

# ST4340LC Quick Start Guide

## Connect, Configure and Assemble



Figure 1: ST4340LC

### 1. Scope:

Initial steps to quickly connect the ST4340LC to a PC, configure Network Parameter settings using SyncTrak and assemble for use. For detailed specifications and programming information please see the links below or contact Suntech Support at [support@suntechus.com](mailto:support@suntechus.com).

### 2. Related Suntech Documentation:

- a. [Suntech ST4340LC Documentation](#)
- b. [ST4000 Series SIM Card Information](#)
- c. [ST4000 Series-LED Activity and Diagnostic Guide](#)
- d. [SyncTrak User Manual](#)

### 3. Required Resources:

- a. **HW:** Suntech ST4340LC, 6 assembly screws, USB to Micro-USB cable
- b. **HW:** 12v DC power supply
- c. **HW:** SIM card: Activated, Access Point Name (APN) for carrier/network
- d. **HW:** PH#1 or PH#2 Screwdriver (Torque Driver recommended)
- e. **HW:** PC Computer: Windows 10 recommended
- f. **SW:** Suntech MediaTek (MTK) USB drivers: v1.1032.3 or newer, available at [support@suntechus.com](mailto:support@suntechus.com)
- g. **SW:** Suntech SyncTrak: v5.0.6.5 or newer, available at [support@suntechus.com](mailto:support@suntechus.com)

### 4. Connect the ST4340LC to a PC

- a. Remove the ST4340LC lid to access the SIM card holder, Micro-USB and backup battery connectors, see Figure 2.



Figure 2: Remove the ST4340LC lid

- a. Insert the SIM card, see Figure 3. Note the SIM card holder slides in the direction indicated before swiveling upwards, and, must be slid back into place in order to lock the lid closed. Failure to slide the lid closed can result in a loose SIM card and a false “No Sim” reading from the device, see Figure 4.

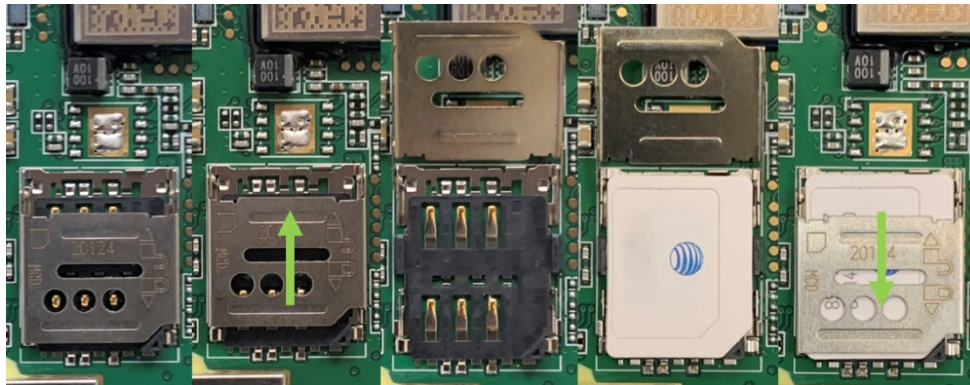


Figure 3: Install SIM card

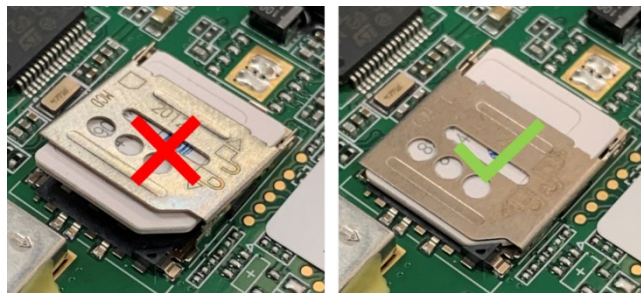


Figure 4: Ensure the SIM card holder lid is locked in place

- b. Insert the Micro-USB cable into the ST4340LC and connect to a PC, see Figure 5.



Figure 5: Inserting the Micro-USB cable connector

- a. Connect the ST4340LC to 12v DC power. Black wire (-), red wire (+). The device's red and blue LEDs will begin to blink on the backside of the ST4340LC indicating the device is powered up, see Figure 6. If the ST4340LC has a 2-Pin Molex connector attached confirm mating connector's (+) and (-) orientation before applying power.



Figure 6: Red and blue LEDs will blink when power is applied

## 5. Connect the ST4340LC to SyncTrak

- a. Open SyncTrak. The Welcome view is displayed while the program attempts to auto-connect with the ST4340LC. Once connected SyncTrak switches to the Network Parameters settings tab, see Figure 7.

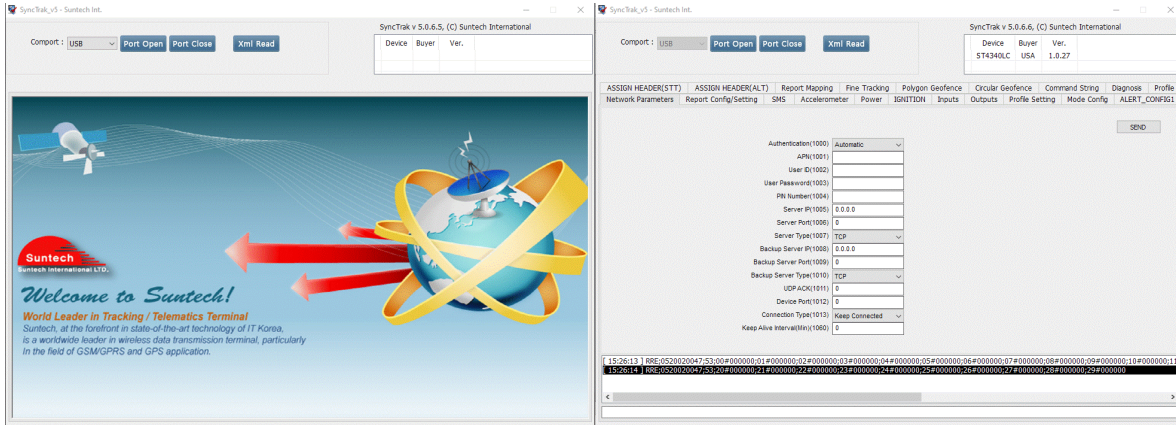


Figure 7: SyncTrak's Welcome and Network Parameters views

- b. If SyncTrak does not auto-connect to the ST4340LC check the following:
  - i. Confirm the Micro-USB cable is connected *BEFORE* power is applied. If power is applied before the Micro-USB cable SyncTrak will not connect to the device. Follow up with ensuring the USB end of the data cable is connected to the PC.
  - ii. Confirm that the MediaTek (MTK) USB drives have been installed on your PC.
  - iii. Check the COM port assigned to the ST4340LC by the PC. Open Windows Device Manager and expand Ports (COM & LPT). The ST4340LC will initially connect as “MediaTek USB Port (COMxx)” then expand to “MTK USB Debug Port (COMyy)” and “MTK USB Modem Port (COMzz)”. SyncTrak will use the MTK USB Modem Port to communicate with the ST4340LC, circled in green in Figure 8. *Note: Your PC may assign a different COM port value.*

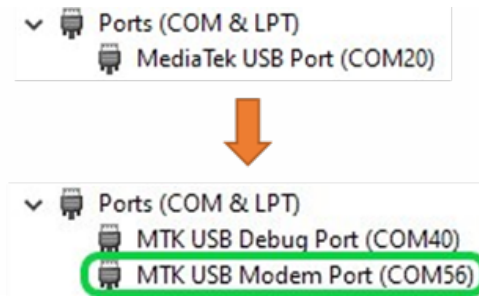


Figure 8: Window's Device Manager: Ports (COM & LPT)

- iv. In SyncTrak, click the Comport USB drop down list, highlight the COM port noted in Device Manager and click the Port Open button, see Figure 9, *COM56 used as an example.*

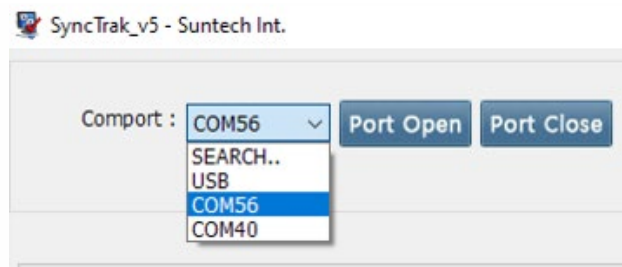


Figure 9: Select the COM port then click Port Open

c. SyncTrak Basics:

- i. The SEND button *must* be clicked to save modified settings in the current SyncTrak tab view before navigating to a different SyncTrak tab or closing the program. If the SEND button is NOT clicked all modified settings will return to prior values. SyncTrak will display the device's returned "OK" string in the command history box indicating success, see Figure 10.

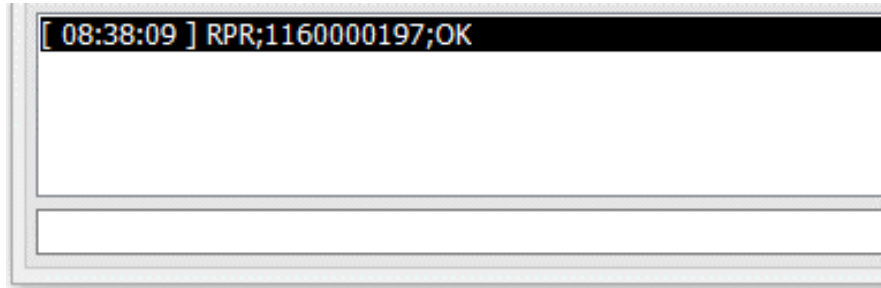


Figure 10: SyncTrak displaying connected device's OK confirmation

- ii. In most cases SyncTrak will display an error message when out of range values or conflicts between settings are attempted, see Figure 11. If this happens review and evaluate the last change made in SyncTrak.

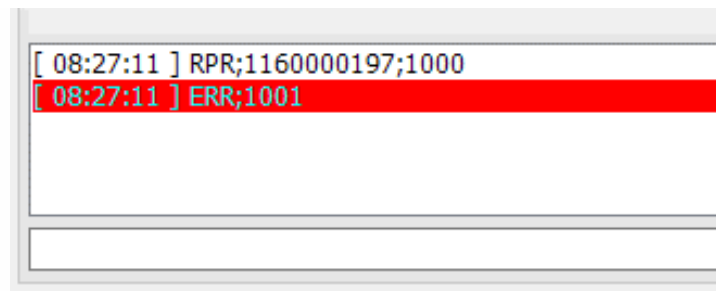


Figure 11: SyncTrak error message example

## 6. Configuring Network Parameters with SyncTrak

The following instructions and settings are the minimum necessary to establish communication between a Suntech device and network/server, all other device settings remain at default values. NOTE: Incorrect Network Parameters may prevent the device from connecting and is not indicative of a failed device. To fully configure the device please see the links at the beginning of this document or contact Suntech Support at [support@suntechus.com](mailto:support@suntechus.com).

- a. Navigate to the Network Parameters tab, refer to Figure 12 below as needed.

|                                |                |
|--------------------------------|----------------|
| Authentication(1000)           | Automatic      |
| APN(1001)                      |                |
| User ID(1002)                  |                |
| User Password(1003)            |                |
| PIN Number(1004)               |                |
| Server IP(1005)                | 0.0.0.0        |
| Server Port(1006)              | 0              |
| Server Type(1007)              | TCP            |
| Backup Server IP(1008)         | 0.0.0.0        |
| Backup Server Port(1009)       | 0              |
| Backup Server Type(1010)       | TCP            |
| UDP ACK(1011)                  | 0              |
| Device Port(1012)              | 0              |
| Connection Type(1013)          | Keep Connected |
| Keep Alive Interval(Min)(1060) | 0              |

Figure 12: SyncTrak Network Parameters, default values shown

- b. **Authentication(1000):** Refer to the carrier for required SIM card authentication:
  - i. If using a major carrier's SIM card and are unsure of the APN, select Automatic to start.
  - ii. If you know the SIM card's APN, select None and enter the APN in the next field.
- c. **APN(1001):** Enter SIM card's APN.
- d. **User ID(1002), User Password(1003), PIN Number(1004):**
  - i. If no User ID, Password or PIN is required: select None in Authentication(1000).
  - ii. Contact Suntech Support if you require the use of the User ID, Password and PIN fields.
- e. **Server IP(1005):** Enter Server IP address (or URL).
- f. **Server Port(1006):** Enter Server Port.
- g. **Server Type(1007):** Select Server traffic type: TCP or UDP.
- h. **NOTE: Click the SEND button before next steps!**
- i. Navigate to the Diagnosis tab in SyncTrak to monitor GPS and GPRS Status, most common indications:
  - i. **GPS Status:**
    1. **Fixed:** GPS location fix established, typically less than 1 minute.
    2. **Not Fixed:** GPS has not established a location fix yet. Up to 3 minutes may be necessary to establish a location fix if any of the following have occurred:
      - a. Device is inside a building.
      - b. Device has been moved more than 1,000 kilometers while powered OFF.
      - c. Device has been powered OFF for several weeks.
  - ii. **GPRS Status (optional):**

Note: In order to check GPRS status the ST4340LC must be connected to minimum 12vDC power via the OBD2 connector on the device. This can be accomplished with either an OBD2 port connector cable supplying 12vDC, or, the device can be inserted into the OBD2 port of a vehicle.

    1. **OK:** Device is connected to the carrier network and customer's server.
    2. **Limited Service or Server Communication Error:** The Server IP or Port is not correct. There may be network traffic on the SIM card, but the server may not be receiving all packets from the device.
    3. **No Network:** Device cannot reach the carrier network. Check Authentication(1000) and APN(1001) settings or the SIM card is not activated.
- iii. A correctly configured device will indicate GPS: Fixed and GPRS: OK, see Figure 13.

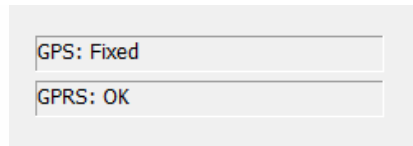


Figure 13: SyncTrak Diagnosis Tab

- j. Navigate to the Command tab.
- k. In the drop-down menu select "StatusReq" to send a status report to the defined Server IP (or URL) to confirm device is reporting as expected.

#### 7. ST4340LC Assembly and Installation

- a. Disconnect the Micro-USB cable from the ST4340LC.
- b. Next, connect the ST4340LC's back up battery, see Figure 13. Note the Red wire on the connector should be towards the cable connected end of the device. Tuck the extra length of wire into the device to prevent pinching during assembly.



Figure 13: Connecting the backup battery

- c. Set the lid back onto the base taking care to not pinch the backup battery wires in the edges of the case.
- d. Insert and tighten the 6 assembly screws provided with the ST4340LC. Use a PH#1 or PH#2 size screwdriver or torque driver (1.5 +/- 0.2 in-lbs recommended).
- e. The ST4340LC must be provided with 9v-33v DC power to operate, 12v DC is optimal.
- f. Install the ST4340LC with "THIS SIDE UP" facing towards the sky for best GPS signal reception.

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