ACM7004-2-LA, ACM7004-2-LV
ACM7004-2-LR
Quick Start Guide

Thank you for purchasing the ACM7004-2-LA/-LV/-LR Resilience Gateway (referred to herein as ACM7004-2-L). 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

ACM7004-2-L appliance; external rack mount tabs; black terminal block; two 4G LTE blade antennas; DB9F-RJ45 adapter (319015, to DTE); 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 *(M)* main and *(A)* diversity connectors

Note: If you have an optional GPS antenna, screw it on to the GPS connector.

- Your carrier will provide a standard size Mini-SIM (2FF) card for activating your data plan – **place the SIM card with contacts facing upwards** in the SIM slot with the notch to LHS and pointing outwards

Note: The -LA model includes an Opengear **OCM7909** cellular modem device, which supports AT&T USA (4G LTE, 3G fallback). The -LV with **OCM7209** supports Verizon USA (4G LTE only). The -LR with **OCM7909-R** supports most other carriers globally (4G LTE, 3G fallback), including major carriers in EMEA, APAC and ANZ regions.

- Connect the Ethernet *NET1* port to your primary network
- For *Out-Of-Band Management* (OOB) only mode, you may connect *NET2* to a secondary or management network; for cellular *IP Passthrough* mode, connect *NET2* to your primary router's secondary WAN Ethernet port

Note: IP Passthrough mode allows your LAN router to utilize the ACM7004-2-L's cellular modem as a WAN connection. For details, refer to the *Knowledge Base FAQ* article **Can I use Opengear cellular as a failover WAN link for a remote LAN?**

- Connect your serial devices to the *SERIAL 1-4* ports, connect your USB devices to the four USB ports
- Plug in the black screw terminal block and attach external sensors and DIO
- Apply power

Note: When the power status LED is lit steadily and the heartbeat LED is flashing, the appliance is ready to be set up.

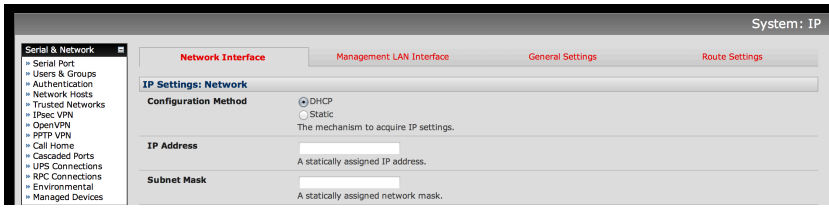
Step 3 Set up appliance networking

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 *NET1*:

- 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.

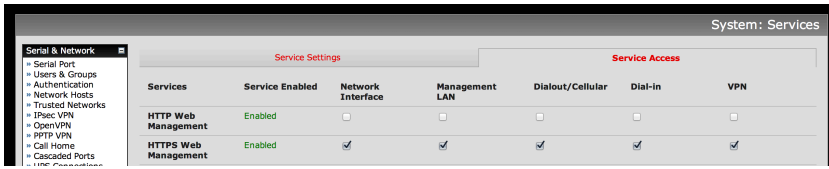
- Select **Serial & Network: Users & Groups** and **Edit** the *Root User*. Enter and confirm a new **Password** and click **Apply**
- Select **System: IP** then **Network Interface** (*NET1)* and check **DHCP** or **Static** for **Configuration Method**



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

- Select **Management LAN Interface** *(NET2)* and uncheck **Disable**
- Enter an **IP Address** and **Subnet Mask** – for OOB only mode this may be a secondary management network; for IP Passthrough mode, select an unused private network

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).

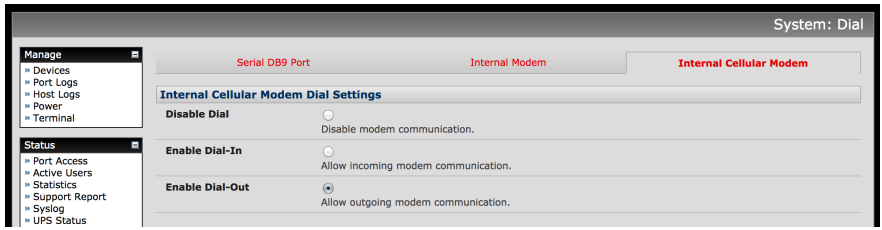


Step 4 Connect the cellular modem

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**. In IP Passthrough mode, the cellular connection must remain always-on.

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: Cellular modem status is also shown by the cellular status and signal strength LEDs. The cellular status LED indicates the state of the cellular data connection: off for no connection, blinking while establishing, and on while established. Cellular coverage is indicated by how many signal strength LEDs are lit: four (*very strong*), three (*strong*), two (*medium*), one (*weak*), zero (*unacceptable*)

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 IP Passthrough (optional)

- Select **Serial & Network: IP Passthrough** to transparently bridge the cellular IP settings and data traffic to a downstream Ethernet router
  - Check **Enable** and select **Internal Cellular Modem** as the **Modem**
  - Select **Management LAN** as the **Interface**
  - If your router has issues accepting the cellular network settings via DHCP, check **Enable Force Subnet Mask** and enter **Force Subnet Mask** of *24*
  - To access to ACM7004-2-L itself (e.g. for OOB management) using the cellular IP address, check **Intercept Enabled** for the desired services

Note: To use **Service Intercepts**, the ACM7004-2-L *must not have a non-cellular default route installed*. Ensure both **Serial & Network: IP: Network Interface** and **Management LAN Interface** are set to **Static** and **Default Gateway** fields are blank.

  - Click **Apply**
- Ensure your downstream router's secondary WAN Ethernet is connected to *NET2* and is set to receive network settings via DHCP, to automatically complete setup

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.

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

http://opengear.com/product-registration