<u>GS10/GS15, GS14</u>

The following are the procedures for setting the rover up using the Network GSM/UTMS/GPRS cell network in your area. You will be set to connect to either NETWORK solution or Nearest solution using SMARTNET North America in your working area.

1. Have your SIM card inserted in CS15 Controller.

2. From the Main Menu, tap Instrument.. then Connections.. then All other connections..
   Ensure you are in the CS connections tab, highlight the CS Internet and press F3 (Edit).
   a. Check Use Internet connection on CS. Choose the correct Port (Connect using CS modem, ensure the Device is the Cinterion 3.5G, Connect to internet using Mobile data, and leave Use user ID & password unchecked.
   Press OK.
   b. Highlight the CS Internet line again and press F4 (Control). Enter the appropriate APN:
   Bell: inet.bell.ca, Telus: isp.telus.com, Rogers: internet.com (or ltemobile.apn), Freedom: mms.freedommobile.ca (APN for other providers may vary, please check with them to see if APN has changed). Press OK.

3. The CS controller modem should now be initialized, and you should be connected to the Internet.. make sure the globe symbol in the top right hand corner has no exclamation mark (!).

4. Page to the GS connections tab, highlight the RTK rover line and press F3 (Edit) to configure the RTK rover settings:
   a. Receive RTK data: Check
   Connect using: CS Internet 1, RTK device: Internet
   RTK data format: RTCMV3
   Use auto coordinate system: NOT checked, Receiver RTK net information: Check and Behavior: Show only, Automatically connect: Uncheck
   b. Sensor at base: Automatically detect
   Antenna at base: Automatically detect
   RTK base is sending unique ID: NOT checked
   c. Use RTK network: check
   Network type: i-MAX – for network solution, Nearest – closest station
   Send user ID: NOT checked
   Tap GGA (F4)…
   d. Ensure GGA position to send: Automatically.
   Send additional message on measure point stored: NOT checked. Press OK.

5. Continue to highlight the RTK rover press F4 (Control). Internet port is set to CS internet 1, then create or select a Server to use:
   a. Server to use: Press the ">"

   i. If already created, highlight the correct Server, select Edit F3, note Address and Port, go to the NTRIP page, then note or adjust user ID and password.

b. To create a new server, press F2 (New)

c. Server name: SmartNet,
Address: bc.smartnetna.com, or ab.smartnetna.com (depending on service area)
Port: 9301 (Note: In BC, using 11111 will have other ref frames)

d. Page other NTRIP tab, Use NTRIP with this server is checked
NTRIP user ID: Enter in your personal User ID provided by SmartNET
NTRIP password: Enter in password provided by SmartNET
Press Store, then OK to return to Internet Port Connection page.

e. Press F5 (Source) to pull down a source table. Select MSM_IMAX to use Network solution, or MSM_NEAR to connect to nearest station..
Press OKs to return to Main menu

6. Tap the Star key on the keypad, press Start RTK stream to connect.

GS12

The following are the procedures for setting the rover up using the Network GSM/UTMS/GPRS cell network in your area. You will be set to connect to either NETWORK solution or Nearest solution using SMARTNET North America in your working area.

1. Have your SIM card inserted in CS15 Controller.

2. From the Main Menu, tap Instrument.. then Connections.. then All other connections..
Ensure you are in the Connections Settings page, highlight the CS Internet and press F3 (Edit).

   a. Check Use Internet connection on CS. Choose the correct Port (Connect using CS modem, ensure the Device is the Cinterion 3.5G, Connect to internet using Mobile data, and leave Use user ID & password unchecked.
   Press OK.

   b. Highlight the CS Internet line again and press F4 (Control). Enter the appropriate APN:
   Bell: inet.bell.ca, Telus: isp.telus.com, Rogers: internet.com (or ltemobile.apn), Freedom: mms.freedommobile.ca (APN for other providers may vary, please check with them to see if APN has changed). Press OK.

3. The CS controller modem should now be initialized, and you should be connected to the Internet.. make sure the globe symbol in the top right hand corner has no exclamation mark (!).

4. Continue on the Connections Settings page, highlight the RTK rover line and press F3 (Edit) to configure the RTK rover settings:

   a. Receive RTK data: Check
   Connect using: CS Internet 1, RTK device: Internet

RTK data format: RTCMV3

Use auto coordinate system: NOT checked, Receiver RTK net information: Check and Behavior: Show only, Automatically connect: Uncheck

f. Sensor at base: Automatically detect

Antenna at base: Automatically detect

RTK base is sending unique ID: NOT checked

g. Use RTK network: check

Network type: i-MAX – for network solution, Nearest – closest station

Send user ID: NOT checked

Tap GGA (F4)…

h. Ensure GGA position to send: Automatically.

Send additional message on measure point stored: NOT checked. Press OK.

5. Continue to highlight the RTK rover line on the Connection Settings page, press F4 (Control). Internet port is set to CS internet 1, then create or select a Server to use:

a. Server to use: Press the ">"

i. If already created, highlight the correct Server, select Edit F3, note Address and Port, go to the NTRIP page, then note or adjust user ID and password.

b. To create a new server, press F2 (New)

e. Server name: SmartNet,

Address: bc.smartnetna.com, or ab.smartnetna.com (depending on service area)

Port: 9301 (Note: In BC, using 11111 will have other ref frames)

f. Page other NTRIP tab, Use NTRIP with this server is checked

NTRIP user ID: Enter in your personal User ID provided by SmartNET

NTRIP password: Enter in password provided by SmartNET

Press Store, then OK to return to Internet Port Connection page.

i. Press F5 (Source) to pull down a source table. Select MSM_IMAX to use Network solution, or MSM_NEAR to connect to nearest station..

Press OKs to return to Main menu

6. Tap the Star key on the keypad, press Start RTK stream to connect.