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IM5698 IMC SMS Unit

User Manual

Document History

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1	22 August 2016	First release	MSH
2	30 August 2016	Add server DHCP information.	CRB
3	07 December 2016	Added detail on SIM card orientation and moved IMC base utility section to a more appropriate location	DJR

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1 Overview

The IMC SMS unit is designed to allow alarms generated by Synergy or Notion Pro installations to be sent as text messages. Key features are-

- Only one SMS unit will be associated with a software instance, and all required alarms from all associated sites will be directed to that device.
- It needs to be mains powered, attached to a network point that can reach the main software and fitted with a SIM card suitable for text messaging. A contract SIM is recommended, rather than one requiring regular top-up.
- It contains a backup battery designed (a) to prevent mains spikes or brief outages affecting performance and (b) to allow it to **independently** warn of communications or mains failure.
- In the event of a mains or communications failure then under either circumstance communication with the main software will cease, but the device will autonomously notify designated users of the issue using an internal phone directory entered during configuration.
- A test button is provided to allow the device to show its GSM network connection status and signal strength, otherwise the screen is normally blank.
- The device polls the server periodically to obtain instructions; hence it always initiates communications and never the other way round.
- The device is compatible with GSM2 or GSM3 networks.

2 Prerequisites

Synergy W700A W700B W706A W706B

1.5.3(W700) & 2.2.1(W706) Onwards

Notion Pro W600A,W600B, W706A W706B

1.2.3(W600) & 2.2.0(W606) Onwards

3 IT Preparation

If you require assistance with this section, please consult your system administrator or IT support Provider.

3.1 Server Configuration

Make sure that any Internet Security or Firewall software on the Synergy/Notion Pro server is not blocking the **IMC Device Listening port**.

Synergy/Notion Pro listens for SMS Unit connections on the **IMC Device Listening port**. The listening port is set during database creation and the default port is 10997. If you are unsure of your listening port log into Synergy/Notion Pro as an administrator and go to **Admin → Device Configuration → Edit/View DB Service → Edit** where the **IMC Device Listening port** will be displayed.

3.2 Hosted or 'Cloud' Server Connection

If you are connecting the IMC SMS Unit to a hosted or 'cloud' server; make sure that the **IMC Device Listening port** is open through the service Provider's Firewall.

3.3 Network Connection

If you are connecting the IMC SMS Unit to a Synergy/Notion Pro server via the internet or other wide area network; make sure that a rule exists on the Synergy/Notion Pro servers' network Firewall, to forward the **IMC Device Listening port** to the Synergy/Notion Pro server.

In this instance, the network will need a fixed public IP address, and you will need to use this address for the Target Server address when configuring the IMC SMS Unit with the IMC Base Utility.

3.4 DHCP

If you intend the IMC SMS Unit to automatically obtain an IP address from your DHCP server; make sure that there is no MAC filtering, or other settings, on the DHCP server that will prevent the Unit obtaining IP settings.

The Synergy/Notion Pro server may only use DHCP to automatically obtain an IP address, if the server is part of a domain; if the Synergy/Notion Pro server is not part of a domain, it **must** use a fixed IP address.

4 Adding the device to Synergy/Notion Pro

For detailed help in following the tasks in this section, read the relevant sections of the software User Manual.

If adding an SMS unit after an upgrade from Synergy version 1.5.2 or earlier; you will need to set the IMC Device Listening Port to the required number (default is 10997) – **and then either restart the DataService using the Services MMC, or reboot the server.**

To set the IMC Device Listening Port, go to **Admin → Device Configuration → Edit/View DB Service → Edit**

The following tasks **must** be performed to add an IMC SMS Unit.

1. Make sure at least one user has a mobile phone number entered; to check user details: **Admin → User Management → Edit/View Users**, select **Edit** for the required user.
 - a. Phone number format must be as **+44 123456789** Anything else may not be accepted in your Locale, this is guaranteed to work. Do **not** use **00** in place of **+**
 - b. You must have one space between the country code and the rest of the number.
 - c. You must not have any other spaces in the number.
 - i. An example of an incorrect phone number format is **0044 0774 369 520**
2. Add the IMC SMS device: **Admin → Device Configuration → Add Device**.
3. Add **SMS Power & Comm's Group** settings; **Admin → System Configuration → SMS Power & Comms Group**.
4. Create **SMS Alert Groups** to define the Sensors and Alarms that will generate an SMS, and the Users that receive the SMS; **User Alerts → SMS Alert Group → Create SMS Alert Group**.

The next step (5) only needs to be done when you are using an SMS unit with all versions of Synergy before version 1.5.4. This is needed so that it will correctly show the device connection statuses which appears on the System Overview Page.

An example of what the connection status indicator looks like shown below



Green means everything is connected correctly



Red means something isn't connected correctly

5. Create a **Device Group** for the SMS unit and add the unit to that device group; **Admin → Device Configuration → Create Device Group**.

If you follow these steps after the base has been powered and connected to Synergy/Notion Pro, you will have to wait up to 15 minutes before the settings will take effect.

5 The IMC base Utility

The IMC Base Utility can be installed on the Synergy/Notion Pro server, and / or any other computer running Windows 7 or later.

For detailed help with using the IMC Base Utility, refer to 'IM5653 IMC Base Utility Manual' at www.pd.the-imcgroup.com/IM5653-IMCBaseUtilityManual.pdf

The IMC SMS Unit must be powered **and connected to the same physical and logical subnet as the computer running the IMC Base Utility.**

Use the IMC Base Utility to set the Synergy/Notion Pro Server name/IP and required IP (DHCP or fixed) settings in the IMC SMS Unit.

If the **IMC Device Listening port** has been changed from the default, make sure that the **Target Data Port** is set to the new port number.

6 Physical Installation

6.1 Connecting

Add the device to Synergy/Notion Pro before this step is undertaken and ensure the system is running.

Note:

For information on how to set the SMS unit up on the software please consult the manuals, these can be located on the software disk in the Documents folder.

1. Make sure the power supply is disconnected from the IMC SMS Unit.
2. Unscrew and remove the battery cover from the underside of the unit.
3. Remove the battery from its compartment; disconnect the battery (if fitted) from the IMC SMS Unit.
4. Fit the SIM into the SIM holder. Please ensure that the SIM card connections are clean and the SIM is correctly orientated, see below.



5. Reconnect the battery connector to the mating connection; place the battery back into the compartment.
6. Refit the battery cover.

Make sure you do not remove the SIM card while the battery or mains power is connected to the SMS unit. Removing the SIM while the SMS unit is powered will break the SIM card and make it no longer fit for purpose.

The screen will show the IMC logo and the Green LED will come on, indicating mains power.

The amber LED will flash quickly, indicating that the device is obtaining GSM and then (possibly) IP settings via DHCP. By default the device is set to use DHCP to find its IP address, but this behaviour can be overridden as described below.

If this is the first time that the device has been powered then you will need to now run the IMC base utility (see below).

6.2 Checking it works.

The device will first connect to the GSM network and then get an IP address via DHCP if required; at that point if all is well then the amber LED flashing will go slow. The device will then attempt to communicate with the Synergy/Notion Pro server after which the LED will go solid if successful.

Please allow a few minutes for the IMC SMS Unit to obtain IP settings and connect to the Synergy server.

The Test button is located lower left on the device bottom panel. Push the test button, when the screen should show a GSM connection, together with a received signal strength indication (RSSI). An RSSI of 10 or more is considered acceptable. If less you will need to move the device, extend the aerial or arrange for an external GSM booster.

You can finally check to see if the IMC SMS Unit is connecting to the Synergy/Notion Pro server by looking for a power-up entry for the device in the activity log; the entry will be similar to the following: 'Device serial number: 20000119 power up at 22/Jul/2016 07:01:45'

6.3 Potential Problems

Amber LED continues to flash quickly

No GSM connectivity – Press test button.

- 1) Has a valid SIM card been fitted?
- 2) If using a pay as you go SIM card does it have credit?
- 3) SIM card cannot be detected. The test screen will show '**SIM No**'. Clean and replace the SIM card or try another. Verify your SIM card works by fitting it to a mobile phone.
- 4) No GSM signal. Check with mobile phone to see how good the connection is in that area.
- 5) Faulty SIM card. Verify your SIM card works by fitting it to a mobile phone.

The Unit has been unable to obtain IP settings - Check network cabling and DHCP server configuration. If using fixed IP then verify that the device is allowed to be on the network.

Amber LED continues to flash slowly

Synergy/Notion Pro is not Properly running – Ensure all services are running

Synergy/Notion Pro does not know about the device- Add this SMS unit to the system

Server address has not been Programmed – use the IMC base utility as described below

The unit has IP settings, but is unable to connect to the Synergy server- check Firewalls, server setting in the IMC SMS Unit, and connectivity to the server; try to telnet to the server from another machine using the **IMC Device Listening port**.