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S2C Link Datasheet

NimbeLink Corp

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1. Introduction

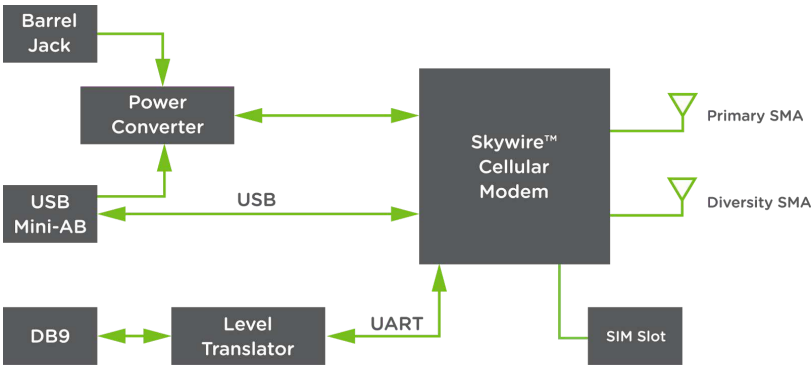
1.1 Overview

The NimbeLink S2C (serial-to-cellular) Link modem family consists of simple, plug-n-play devices featuring serial ports for both USB and RS232 interfaces and versions that can access 2G, 3G, 4G LTE, and LTE CAT1 cellular networks.

The S2C Link modems are tough, compact, and able to handle extremes of temperature. They offer a range of powering and mounting options and draw relatively little power, which suits them for remote applications like kiosks, digital signage, control panels, security panels, and surveillance equipment. Their ruggedness, simplicity, and low cost make them ideal for large volume, low-touch applications, and they can serve as plug-n-play replacements for serial modems like the Sierra Wireless FX Series, GL Series, and the Novatel Wireless / Enfora SA-G, SA-G+.

2. Technical Specifications

2.1 Block Diagram



2.2 Electrical Specifications

2.2.1 Absolute Maximum Ratings

Parameter	Min	Max	Description
Vin	4.5V	32V	Input voltage on barrel jack center pin
VBUS		5.5V	Input voltage on USB VBUS signal
DB9 Inputs	-25V	25V	RS232 Serial inputs
DB9 Outputs	-13.2V	13.2V	RS232 Serial outputs
Date Rate		250kbps	RS232 Serial port Baud Rate
Operating Temperature	-40C	+85C	Operating Temperature

2.2.2 Recommended Ratings

Parameter	Min	Typical	Max	Description
Vin	5V		30V	Input voltage on barrel jack center pin
VBUS		5V		Input voltage on USB VBUS signal
DB9 Inputs	0.8V		2.4V	RS232 Serial inputs
DB9 Outputs	-5.4 V		5.4V	RS232 Serial outputs
Date Rate		115.2Kbps		RS232 Serial port Baud Rate

3. External Interfaces

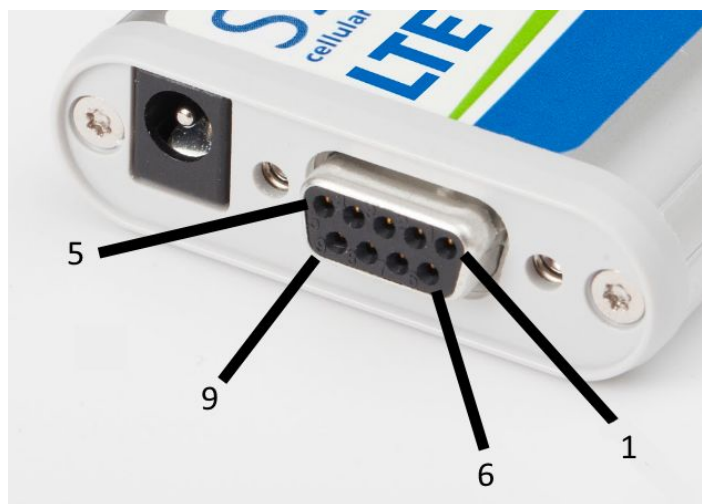
3.1 USB Connector

The USB connector is a USB Mini-AB style.

3.2 RS232 Connector

The RS232 connector is a DB9 female interface.

Pin Number	Name	Direction	Description
1	DCD	Output	Internally tied to V+ through 1K resistor
2	RXD	Output	Receive
3	TXD	Input	Transmit
4	DTR	None	No Internal Connection
5	GND	Input	Ground
6	DSR	Output	Internally tied to V+ through 1K resistor
7	RTS	Input	Ready-To-Send
8	CTS	Output	Clear-To-Send
9	RI	Output	Internally tied to V+ through 1K resistor



3.3 Power Connector

The power connector is a 2.1mm center pin positive barrel jack receptacle.

Parameter	Description
Center Pin	Positive DC voltage input
Shell	Ground
Inside Diameter	2.1mm
Outside Diameter	5.5mm

3.4 SIM Socket

The SIM card socket accepts Micro-SIM size 3FF SIM cards.

The SIM card socket is present on all LTE and GSM modems. The SIM card socket is not present on the 2G 1XRTT nor 3G EVDO CDMA modems.

3.5 RF Connectors

The S2C Link provides a primary and diversity antenna connection points. The connectors are both standard SMA connectors, center pin: female. The primary antenna connection must be used in all implementations. The diversity antenna connection is NOT connected in the 1xRTT product.



4. Recommended Antennas

4.1 Retail Kit

The Retail Kit includes a wide-band, ground plane independent paddle style antenna.

Manufacturer	Part Number
Taoglas	TG.30.8113

4.2 Remote Mount

When the modem is placed inside a metal cabinet or deep inside a building, it is advantageous to use a remote-mount antenna. The modem uses a standard SMA port and can accommodate many aftermarket externally mounted antennas. This is an example of a magnetic mount antenna that will readily connect to the modem.

Manufacturer	Part Number
CDW	MAG-212-12-SMA-M