The user must refer to the sample code for an exact replica of the ladder logic for the configuration settings and reset command.

If the Configuration Image has not been successfully received by the CELL module, ***CNFG*** will be displayed on the LCD of the module.

When the module has been successfully setup and has booted, the *moduleOK* bit will be set in the Input Image, (please see the User manual). The service provider name and signal strength will scroll across the LCD and will be alternated by an ***OK*** that will momentarily be displayed.

GSM or CDMA-EVDO

NOTE: The CELL module uses mobile equipment that operates on the GSM network. The CELL module will not operate on a CDMA network.

In cellular service there are two main competing network technologies: Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA). Cellular carriers including Sprint PCS, Cingular Wireless, Verizon and T-Mobile use one or the other. Understanding the difference between GSM and CDMA will allow you to choose a carrier that uses the preferable network technology for your needs.

http://www.wisegeek.com/what-is-the-difference-between-gsm-and-cdma.htm
http://www.diffen.com/difference/CDMA_vs_GSM

QUICK START GUIDE

V1.00.04

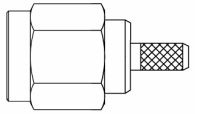
INSTALLATION

Software

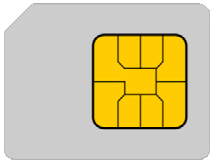
The User-Defined-Type (UDT) needed can be found in the example code. These must be copied from the Input image and copied to the Config and Output images to make sense of the data. Please refer to the example code.

Hardware

- **GSM Antenna:** The GSM antenna is provided and must be connected to the module via a SMA (male) connector. A directional antenna may be used in poor reception areas.



- **SIM Card:** The SIM card is inserted along the top edge of the module with the cut-off corner to the front of the card. A SIM card contains its unique serial number, internationally unique number of the mobile user (IMSI), security information and two passwords (PIN for usual use and PUK for unlocking) A SIM card can be obtained from the cellular service provider. Eg. VodaCom-SA, AT&T, Vodafone etc



NOTE: If the SIM card requires a PIN and the user failed to enter the correct PIN in the Config Image, after three tries the SIM card will be locked and the user will need to unlock it using the PUK code.

SETUP

RSLogix 5000

The module must be added to the RSLogix 5000 IO tree by selecting the Generic 1756 Module as shown below:

Connection Parameters

	Assembly Instance	Size	Format
Input	65	18	32-bit
Output	66	1	32-bit
Config	68	72	8-bit
RPI		**MIN** 10ms **MAX** 750ms	

Antenna Installation

The shark-fin antenna must be installed in a position unobstructed by large metal objects between the cellular tower and antenna. Signal strength should be verified at installation to ensure seamless operation.

"Shark-fin" antenna

OPERATION

RSLogix 5000

Name	Value	Force Mask	Style	Data Type
Cell_Config	{...}	{...}		CELL_CNFG_IMAGE
Cell_Config.PIN_NUMBER	''	{...}		STRING8
Cell_Config.SMS_SERV_CENTRE	''	{...}		STRING16
Cell_Config.APN	''	{...}		STRING24
Cell_Config.PORT	''	{...}		STRING8

The user must update the parameters in the CELL_VAR.Config UDT (provided in the example code) to what is needed from the application.

CELL.Config.PIN_NUMBER This is the pin number for the sim card inserted into the module. May be left blank if PIN is disabled on the sim card.	Eg: 1234
CELL.Config.SMS_SERV_CENTRE The service centre that is used by the service provider to send and receive SMS messages.	Eg: +27829129 (Vodacom-SA) +27831000002 (MTN-SA)
CELL.Config.APN If an APN has been registered with the cellular service provider to obtain a static IP address, it may be entered here. (or left blank)	Eg: www.hiprom.co.za
CELL.Config.PORT The TCP/IP port used by the module when establishing a TCP server. (or left blank)	Eg: 8123