ACM5508-2-GS-I

Quick Start Guide

Thank you for purchasing the ACM5508-2-GS-I management gateway. This Quick Start walks you through installation, configuration & local operation. More details are available in the *User Manual*, which can be downloaded from: *http://opengear.com/documentation*

Step 1 Check kit contents

ACM5508-2-GS-I appliance. External rack and DIN rail mount tabs. Green terminal block and 3G antenna. UTP cables. Straight (319014) & crossover (319015) DB9F-RJ45s. Straight (319016) DB9M-RJ45. Quick Start. 12VDC power pack.

Step 2 Connect the hardware

- Attach rubber feet to base and/or attach the desired mounting tab
- Screw the 3G antenna on to the main *Cell (M)* connector, if you have purchased a diversity or GPS antenna, screw it on to *Cell (A)*
- Connect the Ethernet *LAN 1* port to your primary network, connect *LAN 2* to a secondary network, e.g. external management switch or VLAN
- Connect your serial devices to the *SERIAL 1-8* ports, connect your USB devices to the two *USB* ports
- Plug in the green screw terminal block and attach external sensors and DIO

Note: Refer to the *ACM5500-I Addendum* for details on RS422/485 and DIO.

- Apply power, the appliance may be powered by connecting:
  - The included power pack to the *12VDC* barrel socket
  - An external 9 – 24V AC source to the *12VDC* barrel socket
  - An external +9 – 30V DC source to *DC PWR* and *GND* on the green terminal block
  - The optional DC power converter input to +/- 36V – 72V DC, and output to the 12vDC barrel socket
  - The optional C13/C14 power adapter to the *12VDC* barrel socket

Note: When the PWR status LED is lit steadily and the H/B (heartbeat) is flashing, the appliance is ready for activation.

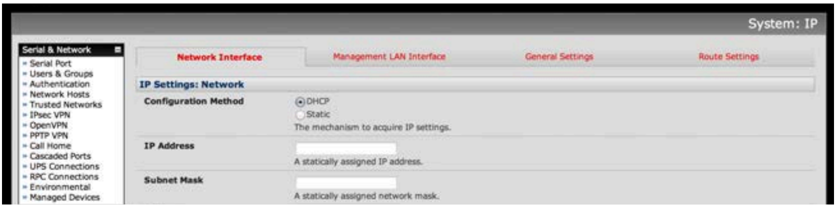
Step 3 Set up appliance networking

The appliance's default IP address is *192.168.0.1* (subnet mask *255.255.255.0*). With a web browser on any computer that is connected to the appliance via LAN:

- Enter **https://192.168.0.1** into the address bar
- Log in using the default system user name *root* and the default password *default,* a **Welcome** screen listing the basic configuration steps is displayed

Note: The computer must have an IP address in the same network range (192.168.0.x) as the appliance. Alternatively, you can use the *arping* command to set the IP address (refer to the *User Manual* or online *Knowledge Base FAQ* for details). The appliance also has DHCP client enabled by default. It will automatically accept any network IP address assigned by any DHCP server on your network, and will then respond at both 192.168.0.1 and its DHCP address.

- Select **Serial & Network: Users & Groups** and **Edit** the *Root User*. Enter and confirm a new **Password** and click **Apply**
- Select **System: IP** then **Network Interface** (*LAN 1)* and check **DHCP** or **Static** for **Configuration Method**



IP Settings: Network

Configuration Method ● DHCP ○ Static
The mechanism to acquire IP settings.

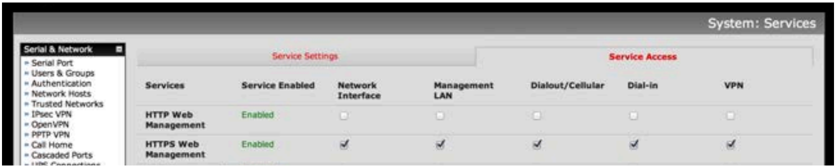
IP Address
A statically assigned IP address.

Subnet Mask
A statically assigned network mask.

The appliance's second Ethernet port is inactive by default. To activate:

- Select **Management LAN Interface** *(LAN 2)* and uncheck **Disable**
- Enter the **IP Address** and **Subnet Mask** for this segment of the Management LAN (leaving **Gateway** and **DNS** fields blank) – refer to the *User Manual* if you wish to enable the DHCP server or change default firewall/router settings

Note: The appliance's firewall determines which protocols and services can be used to access which ports and devices. By default only HTTPS and SSH access is enabled to the appliance itself. Use the **Service Access** menu on **System: Services** to change settings for the appliance itself (and for connected serial ports). Similarly using the **Forwarding & Network** menu on **System: Firewall** you can permit IP access between devices on Network Interface and Management LAN.



Services	Service Enabled	Network Interface	Management LAN	Dialout/Cellular	Dial-in	VPN
HTTP Web Management	Enabled	☐	☐	☐	☐	☐
HTTPS Web Management	Enabled	☑	☑	☑	☑	☑

Step 4 Activate the cellular modem

Contact Sprint and give them the ESN (Electronic Serial Number) for your appliance. The ESN is located on underside of the appliance and also shown on **Status: Statistics**: **Cellular** under **Hardware Information**).

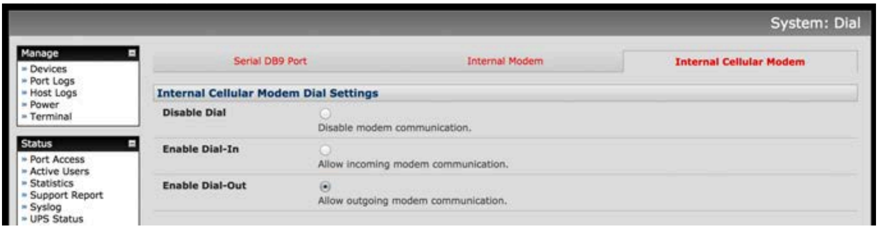
Select your data plan and Sprint will send you an email with your MSL, MDN and MSID numbers. At this point the modem is *good to go*.

Note: Obtaining a public static IP address – Sprint provides an option that can be added on to certain plans, which will allocate a publicly reachable IP address. If you require **direct remote access** to your appliance without the use of *Call Home* or an outbound VPN, then you will need this feature. To add this to your Data/Voice+Data plan, request a **Standard Static IP** or a **Reserved Static IP** address be added to your line. An additional monthly fee will apply. For more information visit: *http://sprint.com*

Step 5 Connect the cellular modem

To set up an *Always-on Out-of-Band* cellular connection:

- Select **System: Dial** then the **Internal Cellular Modem** tab



Internal Cellular Modem Dial Settings

Disable Dial ○ Disable modem communication.

Enable Dial-In ○ Allow incoming modem communication.

Enable Dial-Out ● Allow outgoing modem communication.

- Select **Enable Dial-Out** and click **Apply**
- Select **Status: Statistics** then the **Failover & Out-of-Band** tab
- Verify the **Connection Status** of **Internal Cellular Modem** is *Connected* and note your allocated **IP Address** (take note if it's a private IP address)
- At any time you may view the cellular signal strength (**RSSI**) from the **Cellular** tab of the **Status: Statistics** page – an RSSI of -100 dBm and less is *unacceptable* coverage, -99 to -90 is *weak* coverage, -89 to -70 is *medium to high* coverage, -69 and greater is *very strong* coverage

Note: Cellular modem status is also shown by the WWAN LED. The LED is off when the modem is not powered or being reset. When powered, the LED turns on and flashes briefly every 5 sec while searching for service. Once configured and connected, the WWAN LED blinks more rapidly.

If you have been allocated a *public IP address*, you can now access the appliance's HTTPS and SSH services directly. The public IP may be static or dynamic, depending on your plan options. If you have a *dynamic public IP address* that changes each time the appliance connects, you may configure the appliance's **Dynamic DNS** client in **System: Dial**, **Internal Cellular Modem**.

If you have been allocated a *private IP address* (i.e. in the 10.x.x.x, 172.16-31.x.x or 192.168.x.x range), direct remote access is not possible. Instead, use *Call Home* or VPN to establish an outbound tunnel to an Opengear Lighthouse or VPN server, to enable remote access over the tunnel.

Note: For a detailed overview of remote access alternatives to an appliance with a private IP address, refer to the *Knowledge Base FAQ* article **Does my site need a public IP address for OOB or Failover access?**

Step 6 Configure managed devices

- Select **Serial & Network: Serial Port** to display the labels, modes and protocol options currently set for each serial port – to configure a port for remote access to the managed device's serial console (refer to the *User Manual* if other modes are required):
  - Configure the **Common Settings** (Baud Rate, Parity, Data Bits, Stop Bits and Flow Control) to match those of the device being controlled
  - Select the **Console Server** protocols (e.g. SSH, Telnet, Web Terminal) that are to be used for the network connection to this console
  - A **Logging Level** may also be set to specify the direction and level of information to be logged for that port
  - Click **Apply** – device consoles can now be accessed using your preferred client (e.g. PuTTY, SecureCRT, OpenSSH) and in **Manage: Devices**
- Network managed devices connected via the Management LAN (LAN 2) can be accessed in a number of ways:
  - Select **System: Firewall** and define a **Port/Protocol Forward** rule
  - Use a VPN client to connect to the appliance's **Serial & Network: OpenVPN**, **IPsec VPN** or **PPTP VPN** server
  - Add **Serial & Network: Network Hosts** to permit your preferred SSH client or SDT Connector to establish an SSH port forward to the device
- The appliance's default firewall policy is a *NAT gateway* configuration, so network devices are permitted outbound WAN access via the masqueraded cellular connection
- User access policies may be configured locally in **Serial & Network: Users & Groups** and/or remotely with a AAA server, refer to the *User Manual* for details

Step 7 Other modes and functions

This guide sets up the cellular connection in *Always-on* mode. An alternative is *Failover* mode, where cellular is used as an automatic backup connection. Please refer to the *User Manual* for details on this and other advanced features, such as PDU (RPC) and UPS power management, environmental monitoring, *Auto-Response* alerting and more.

Please register your product to activate the warranty and to automatically receive advice of future firmware updates. Go to:

http://opengear.com/product-registration