

Opengear Application Note

Installing your ACM5004-G in the Telstra Next G network

Opengear 3G cellular enabled appliances are configured by default for operation on GSM networks with roaming worldwide (AT&T, T-Mobile, Telstra, Optus). This guide walks through using any Opengear ACM5000 3G Cellular enabled appliance with the Telstra Next G network in Australia.

Data Plans and SIM Cards

The ACM5004-G comes with an internal 3G cellular modem so you will need to purchase a data plan for the Telstra Next G network that does not require you to use a Telstra Mobile modem. Which plan you select will vary depending on your organisation and whether you are already a Telstra corporate, enterprise or government customer. Most small operators will use the ACM5004-G over the public Internet while larger organisations may use a telco managed MAN/WAN.

Now Telstra will not supply you any hardware with your plan, but they will supply you with a SIM card. For 'business customers' SIM cards are generally shipped in bulk. Depending on the process Telstra establishes with them the SIM cards may be non-active or some customers receive SIM cards that are active. This gives you maximum flexibility in integrating them into a wide range of solutions some of which may benefit from activation taking place at install time.



Before powering on the ACM5004-G you must insert the SIM card into your ACM5004-G as shown. :

1. Unscrew and remove the SIM card access panel on the side of the ACM5004-G
2. Insert SIM with contacts facing upward. 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
3. Replace the SIM card access panel

Telstra offers a number of "SIM only" connection services and by default these only offer dynamic, private IP address assignments to 3G devices. While this is perfectly adequate general use, to be able to OoB access your ACM5004-G will require either a publicly accessible fixed IP address or a publicly accessible dynamic IP address. If you select a dynamic IP address then a DDNS service will need to be configured to enable the remote administrator to initiate incoming access. For more details [refer `faq 348.html`](#).

Telstra Business or Enterprise Network Service

Telstra has a range of plans for a wide variety of customers. They provide customized pricing to 'business customers' that are managed by a Telstra account executive and have, or commit to, a particular Telco spend with them.

The Telstra Next IP-based range of products is designed for medium and large businesses, enterprises and government providing Private IP VPN (IP WAN) services, integrated access to the Cellular network and other optional services such as hosted e-mail, conferencing and IP telephony. These are sold by Telstra through their Telstra Business Account Representative. They can arrange for your cellular data plans to be provided with a Static IP address through a wireless port into a Next IP fixed data network. This means that all your ACM5004-G devices will be directly accessible through this network by authorised users.

Telstra does also have the ability to provide some business customers with dynamic public IP addresses, but there is no SLA. To have this feature activated on customers need to request of their account reps that "Extranet codes (GPTEXB3) be added to the applicable numbers.

For more information you should contact your existing Telstra Business Account Representative or call Telstra on 1800 125 593.



Member Data Pack for smaller businesses

If you do not already have an account with Telstra and don't have an assigned Telstra account executive, it is recommended you organize your data pack through one of the larger Telstra dealers. You can [find a reseller online](#) or contact sales@opengear.com.au for an introduction.

If you don't want to engage with an account executive or reseller then you can order a [Member Data Pack](#) online. These plans are tailored for low, medium and high usage and run for a contracted term. All you need is a local Australian address and a local business number (ABN or ACN). There is no need for them to be an existing customer. Data pack pricing (June 2010) is shown below:

Member Data Packs - SIM Only (24 Month Commitment)				
	Monthly Access Charge [~]	Monthly included data ¹ (per month)	Excess usage charges ^{1,2} (per MB)	Minimum Cost over 24 months
Low Usage	\$19	1GB	\$0.25	\$456
Medium Usage	\$29	3GB	\$0.15	\$696
	\$59	6GB	\$0.10	\$1,416
High Usage	\$79	9GB	\$0.05	\$1,896
	\$149	20GB	\$0.05	\$3,576

www.telstrabusiness.com/business/portal/online/site/productsservices/memberplans.44018

These Member Data Packs will allow your ACM5004-G to connect to the Internet. However by default all 'generic' mobile data services are provided with a NAT'd private address.

Telstra can offer 'business customers' a dynamic public address at nil cost but there are no guaranteed service levels with this solution. It's best effort so should there be no public IP address available, as a device tries to connect, it will fall back to a NAT'd private IP address. Also this option may be restricted to account managed customers only. However any customer can contact Telstra's helpdesks (phone 125111) and request the GPTEXB3 code. With this their SIM can access the Internet using APN telstra.extranet which assigns a dynamic real IP address. There's more details on Telstra APNs online at mobilesfaq.com

The premium option providing a Static IP address is through integration of Next G services through an access port into a Next IP fixed data network (e.g. Connect IP). So if you want to get a static Next G IP then it is important you become a Telstra 'business customer' and explore one of these services.

How do I access my ACM5004-G if I do not have publically accessible IP address?

For "direct" remote access to your ACM5004-G you will need a publicly accessible fixed or dynamic IP address. Without this your ACM5004-G can connect out easily however it's invisible on the Internet to any user or application trying to contact it directly via its Telstra assigned IP address (which in this case will be private).

However there are some "indirect" paths available for remotely accessing devices behind remote firewalls:

- **CMS appliance**
Opengear CMS6100 appliance or VCMS virtual appliance provides a central management solution. The console server on the private network initiates an outgoing "call-home" to the CMS, which then maintains a secure transparent bridged connection between the remote administrator and the console server. For more details refer [faq372-Call-Home](#)
- **VPN connection**
Advanced console servers have an embedded OpenVPN and IPsec client and servers. This enables secure VPN tunnels to be set up between distributed console servers and a third party VPN or IPsec server at the enterprise central management site. Refer [faq367-OpenVPN](#) or [faq362](#)

For more details refer [faq377-Public-IP](#)

What can I do once the cellular Internet connection is working?

Once an ACM5004-G device is contactable across the Internet with a publicly accessible IP address it can be used for out of band access to your remote site. The ACM5004-G also supports fail-over from wired connections to mobile wireless out of band connections.

- Access to the ACM5004-G is via a secure browser (HTTPS), secure terminal emulators (SSH) and Opengear's SDTConnector SSH tunneling software to access specific network services (RDP, VNC, Telnet ...)
- The ACM5004-G devices can also be accessed over corporate VPNs using industry standard secure IPsec or OpenVPN tunneling. So managed devices on the ACM5004-G's private network can be securely IP accessible from VPN clients or the corporate VPN.

- once connected to the ACM500-G you can manage serial consoles, UPSs, PDUs, environmental modules, service processors and digital and easily connect to remote utility or branch office installations
- ACM5004-G products also support M2M applications, serial COM port redirection using PortShare, serial bridging and digital I/O control

ACM5004-G cellular configuration

Installation and configuration is quite simple and you can find details in the User Manual and Quick Start provided with your ACM5004-G (or [refer faq 354.html](#))

Once the SIM has been installed the configuration procedure requires you to select the dial out (Cellular Modem) link on the web management interface, then switch on the Cellular Radio and enter the Access Point Name (APN).

What's an APN? Customers on all plans whether standard or customized have access to the general Telstra.Internet and Telstra.Datapack APN. Additional APN's are available for customers with additional products such as fixed IP networks with wireless access ports; this can also include having a custom APN created. The general Telstra.Internet APN is *telstra.internet*.

Once configured the internal cellular modem will retrieve critical settings from the SIM and set up the connection according to that information and the radio signal strength. There are specific statistics screens that also allow you to monitor cellular parameters including signal strength, band, and temperature and so on. You can also monitor the IP address that Telstra has assigned.