IM4200-2/34-DAC/DDC-X2/0-G
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-G (*IM4200-X-G*) console server has an internal 3G-GSM HSUPA/UMTS 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-G:

> Your carrier will provide you with a SIM card. Insert SIM card (1) and it will lock into place

>> **Take care to insert SIM card with contacts facing downwards**

> Screw the external antenna coax cable (2) onto the MAIN screw mount on the rear of the IM4200-X-G

Complete to Step 4 (*Configure Serial and Network Devices*) in the QSG then connect to your wireless carrier as detailed below.

Connect to the carrier

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

> Check **Enable** for **Dial-Out Settings-OOB** and enter the carrier's **APN** e.g. for AT&T (USA) simply enter *i2gold*, for T-Mobile (USA) enter *epc.tmobile.com*, for InterNode (Aust) enter *internode* and for Telstra (Aust) enter *telstra.internet*

Note: *Your GSM carrier may have provided you with connection details. However, you generally will only need to enter your provider's APN and leave the other fields blank. If provided a Pin Code you may need to use it to unlock the SIM card.*

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-G *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-G 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-G, 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-G using the allocated domain name

By default, most providers offer a consumer grade service which provides dynamic Private IP address assignments to 3G devices. This IP address is not visible across the Internet but generally it is adequate for home and general business use.

- ➢ 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 VCMS/CMS6110, or set up a VPN connection

Alternate connection modes

In the 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** (requires firmware 3.3 or later). 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