RAM® 6000 & IndustrialPro® SN 6000 Cellular Routers

GSM, CDMA, EDVO, HSPA or LTE

red lion®

Unpacking Instructions

1. Unpack the Red Lion unit and verify the following components are enclosed in the package:

- Quick Start Guide and RAM/SN cellular router:

  RAM/SN-6xxx: AC adapter with either barrel connector (AC) or Molex (MX), or 15ft Molex cable (DC) can be ordered in a kit (ie RAM/SN-6600-xx-AC or -MX) or ordered separately. (RAM/SN-6400 not available)

  RAM/SN-6x01: 4-pin plug with screw terminals to connect to an external DC power source. Available with AC adapter with barrel connector (AC).

  RAM/SN-6x21: 4-pin plug with screw terminals to connect to an external DC power source. Available with AC adapter with barrel connector (AC).

  Note: Only RAM cellular routers shown.
  Power supply, antennas and accessories sold separately.

2. Contact your cellular provider (carrier) and request a data account. For CDMA models (RAM/SN-66xx), give the ESN number of the router to the carrier to activate the data account. For GSM and HSPA models (RAM/SN-64xx, RAM/SN-68xx, RAM/SN-67xx and RAM/SN-69xx) the carrier should provide you with a SIM card to insert into the router, along with the APN, username and password for data connectivity.

3. Insert the SIM card (GSM, HSPA and LTE models):

- Locate the SIM card slot on the right side of the unit.
- Insert the SIM card with its cut side facing forward and on the left.
- Using the tip of a pen push the SIM card in until it clicks.

4. An antenna with an SMA-M connector should be connected to the router. This antenna should meet the specifications listed below. Also see the Hardware Guide for more information on antennas.

- 3G: Dual-band 800 & 1900 MHz
- LTE: 700 MHz
- Nominal 50 ohm impedance
- Voltage Standing Wave Ratio (VSWR) less than 2.5:1

5. Supply power to the router using one of the four available methods.

- 4-pin Molex connector - available on RAM-6x00
- 4-pin screw terminal - available on RAM-6xx1/EB

Label	Description
GND	Ground
PWR+	Power 8 to 30 VDC (12 or 24 VDC nominal)
IN	Digital and analog input
OUT	Digital output

- Side mounted 2.5mm barrel connector - all models.
- Power-over-Ethernet (PoE) IEEE802.3af - available on RAM-6x01EB

  Note: The modem requires a power source between 8 and 30 VDC to operate

6. Please allow 2-4 minutes for the unit to recognize the cellular data card and connect to the cellular network. When this has occurred, the WAN LED should light up (see table on back). If the signal LED is not lit or flashes slowly, please refer to the Hardware Guide at:
www.redlion.net/sixnet_documentation.

Accessing the Web User Interface

1. Connect PC to the RAM/SN-6000 router.

  a. Connect an Ethernet cable between the local PC and any available Ethernet port.

  b. Verify the green LED on the Ethernet port is lit.

2. Setup PC IP Address.

  Note: For assistance with configuring your PC, see the appropriate Microsoft Windows support web page listed at:
http://support.microsoft.com

PC to Ethernet Interfaces

Use the following IP address and fill in the blank fields with the information below:

IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
Preferred DNS	192.168.0.1

3. Access Web User Interface

Open a web browser and enter the following in the address bar:
http://192.168.0.1:10000/

Login Instructions

1. For User Name enter:

- **admin** (lowercase letters)

2. For Password enter:

- last six digits of the unit serial number

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Phone +1 (877) 432-9908
Fax +1 (717) 764-0839
www.redlion.net

Quick Start Guide
Sixnet® Series
Drawing No. LP0981

Note: For security purposes, it is recommended that the admin password be changed according to your internal policies.

To change password, go to: **Admin->Access Settings**.

3. Upon successfully logging in you will see the following screen
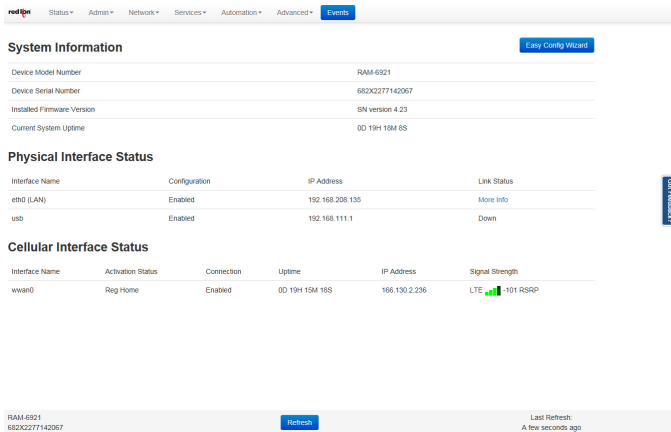
You are now connected to the web interface. If you should see anything other than the interface screen shown above, please refer to the Red Lion Software Manual located at: www.redlion.net/sixnet_documentation.

Verify Cellular Connectivity

Confirm the following on the GUI after logging into the unit:

Activation: "Succeeded" or "Unavailable"

Connection: "Enabled"

IP Address: Populated with a network IP address

Signal Strength has GREEN bars populated. If you see any RED bars represented under the Signal Strength graphics, please consult the Software Manual. Ethernet (Eth0) should show "Up" and show the network issued IP address.

Note: If "Unavailable" and connection "Unknown" browse to the **Status→EZ Config Wizard** or **Network Tab → Cellular Connection → Configuration** and input the APN field. EVDO models will automatically try to activate on a periodic basis.

If you were unable to confirm this status on the Main page, please refer to the Software Manual for troubleshooting steps at www.redlion.net/sixnet_documentation.

For more information to set up Modbus features (RAM models only), please refer to the Hardware Guide available at: www.redlion.net/sixnet_documentation.

If you are able to confirm this status, then your unit is successfully connected to the cellular network

Hardware Status LEDs*

LED	State	Description
Power	ON	Power is applied to the router
	ON	Excellent signal strength
Signal	FLASH	Flashes faster as signal is stronger
	OFF	Very weak or no signal (less than -100dBm)
WAN	ON	Wireless link established, but no data activity
	FLASH	Data transmitted/received on wireless network
RS232	ON	Link established with serial device but no data activity
	FLASH	Data transmitted/received with attached serial device
Ethernet	ON	Link established with Ethernet Device
	FLASH	Data transmitted/received

*See the RAM/SN Hardware Guide for more information on LEDs.

Red Lion Technical Support

If you have followed all instructions up to this point, have verified with your carrier that you are not having an authentication problem, verified that you have adequate cellular signal reception, and your unit is still not communicating, then it is time to contact Red Lion Technical Support at support@redlion.net or 1-877-432-9908 and we will be happy to assist in getting your unit operational.

Installation and Hazardous Area Warnings

All power, input and output (I/O) wiring must be in accordance with Class I, Division 2 wiring methods and in accordance with the authority having jurisdiction.

Suitable for use in Class I, Division 2, Groups A, B, C and D hazardous locations, or non-hazardous locations only.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS 1, DIVISION 2.

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

Avertissements pour Installation et Endroits Dangereux

Tout courant, câblage entrée et sortie (I / O) doit être conforme aux méthodes de câblage à la Classe I, Division 2 et conformément à l'autorité compétente.

Cet appareil est adapté pour utilisation en Classe I, Division 2, Groupes A, B, C, D endroits dangereux ou endroits non-dangereux.

AVERTISSEMENT – RISQUE D'EXPLOSION – LA SUBSTITUTION DE TOUT COMPOSANT PEUT NUIRE À LA CONFORMITÉ DE CLASSE I, DIVISION 2.

AVERTISSEMENT – RISQUE D'EXPLOSION – NE DÉBRANCHEZ PAS L'ÉQUIPEMENT À MOINS QUE L'ALIMENTATION AIT ÉTÉ COUPÉE OU QUE L'ENVIRONNEMENT EST CONNU POUR ÊTRE NON DANGEREUX.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy; and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference to radio communications, in which case the user will be required to correct the interference at their own expense. Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Information to the user

If this equipment causes interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: In order to meet FCC emissions limits, this equipment must be used only with cables that comply with IEEE 802.3. If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems".