6712Ci LTE Cellular Modem
Installation and Operation

TELEDYNE ISCO
Everywhere**you**look™

Instruction Sheet #69-9003-676
Rev. E, December 17, 2019

Overview

This modem can transmit SMS text message alarms to cell phones and/or email addresses, and receive SMS text message commands, via the internet.

Sampler firmware version **3.02** or newer is required for the 6712Ci modem. This firmware will only work with C0 hardware.

To verify the hardware of your sampler:

1. Go to VIEW REPORT.
2. Select SYSTEM IDs.
3. The hardware version will appear in the display.

Equipment part numbers:

• 6712Ci LTE Cellular Modem Kit

(modem module with magnetic mount antenna)

Part #60-9004-404

• Antenna Only Part #60-4804-035

☑ *Note*

When the 6712Ci modem is used, the baud rate is locked at **9600bps**. Ensure that this setting is also selected in Flowlink or Hyperterminal.

Programming the APN

The APN (Access Point Name – for Data) is stored in the 6712 Sampler head.

1. Plug the com cable directly to the 6712.
2. Connect with a terminal program and type ???? 3-4 times to log in. The Sampler will beep.
3. When you see the ">" type "APN" then ENTER. The following screen will appear:

```
> APN
  1. Name: empty
  2. User: empty
  3. Password: empty
Press 1,2,3 to change or 0 if ok
```

4. Choose "1" to input the APN.

```
> APN
  1. Name: empty
  2. User: empty
  3. Password: empty
Press 1,2,3 to change or 0 if ok
Enter Name:
```

5. Type in the name and press enter. The screen will update with the APN below the entry screen:

```
> APN
  1. Name: empty
  2. User: empty
  3. Password: empty
Press 1, 2, 3 to change or 0 if ok
Enter Name:i2gold
  1. Name: i2gold
  2. User: empty
  3. Password: empty
Press 1,2,3 to change or 0 if ok
```

6. Pressing "0" to save the setting gets you the ">" again. You can now disconnect via Terminal.

```
> APN
  1. Name: empty
  2. User: empty
  3. Password: empty
Press 1, 2, 3 to change or 0 if ok
Enter Name:i2gold
  1. Name: i2gold
  2. User: empty
  3. Password: empty
Press 1,2,3 to change or 0 if ok
> ▯
```

7. Close the Terminal.
8. Now you can connect the modem to the sampler and program the sampler accordingly.

6712Ci Modem Activation and Setup

The item in bold is the current selection; use the arrow keys to scroll and press [←] to accept:

```
       RUN "EXTENDED 1"
          PROGRAM
         VEIW REPORT
       OTHER FUNCTIONS
```

```
        MAINTENANCE
      MANUAL FUNCTIONS
      SOFTWARE OPTIONS
          HARDWARE
```

Step through the program, enabling any desired alarms (I/O1, I/O2, I/O3).

```
          NO EXTERNAL MODEM
```

```
          SELECT EXTERNAL
         MODEM TYPE: NONE
          TELIT LTE UMT
```

☑ *Note*

Three types of modems: TELIT (for CDMA or GSM or LTE Telit modems), LTE (for GELS3 LTE modems), and UMT (for GSM modems) will be shown; select the appropriate one.

```
           EXT LTE MODEM
```

Power Settings

Next, you will need to select one of three power on modes, depending on your power conservation requirements:

```
          POWER ALWAYS ON
           MESSAGE CHECK
            ALARMS ONLY
```

Power Always On – The modem stays constantly powered.

```
         MODEM CONNECTOR
         POWER ALWAYS ON
```

Message Check – The modem powers on at user-selected intervals to poll for valid incoming SMS messages. If a message is detected, the sampler will keep the modem powered up for the next 20 minutes, ready to receive incoming messages.

```
           MESSAGE CHECK
             5 10 15
             MINUTES
```

```
         MODEM CONNECTOR
          POWERED FOR
          MESSAGE CHECK
        EVERY 10 MINUTES
```

Alarms Only – The modem powers on only to transmit alarm messages.

```
         MODEM CONNECTOR
          POWERED FOR
          ALARMS ONLY
```

Notification List

As detailed in the *Extended Programming* section of the sampler manual, when any programmed and enabled I/O output enters a true state, the sampler can send an SMS text message to a list of up to three phone numbers.

With the 6712Ci modem, the sampler can also send the message to up to three email addresses.

Email Setup

Email addresses are programmed into the sampler with HyperTerminal.

1. Connect your computer to the sampler's interrogator port with the standard interrogator cable: Part #60-2544-044 for 9-pin serial port; part #60-2004-508 for USB port.

2. In Hyperterminal, use the following communication settings:
   - baud rate 9600bps
   - no parity
   - 8 data bits
   - 1 stop bit
   - VT100 terminal emulation

3. On the computer, press and hold the question mark (?) until the sampler returns its banner string. A caret (>) prompt will appear when the sampler is ready for input.
   Press Enter (CR) after every command.

4. At the prompt, enter the word "email." Then follow the sequence shown in Figure   below.

☑ *Note*

A combination of phone numbers/email addresses can be used. Any phone numbers already programmed for I/O 1, 2, or 3 will appear in Hyperterminal instead of the word "empty."

After entering "email," the following appears.

```
email (CR)

1: empty
2: empty
3: empty
Press 1, 2, 3 to change or 0 if OK
```

After selecting the I/O pin, the following prompt appears. Enter the address to be used.

```
1 (CR)

Enter email address 1: myaddress@example.com (CR)
```

After entering the address, changes are reflected. To add another address, enter the word "email" again.

```
1: myaddress@example.com
2: empty
3: empty
```

SMS Commands

Commands to start the program, load a selected program, enable/disable the sampler, take a sample, and report sampler status, can be sent to the sampler by cell phone or by email.

When you send a command to the sampler, it will carry out the command and also respond with an acknowledging message to all programmed destination phone numbers/email addresses.

With a cell phone, simply send the command in a text message to the 6712Ci modem's phone number. When using email, send the command either in the subject line or body of the email, to: [phone number]@vtext.com.

The command must contain the string "6712," along with one of the commands listed in Table 1. The middle and right columns are interchangeable, with the right column containing abbreviated commands. Commands are not case-sensitive, and do not require spacing.

Table 1: 6712Ci SMS Commands

Prefix	Command	Short Version
6712	START	C0
	RUN1	C1
	RUN2	C2
	RUN3	C3
	RUN4	C4
	DISABLE	C5
	ENABLE	C6
	TAKE SAMPLE	C7
	STATUS	C9

Example Command: 6712status

Shortened Version: 6712C9SMS Messages Sent From the Sampler

Response messages and alarms sent out by the sampler contain the sampler's three-digit ID number, the site name, and IP address (if applicable), followed by either the command response or alarm condition.

Example Response:
Isco Sampler 148, FACTORY148, IP:##.###.###.###, Sampler Status: Program Done

Example Alarm:
Isco Sampler 148, FACTORY148, IP:##.###.###.###, alarm 1 PGM ENABLED

To acknowledge an alarm, copy the text and send it back to the sampler. This will stop the user from receiving the same message up to five times.

Dual Sampler Setup

To set up a dual-sampler system where one sampler's program is triggered by the enable alarm of another, program the primary (master) sampler to send an SMS alarm message of "Program Enabled" to the phone number of the secondary (slave) sampler.

Program the secondary sampler to start with a delay setting of WAIT FOR PHONE COMMAND.

SIM Card

The data transmission capabilities of the 6712Ci are dependent upon the type of service plan you have through your cell phone service provider. The service parameters, or provider, can be changed by simply replacing the SIM card in your 6712Ci. Check with your service provider to verify what data transmission technologies are available for your use. There are three types of SIM cards, but only the Micro SIM cards will work with the 6712Ci modems (Figure 1).

☑ *Note*

A Micro SIM card is required for any LTE units including the 6712Ci.

Standard (Mini)
SIM card
15 x 25 mm

Micro SIM card
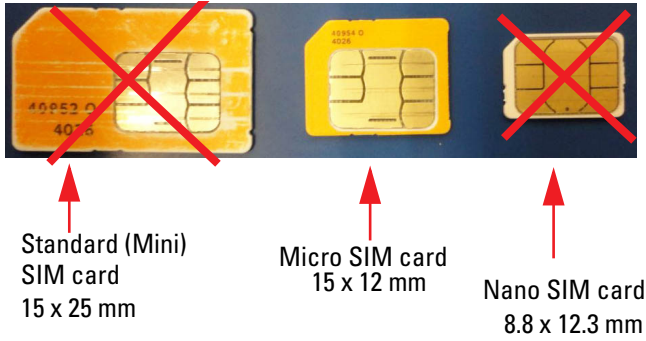15 x 12 mm

Nano SIM card
8.8 x 12.3 mm

Figure 1: Types of SIM cards

To access the SIM card adapter, remove the ten screws in the top of the 6712Ci. Once the lid is removed, the SIM extender can be accessed.

To use a Micro SIM card, insert the SIM card into the SIM extender with the contacts facing each other and the notch not in the extender.

When installing the top back onto the unit, screw the ten screws down finger tight before torquing them to 8 inch-pounds.

TELEDYNE ISCO
Everywhere**you**look™

EAR-Controlled Technology Subject to Restrictions Contained on page 1.