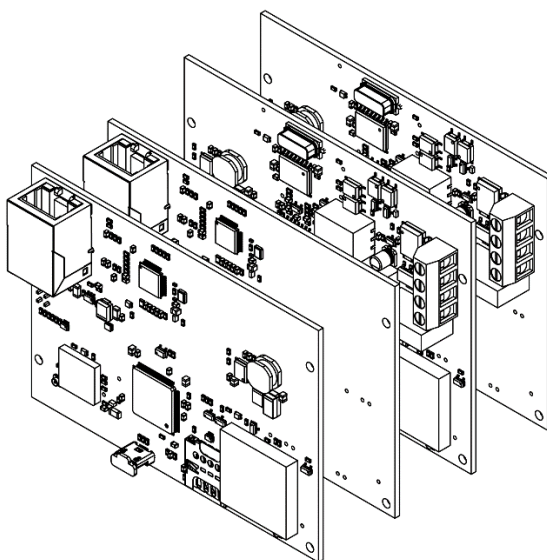




CM2 Modules Installation Manual

PSTN, WIFI, GSM, IP



**Designed and Manufactured
in the United Kingdom**

www.orisec.co.uk

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1. Introduction

The CM2 Modules are fully compatible with the following panels and software versions:

Control Panel	Software Version
CP-20, CP-60*	Version 3.20 and above.
CK-20 / CT-20 / CK-60 / CT-60	Version 3.20 and above.
W-CP-40 K/T/E	Version 1.60 and above.
ZP-10, ZP-20, ZP-40, ZP-100*	Version 3.20 and above.
CP-50 / CP-100 / CP-200	Version 7.00 and above.

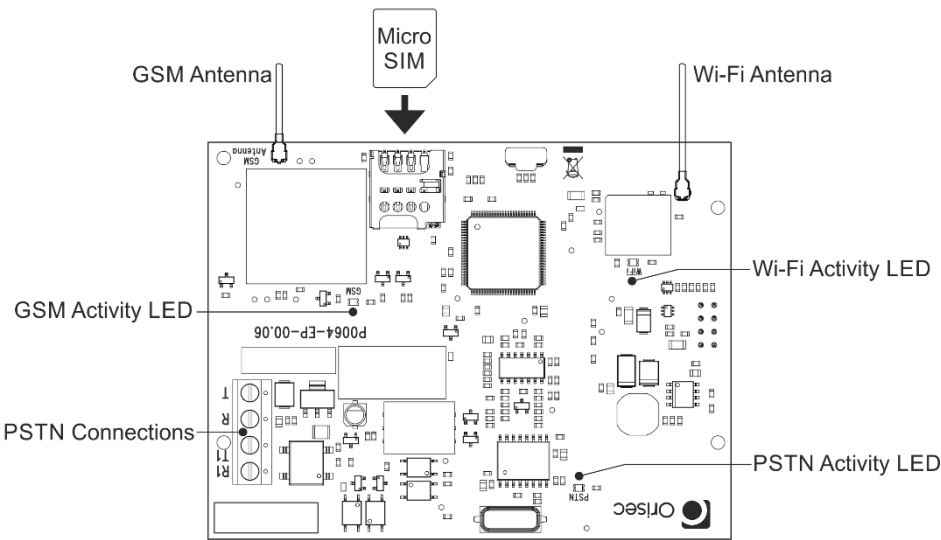
	SINGLE PATH				DUAL PATH					TRIPLE PATH
Product Names	CM2-PSTN	CM2-WIFI	CM2-GSM	CM2-IP	CM2-PSTN-GSM	CM2-WIFI-GSM	CM2-GSM-IP	CM2-PSTN-WIFI	CM2-IP-WIFI	CM2-GSM-PSTN-WIFI
Features:										
UDL	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
Apps	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal Wi-Fi Antenna	-	✓	-	-	-	✓	-	✓	✓	✓
Internal GSM Antenna	-	-	✓	-	✓	✓	✓	-	-	✓
Protocols:										
Fast Format, Contact ID & SIA 2/3	✓	-	-	-	✓	-	-	✓	-	✓
SMS Alerts	✓	-	✓	-	✓	✓	✓	✓	-	✓
SMS Remote Control	-	-	✓	-	✓	✓	✓	-	-	✓
2G/3G Quad Band GSM Module	-	-	✓	-	✓	✓	✓	-	-	✓
10/100 Mbps, TCP/IP, UDP, DHCP & HTTP	-	-	-	✓	-	-	✓	-	✓	✓
IEEE 802.11B/G/N WEP, WPA & WPA2-PSK	-	✓	-	-	-	✓	-	✓	✓	✓

*The CP-20, CP-60 and ZP series of control panels are available with PSTN built in. CM2 PSTN modules (and other variants that support PSTN) can be used on the CP-20, CP-60 and ZP series of control panels from issue 8 PCBs onwards.

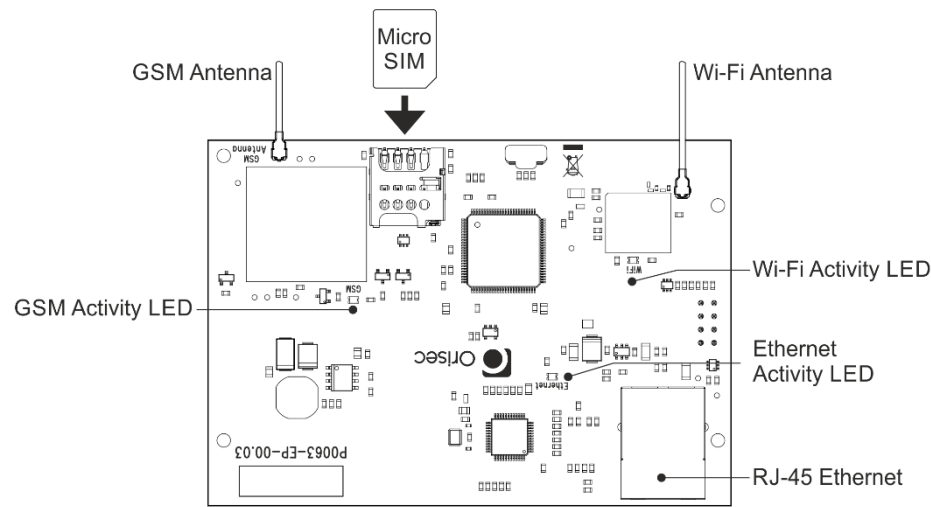
The issue number of the control panel PCB can be identified on the top right of the PCB under the Orisec logo - P00XX-EP-00-08

2. Installation

PCB Layouts and Connections



CM2 Module with GSM, Wi-Fi and PSTN



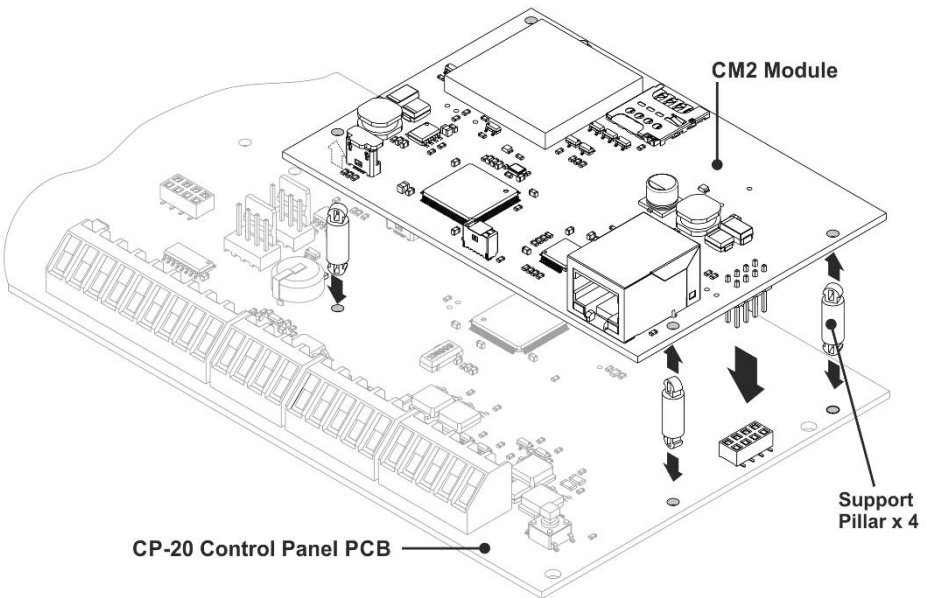
CM2 Module with GSM, Wi-Fi and Ethernet

Connecting CM2 Modules to CP-20 and CP-60

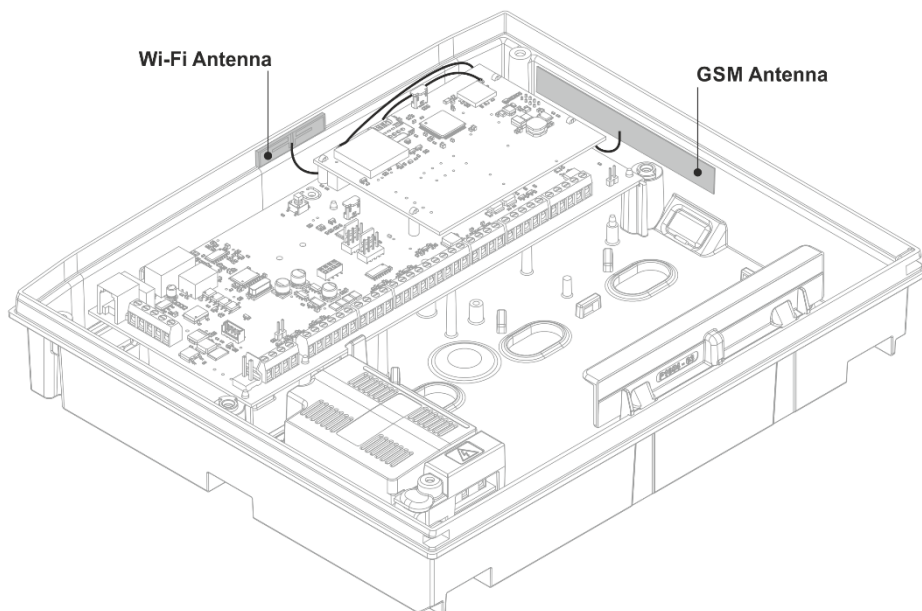
1. For Wi-Fi or GSM modules connect the antenna cable to the relevant socket as shown on page 4.
2. Insert the long support pillars into the CM2 module.
3. Plug the CM2 module onto the control panel PCB as shown below:

IMPORTANT:

The control panel must **NOT** be powered when connecting or removing the CM2 Module.



4. If the module has a Wi-Fi antenna peel off the self-adhesive backing and stick the PCB antenna to the top side of the enclosure as shown below.
5. If the module has a GSM antenna peel off the self-adhesive backing and stick the PCB antenna to the right-hand side of the enclosure as shown below.

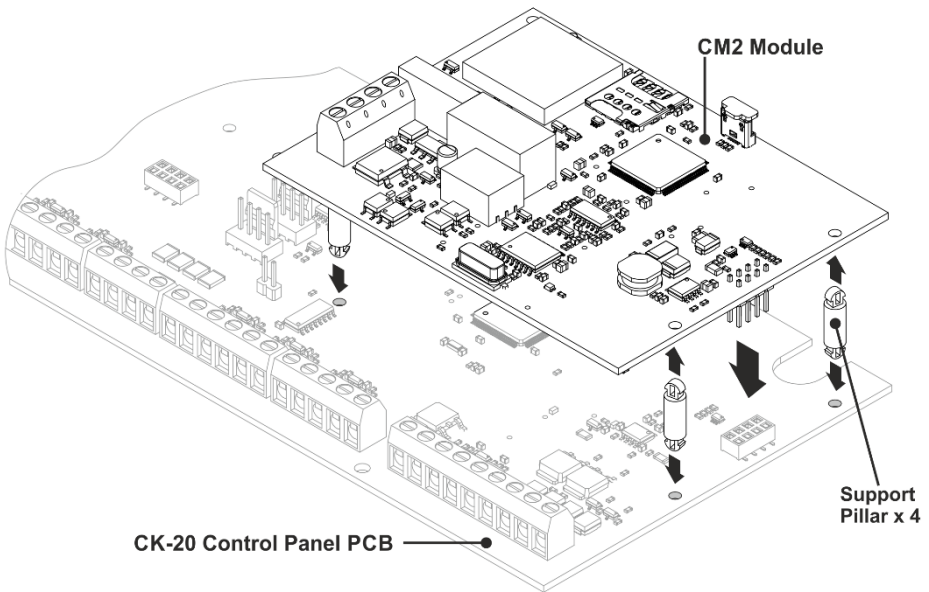


Connecting CM2 Modules to CK-20, CT-20, CK-60 & CT-60

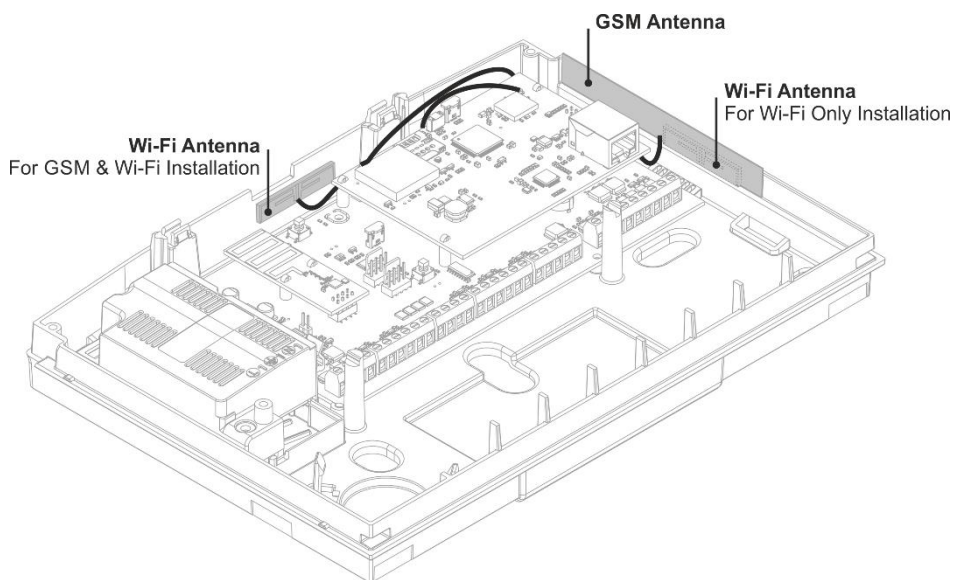
1. For Wi-Fi or GSM modules connect the antenna cable to the relevant socket as shown on page 4.
2. Insert the long support pillars into the CM2 module.
3. Plug the CM2 module onto the control panel as shown below:

IMPORTANT:

The control panel must NOT be powered when connecting or removing the CM2 Module.



4. Affixing the Wi-Fi antenna.
For Wi-Fi modules that don't have GSM, peel off the self-adhesive backing and stick the PCB antenna to the right-hand side of the enclosure as shown below.
For dual-path Wi-Fi and GSM modules connect the Wi-Fi antenna to the top of the enclosure.
5. Affixing the GSM antenna.
Peel off the self-adhesive backing and stick the PCB antenna to the right-hand side of the enclosure as shown below.

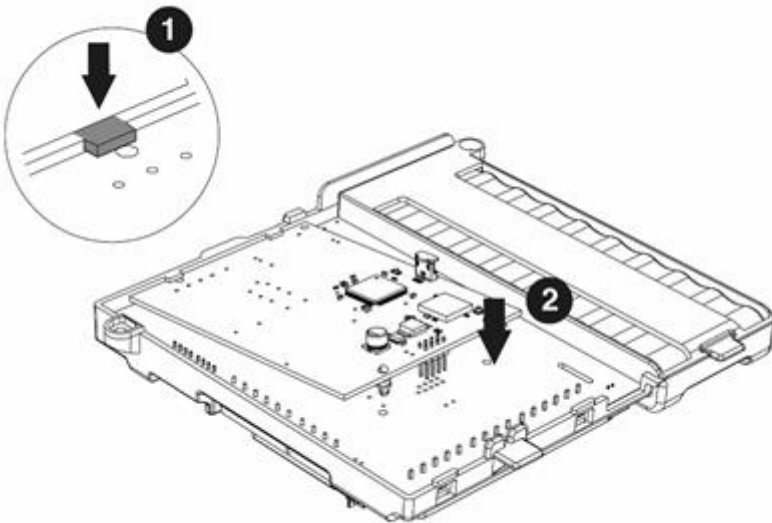


Connecting CM2 Modules to W-CP-40T, W-CP-40K, W-CP-40E

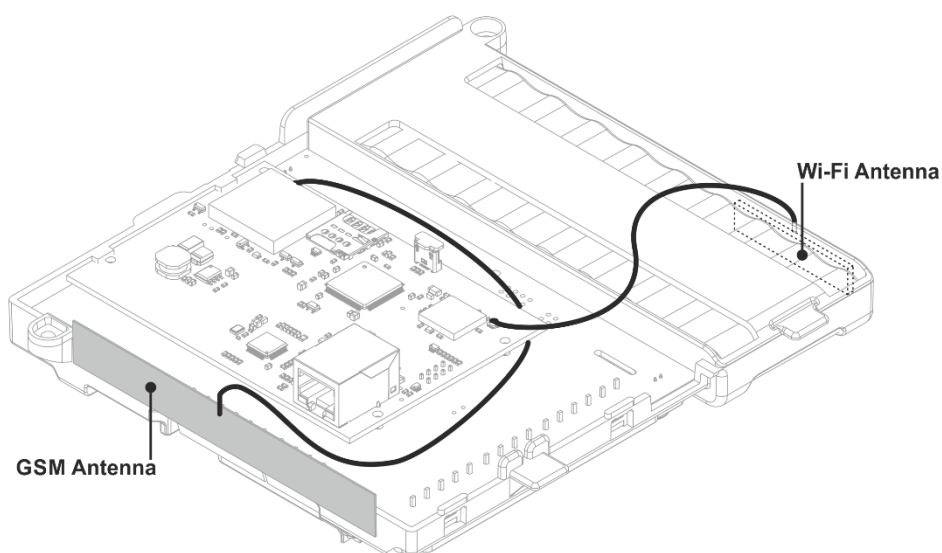
1. For Wi-Fi or GSM modules connect the antenna cable to the relevant socket as shown on page 4.
2. Insert the two short support pillars into the CM2 module on the end with the connector pins..
3. Plug the CM2 module onto the reverse of the W-CP-40T and W-CP-40K control panel as shown below:

IMPORTANT:

The control panel must NOT be powered when connecting or removing the CM2 Module.



4. If the module has a Wi-Fi antenna peel off the self-adhesive backing and stick the PCB antenna to the side of the enclosure next to the battery pack as shown below.
5. If the module has a GSM antenna peel off the self-adhesive backing and stick the PCB antenna to side of the enclosure next to the module as shown below.



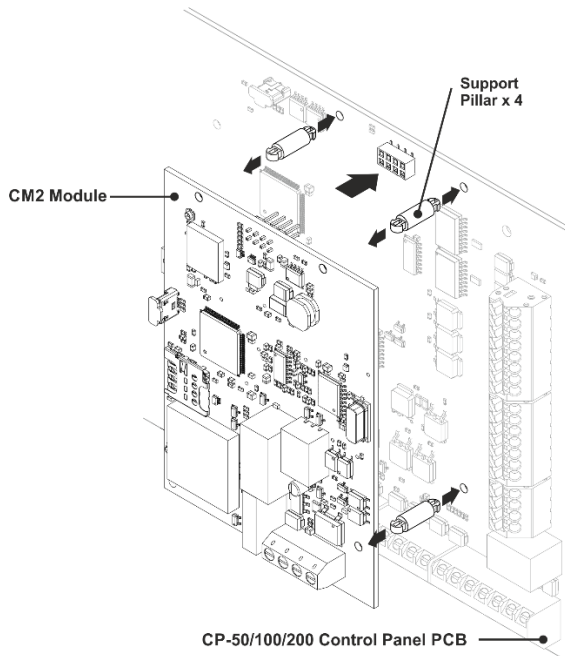
Connecting CM2 Modules to a CP-50, CP-100, CP-200

1. For Wi-Fi or GSM modules connect the antenna cable to the relevant socket as shown on page 4.
2. Insert the long support pillars into the CM2 module.
3. Plug the CM2 module onto the control panel as shown below:

IMPORTANT:

The control panel must **NOT** be powered when connecting or removing the CM2 Module.

4. Affixing the Wi-Fi antenna. For Wi-Fi modules that don't have GSM, peel off the self-adhesive backing and stick the PCB antenna to the right-hand side of the enclosure as shown below. For dual-path Wi-Fi and GSM modules connect the Wi-Fi antenna to the top of the enclosure.
5. Affixing the GSM antenna. Peel off the self-adhesive backing and stick the PCB antenna to the right-hand side of the enclosure as shown below.



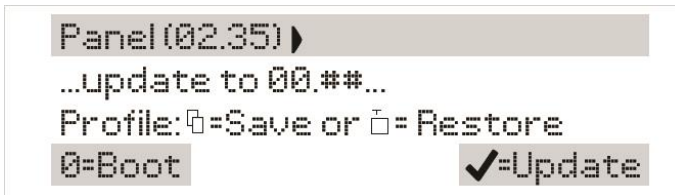
3. Programming

Data Backup

Once the CM2 module is connected to the Orisec control panel it can be used to backup the control panel data or restore control panel data.

To achieve this:

- ▶ Enter Engineers code
- ▶ Enter 'Tests & Diagnostics'
- ▶ Enter 'Update Device Firmware'
- ▶ The screen will now display as follows:



To SAVE the panel programming data to the CM2 module from the control panel simply press the COPY button on the keypad (ARM key)

To RESTORE the panel programming data from the CM2 module to the control panel simply press the PASTE button on the keypad (PART key)

Panel programming can be taken from one control panel and restored onto a second control panel using the CM2 module.

Please note - the secondary control panel in the above example will need to be the same panel type and software version as the first panel.

Wi-Fi Programming

Scanning available networks

1. Enter engineers code
2. Tests & Diagnostics - press  or  arrow to enter the menu.
3. Navigate to 'Wi-Fi status & checks' (option 7) and press  or  arrow to enter the menu.
4. Press  to scan for available networks, once the required network has been found, press .

This will insert the SSID (Service Set Identifier) into the Wi-Fi setup menu (see 'programming')

Example screen:



Once this is done, back out of Tests & Diagnostics.

5. Enter Programming menu - press or arrow to enter the menu.
6. Navigate to 'Coms Modules' and press or arrow to enter the menu.
7. Scroll down to 'Wi-Fi settings' press or arrow to enter the menu.
8. Enter the following information:

SSID = enter the routers SSID (if scanned previously this will already be populated)

Password = The password for the router

The IP Details below are Only required if DHCP is Not being used.

Address = Local IP address for the network (i.e. 192.168.1.75)

Port = Port number for the CM2 Module (i.e. 20000)

Mask = Subnet Mask for the network (i.e. 255.255.255.0)

Gateway = Gateway Address for the network (i.e. 192.168.1.0)

IP Programming

If the router supports DHCP dynamic IP details will be automatically assigned to the CM2-IP Module. If the network does not support this, the below steps are required:

1. Enter engineers code
2. Programming menu - press or arrow to enter the menu.
3. Navigate to 'Coms Modules' and press or arrow to enter the menu.
4. Scroll down to 'Ethernet settings' press or arrow to enter the menu.
5. Enter the following information:
 - **Address** = Local IP address for the CM2 Module (i.e. 192.168.1.75)
 - **Mask** = Sub net mask for the network (i.e. 255.255.255.0)
 - **Gateway** = Local gateway for the network (i.e. 192.168.1.1)
 - **Port** = Port number for the CM2 Module (i.e. 20000)

GSM Programming

APN Details

For GSM modules it is necessary to enter the APN details before the module can make a connection to the Orisec Cloud or CSL Connected.

1. Enter engineers code
2. Programming menu - press  or  arrow to enter the menu
3. Navigate to 'Coms Modules' and press  or  arrow to enter the menu.
4. Enter 'GSM settings' by pressing  or 
5. Check the programming for the following options;
 - ▶ APN Name = the name provided by the SIM Card provider
 - ▶ APN User = the name provided by the SIM Card provider
 - ▶ APN Password = the password provided by the SIM Card provider
 - ▶ SIM PIN = Optional - The SIM passcode (if the sim is locked)
 - ▶ SIM Credit Code = Optional – The code provided by the SIM Card provider

Operator	APN Name	User	Password
CSL Sim Type 1	gemit2.m2m		
CSL Sim Type 2	iot.cslm2m.com		
EE/ Orange/ ASDA Mobile/ Post office	everywhere	eesecure	secure
BT Mobile	Btmobile.bt.com	bt	bt
Giffgaff	Giffgaff.com	giffgaff	
Tesco Mobile	Prepay.tesco-mobile.com	tescowap	password
Virgin Mobile	Goto.virginmobile.uk	user	
Vodafone Contract 3G	wap.vodafone.co.uk	wap	wap
Vodafone Contract 4G	internet	web	web
Vodafone PAYG 3G	pp.vodafone.co.uk	wap	wap
Vodafone PAYG 4G	pp.vodafone.co.uk	web	web
O2 PAYG	Payandgo.o2.co.uk	Payandgo	password
O2 contract	Mobile.o2.co.uk	02web	password
Three	Three.co.uk		
Vodacom	internet		

 APN details are subject to change. It is advised to check with the network provider to obtain up to date APN settings.

CSL Connected

1. Enter engineers code
2. Programming menu - press  or  arrow to enter the menu
3. Navigate to 'ARC setup' and press  or  arrow to enter the menu.
4. Check the programming for the following options;
 - ▶ **Number** = ARC number (E.g. Southern/ Northern Monitoring is **76527**)
 - ▶ **Account** = Chip number
 - ▶ **Protocol** = SIA III
 - ▶ *Options* = leave blank (default)
 - ▶ **Dial Seq** = Set as 5
 - ▶ **Reported** = Select the signals to be communicated.
 - ▶ *Cancel* = leave blank (default)
 - ▶ **Area** = Select which areas are to be communicated.
 - ▶ *IP Address* = leave blank (default)
 - ▶ *IP Port* = leave blank (default)

SMS Messaging

1. Enter engineers code
2. Programming menu - press  or  arrow to enter the menu
3. Navigate to 'ARC setup' and press  or  arrow to enter the menu.
4. Check the programming for the following options;
 - ▶ **Number = Recipients Mobile Number**
 - ▶ *Account = leave blank (default)*
 - ▶ **Protocol = SMS**
 - ▶ *Options = leave blank (default)*
 - ▶ **Dial Seq = Set as 5**
 - ▶ **Reported = Select the signals to be communicated.**
 - ▶ *Cancel = leave blank (default)*
 - ▶ **Area = Select which areas are to be communicated.**
 - ▶ *IP Address = leave blank (default)*
 - ▶ *IP Port = leave blank (default)*

SMS Control Commands

When the control panel is fitted with a CM2-GSM, the system can be remotely controlled via SMS commands. Please see below table:

Function	SMS Command	Example
Full Arm	#### ARM [areas]	5678 ARM 1
Part Arm 1,2,3	#### PART [mode] [areas]	5678 PART 1 1
Disarm	#### DISARM [areas]	5678 DISARM 1
Reset	#### RESET [areas]	5678 RESET 1
Report Current Status	#### STATUS [areas]	5678 STATUS
Omit Zones	#### OMIT [zones]	5678 OMIT 6
Un-Omit Zones	#### UNOMIT [zones]	5678 UNOMIT 6
Send LCD Message	#### LCD [message]	5678 Payment reminder
Turn 'Remote Control' output ON	#### REM ON [mode]	5678 REM ON 1
Turn 'Remote Control' output OFF	#### REM OFF [mode]	5678 REM OFF 1

= User access code, which may be 4, 5, or 6 digits.

[areas] = Optional list of areas the command will apply, if no areas are specified, all areas assigned to user code will be used.

[Zones] = Which zones are to be omitted.

[Mode] = Which part set is to be armed / which remote control output is to be toggled.

PSTN Programming

ARC communications

1. Enter engineers code
2. Programming menu - press  or  arrow to enter the menu.
3. Navigate to ARC setup and press  or  arrow to enter the menu.
4. Check the programming for the following options;
 - ▶ Number = ARC receiver number
 - ▶ Account = Account number for the ARC (4-6 digits)
 - ▶ Protocol = Fast Format/ Contact ID/ SIA II/ SIA III
 - ▶ *Options = leave blank*
 - ▶ Dial Seq = Set as 1
 - ▶ Reported = Signals to be communicated.
 - ▶ *Cancel = leave blank (default)*
 - ▶ Area = select which areas are to be communicated.
 - ▶ *IP Address = leave blank (default)*
 - ▶ *IP Port = leave blank (default)*

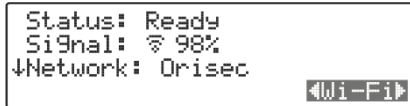
To edit the fast format channels, navigate to 'Fast Format channels' from 'programming menu'.

To edit SIA or Contact ID codes navigate to 'Edit SIA & ID Codes' from the main menu.

Checking Status for the CM2 Modules

1. Enter engineers code
2. Tests & diagnostics - press  or  arrow to enter the menu.
3. Navigate to 'View module status' and press  or  arrow to enter the menu.
4. Scroll across to 'Wi-Fi', 'Ethernet', 'GSM' or 'PSTN' status (select as appropriate based on module). The screen will show one of the following;

- ▶ Status: Not fitted
- ▶ Status: Initialising
- ▶ Status: Ready
- ▶ Status: In Fault



```
Status: Ready
Signal: 98%
Network: Oriseo
Wi-Fi
```

Not fitted

The CM2 Module is not fitted or not being seen by the control panel, check the physical connection.

Initialising

The CM2 Module is in the initialising stage, once configuration has been saved this will change to 'Ready'.

Ready

The CM2 Module is ready for use.

In Fault

The CM2 Module is in fault, check to ensure all settings are correct.

4. ControlPlus setup for iOS & Android

1. Open the ControlPlus Application on the Smart Device.
2. Select the **COG** on the bottom right.
3. On initial setup, a new site will need to be added, simply select '+ Add new site'
4. Fill in the following information:
 - a. ***App Password** – An app password can be utilised to require a log in code prior to using the app.
 - b. **Site** – Unique identifier for the site i.e. My House
 - c. **User Code** – Enter a valid user code for the control panel.
 - d. **Use Cloud** – Enable this option to create a connection via the Orisec Cloud.
 - e. ***Authorisation** – An authorisation code can be assigned as an extra level of security.
 - f. **Serial #** - The serial number of the control panel (Required for Cloud Connections)
 - g. **Notifications** – Enable this option to receive notifications from the app.
 - h. **Enable Omit** – Enable this option to have the ability to omit zones.
5. Once complete, press the **COG** on the bottom right to return to the connect screen.

**Optional feature*



The serial number is acquired from the control panel in the following location:

Engineers code > 'About'



5. Specifications

Electrical

Operating Voltage:	10 – 15Vdc
Current Consumption:	Nominal: 15mA plus: PSTN: 15mA GSM: 45mA WiFi: 30mA IP: 30mA E.g., CM2-GSM-WIFI = 15 + 45 +30 = 90mA

Environmental

Operating Temperature:	-10°C to +55°C
Storage Temperature:	-20°C to +60°C
Max. Humidity:	95% non-condensing
EMC:	Residential, Commercial, Light Industrial & Industrial

Physical

Dimensions:	HxWxD:
GSM-Wi-Fi-PSTN:	76mm x 100mm x 21.5mm
GSM-Wi-Fi-IP	70mm x 100mm x 23.5mm
Packed Weight:	140g



6. Standards

EMC

Conforms to European Union (EU) Electro-Magnetic Compatibility (EMC) Directive 2014/30/EU and EN 50130-4:2011+A1:2014

EMC Environment: Residential / Commercial / Light Industrial / Industrial



CE: You can view the product EC Declaration of Conformity here:
www.orisec.co.uk/compliance



WEEE Directive: 2012/19/EU Compliant: This symbol indicates that according to local laws and regulations, this product should not be disposed of as municipal/household waste. Instead, it should be disposed of at the appropriate collection points designated for the recycling of electrical and electronic equipment, or returned to Orisec upon purchase of new replacement products. This will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

RoHS

RoHS Directive: 2011/65/EU Compliant:

Orisec declares that this product complies with and conforms to RoHS legislation that it does not contain more than the agreed levels of: Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Cr6+), Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE)

Manufacturer: Orisec Ltd, 1 St Crispin Way, Haslingden, Lancashire. BB4 4PW. United Kingdom.

Warranty

The CM2 Modules are guaranteed against defects in material or faulty workmanship for a period of 2 years from the date of purchase.

Disclaimer: Orisec will not accept any liability based on a claim that the CM2 Modules failed to perform correctly as it is a component part of an installation and not a complete intruder alarm system.

Notes

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