



IM4200-2/34-DAC/DDC-X2/0-GV Cellular Wireless Addendum

This addendum should be read in conjunction with the IM4200 Quick Start Guide (QSG). Your IM4200-2/34-DAC/DDC-X2/0-GV (IM4200-X-GV) console server has an CDMA cellular modem, an internal 16GB flash memory and an additional USB port at the rear. It is also supplied with an external antenna with extension cable, and a USB micro-AB adapter cable.

Before powering on the IM4200-X-GV:

- Screw the external antenna coax cable onto the *MAIN* screw mount on the rear of the IM4200-X-GV. If you have purchased a diversity antenna, screw it onto *AUX*

Complete to Step 4 (*Configure Serial and Network Devices*) in the QSG. Then you can connect to Verizon as detailed below.



Connect to the carrier

- Select the **Internal Cellular Modem** tab on the **System: Dial** menu
- The IM4200-X-GV supports both OTASP (*Over-the-Air Service Provisioning* where modem specific parameters can be retrieved via a call to a special phone number) and a manual process where the phone number and other parameters can be entered manually.

The screenshot shows the 'System: Dial' configuration page for the 'Internal Cellular Modem'. The page is divided into several sections:

- Serial Console/Port 1** (selected) and **Internal Cellular Modem** (selected).
- CDMA Modem Activation**: A warning message states 'The CDMA Modem is not provisioned/activated, please contact your carrier and provide them with the ESN: 5420743259 (040804498)'. Below this, it says 'Some carriers require a second activation step before you can connect successfully to their service. If your carrier requires OTASP enter the Phone number below and click Activate'.
- Activation Phone Number**: A text input field with a placeholder 'The phone number to dial for OTASP (Over-the-Air Service Provisioning) activation, e.g. *22899 for Verizon'.
- MSL**: A text input field with a placeholder 'The MSL for connecting the MAIN profile. Advanced'.
- MDN**: A text input field with a placeholder 'The Home Directory Number to use. Advanced'.
- MSID**: A text input field with a placeholder 'The Main profile MSID to use. Advanced'.
- Activate**: A button at the bottom of the form.

- For OTASP, enter *22899 as the number to be dialed (for Verizon)
- For manual activation enter the **MSL**, **MDN** and **MSID** values. Verizon have been known to use an **MSL of 000000** and the phone number assigned to the ACM5004-GV as both the **MDN** and **MSID**

- Click **Activate**. If no errors occur you will see a valid phone number being placed in the **NAM Profile Account MDN** field (**Cellular** page on **Status: Statistics**)
- Enable the **Internal Cellular Modem** by entering the carriers phone number (which defaults to **#777**)

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

- Enable **Override DNS**. Then check the **Override returned DNS Servers** box and enter the IP of the DNS servers into the spaces provided.
- Check **Apply** and a radio connection will be established with your cellular carrier. *Out-of-band access* is enabled, so the cellular modem connection is always ON.

Verify Connection

- 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

OoB Access

To directly access the IM4200-X-GV *console server*, it needs to have a Public IP address and it must not have SSH access firewalled. Almost all carriers offer corporate mobile data service/plans with a Public (static or dynamic) IP address. These plans often have a service fee attached.

- If you have such a static Public IP address plan, you can now try accessing the IM4200-X-GV using the Public IP Address provided by the carrier. However, by default, only HTTPS and SSH access is enabled on the OoB connection. So you can browse to the IM4200-X-GV, 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 IM4200-X-GV using the allocated domain name
- If your service by default assigns a dynamic Private IP address to your 3G device then this IP address is not visible across the Internet.
 - With such a plan, 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)
 - For an inbound OoB connection with such a plan, you will need to either use Call Home with a CMS or set up a VPN connection

In this default **out of band access mode**, the connection to the carrier cellular network is always on - awaiting any incoming access to the console server or attached serial consoles/network hosts.

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 other alternative is **cellular router mode**. In this mode the connection to the carrier cellular network is always on, but IP traffic is selectively routed between the cellular connected network and the local Ethernet LANs.