Nimbus Gateway Installation Guide
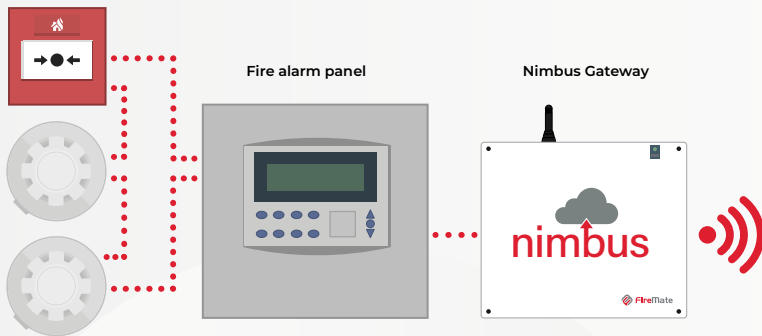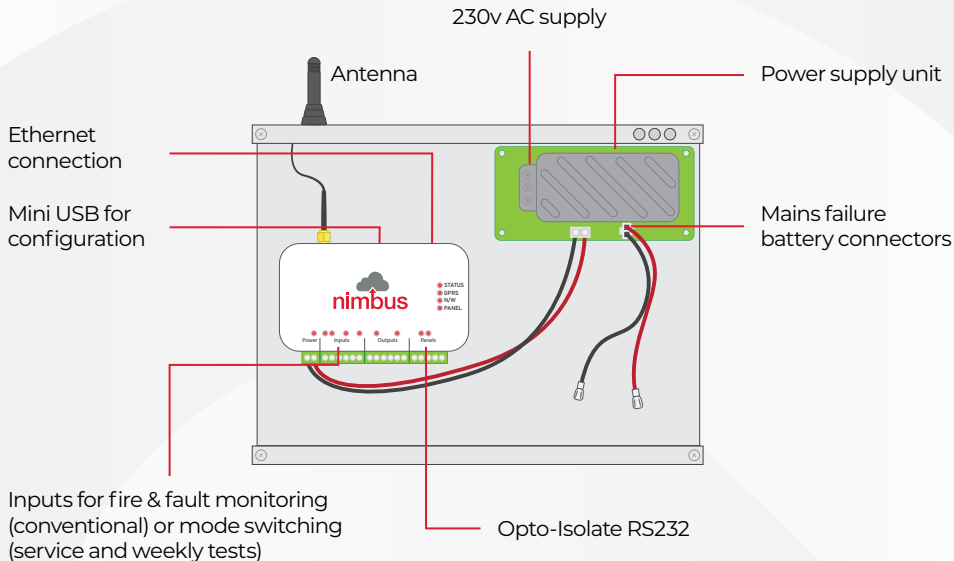

Fire alarm panel

Nimbus Gateway

Nimbus Gateway

Nimbus is an innovative fire alarm management system providing monitoring wherever you are. A non-intrusive add-on to a fire alarm control panel, Nimbus communicates all activity to a cloud-hosted database. Activity is recorded to an infinite log and users access Nimbus via a web browser or interact with Nimbus via our mobile apps.

Contents

Nimbus Gateway overview

Antenna

230v AC supply

Power supply unit

Ethernet connection

Mini USB for configuration

Mains failure battery connectors

nimbus

STATUS
GPRS
N/W
PANEL

Power   Inputs   Outputs   Panels

Inputs for fire & fault monitoring (conventional) or mode switching (service and weekly tests)

Opto-Isolate RS232

Before you begin

The gateway electrical installation should be performed by an approved Electrical Engineer in accordance with regional regulations.

Additional troubleshooting and help can be found in the Nimbus help centre, which can be found when you log in to the Nimbus Portal.
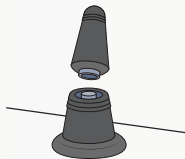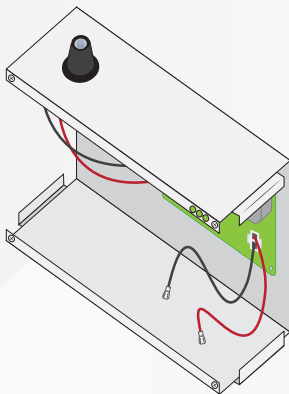
Consider the location

Your gateway will need:

1. Electrical power

2. Data connectivity

3. Communication to the fire panel (including panel-specific connectors and accessories)

You will need:

1. Your Nimbus user login

2. The fire alarm configuration file/s

1. Fix the antenna to the gateway

Fix the antenna to its base to the top of the gateway.

Understanding gateway communication modes

The gateway has three operating modes, depending on what data connectivity is available. The gateway will establish the correct mode automatically.

Dual path
Requires both a working Ethernet connection, and GPRS connectivity. This mode will alternate between Ethernet and GPRS.

Ethernet only
Requires working Ethernet connection only.

Cellular only
Requires GPRS connectivity only.

For more information on gateway modes – <u>see here.</u>

2. Set up your data connectivity

For GPRS Connectivity

Determine the best location using a GPRS signal tester.

Required levels:

SIG (signal): +33% ✓

BER (Bit error rate): Good ✓

Check for signals from more than one service provider and make a record of this.

Note: Signal testers are available from Nimbus.
For further information on using a suitable tester please see the 'GPRS Signal Analyser' article in our help centre.

Extension antenna (external and internal) with 5m cables are available from Nimbus.

For Ethernet connectivity

The RJ45 Ethernet network interface provides connectivity to Nimbus via an internet enabled network connection with outbound TCP/IP ports 54536 & 80 open.

By default, the gateway will obtain IP address information via DHCP if the service is available on the network. If a fixed IP address is required, it can be set via the gateway configuration tool. To download and for further instructions see the 'Gateway configuration tool' article in the Nimbus help centre.


Ethernet Port
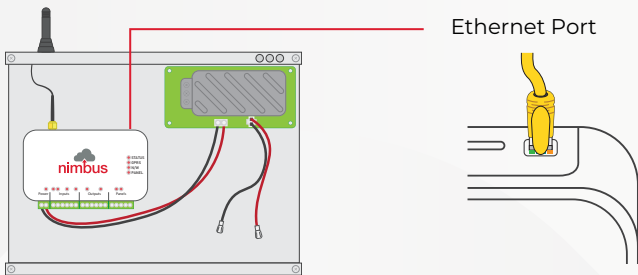
Note: The network owner/administrator will need to provide: an IP address, Subnet mask, Gateway IP address and DNS server addresses. You can find a PDF of full requirements for your site's IT team in our help centre.

3. Connect the fire alarm panel to the gateway

How the Nimbus Gateway connects to a specific fire alarm panel varies from panel to panel, but in most cases the gateway connects via RS232 TX, RX and ground, to the communications/printer port. For panel specific connection details, please refer to the 'Connecting to panels' area of the Nimbus help centre.
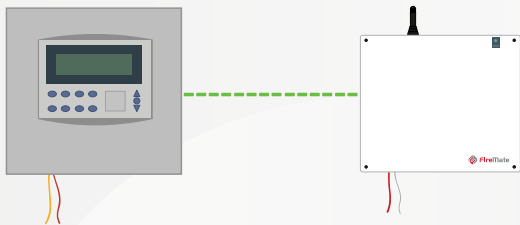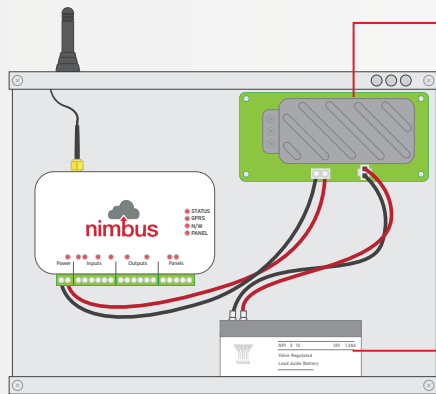

Panel Connector Guide
Follow the above link for more information on the panel connections

Note: FireMate supplies panel connectors for some models of panel. For some panels, additional cards or licences may be required from the panel manufacturer.

4. Connect power

Power supply unit

Connect the power supply unit to the 230V AC electrical supply, in accordance to the relevant electrical standards and regulations.

A 12v 1.2 Ah sealed lead acid battery can be fitted within the gateway to maintain power in the event of a mains supply failure.

Note: An alternate PSU enclosure can be supplied by Nimbus which provides mains failure fault output.
This power supply unit is only to be used by qualified service personnel; there are no user serviceable parts.
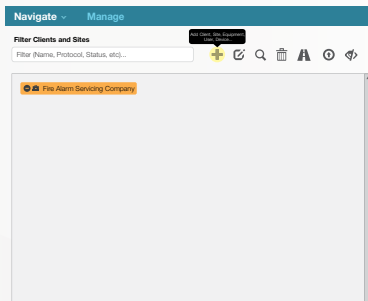
5. Assign your Nimbus Gateway

Login to the Nimbus portal and navigate to the 'Manage' page.
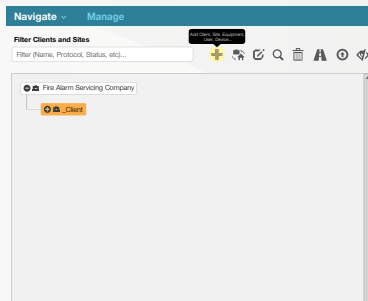
You will need to

1. Create the Client

Highlight your organisation name and add the client who's site the gateway is being installed on. If the client already exists, go to step 2.

2. Create the site

Highlight the client you just created or an existing client and add a new site under the client.


3. Create the equipment

Highlight the site you just created and add 'Active equipment' (the gateway you are installing) under the site.

You can find the five-digit serial number down the side of the gateway and on the packaging box.
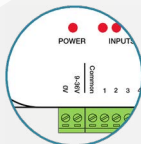
6. Import table of contents

Highlight your newly created equipment and import your table of contents using your downloaded panel configuration file and following the instructions on screen.
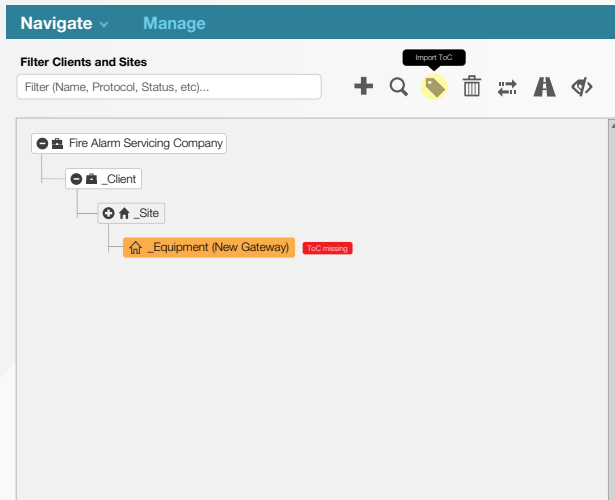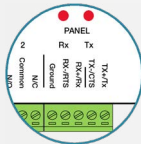
7. Power on the gateway

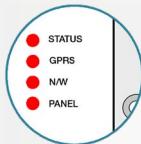Now you can power on the gateway. To confirm everything is working as expected, use the LEDs as show.

Power

Power on indication. Power supplied should be in accordance with requirements shown in the datasheet

Panel Rx & Tx

One LED will flash with activity over the serial data connection. Lack of activity may reveal a problem with panel connectivity

Status

In normal operation, the status LED will flash every 3 seconds. Status will be permanently illuminated if there is an issue

GPRS

Indicates GPRS data activity and connectivity state

N/W

Indicates Ethernet network data activity and connectivity state

Panel

Indicates the state of the connected host panel to gateway communications. A permanently illuminated LED indicates a fault with panel comms

On startup, the gateway will follow the below logic:

1. The status LED should flash once every 3 seconds if the gateway is powered and operating.

2. If connected to Ethernet, N/W LED should start flashing every half a second and the GPRS LED will be permanently illuminated showing the GPRS path is currently offline.

3. If cellular network is available, GPRS LED should start flashing every half a second within a few seconds.

4. This pattern will repeat every 30 seconds for 10 minutes to allow the gateway to test availability of paths.

5. If both paths are operating, then both LEDs will flash.

6. If there is a fault, or one path is not operating then the LED will be permanently illuminated.

7. For the next 12 hours the gateway will continue to test the reliability of both data paths. If one or the other is unreliable or unavailable it will settle into Ethernet or GPRS ONLY. If both paths are available, the gateway will switch to Dual Path mode alternate between both every hour.

8. Restarting the gateway will force the gateway to relearn the available paths.

8. Troubleshooting

How can I double-check my gateway is online?

In the Nimbus portal, navigate to view the status boxes of all your organisation's gateways.
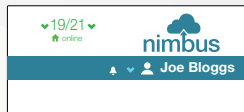
Example Fire Alarm
Live: 7 minutes ago: GW
Panel — Ethernet
Healthy — Cellular

If the box is green, your gateway has come online. This may take a few seconds to update once you've powered on the gateway. The bottom right hand corner shows the path that the gateway is communicating on. If either are red – the path is not available.

Example Fire Alarm
Live: 15 seconds ago: GW
Panel — Ethernet
Offline — Cellular

If the box is green with a red quarter then your gateway is communicating with Nimbus, but your panel is not communicating with the gateway. Check the connection to the panel and confirm that the configuration has been carried as per the 'Panel Connection Documents' in the help centre.

Example Fire Alarm
Offline: 4 weeks ago: GW
Panel — Ethernet
Offline — Cellular

If the box is red, your gateway is not communicating with Nimbus.

For an Ethernet issue: confirm that the Ethernet connection is properly configured, and any firewalls on the network are allowing TCP ports 54536 and 80 outbound from the gateway. Also confirm, using the gateway configuration tool, that the gateway has a valid IP address - either via DHCP or a fixed IP.
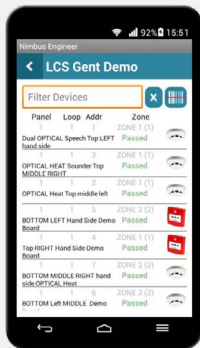
For a GPRS issue: Confirm that a signal test was performed in the location of the gateway. If required, install an extension antenna to improve the signal (minimum of 33% signal and BER 'good').

Take a look at our applications
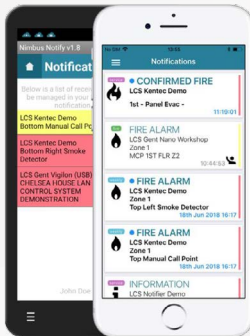
Nimbus Engineer
Fire alarm service & auditing

An android application that works with Nimbus and Nimbus Mobile, verifying device data and recording engineers' notes whilst testing.
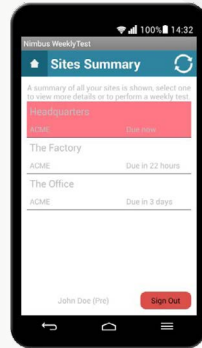
Nimbus Notify
Receive event notification

A mobile (Android & iPhone) application that presents Nimbus events as notifications. Receive fire alarms directly on your phone.

Nimbus Weekly Test
Performed scheduled testing

An Android application that notifies users of a pending 'fire alarm weekly test' with specific instructions of which Manual Call Points (MCUs) should be tested.

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