LinkComm – Quick Start Guide

LinkComm is a program used to view status and configure Sutron data loggers. LinkComm runs on PC and Macs, but also on Apple iPhones and iPads, and Android phones and tablets.

With LinkComm you can:

- View current status and measurement data
- Change the setup
- Download and graph the log
- Perform diagnostics (e.g., send a command, set the time)
- Upgrade the firmware (Satlink3 only)

This is a quick start guide for LinkComm. Please see the user manual for your particular logger for complete documentation of LinkComm and using your Sutron logger!

LinkComm provides full support for the Satlink3 and X-Link family of Sutron loggers (GPRSLink, IridiumLink, etc.), with text-only status and setup for Xpert and 8310 families.

1.1 Installing LinkComm

If you haven't already, download and install LinkComm. PC and Mac versions are available at www.sutron.com/downloads. Mac version needs no installation. For PC:

1. Run "setup.exe"

2. Install USB drivers for your logger (see Start Menu\Sutron\LinkComm), if needed

For Apple devices, download from the Apple App Store. For Android devices, download from the Google Play Store. Do this from within your mobile device:

1. Open the App Store or Play Store app

2. Search on LinkComm

3. Select Install

1.2 Running LinkComm on Windows

Some Windows PCs do not fully support OpenGL or DirectX hardware acceleration. If LinkComm.exe does not appear to start properly, try running either "LinkComm.exe (DirectX)" or "LinkComm.exe (SoftOpenGL)" from the Start menu (or, start LinkComm.exe at the command line with either the "--angle" or "--softopengl" command line options).

1.3 Getting Connected

When you open LinkComm the first time, "New Station" is selected by default (on smaller screens, select the "< Stations" text link to see the list view where "New Station" resides).

Specify your station type (e.g., Satlink3, GPRSLink, Xpert, etc.). Then scroll down (if necessary) to see the Connection Settings section and configure as needed to connect to your station.

The Connection Settings appear as follows. The image on the left from a PC, while the image on the right comes from an iPhone with the view scrolled down to see the connection settings (the station settings are out of view above the connection settings).
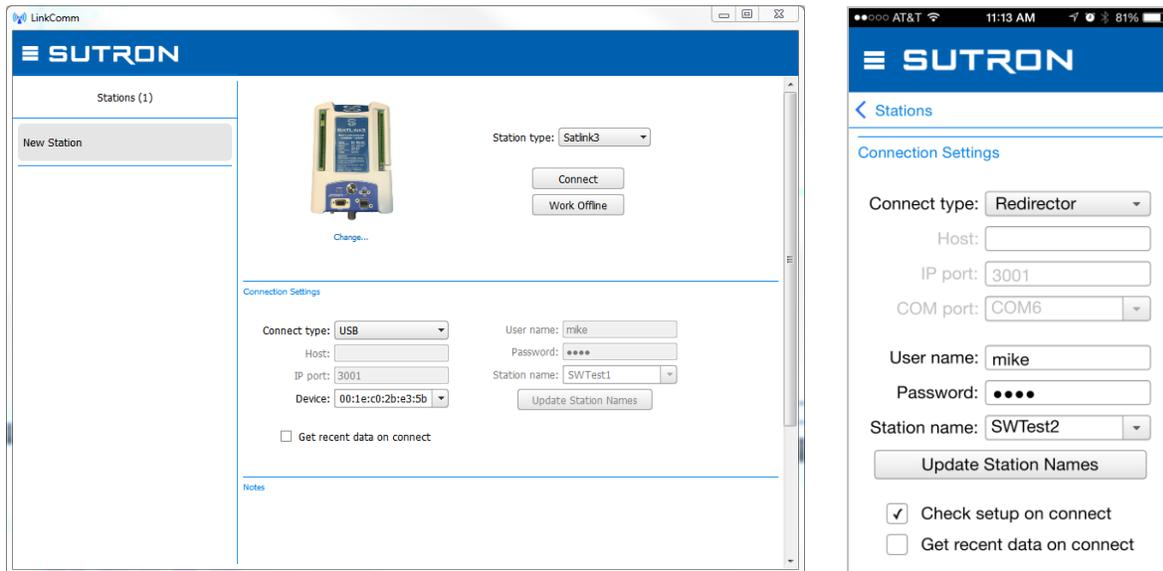
Connect Type

- **USB**: Select this option to connect to Satlink3 via USB

- **Serial**: Select this option to connect to station via serial cable (or USB for X-Link family, which uses a virtual serial port over USB)

- **Station Wi-Fi**: Select this option if you are in range of your logger's on-board Wi-Fi. Note: to use this option, you must first:
    - Turn Wi-Fi on(by pressing the Satlink3 or X-Link Wi-Fi button), if needed
    - Connect to the station's Wi-Fi network using desktop/phone/tablet network settings

- **Redirector**: Choose this option if your logger has been set up for access via the Sutron Redirector service (common for those devices using Sutron-provided cellular data plans). Set User name and Password to the values provided by Sutron, and select the station name

Check Setup on Connect: Visible for Redirector connections, only. When checked, LinkComm checks setup content from the station every time you connect to alert you of differences. You may disable this feature to reduce data costs (e.g., for cellular connections that cost money).

Get Recent Data on Connect: When checked, LinkComm downloads the last week of data to graph on the dashboard tab, every time you connect to the station. This can be a lot of data (several k-bytes). Here again, disable this feature to reduce data costs.

After configuring Connection Settings, press the **Connect** button to connect.

Note: GPRS/CDMA communications are billed per bytes transferred, so be mindful of data transfers! Syncing the setup (either getting or sending the setup), can range from a few tens of bytes to a few thousand bytes, depending on how many measurements are active. A typical status update is a few hundred bytes.

1.3.1   Work Offline

When you choose the **Work Offline** button in the stations list view, instead of the **Connect** button, LinkComm enters "offline mode". In this mode, LinkComm does not try to communicate with a data logger over the network. This mode is useful for making changes to setups you will later load into a station.

Remember while in Offline mode, that the changes you are making are not in the logger!

1.4   Viewing Station Status

Use the Dashboard tab to view the logger's current status. Here's the Dashboard for an X-Link logger. To see the complete status on the smaller phone screen, simply scroll down:

Use the **Refresh Status** button to refresh the status displayed.

Use the **Clear Status** button to tell the logger to reset all of its status data like error counts, etc. (make sure this is really what you want to do first, as it cannot be undone).

Use the **Show Details** button to view the status text stream reported by the logger.

Click or touch the recent data graph to see a pop-up menu allowing you to refresh recent data, or see the selected data in a larger graph on the Data tab.

Access the main menu by pressing the ▤ button in the upper left. Different tabs are selected by pressing the tab buttons at the bottom of the view.

To disconnect, either press the **Disconnect** button in the header, or open the main menu and select **Stations…** to return to the stations list view.

1.5 Making Changes

Use the Measurements and Telemetry tabs to make changes to the setup. Note that after making your first change, the setup sync icon at the top of the screen changes from a green check to a yellow warning sign. Use this yellow warning sign as a reminder to send the setup to the logger when you're done making changes.
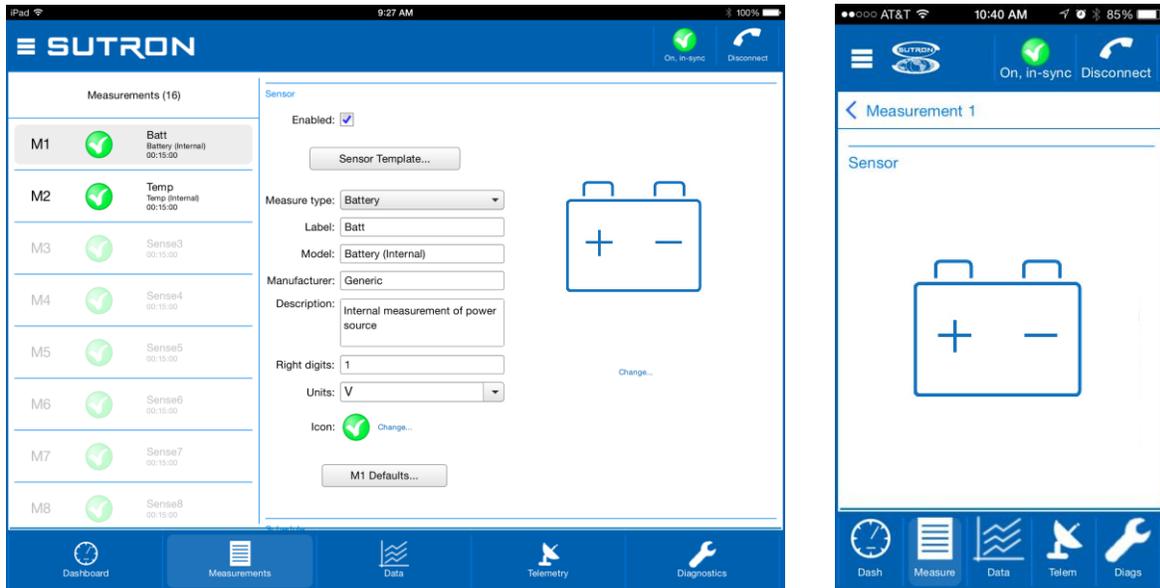
In the larger, landscape view on desktop/tablet, change the selected measurement by selecting from the list on the left. On smaller screens, press the "< Measurement 1" link text first to access the measurement list, then select the desired measurement.

Don't Forget! You must send the setup to have the station start using your changes. Do this by pressing the setup sync button when it's a yellow warning icon, or by selecting "Send Setup to Station" in the main menu

1.5.1 Some Things Can't Be Changed!

There are some changes you can't make when connected to a station over GPRS or CDMA (i.e., "remotely"):

1. Stop recording
2. Stop listening
3. Disable transmissions
4. Change APN or modem username, modem password, or modem type
5. Set factory defaults

You are able to change these items when connected over Wi-Fi (as well as when connected directly using LinkComm on the desktop, of course).

1.6 Viewing Data

Use the Data tab to view historical data, and to download the log. If recent data was downloaded when connecting to the logger, the graph displays this data the first time you select the Data tab.
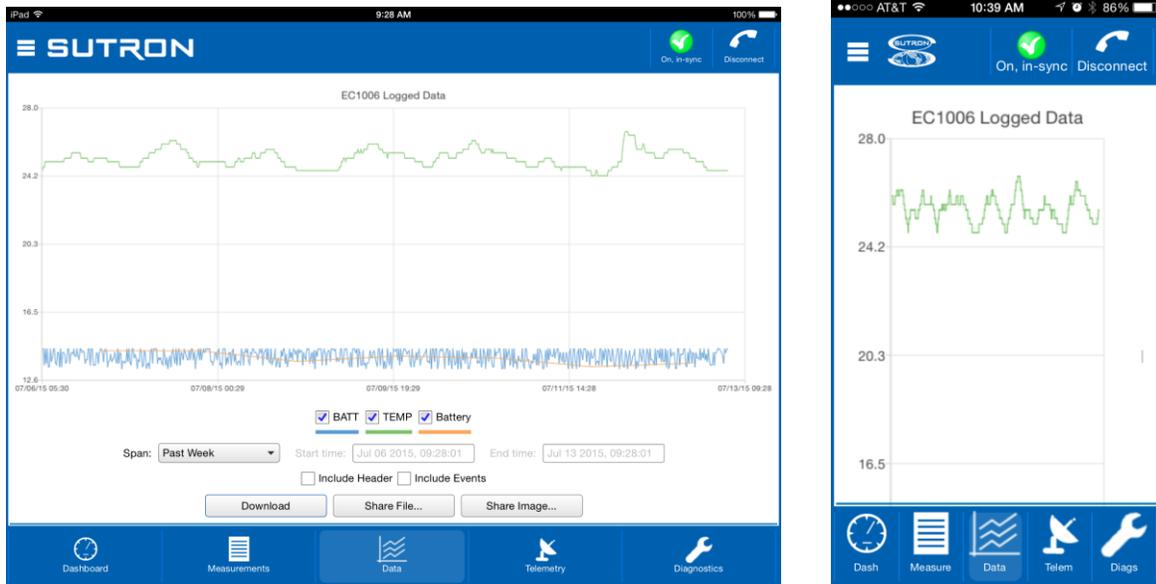
To zoom-in on subsets of data, click/touch-and-drag to create a rectangle around the data you want to zoom to. To restore the zoom to all data, double-tap.

Click/touch and hold the press for a short bit to show a menu allowing you to select all series, deselect all series, or show points. You may select or deselect individual data series for display using the legend just below the graph.

Change the span of the period to graph using the **Span** control. Several options are available. Whenever a change to span is made, you must press the **Download** button to retrieve the data for display. When the defined span no longer matches the displayed span, the download button text changes to "Download***".

On the desktop, click **Save File…** to save the downloaded raw data file, or click **Save Image…** to save an image of the graph to file. In mobile versions, you'll see **Share File…** and **Share Image…**, which enable you to share the files via services like Email and Dropbox (if installed).

The "Include Header" and "Include Events" options shown affect only the raw data file content downloaded from the station.

Note: On smaller screens, **turning the device to landscape** causes the blue header and footer sections to be hidden, showing you more data content.

1.7 Diagnostics

This tab provides extensive diagnostics information, and offers tools for performing various diagnostics and maintenance operations. For example:

- Get diagnostics information including software versions and data usage
- Terminal and Data Flow views
- SDI-12 command utility
- Set the station clock

The following images show the LinkComm diagnostics screen for an X-Link:
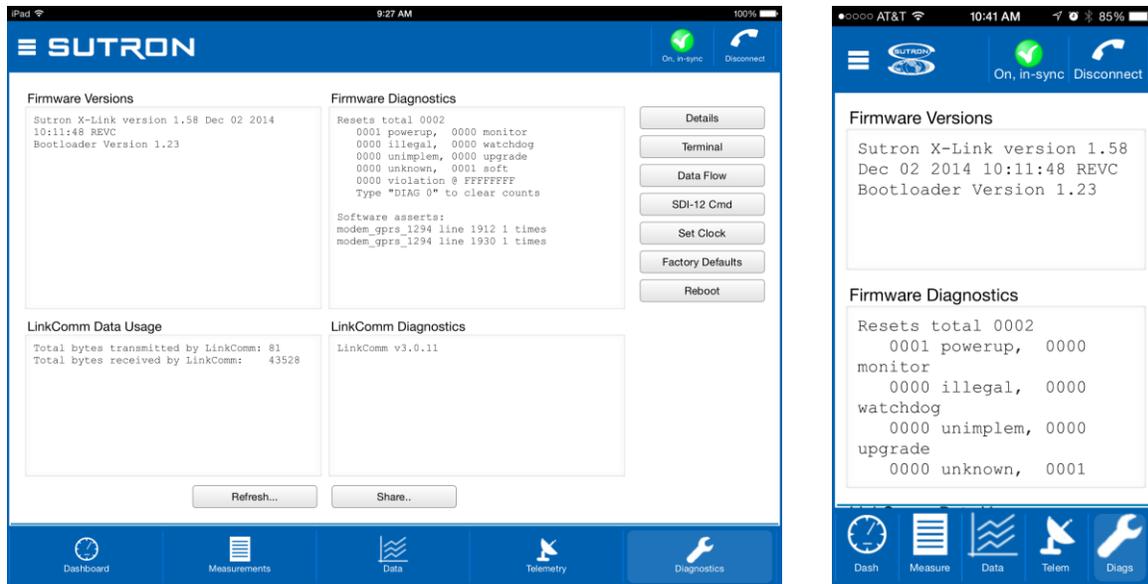
1.8 Troubleshooting

1. Problem connecting to station – here are a couple of common reasons why you may not be able to connect to your station:

    a. For most station types, only one connection can be active at any given time

    b. Some stations can't accept a remote connection attempt when it is transmitting (and if the station is experiencing problems connecting to the server, it may be trying to transmit a lot!)

2. Problem changing setting xxx – some settings can't be changed remotely. See "Some Things Can't Be Changed", above.

3. When using GPRS, disconnecting when not in use may help save precious bytes, as well as availability for other users!

1.9 Stations Database

All station definitions are saved in a database. You can export this database to a file, and import it into LinkComm running on another device. This is how you can easily share your station definitions between, say, your PC and your smartphone. Use the main menu items, "Import Database" and "Export Database", to share the stations database across devices.