






MODEM NETWORK CONNECTION

After the modem has been successfully provisioned and, if applicable, the SIM card has been accepted, a data connection can be enabled. The SVC LED will indicate when the cellular connection has been established.

- Steady **green** indicates a **4G** connection.
- Steady **amber** indicates a **2G/3G** connection.

Return to the modem’s Unit Status page to verify WAN Status is UP. The WAN IP Address shows the current IP address assigned to the modem and you are ready to browse the Web.

BASIC PACKAGE

Vanguard 5530 mobile Cellular Router with GPS and Wi-Fi Includes one (1) of each item below.	
▪ This Quick Start Guide (PN 134665-V5530M)	
▪ 22 ft. (6,7 m) Fused Power Cable (PN 150-7001-002)	
▪ Mounting Bracket U-bracket for top or bottom mounting* (PN 817-2225-900)	
▪ 22 Pin I/O Cable (PN 5C889)	

* U-bracket includes four #8-32 x ½ (3/8-inch tread length) black plated stainless steel slotted hex flange cap screws to fasten the bracket to the sides of the Vanguard chassis.

ACCESSORY KIT (PN 134751-V5530M)

▪ 110-220 VAC 3-wire Power Supply (PN 150-7001-005)	
▪ 4 in. (10 cm) plastic “Rubber Duck” antenna (PN 4GF546-8113)	
▪ GPS SMA Mag Mount Antenna (PN 401-7100-003)	
▪ Wi-Fi 7.75 in. Mag Mount Antenna (PN 401-7100-004)	
▪ DB-9 Male to DB-9 Female Serial Cable (PN L2CAB0002)	
▪ Category 5 100Base 7 ft. (2 m) Red Ethernet Cable (PN L2CAB0006)	

MINIMUM REQUIREMENTS

Interface and configuration of this cellular device requires a user PC with an Ethernet interface, Microsoft Windows 98 or newer, and a web browser.


Any changes or modifications not expressly approved by the party responsible for compliance (in the country where used) could void the user’s authority to operate the equipment.


CalAmp reserves the right to update its products, software or documentation without obligation to notify any individual or entity. Product updates may result in differences between the information provided and the product shipped. For access to the most current product documentation and application notes, visit www.calamp.com.


UL LISTED MODELS ONLY

Hazardous locations installation instructions. Users are advised to visit www.calamp.com where they can download the complete user manual and review Appendix C – UL Installation Instructions.

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

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WARNING — EXPLOSION HAZARD, Do not connect while circuit is live unless area is known to be non-hazardous.
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WARNING — EXPLOSION HAZZARD, Substitution of components may impair suitability for Class I, Division 2.
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When operating at elevated temperature extremes, the surface may exceed +70 Celsius. For user safety, the Vanguard should be installed in a restricted access location.

The Unit is to be powered with a Listed Class 2 or LPS power supply, rated 10 – 30 Vdc or equivalent.

Device is open-type and must be installed in a tool only accessible enclosure **suitable for the environment**.

All wiring routed outside the housing, except for the antenna, must be installed in grounded conduit, following acceptable wiring methods based on installation location and electrical code.

The USB and SIM connector is for temporary connection only during maintenance and setup of the device. Do not use, connect, or disconnect unless area is known to be non-hazardous. Connection or disconnection in an explosive atmosphere could result in an explosion.

Do not operate reset switch unless area is known to be non-hazardous.



1401 North Rice Avenue
Oxnard, CA 93030
Tel: 800-992-7774
email: productsupport@calamp.com

QUICK START GUIDE



This quick start guide covers programming software installation and basic setup. For advanced configuration, please refer to the user manual.

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ABOUT CALAMP

CalAmp is a leading provider of wireless communications products that enable anytime/anywhere access to critical information, data and entertainment content. With comprehensive capabilities ranging from product design and development through volume production, CalAmp delivers cost-effective high quality solutions to a broad array of customers and end markets. CalAmp is the leading supplier of Direct Broadcast Satellite (DBS) outdoor customer premise equipment to the U.S. satellite television market. The Company also provides wireless data communication solutions for the telemetry and asset tracking markets, private wireless networks, Interoperable Train Control (ITC) radio transceivers for use in railroad Positive Train Control (PTC) applications, public safety communications and critical infrastructure and process control applications. For additional information, please visit the Company’s website at www.calamp.com.

All specifications are typical and subject to change without notice.

CalAmp
1401 N Rice Avenue
Oxnard, CA 93030
U.S. t: 800-992-7774
507-833-8819
Int’l t: +442032874748
+447557133600
www.calamp.com

DEVICE CONNECTIONS

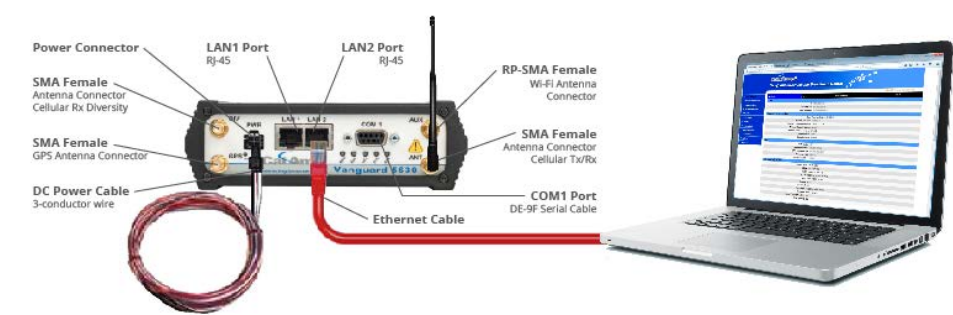
Step 1 Insert the SIM card into the spring-loaded SIM slot as shown.



Step 2 Connect a cellular antenna (for Tx/Rx) to the SMA connector labeled ANT on the front of the Vanguard modem. Optionally, a second cellular antenna (for Rx diversity) may be connected to the SMA connector labeled DIV.

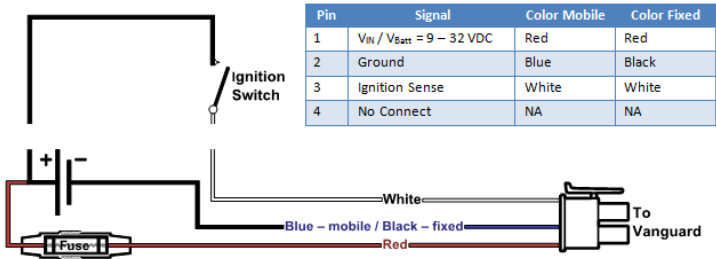
Step 3 Connect a GPS antenna to the SMA connector labeled GPS and connect a Wi-Fi antenna to the RP-SMA connector labeled AUX.

Step 4 Connect the Ethernet cable to the modem’s Ethernet port and connect the other end into the network port of your PC.



Step 5 Connect the DC power cable (or optional AC power adapter) to an applicable power source and plug the connector into the modem. If using the fused power cable to connect to a DC supply (car battery), use the following diagram and pin-out table to connect the unit.

Note: Both ignition sense and DC power are required to start the Vanguard unit. When used in fixed installation, connect the ignition sense wire (white) to DC power.



At power up, all LEDs will light red, then amber, then green. At the end of the boot sequence, the service light will blink as it attempts a network connection.

SUBSCRIBER ACTIVATION

In order to use the modem, it must be activated for your specific carrier.

ACCESSING THE MODEM’S WEB SERVER

Step 1 Enable a network connection with the following LAN settings. In the Internet Protocol (TCP/IP) Properties window, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Click **OK** and close.

Step 2 Open a Web browser and enter **192.168.1.50** in the Address bar. When the connection Login window appears, enter the User name: **admin** and the Password: **password** and click **OK**.

IMPORTANT NOTE: CalAmp strongly recommends that you change the default password before the Vanguard is deployed on a public cellular network.

Note: On the **Unit Status** page, the WAN status will read DOWN until the cellular connection is enabled. Before activating the unit, you will need to select your carrier and, if applicable, activate your SIM card.

CARRIER SELECTION

Step 1 Select **Cell Connection** from the Main Navigation Panel and select the **Carrier** tab. In the Carrier section, select the APN, user name and password and authentication protocol required by the carrier. Most carriers don’t require a user name, password or authentication for connection. Please check with your carrier for more information.

Carrier	Settings	Dynamic DNS	System Monitor	HELP
Carrier				
Data Session Type: AUTO				
Auto Connect: <input checked="" type="radio"/> Enable <input type="radio"/> Disable				
Carrier APN: <input type="text"/>				
Username: <input type="text"/>				
Password: <input type="text"/>				
Authentication Protocols: <input type="checkbox"/> PAP <input type="checkbox"/> CHAP				
<input type="button" value="Save & Apply"/> <input type="button" value="Save"/> <input type="button" value="Cancel"/>				
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Step 2 Click **Save & Apply** to save your carrier selection. This will also refresh the page. The options that display on the Settings page are dependent on which carrier is selected.

Step 3 Configure the applicable settings on the **Settings** tab.

See instructions that follow that are specific to your carrier.

SETTINGS (SIM CARD ACCEPTANCE)

In **Settings**, SIM STATUS should read SIM ACCEPTED.

SIM Status
SIM STATUS: SIM ACCEPTED
PIN STATUS: PIN DISABLED
ATTEMPTS LEFT: N/A
PIN Settings
Action button initiates PIN commands immediately
Pin Action: <input type="radio"/> Change PIN <input checked="" type="radio"/> Enable PIN
Current PIN: <input type="text"/> <input type="button" value="OK"/>
Action: <input type="button" value="Enable"/>