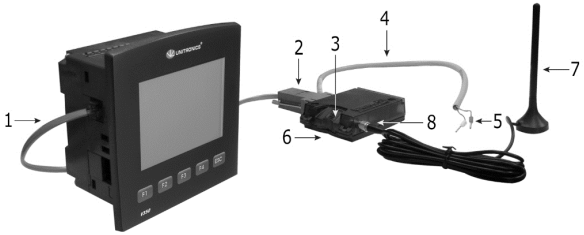
The GSM-16J Modem Kit: Cinterion BGS2T

This kit enables your SMS-enabled OPLC to communicate via cellular networks.
The kit, GSM-16J Modem Kit, contains a Cinterion BGS2T GSM modem and related hardware.
The modem can communicate via GSM, GPRS + TCP/IP at 850/900/1800/1900 MHz.

Connection

The figure below shows you how to assemble the different elements of the Cinterion BGS2T GSM modem, and how to connect the modem to an OPLC.



Component Identification

#	Description	Notes
1	Communication cable, controller to modem	Vision, M90/91 series: This is the programming cable for the controller. Jazz Jazz does not comprise an embedded communication port. Add-on ports are available by separate order. Use the communication cable supplied with the Add-on port
2	9 pin male adapter p/n MJ10-22-CS76	
3	LED	
4	Power supply cable	
5	End of power supply cable	Orange wire + striped orange & white wire—positive, blue wire—negative.
6	SIM Slot	
7	GSM antenna	
8	GSM antenna connector	Located on modem

SIM Slot

SIMs is inserted directly into the SIM slot in the GSM Terminal.

Insert the SIM card with the correct orientation and push all the way in.

It will be necessary to use fingernails or a small tool to fully insert the card into terminal

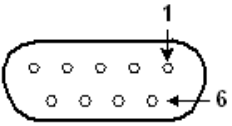
Until it can be pushed no further. (Small click may be noted).

Removal is possible by pushing the SIM card back into the terminal and releasing it much that it will then be possible to completely remove the SIM card by hand.

Modem RS232 port pin-out

D-type 9 pin female connector:

Pin	Description	Direction
1	DCD (Data Carrier Detect)	O
2	RxD (Receive Data)	O
3	TxD (Transmit Data)	I
4	DTR (Data Terminal Ready)	I
5	GND (Signal Ground)	–
6	DSR (Data Set Ready)	O
7	RTS (Request to Send)	I
8	CTS (Clear To Send)	O
9	RING (Ring Indicator)	O



LED: Status Indication

BGS2T has two LEDs indicating the operation status through the device casing:

A green LED indicates whether the modem is correctly powered and ready to operate.

An orange LED indicates the various operation states of the terminal as per the following table.

Orange LED mode	Operating status of MC55i Terminal
Permanently off	MC55i Terminal is in one of the following modes: • POWER DOWN mode • ALARM mode • NON-CYCLIC SLEEP mode • CYCLIC SLEEP mode with no temporary wake-up event*
600 ms on / 600 ms off	Limited Network Service: No SIM card inserted or no PIN entered, or network search in progress, or on-going user authentication, or network login in progress
75 ms on / 3 s off	IDLE mode: The Terminal is registered to the network (monitoring control channels and user interactions). No call in progress
75 ms on / 75 ms off / 75 ms on / 3 s off	One or more GPRS contexts activated
500 ms on / 25 ms off	Packet switched data transfer in progress
Permanently on	Depending on type of call: *Voice call:* Connected to remote party *CSD call:* Connected to remote party or exchange of parameters while setting up or disconnecting a call

Technical Specifications

Modem

Power voltage range	8 - 30VDC
Status indication	Green/Orange LED
SIM card	3V and 1.8V SIM card
GSM frequency	850/900/1800/1900 MHz
Weight	65g (2.30 oz.)
Dimensions	80 x 55 x 23mm (3.15” x 2.16” x 10.9”)
Operational temperature	-30 to 85°C (-22 to 185°F)
Storage temperature	-40 to 90°C (-40 to 194°F)
Antenna connector type	SMA female

Antenna

Antenna frequency	Quad band GSM:850/900/1800/1900 MHz

Unitronics product sold hereunder can be used with certain products of other manufacturers at the user’s sole responsibility.

The information provided is subject to change without notice.

Modem initialization

1. Preparing the modem as described below initializes it so that it is compatible with Unitronics PLCs.

2. Connect the modem to a PC, using a cable comprising the full RS232 pinout, either supplied in the modem kit or supplied by the modem manufacturer.

   Note that using a cable that does not comprise the full RS232 pinout will cause the process to fail.

3. Prepare the PLC modem.

4. Connect the modem to a PC, using the cable supplied by the modem manufacturer.

5. Open VisiLogic/U90Ladder.

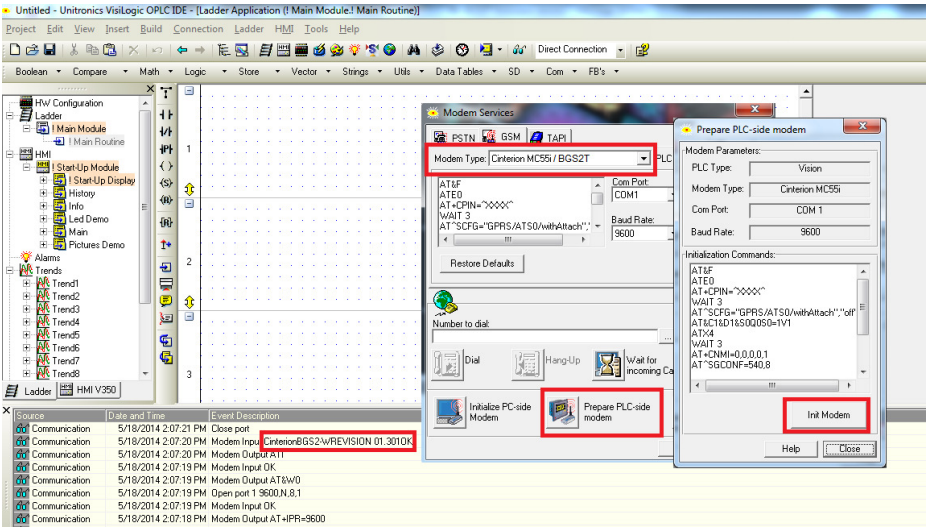
6. Open Connection>Modem Services, and select the modem type.
   If required, you can edit other parameters: Com Port, Baud Rate, Time Out, and Time-Out Reply: use the drop down boxes. If SIM has PIN code: click to enter the number.

7. Click the Prepare PLC-side Modem button; that dialog box opens.

8. When all parameters are set, click the Init Modem button; the PC establishes communication with the modem and initializes it to baud rate of the 9600.

9. Now you can connect the modem to the PLC using the 9 Pin connector MJ10-22-CS76 via cable 4 wires.

10. For further information please refer to VisiLogic/U90Ladder Help topic PLC Side Modems.



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