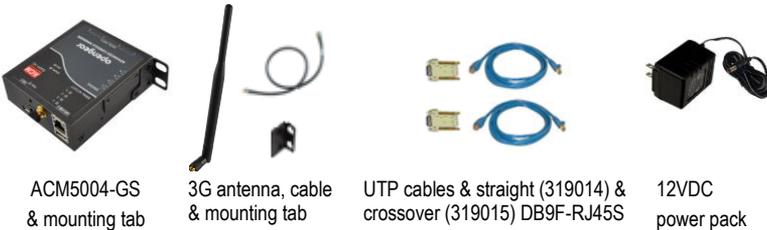


ACM5004-GS

Quick Start Guide

Thank you for purchasing the ACM5004-GS. This Quick Start walks you through both installation and configuration. More details are available in the *User Manual* which can be downloaded from <http://opengear.com/documentation>.

Step 1 Check kit contents

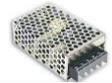


Ensure you have the correct model. The ACM5004-GS works with Sprint.

Step 2 Configure the hardware

- Attach rubber feet to base. Also attach the mounting tab and 3G antenna
- Slide the appropriate AC socket adapter into the power pack and plug it into the AC mains. Connect the DC power cable to the PWR socket. Use the provided DC Power barrel connector lock tab to securely keep the power connector attached

Note: *The -SDC models have an external DC-DC power converter (input voltage +/- 36V DC to 72V DC. The converter power cable/connector plugs into the PWR socket on the ACM5000*



- Connect the Ethernet port (LAN USB1) to your network. Plug your serial console devices in to the Serial Ports. The RJ45 sockets on the ACM5004-GS use the standard Cisco console pin-out
- Screw the antenna on to the MAIN SMA antenna connector.

Note: *If you ordered a second antenna for receive diversity (Part# 569006 and cable 449041) screw this on to the AUX antenna connector*

Step 3 ACM5004-GS initial set up

The default IP Address is *192.168.0.1* (subnet mask *255.255.255.0*). With a web browser on any computer that is network connected to the ACM5004-GS:

- Enter **https://192.168.0.1** into the address bar

Note: *The LAN connected computer must have an IP address in the same network range (192.168.0.xxx) as the ACM5004-GS. If this is not convenient, you can use the ARP Ping command to set the IP address. Refer to the User Manual or online FAQ for details. The ACM5004-GS also has DHCP enabled by default, so it will automatically accept any network IP address assigned by any DHCP server on your network. It will then respond at both 192.168.0.1 and its DHCP address.*

- Log in using the default system user name, *root*, and the password, *default*. A **Welcome** screen listing the basic configuration steps is displayed

It is recommended that you set up a new Administrator user (in the *admin* group with full access privileges) and login as this new user for all ongoing administration functions (rather than continuing as root).

- Select **System: Administration**. Enter and confirm a new **System Password** and click **Apply**
- To assign your ACM5004-GS a static IP address or to permanently enable DHCP on the primary Ethernet network, select **System: IP** then **Network Interface** and check **DHCP** or **Static** for **Configuration Method**. Leave the **Failover Interface** set to *None*

To configure the ACM5004-GS remote management gateway features:

- Configure the serial port settings and enable the desired protocols and logging levels via **Serial & Network: Serial Port**.
- You may also enable SSH tunneled access through the ACM5004-GS to locally networked devices (*hosts*) using **Serial & Network: Network Hosts**
- Configure user access to serial ports via **Serial & Network: Users & Groups**

Step 4 Activate the cellular modem

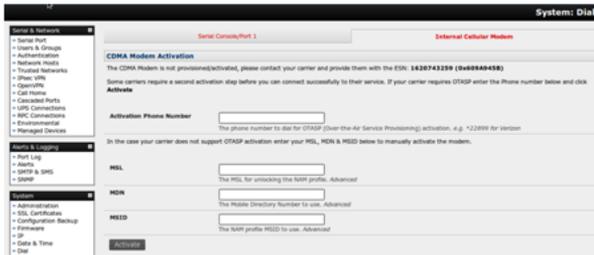
- Contact Sprint and give them the ESN - Electronic Serial Number for your ACM5004-GS (located on the Serial Label, also shown on **Status: Statistics: Cellular** under **Hardware Information**). Select your data plan and Sprint will send you an email with your MSL, MDN and MSID numbers. Reply to activate your cellular modem.
- 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 plan to access your ACM5004-GS from a remote location without the use of an outbound VPN, then you will need this feature. To add this to your Data/Voice+Data Plan you will need to request a **Standard Static IP** or a **Reserved Static IP** Address be added to you line. An additional monthly fee will apply. For more information visit: <http://sprint.com>.*

Step 5 Connect using Always On OoB access

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

- Select the **Internal Cellular Modem** tab on the **System: Dial** menu



- Select **Enable** and either leave **Phone Number** blank or set it to **#777**
- Click **Apply** to enable your **Always On Out-of-Band** connection. The **Internal Cellular Modem** will now connect to **Sprint's** 3G network

You can view the current status of your Internal Cellular Modem at any time by navigating to the **Cellular** page on **Status: Statistics**:

- Verify the *Connection Status* in the **Statistics - Failover& Out-of-Band** tab is shown as *Connected*. You can also check your allocated *IP address*
- You can measure the received signal strength *RSSI* from the **Cellular Statistics** page on the **Status: Statistics** screen. -99 dbm to -90 dbm = Weak Coverage, -89 dbm to -70 dbm = Medium, -69 dbm or greater = Strong. For advanced detail and logging you can examine **Status: Syslog**

Note: *You can also see the connection status from the WWAN LED. OFF is shown when in reset mode or not powered. When powered, it will go ON and while searching for service it will flash off briefly every 5sec. Once a radio connection has been established with your cellular carrier (ie, after an APN has been properly configured) the WWAN LED will blink rapidly*

Once the cellular modem has connected to the Sprint network, you can directly access your ACM5004-GS remotely. To do this your ACM5004-GS needs to have a Public IP address (and the remote access path must not have SSH firewalled).

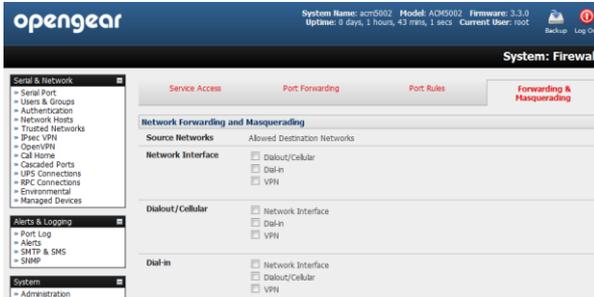
- If you obtained a Sprint Static IP with your data plan, your ACM5004-GS will be assigned the same IP address each time it authenticates and accesses the Internet. So you can now try accessing the ACM5004-GS using the Static Public IP Address provided by Sprint. However, by default, only HTTPS and SSH access is enabled on the OoB connection. So you can browse to the ACM5004-GS, but you cannot *ping* it
- If you have a dynamic Public IP address plan, then a DDNS service will need to be configured. Once this is done, you can then also try accessing the ACM5004-GS using the allocated domain name. Alternately for an inbound OoB connection you could use Call Home with a Lighthouse or set up a VPN connection

Note: *Some carriers' data plans only provides dynamic Private IP address assignments. Such IP addresses are not directly visible across the Internet and the **Failover & Out-of-Band** tab on the **Status: Statistics** page, will show your carrier allocated a Private IP Address (i.e. in the range 10.0.x.x, 172.16.x.x or 192.168.x.x) and Call Home or VPN is required*

Step 6 Enable cellular router features

In the default **OoB access mode**, the connection to the carrier cellular network is always on, awaiting any incoming access to the ACM5004-GS itself or attached serial consoles. The ACM5004-GS also provides cellular routing (disabled by default) whereby IP traffic is selectively routed between the cellular connected network and the local Ethernet network (LAN). To enable routing:

- Select the **Forwarding & Masquerading** tab on **System: Firewall**
- *Network Forwarding* allows devices on the local private LAN to IP connect through to the public network. To enable, check **Dialout/Cellular** to be enabled as the *Destination Network* for the **Network Interface** *Source Network*



- *IP Masquerading* allows devices on the LAN to hide behind and share the one public IP address when cellular connecting to the public network. To enable check **Enable IP Masquerading (SNAT)** on **Dialout/Cellular**
- Configure **Port Forwarding** and set **Port Rules** so external users can selectively initiate connections to the masqueraded devices on the LAN
- Set the **Service Access** rules for routed connections to the ACM5004-GS itself
- Configure the devices on the LAN with new *Gateway* and *DNS* settings

Step 7 Other modes and functions

In this default **out of band access mode**, the connection to the carrier cellular network is always on. An alternative is **failover mode**. This will tell the internal cellular connection to remain idle in a low power state. Only when primary and secondary probes are not successful will it connect to the cellular carrier (refer to the User Manual)

The ACM5004-GS also offers many more advanced functions including an *Alerts & Logging* facility, management of third party UPSs with *Manage: Power, Serial Port Cascading, Authentication, Trusted Networks, Secure Tunneling, Distributed Monitoring, Custom Scripting* and a *Command Line* interface. Refer to the *User Manual* for details.



Please register your product to activate the warranty and to automatically receive advice of future firmware updates. Go to: <http://opengear.com/product-registration.html>