

ACM5004-LR

Quick Start Guide

Thank you for purchasing the ACM5004-LR Remote Site Manager (referred to herein as ACM5004-LR). 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



ACM5004-LR appliance & mounting tab; green terminal block; two antennas, cable & mounting tab; two UTP cables; two DB9F-RJ45 adapter (319015, to DTE & 319014, to DCE); DB9M-RJ45 adapter (319016, to 3rd party console cable); four rubber feet; 12VDC power pack; Quick Start Guide.

Step 2 Connect the hardware

- Attach rubber feet to base and/or attach the desired mounting tab
- Screw the antennas on to the *MAIN* and *AUX* connectors

Note: The ACM5004-LR is a functional upgrade replacement for the ACM5004-G product family. As well as 3G, it supports 4G LTE – however it does not support GPS.

- Your carrier will provide a standard size Mini-SIM (2FF) card for activating your data plan – unscrew the SIM card access panel and insert the SIM card with contacts facing upward and notch to the RHS (the SIM card will lock into place, you may wish to use a pencil or tip of the antenna to fully seat the SIM card), then replace the SIM card access panel
- Connect the Ethernet *LAN USB 1* port to your primary network
- Connect your serial devices to the four *SERIAL* ports, and/or connect a USB device to the *USB* port
- Plug in the green screw terminal block and attach external sensors and DIO

Note: *For the -I model, refer to the Quick Start Addendum.*

- Apply power

Note: *If you ordered the optional external DC-DC power converter (input voltage +/- 36V DC to 72V DC), plug it into the PWR socket on the ACM5000.*

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 USB 1*:

- 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. 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 USB 1*) and check **DHCP** or **Static** for **Configuration Method**



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).



Step 4 Connect the cellular modem

Note: In OOB only mode the cellular modem may be always-on, or configured to start and stop dynamically (e.g. in response to a loss of primary network connectivity). For an overview of failover configurations, refer to the *Knowledge Base FAQ* article **Automatic failover to alternate broadband, cellular or dial-out Internet connection**.

To set up an *always-on* cellular connection:

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



- Select **Enable Dial-Out**, enter the carrier's **APN** and optionally a **Username** and **Password**

You may also need to use alternate DNS servers from those provided by your carrier:

- Check the **Override Returned DNS Servers** box and enter the IP of the DNS servers into the fields provided

Note: Your cellular carrier may have provided you with connection details. However, you generally will only need to enter the APN and leave the other fields blank. If provided a PIN code you may need to use it to unlock the SIM card.

- Click **Apply** and a data connection will be established with your cellular carrier
- 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 to medium* coverage, -89 to -70 is *medium to strong* coverage, -69 and greater is *very strong* coverage

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 5 sec. Once a data connection has been established with your cellular carrier (i.e., after an APN has been properly configured) the WWAN LED will blink rapidly.

If you have been allocated a *public IP address*, you can now access the appliance's HTTPS and SSH services directly. 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, 100.64-127.x.x, 172.16-31.x.x or 192.168.x.x range), direct remote access may not be 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 5 Configure managed devices

- Select **Serial & Network: Serial Port** to display the labels, modes and protocol options currently set for each serial & USB port – to configure a port for remote access to the managed device's console:
 - Configure the **Common Settings** to match the connected serial device
 - Select the **Console Server** protocols (e.g. SSH, Telnet, Web Terminal) that are to be used for the network connection to this console
 - Click **Apply** – device consoles can now be accessed using your preferred client (e.g. PuTTY, SecureCRT, OpenSSH) and in **Manage: Devices**
- 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 6 Configure cellular routing (optional)

The ACM5004-LR can provide cellular routing. In this mode the connection to the carrier cellular network is always on, and IP traffic is selectively routed between the cellular connected network and the local Ethernet network (LAN).

By default, the ACM5004-LR is configured to allowing forwarding between *Network Interface* and *Dialout/Cellular*. By default, *Masquerading (SNAT)* is enabled to allow devices on the LAN to hide behind and share the cellular IP address. These policies are configured under **System: Firewall: Forwarding & Masquerading**.

You may also configure **Firewall: Port Forwarding** and **Port Rules** to allow external connects to the masqueraded devices on the LAN.

Configure the default gateway and DNS addresses of devices on the LAN to connect via the ACM5004-LR's *Network Interface* address.

Step 7 Other modes and functions

Please refer to the *User Manual* for details other advanced features, such as cellular failover, PDU (RPC) and UPS power management, environmental monitoring, logging, *Auto-Response* alerting and more.



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<http://opengear.com/product-registration>
