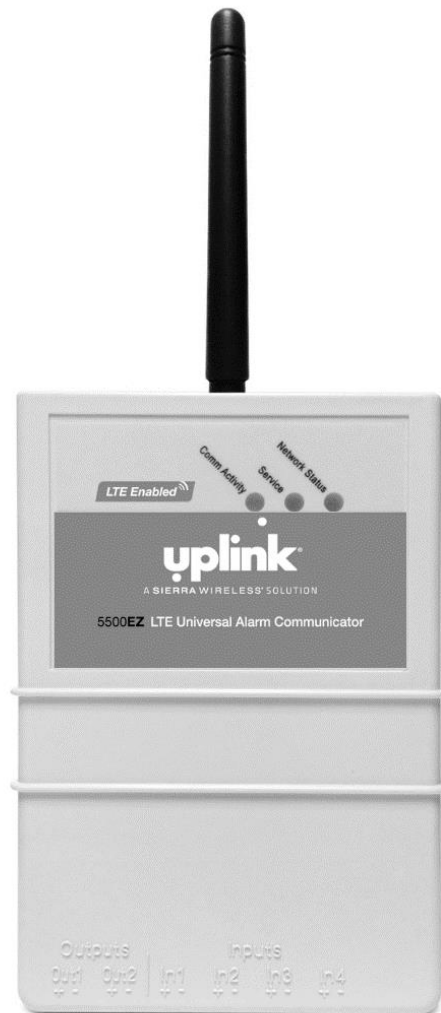




Uplink 5500EZ

Installation and User Guide



SIERRA
WIRELESS®

4134647

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September 12, 2018

Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices are used in a normal manner with a well-constructed network, the Sierra Wireless device should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless device, or for failure of the Sierra Wireless device to transmit or receive such data.

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Do not operate the Sierra Wireless device in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless device can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless device in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless device **MUST BE POWERED OFF**. When operating, the Sierra Wireless device can transmit signals that could interfere with various onboard systems.

Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Sierra Wireless modems may be used at this time.

The driver or operator of any vehicle should not operate the Sierra Wireless device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

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FCC & Industry Canada Regulatory Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it can cause harmful interference to radio communications. Interference may occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from the one to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

FCC RF Exposure Information

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this unit complies with the FCC guidelines and these international standards. For more information about RF exposure, please visit the FCC website at www.fcc.gov. THE TERM "IC:" BEFORE THE CERTIFICATION/REGISTRATION NUMBER ONLY SIGNIFIES THAT THE INDUSTRY CANADA TECHNICAL SPECIFICATIONS WERE MET.

THE EXTERNAL ANTENNAS USED FOR THIS UNIT MUST PROVIDE A SEPARATION DISTANCE OF AT LEAST 20 CM FROM ALL PERSONS AND MUST NOT BE CO-LOCATED OR OPERATED IN CONJUNCTION WITH ANY OTHER ANTENNA OR TRANSMITTER.

Patents

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Contact Information

Sales information and technical support, including warranty and returns	Web: uplink.com/contact-us/ Uplink toll-free number: 1-888-9-UPLINK 8:00 am to 8:00 pm EST
Corporate and product information	Web: sierrawireless.com uplink.com

Document History

Version	Date	Updates
1.0	April 13 2018	Creation
2.0	August 28, 2018	Updated Warranty & Limitation of Liability section. Updated Figure 2 with Serial Interface callout. Updated Unit Wiring section with Serial Interface sub-section.

»» Contents

- 1 OVERVIEW 10
- 2 INSTALLATION 11
 - 2.1 Installation Steps 11
 - 2.1.1 5500EZ Front Case and Circuit Board 13
- 3 UNIT WIRING 14
 - 3.1 Inputs..... 14
 - 3.1.1 Input 1 (Selectable Via DIP Switches)..... 14
 - 3.1.2 Input 4..... 15
 - 3.1.3 *Inputs 2, 3, and 4 (and Input 1 if Standard Type)..... 15
 - 3.2 Outputs 15
 - 3.2.1 Output 1 16
 - 3.2.2 Output 2 16
 - 3.3 Serial Interface 16
 - 3.4 Power..... 16
- 4 ANTENNA SPECIFICATION..... 17
 - 4.1 Antenna 1 17
 - 4.2 Antenna 2 17

List of Figures

Figure 1 - DIP SWITCHES.....	12
Figure 2 - 5500EZ FRONT CASE AND CIRCUIT BOARD	13
Figure 3 - DETAIL OF CONNECTIONS	14
Figure 4 - WIRING EXAMPLE FOR VOLTAGE TRIP.....	15
Figure 5 - WIRING EXAMPLE FOR OPEN COLLECTOR TRIP.....	15

List of Tables

Table 1 - LED Indications – Inside Product Label.....	11
Table 2: Dip Switch Settings	12

➤➤ | 1 Overview

The Uplink® 5500EZ is an “always on,” multi-purpose, FCC-certified device capable of sending and receiving alarm signals or other data over the LTE Cellular Network. When connected to an alarm system, the 5500EZ will send alarm signals over the cellular network to Uplink’s alarm processing center, that will forward the signals to the appropriate monitoring station and/or selected email addresses.

The 5500EZ can be connected to an alarm system using up to four inputs on the 5500EZ. Each of these inputs can be set up to send a selected signal to the monitoring station. Contact ID, SIA, Modem lle/llla2 and 4/2 (:20 PPS) formats are supported.

The 5500EZ also has two configurable relay outputs to send signals to alarm panels or control other devices.

2 Installation

2.1 Installation Steps

Before beginning installation: If you are not yet an Uplink dealer, register by visiting www.uplink.com and click on the new dealer account tab.

1. Activate the system. The Uplink 5500EZ operates “out of the box” with most commercial panels. No additional programming or equipment is required. To activate with default functions, go to www.uplink.com, or use the Uplink Installer App, or call 1-888-987- 5465. Consult the Quick Installation Guide included with the 5500EZ.
2. Install the antenna on the top of the unit.
3. Position the unit for maximum signal strength. Connect the unit to a 12V DC, 500mA power supply. Be sure the area is dry and free from interference of metal objects and obstructions.
4. Determine network availability and signal strength.
 - a. Signal strength should be one blink minimum. Relocate the unit or install a high- gain antenna if necessary.

Table 1 - LED Indications – Inside Product Label

COM LED	ON	Sending Cellular Traffic
	OFF	Not sending Cellular Traffic
SERVICE LED	5 Blinks	Best Cellular Signal
	4 Blinks	Very Good Cellular Signal
	3 Blinks	Good Cellular Signal
	2 Blinks	Acceptable Cellular Signal
	1 Blink	Fair Signal Signal
	OFF	Very Poor/No Signal
NETWORK LED	FAST BLINK	No Network Registration
	SLOW BLINK	Network Registration
	SOLID ON	Unit in error
	NOTE	Relocate unit if LEDs indicate- No Signal after 3 minutes with power and antenna connected.
INPUT / OUTPUT		

5. Disconnect the unit from the power supply before wiring. The standard configuration for the Uplink 5500EZ is to leave DIP switches S1 and S2 set to "OFF" (Input 1 triggered by 9V DC to 12V DC or an open collector). For detailed wiring instructions and alternative configurations, see UNIT WIRING on pages 8 and 9.

Caution: Do not connect the unit to a receptacle controlled by a switch.

Caution: Improper connections at the power connector may result in damage to the unit.

6. Configure the unit. Set the DIP switches on the front panel of the unit according to the following table:

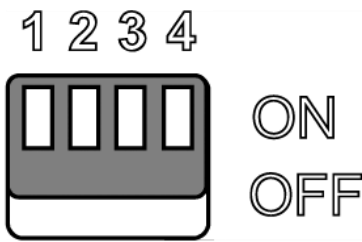


Figure 1 - DIP SWITCHES

DIP Switch Settings

Table 2: Dip Switch Settings

DIP SWITCH Functionality	S1 and S2	S1	S2	Input 1 Type
		OFF	OFF	Standard Input
		OFF	ON	Pulse Counter
		ON	OFF	Timed Bell
		ON	ON	Sampled Siren
	S3	OFF	Input 4 Normal Operation	
		ON	Input 4 Neg Pulse causes reset	
	S4	OFF	Output 1 - Controllable via Website	
		ON	Output 1 - Normally Closed Trouble Output	

When you have finished wiring and configuring the unit, re-apply power to the unit and wait at least two minutes then test the connection to the central station by creating an alarm from the panel.

Note: The DIP switches are only read immediately after the unit is powered up. Always cycle the unit's power after making changes to the DIP switch settings.

2.1.1 5500EZ Front Case and Circuit Board

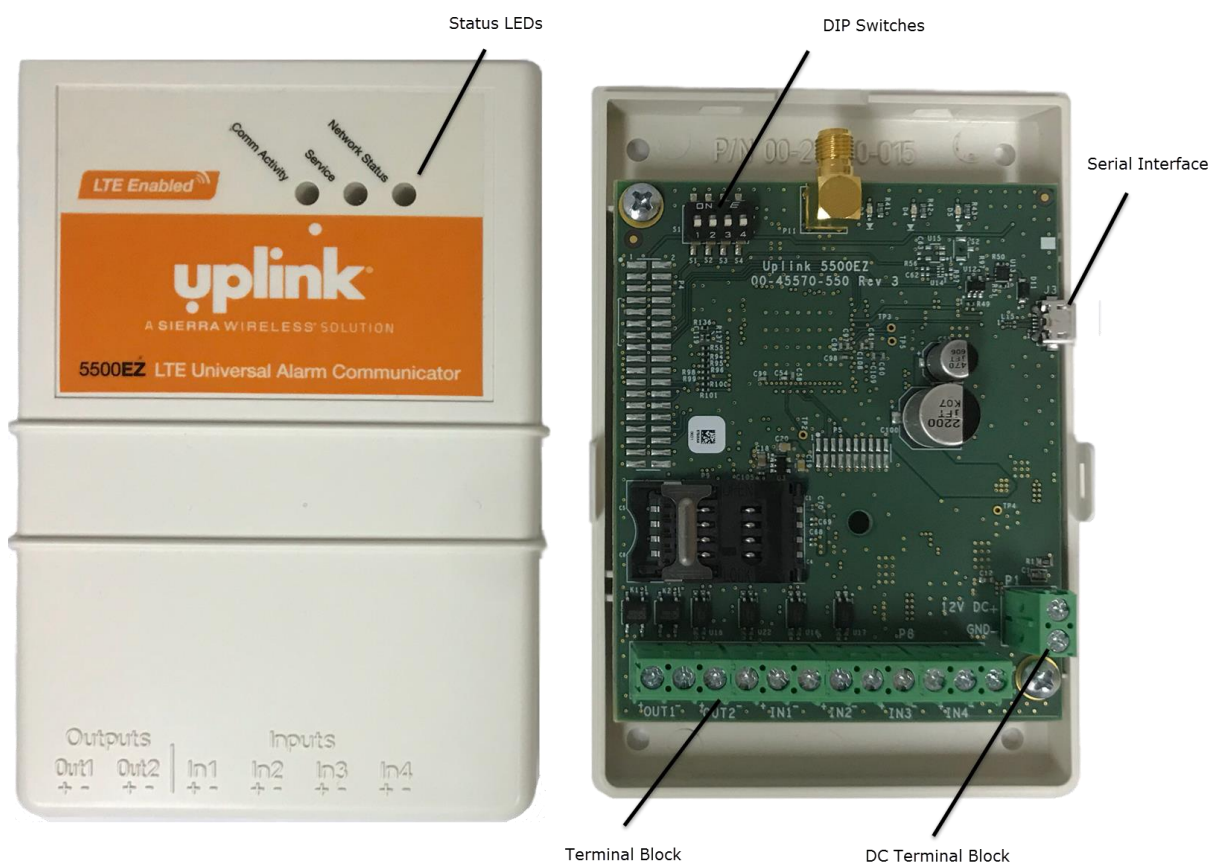


Figure 2 - 5500EZ FRONT CASE AND CIRCUIT BOARD

>> | 3 Unit Wiring

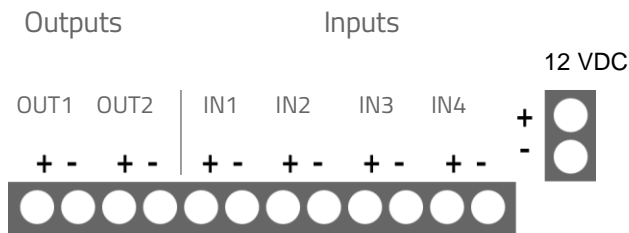


Figure 3 - DETAIL OF CONNECTIONS

3.1 Inputs

3.1.1 Input 1 (Selectable Via DIP Switches)

- Standard Input - (DIP switches S1 OFF, S2 OFF) This mode configures the unit to be tripped from a DC voltage ranging from 9 V DC to 12 V DC or an open collector.
- Pulse Counter - This mode configures the unit to count 12-volt pulses. This is not intended for rapid repetitive pulses.
- Timed Bell - (DIP switches S1 ON, S2 OFF) This mode configures the unit to be tripped from a DC voltage ranging from 9 V DC to 12 V DC. The unit reads a pulsed voltage as a fire signal and a steady voltage as a burglary signal. It may be necessary to place a 1K Ohm resistor in **parallel** to prevent false alarms when using panels with supervisory voltage on the bell circuit. Some panels with supervised bell circuits may require a 1K Ohm resistor in the circuit. Contact Technical Support for further details.
- Sampled Siren* - (DIP switches S1 ON, S2 ON) This mode configures the unit to be tripped from a siren driver or a panel with a built-in siren driver. The unit reads a steady tone as a fire signal and a yelping tone as a burglary signal.

Note: The input assumes that a speaker is connected to the panel. If you are not using a speaker we recommend using a Timed Bell instead of Sample Siren. This is an option on most panels.

3.1.2 Input 4

Neg Pulse Reset

(DIP switch S3 ON) A trigger of INPUT 4 from high-to-low and back-to-high causes the 5500EZ to reset. The high-to-low-to-high must be held for at-least 100 ms.

3.1.3 *Inputs 2, 3, and 4 (and Input 1 if Standard Type)

Voltage Trip

Inputs 2, 3, and 4 (and 1 if set for standard input) can be tripped by applying 12 V to the + input and 0 V to the - input. A signal must be continuously present for 500 ms.

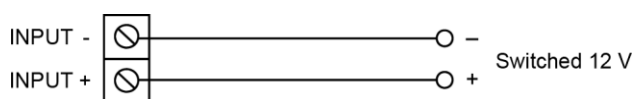


Figure 4 - WIRING EXAMPLE FOR VOLTAGE TRIP

Open Collector

Inputs 2, 3 and 4 (and 1 if set for standard input) can be tripped by applying 12 V to the + input and the Open Collector output of the panel to the - input. A signal must be continuously present for 500

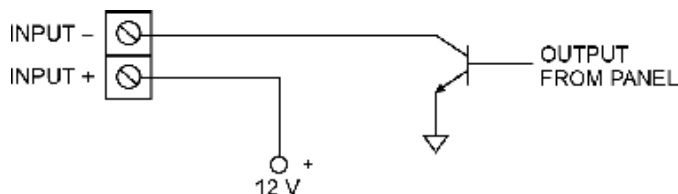


Figure 5 - WIRING EXAMPLE FOR OPEN COLLECTOR TRIP ms.

3.2 Outputs

Outputs can be used to signal communication trouble to the alarm panel or can be used to control other devices at the installation site. Outputs 1 and 2 are dry contact relays rated for a maximum of 100 mA at 24 V DC and are in the normally closed condition (selectable to NO).

3.2.1 Output 1

- Controllable Output via Website - (DIP Switch S4 OFF) This mode configures the unit to accept commands over the air (OTA) to open or close the relay.
- Normally Closed Trouble Output - (DIP Switch S4 ON) This mode configures the unit to keep the relay closed while the radio is connected to the network. The relay will open if the radio loses its connection to the network after a programmable delay of 0 to 15 minutes.

3.2.2 Output 2

Available for OTA commands unless you plan on using Uplink Remote. If you plan on using Uplink Remote, this output is used for the Key Switch Zone (arming and disarming the panel).

3.3 Serial Interface

When utilizing the micro-USB connector on the 5500EZ to connect serially to an Elk or Europlex panel, you will need the accessory cable (PN 2091195500EZCB00). You must have the serial cable connected prior to applying power to the device.

Once power has been applied, you must enable serial protocol and send a command to the device. To do this, log in to Uplink.com, go to the Edit Unit screen and set the Serial Connection to Panel = Yes, then go to the Program Unit Over-The-Air screen and send the Enable Aux Serial command. For detailed instructions, see the Uplink 5500EZ Serial Interface Reference Guide.

Note: The Elk and Europlex panels will need to be programmed to enable the serial protocol.
See the panel's installation / programming manual for details.

3.4 Power

Power Supply - The customer-supplied 12 V DC power supply/battery charger should be capable of supplying 500 mA peak for brief high current demands of the radio during transmission.

>> | 4 Antenna Specification

The following types of antennas should be used with this unit:

4.1 Antenna 1

- Antenna type: External Dual Band $\frac{1}{4}$ wave antenna (included with unit) Maximum Antenna Gain: 3.0 dBi
- Antenna connector: SMA

4.2 Antenna 2

- Antenna type: External Dual Band $\frac{1}{4}$ wave antenna magnet mount (available separately)
- Maximum Antenna Gain: 3.5 dBi Antenna connector: SMA
- Cable length and loss: 3-meter, RG-174, total loss 2.8 dB