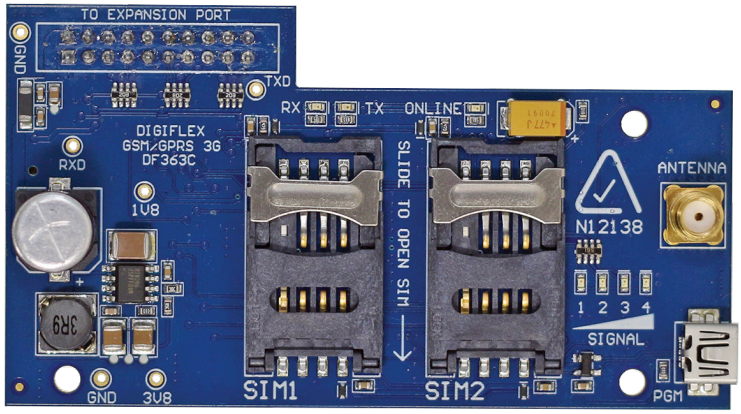
CM744B
3G GSM/GPRS/SMS Radio Module



Security Systems

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Introduction

The CM744B 3G radio module allows you to interface compatible security control panels to the GSM/GPRS /SMS network providing a high reliability primary or backup reporting path.

The unit is designed to plug onto the main control panel with the supplied antenna mounting onto the metal cabinet.

Module Compatibility	
Panels Supported	**Version**
Solution 6000 Series	2.23

Getting Started

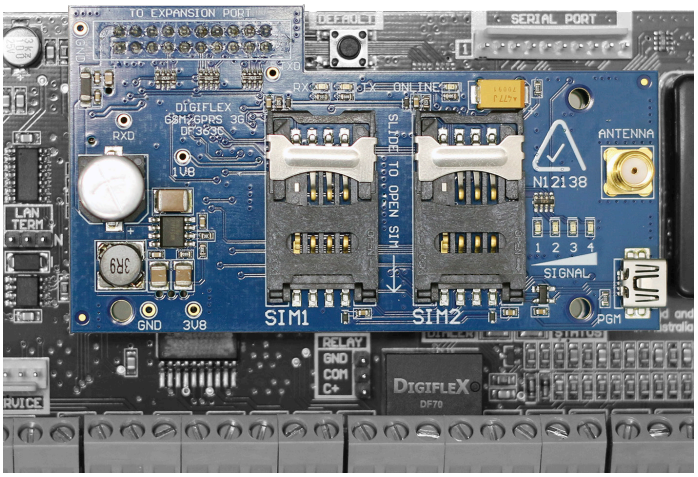
There are four main steps required to configure the CM744B for reporting to the control room. The instructions assume that you already have purchased a SIM card and that the card has been charged with credit and activated on the network if necessary.

1. Install the CM744B hardware on the control panel.
2. Install the antenna.
3. Configure the module's features and parameters.
4. Configure the control panel for reporting.

Step 1 - Installing the Radio Module

Ensure that the panel is powered off before proceeding. Plug the 3 short plastic standoffs into the module and then plug it onto the Expansion Port header pins on the panel as shown in. If you are connecting the CM744B to a panel which also has a CM101B Voice Module fitted then you should use the longer standoffs from the HW750 Riser Kit.

Install the SIM card into the SIM 1 card position.



Step 2 - Installing the Antenna

Remove the knockout in the top of the cabinet and pass the antenna lead through the hole ensuring the antenna is on the outside of the cabinet. Screw the lead to the socket on the radio module before power the panel.

Do not fix the antenna in place at this stage.

Step 3 - Configuring The Module

Once powered the radio will attempt to connect to the network. This may take up to a minute to complete. During this time the online indicator on the module will be on solid. Once the radio has registered the online indicator will begin to flash and the signal strength indicators will show the current signal condition.

Experiment with the position of the antenna to find the best signal strength before fixing it in place.

Step 4 - Configuring The Panel Reporting

Reporting configuration will vary depending on the required options and whether or not the GSM module is to be used as the primary or secondary reporting route.

Configure the required reporting formats in MENU 5-4-0 and 5-4-1. The system can be configured to report to the base in CID and also to selected phone numbers via SMS, or to the base in CID via PSTN line and then CID via GSM if the PSTN line is cut.

All reporting scenarios are configured by varying the programming of the reporting format and reporting routes configurations options.

Module Indicators

The module includes 7 led indicators which are used to show status and signal strength. See table below.

Module Indicators	
Indicator	**Meaning**
TX	Module Transmitting Data
RX	Module Receiving Data
Online	ON Steady = Not Registered On Network Pulsing = Registered On Network
Signal 1	Signal strength indicators show relative signal level at the radio. Signal indicator 1 on indicates weak signal and all 4 indicators on indicates stronger signal strength.
Signal 2	
Signal 3	
Signal 4	

Supported Reporting Formats

Version 2.22 of the Solution 6000 panel firmware is required to support the CM744B.

The following reporting formats are currently supported by the module.

SMS Format via GSM
CSV-IP Format via GPRS
Conettix Format via GPRS

Support for the MyAlarm iFob App and RAS upload / download via GPRS is not currently supported but will be available in a future panel firmware update.

There is no support in the 3G module for Contact ID (CID) over GSM.

CLI Trigger Output Control

The CLI trigger tables in MENU 6-5-5-1 and 6-5-6-2 can be used to store a list of telephone numbers that can trigger an output on the control panel. If you call the GSM unit from a telephone number that matches a number in the CLI list then the appropriate output will be operated.

An output needs to be programmed with an event type of CLI Trigger and event assignment of 1 or 2 depending on which table is to be checked.

Simply call the GSM unit from a telephone number that is programmed in the CLI trigger list to activate the output.

Module Status

MENU 6-5-0 can be used to obtain various information on the radio module. The following information is currently available.

1) Connected Network
2) Signal Strength in dB
3) IMEI Number
4) Radio Firmware Revision
5) SIM Card Present

Dial Number Test

It is possible to check the SIM phone number by selecting the dial number test via GSM option in MENU 5-9-5.

SMS Remote Control

The SMS control option in MENU 6-5-6 allows you to program up to 10 telephone numbers that are allowed to send SMS commands to the GSM unit. The first number in this list is considered as the administrator who will also receive SMS messages that the GSM unit is unable to interpret. i.e. any message sent to the radio which cannot be interpreted will be sent back via SMS to the first number in the SMS control number list.

Numerous commands can be sent to the panel using the SMS control functions including arming/ disarming areas, controlling outputs and doors or checking system status. The panel can also be requested to send a confirmation SMS if required.

The control messages must be sent to the SIM phone number.

The SMS Control phrase table shows the correct method for constructing the SMS messages. Note there are no spaces between the fields only commas as shown.

SMS Control Smartphone App

The MyAlarm SMS Control App for iOS and Android devices is now available and can be used to simplify the configuration and sending of SMS control messages.

You can search for the MyAlarm SMS Control app in the app store or scan the QR codes below using your device's barcode reader for a direct link to the app.

Scan Here (iOS Version)

Scan Here (Android Version)

SIM Balance Recharge Reminder Function

In Solution 6000 version 2.20 firmware, a new SIM expire parameter can be added to the to the SIMBAL setup command when using the GSM module with a pre-paid SIM card. When configured the control panel will send a reminder to the designated SIM owner prompting them to recharge the SIM before it expires.

The SIM Balance string would include the follows parameters including the new optional reminder in weeks (01 to 52 weeks).

The MyAlarm SMS Control smart device app has been updated to include support for this new feature. For more information refer to the example below.

User Code

This field is used to enter your PIN (eg. 2580).

Command Header

The command header field is fixed - SIMBAL.

Access Number

Enter the communication providers access number for SIM card balance enquiries.

- Optus = 9999
- Vodafone = 1555 / 1512
- Telstra = #100#
- Virgin = 225

Text

Enter the text required by the communication providers to obtain your SIM card balance (Max = 16 characters). In Australia, examples may change and include:

- Optus = Balance
- Vodafone = Blank Message
- Telstra = Voice Call
- Virgin = Bal

Preamble

Enter text to search for the credit remaining on your SIM card (eg. if Vodafone Australia displays 'U've Remaining: 365 day: $35.53 Exp: 09/11/2015' enter 'Day:' as the preamble).

Minimum Amount

Enter the minimum balance to filter GSM module SIM card balance enquiries. This allows the GSM module to only forward an SMS balance alert message to your mobile telephone when the SIM card balance falls below the minimum amount set here.

Days

This parameter sets how often the GSM module will automatically request a SIM card balance. This can be set between 001 and 255 days / 000 = disabled.

Mobile

This parameter allows you to program which mobile telephone number the GSM module will forward the SIM card balance enquiry of the GSM module to.

Expire Reminder

Enter the number of weeks for the GSM module to remind you to recharge your GSM SIM card (01 to 99 weeks / 00 = disabled).

Example

The example below is requesting a SIM Balance of the SIM card connected to the Vodafone network (Australia) with a reminder that the credit available on the SIM card requires a recharge in 25 weeks using a 180 day prepaid SIM card. The SIMBAL requests a balance enquiry every two days when the balance falls below $20.00.

SIMBAL,2580,1555,Day,$20.00,002,0414123456,25

After 25 weeks, the GSM module will send the following SMS, 'SIM is about to expire please recharge immediately'.

Information in this example is correct at time of printing. Check with your telco carrier as these options may change.

Description	SMS String
Arming / Disarming Areas	
Turning Area 1 On	<User Code>,AREA,1,ON
Turning Area 1 On With Confirmation	<User Code>,AREA,1,ON,CONFIRM
Turning Area 1 Part 1 On	<User Code>,AREA,1,PART 1
Turning Area 1 Part 1 On With Confirmation	<User Code>,AREA,1,PART 1,CONFIRM
Turning Area 1 Part 2 On	<User Code>,AREA,1,PART 2
Turning Area 1 Part 2 On With Confirmation	<User Code>,AREA,1,PART 2,CONFIRM
Turn Multiple Areas On	<User Code>,AREA,1,2,3,4,ON
Turn All Areas On That the User Belongs To	<User Code>,AREA,ON
Turning Area 1 OFF	<User Code>,AREA,1,OFF
Turning Area 1 OFF With Confirmation	<User Code>,AREA,1,OFF,CONFIRM
Check Area Status	<User Code>,AREA,1,STATUS
Check Status Of Multiple Areas	<User Code>,AREA,1,2,3,STATUS
Turning Outputs On/Off	
Turn Output 1 On	<User Code>,OUTPUT,1,ON
Turn Output 1 On With Confirmation	<User Code>,OUTPUT,1,ON,CONFIRM
Turn Multiple Outputs On	<User Code>,OUTPUT,1,2,3,4,ON
Turn Multiple Outputs On With Confirmation	<User Code>,OUTPUT,1,2,3,4,ON,CONFIRM
Turning Output 1 OFF	<User Code>,OUTPUT,1,OFF
Turning Output 1 OFF With Confirmation	<User Code>,OUTPUT,1,OFF,CONFIRM
Turning Multiple Outputs OFF	<User Code>,OUTPUT,1,2,3,4,OFF
Turning Multiple Outputs OFF With Confirmation	<User Code>,OUTPUT,1,2,3,4,OFF,CONFIRM
Check Output Status	<User Code>,OUTPUT,1,STATUS
Check Status Of Multiple Outputs	<User Code>,OUTPUT,1,2,3,4,STATUS
Locking and Unlocking Doors	
Unlock Door 1	<User Code>,DOOR,1,UNLOCK
Unlock Door 1 With Confirmation	<User Code>,DOOR,1,UNLOCK,CONFIRM
Unlock Multiple Doors	<User Code>,DOOR,1,2,3,UNLOCK
Unlock Multiple Doors With Confirmation	<User Code>,DOOR,1,2,3,UNLOCK,CONFIRM
Lock Door 1	<User Code>,DOOR,1,LOCK
Lock Door 1 With Confirmation	<User Code>,DOOR,1,LOCK,CONFIRM
Lock Multiple Doors	<User Code>,DOOR,1,2,3,LOCK
Lock Multiple Doors With Confirmation	<User Code>,DOOR,1,2,3,LOCK,CONFIRM
Check Status Of A Door	<User Code>,DOOR,1,STATUS
Check Status Of Multiple Doors	<User Code>,DOOR,1,2,3,STATUS
Check System Status	<User Code>,SYSTEM,STATUS
SIM Balance Check - Must have been configured under site settings	
Check Current SIM Balance	<User Code>,SIMBAL,<Access Number>,<Text., <Preamble>,<Min Amount>,<Days>,<Mobile>,<Expire Reminder>

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CM744B Specifications

Part Number:	CM744B - 3G GSM/GPRS/SMS Radio Module
Reporting Formats:	SMS via GSM , CSV-IP via GPRS and Conettix Format via GPRS are supported. iFob app and RAS will be available via a future panel firmware update. Check with your distributor for availability. The CM744B does not support Contact ID (CID) over GSM.
SIM Card Type:	Dual standard size SIM cards. When using the module in single SIM mode the SIM card should be installed in SIM 1 socket.
Antenna:	Quad Band Omni Directional Adhesive Antenna with integrated lead and SMA Connector. 3dbi gain - 50 ohm
Operating Environment:	0˚ to 55˚C RH 5 to 85% at 30˚C non-condensing.
Fixing Method:	The CM744B is mounted directly to the expansion port on the control panel PCB. Three plastic standoffs are supplied to support the module and these should be connected to the control panel before installing the CM744B.
Warranty:	3 years from date of manufacture (return to base)

In the interest of ongoing product development this document is subject to change without notice.

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