

SNAPlink RS-232 Serial Cable Replacement Devices

Model SL232-010 is FCC and IC certified for use in North America
Model SL232-020 is CE certified for use in Europe



WARNING AND CAUTIONS:

- **To reduce risk of damage, disconnect power from the SNAPlink and from the connected device before making your serial connection.**
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.
- Terminal block connections should use wire between 26 and 14 AWG.
- Torque terminal block connections to between 0.35 and 0.40 Nm (3.1 to 3.5 inch pounds).
- **Mounting:** It is critical that the antennas of all SNAPlink devices be oriented in the same direction.

QUICK START GUIDE

DESCRIPTION

The Synapse SL232-xxx is a cable-replacement solution for connecting devices that would normally use an RS-232 DE-9 cable.

SNAPlink devices allow for one-to-one communications, or communications between a single master and multiple slaves. They support many serial baud rates and configurations, and multiple independent pairings or networks can coexist without conflict in a single working environment.

PROVISIONING

SNAPlink devices are configured for 9600 baud 8N1 serial communications with flow control disabled by default. These settings can be adjusted using the EasySet software available from Synapse Wireless, or you can select common baud rates and configure flow control using DIP switches inside the case.

To begin provisioning:

Remove the screw from the end of the SNAPlink device and lift the cover off. There will be a bank of eight DIP switches, labeled 1 through 8.

DIP switch 1 controls flow control, and the On position indicates that flow control is enabled.

DIP switches 2, 3, and 4 control the serial baud rate, as follows:

| Baud Rate | Switch 2 | Switch 3 | Switch 4 |
|-----------|----------|----------|----------|
| 300 | On | Off | On |
| 1,200 | Off | On | On |
| 2,400 | On | On | On |
| 9,600 | Off | Off | Off |
| 19,200 | On | Off | Off |
| 38,400 | Off | On | Off |
| 57,600 | On | On | Off |
| 115,200 | Off | Off | On |

DIP switches 5 through 8 affect the SNAP radio channel used for over-the-air communications and typically need no adjustment. Refer to the SNAPlink User Guide for more information. (Note: Devices must use the same channel to communicate with each other. Do not set all four switches to On as this selects channel 15, which is unavailable for the SL232-020 and SL485-020 devices.)

After setting the DIP switches, reassemble each device.

POWERING THE DEVICES

You can power your SNAPlink devices either through the micro-B USB connection (5V DC, 500 mA), or using the power terminal blocks providing 6-30 volts DC.

PAIRING DEVICES

To pair two devices for one-to-one communication, power both devices in their defaulted state. Select a device and hold the Mode button for at least 5 seconds until LED A turns red, then release the button. Repeat this process for the second device and it should find the first SNAPlink device looking for a partner and then switch to a solid LED color indicating radio link quality (green for strong, amber for weak, red for unable to communicate). Your devices are now paired and ready to communicate.

If you need to establish a master/slave configuration for a one-to-many installation, first select a device to be the master. With the device powered and in its default state, press the Mode button four times within 3 seconds to put it into multipoint mode. (LED A will blink amber when the device is in multipoint mode.) When LED A is blinking amber, press the Mode button four more times within 3 seconds to indicate the device is a master. LED A will begin to slowly blink between amber and green.

With the master device still powered, on each (powered) slave device press the Mode button four times within 3 seconds to put the device into multipoint mode. LED A may briefly flash amber, but then should go to a solid color indicating radio link quality with the master (green for strong, amber for weak, red for unable to communicate).

Once your devices are paired (either one-to-one or in a master/slave configuration) you may remove their power. They will retain their pairing information in non-volatile memory and you can now install them in their final environments.

MOUNTING

For best transmission, orient all antennas in the same direction. Typically it will be easiest if the antenna points straight up. However if one device is physically located directly above another one, adjust all antennas to be parallel to each other and horizontal.

SERIAL CONNECTIONS

SNAPlink SL232-xxx devices are configured as DCE (Data Communications Equipment) devices, ready to be connected to DTE (Data Terminal Equipment) devices. If you need to connect your SNAPlink device to a DCE device, you will need a crossover cable or null modem adapter. Please consult the SNAPlink User Guide for more information.

ADDITIONAL INFORMATION

For additional information on configuring your SNAPlink devices and how to fine-tune settings for your application and environment, please see the SNAPlink User Guide, available at <http://www.synapse-wireless.com/resources/support-documents/>