 makes it possible to simultaneously charge select Samsung Galaxy Tablets while working with USB peripherals such as mice, keyboards, and even hard drives. LAVA calls this simultaneous charging and USB Host feature Simulcharge Mode.

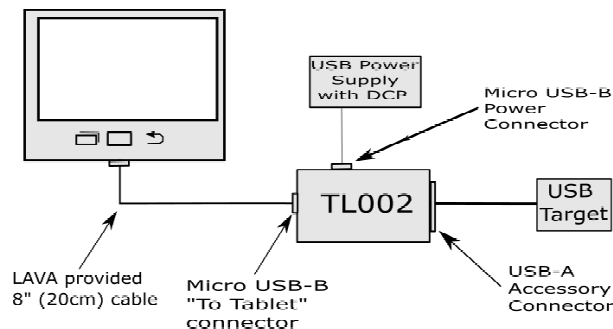


To use the LAVA TL002:

1. Turn on the tablet.
2. Connect the USB Power Supply provided with your tablet to the TL002.
3. Plug the USB Power Supply into an AC wall outlet.
4. Attach the TL002 to your tablet using the provided 20 cm (8 inch) cable.
5. USB devices can generally be added at any point in the above sequence.

The TL002 Adapter requires a 5 Volt USB Power Supply with a Dedicated Charge Port (DCP), which means it can provide more current than 500 mA. The supply has the USB D+ and D- lines shorted to inform the tablet it is a high capacity charger. An alternative power supply is a Power Bank (aka Battery Pack) with DCP support.

### TL002 Connections



The Samsung Tablets that are known to be compatible are described on the LAVA website at [www.lavalink.com](http://www.lavalink.com). Not all Samsung Tablets and model variations support Simulcharge Mode.

With no power applied to the TL002, the TL002 operates as a USB OTG Adapter! Any mobile device, not just Samsung, that supports the OTG standard can use the TL002 (with no power) to attach USB Peripherals. In this state, the tablet battery supplies power to attached peripherals.

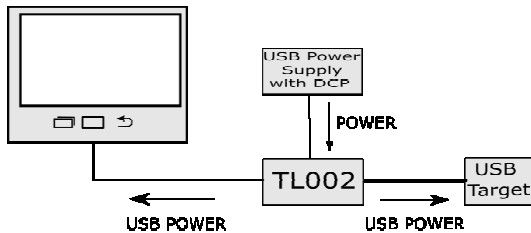
Always apply power to the TL002 before attaching it to the tablet when using Simulcharge Mode. Do not remove and restore the USB power after the tablet is connected to the TL002, as the tablet may not enter the correct charging state, and may not recognize any peripherals.

Do not add power to the TL002 after it is connected to the tablet, as the previously mentioned issues may occur. If the power drops out briefly, simply unplug the TL002 from the tablet and reconnect it to the tablet. This problem is due to tablet behavior, not the TL002 design.

The TL002 is an ideal device for the business user or consumer to connect USB devices to a Samsung Tablet for temporary access while simultaneously charging the tablet battery.

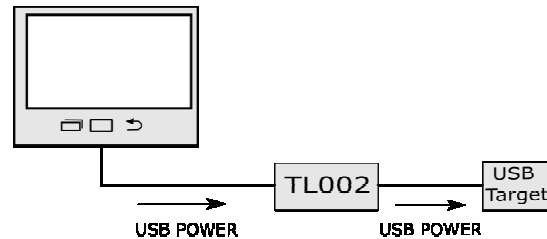
## TL002 Power Options

Tablet in SimulCharge: Tablet is a USB Host with USB accessories attached. The tablet is being charged, and target power comes from the USB DCP Power Supply.



**Note:** The power supply must be a DCP such as the Samsung USB Power supply provide with the tablet.

Tablet in OTG: Tablet is a USB Host with USB accessories attached. Tablet supplies power to target. The tablet battery is being drained.



**Note:** As an OTG adapter, the TL002 can be used with any manufacturer's tablet that supports OTG.

**Note:** The TL002 is not recommended for permanent installations such as digital signs or kiosks, because when power is removed and restored the tablet state becomes unpredictable. For permanent installation, the LAVA STS and eSTS Family of devices must be used for reliable operations.

**Note:** The TL002 cannot be used for applications that want to jump between Simulcharge Mode and OTG Mode by removing or restoring power. When power is restored, the tablet may fail to enter the charging state. The tablet cannot reliably support this type of transition with a TL002. This problem is due to tablet behavior, not the TL002 design. The tablet may work the first 40 times and then fail on the 41<sup>st</sup>. When a failure occurs the tablet may not be charging, may be charging poorly, and may drop the connection to USB devices.

**Note:** The charging indicator on the tablet notification line does not provide a real indication that the tablet is charging. To confirm the tablet is charging, you must wait to observe a change in the battery level or use a program to monitor the battery charge current. The LAVA Advanced Battery Information application is available on GooglePlay for free to help diagnose tablet charging issues.

**Note:** Not all Samsung Tablets and model variations support Simulcharge Mode. As new tablets are released, please check our support pages at [www.lavalink.com](http://www.lavalink.com).