Honeywell

Honeywell Connected Life Safety Services

GLSS Gateway

Installation and User's Manual

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Section 1: General Information

1.1 About This Manual

This *GLSS Gateway Installation and User's Manual* provides detailed procedures about installation, deployment, and upgrade of Honeywell Connected Life Safety Services. The manual describes:

- the dedicated CCM gateway,
- its installation environment,
- mounting and connecting the gateway circuit board to a fire detection panel, and
- initial network configurations

Using This Manual This manual is written with the understanding that the user is trained in the operations and services required for this product.

NOTE: In this manual, the *GLSS Gateway*'s printed circuit board is also called as *the gateway board*.

1.2 Information Sources

The table below lists related documents:

Table 1.1: Supplemental Documents

Product Type: Honeywell Connected Life Safety Services Gateway	
For This Purpose ...	**Refer to ...**
Get comprehensive installation and configuration process details	*GLSS Gateway Installation and User's Manual* (This document) *Part Number* 50151849-001
Product Type: Notifier Panels	
For This Purpose ...	**Refer to ...**
NCA Panel	
Install the NCA panel	NCA Installation Manual 51482
NCA-2 Panel	
Install the NCA-2 panel	NCA-2 Installation Manual 52482
NFS-320 Panel	
Install the NFS-320 panel	NFS-320 Installation Manual 52745
Customize the NFS-320 panel	NFS-320 Programming Manual 52746
Operate the NFS-320 panel	NFS-320 Operations Manual 52747
NFS2-640 Panel	
Install the NFS2-640 panel	NFS2-640 Installation Manual 52741
Customize the NFS2-640 panel	NFS2-640 Programming Manual 52742
Operate the NFS2-640 panel	NFS2-640 Operations Manual 52743
NFS-3030 Panel	
Install the NFS-3030 panel	NFS-3030 Installation Manual 51330
Customize the NFS-3030 panel	NFS-3030 Programming Manual 51344

Product Type: Honeywell Connected Life Safety Services Gateway	
Operate the NFS-3030 panel	NFS-3030 Operational Manual 51345
NFS2-3030 Panel	
Install the NFS2-3030 panel	NFS2-3030 Installation Manual 52544
Customize the NFS2-3030 panel	NFS2-3030 Programming Manual 52545
Operate the NFS2-3030 panel	NFS2-3030 Operations Manual 52546

1.3 Documentation Feedback

Your feedback helps us keep our documentation up-to-date and accurate. If you have any comments or suggestions about our Online Help or printed documents, you can email us.

Please include the following information:

- Product name and version number (if applicable)
- Printed document or Online Help
- Topic title (for Online Help)
- Page number (for printed document)
- A brief description of content you think should be improved or corrected
- Your suggestion for how to correct/improve documentation

Send email messages to:

FireSystem.TechPubs@Honeywell.com

Please note this email address is for documentation feedback only. If you have any technical issues, please contact Honeywell Technical Services.

1.4 Abbreviations Used in This Document

Table 1.2: Abbreviations List

Abbreviation	Description
DACT	Digital Alarm Communicator Transmitter
ESD	Engineered Systems Distributor
NFN	Noti-FIRE-Net Network
NUP	Notifier Universal Protocol The Universal Protocol by Notifier for all fire alarm panel communications. This protocol enables direct transfer of data between the panels and networks, without the need to translate.
OC	Ownership Code The code that confirms ownership of the gateway
TTL	Transistor-Transistor Logic A physical connection for performing both the logic gating and amplifying functions on the serial data.
UART	Universal Asynchronous Receiver/Transmitter A physical connection that converts and provides serial data for the panel and parallel data for the gateway.
USB	Universal Serial Bus

1.5 FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including, an interference that may cause undesired operation.

FCC ID: PV3CGWMB

1.6 Warnings and Cautions

CAUTION:USERS MUST FOLLOW THE PROCESSES AND USAGES APPROVED AS PER COMPLIANCE. A CHANGED OR MODIFIED USAGE NOT EXPRESSLY APPROVED BY COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE GLSS GATEWAY.

WARNING:

THESE INSTRUCTIONS CONTAIN PROCEDURES TO FOLLOW TO AVOID INJURY AND DAMAGE TO EQUIPMENT. IT IS ASSUMED THAT THE USER OF THIS MANUAL HAS BEEN SUITABLY TRAINED AND IS FAMILIAR WITH THE RELEVANT REGULATIONS.

ELECTRO-STATIC SENSITIVE DEVICES:

TAKE SUITABLE ESD PRECAUTIONS WHEN REMOVING OR INSTALLING PRINTED CIRCUIT BOARDS.

THIS GATEWAY'S PANEL IS CE MARKED TO SHOW THAT IT CONFORMS TO THE REQUIREMENTS OF THE FOLLOWING EUROPEAN COMMUNITY DIRECTIVES:

- EMC Directive 2014/30/EU
- Low Voltage Directive (LVD) 2014/35/EU
- Radio Equipment Directive 2014/53/EU
- RoHS Directive 2011/65/EU
- WEEE Directive 2012/19/EU

The gateway is designed to meet Additional National Requirements: EFSG [BRE, AFNOR/CNPP, and VdS], Incert, SBSC, EMEA, and EAC

1.7 Disclaimer

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Section 2: Overview

GLSS Gateway is an embedded and intelligent gateway for connected buildings. It enables system maintenance providers as well as end users to remotely manage connected fire detection systems. The gateway also supports them to ensure compliance.

CAUTION: THE GATEWAY MUST BE INSTALLED INDOORS.

2.1 Operations

The gateway acts as a portal among fire alarm panels, Cloud, and peripheral devices. The gateway connection with the fire alarm panel enables reading the inventory and transmitting the data. The connection with Cloud facilitates remotely monitoring and managing the fire detection systems.

2.2 Honeywell Connected Life Safety Services

The software suite enables remote management of fire detection systems. It monitors the building's fire system events in real-time and notifies users about the events immediately. It also supports periodical maintenance activities and helps in reports generation.

2.3 The Gateway Board's Layout

The illustration below points out those parts that are used for connections and trouble shooting.

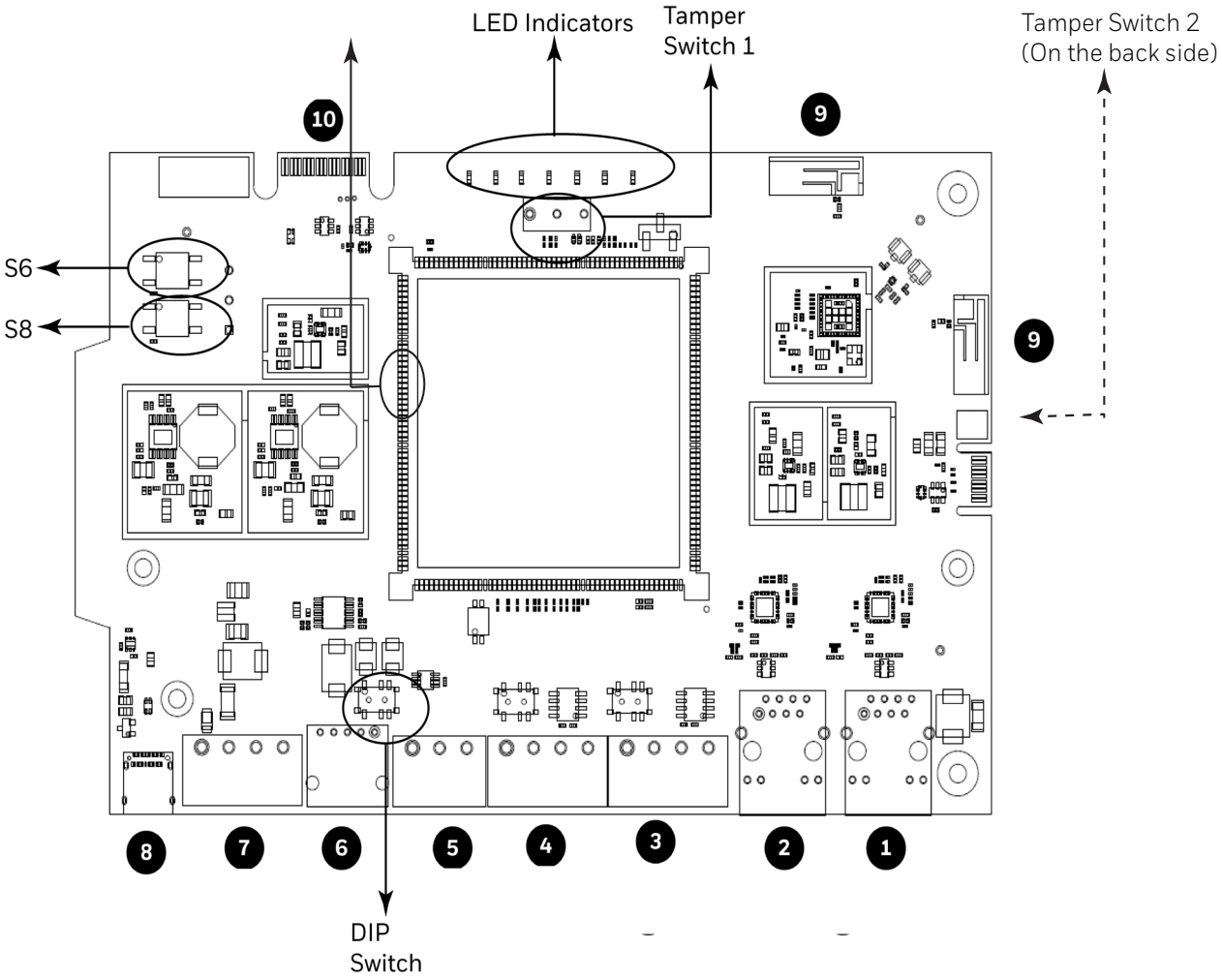


Figure 2.1: Printed Circuit Board: Layout

2.3.1 Connecting Interfaces

Figure 2.1 uses numbered labels to show the location of the interfaces for connections. This manual uses these numbered labels at various places for your convenience.

The table below uses these numbered labels to describe the type and usage of the interfaces.

Table 2.1: Gateway Interface Details

Label No.	Interface Type	Usage
1	Ethernet 1	Primary Ethernet port that can permanently connect the gateway board with the CLSS Cloud services. Cable: CAT 5 standard Ethernet cable with RJ45 connector
2	Ethernet 2	Secondary Ethernet port providing a TCP/IP connection to one of the compatible Notifier panel. Cable: CAT 5 standard Ethernet cable with RJ45 connector
3	RS485B	For future use
4	RS485A	For future use
5	UART/TTL	Connects the gateway board to a UART/TTL-compatible fire alarm panel. This connection enables the fire alarm panel to send the alarm data and device data to the gateway.
6	NUP (RS232)	Transfer of fire-related and device-related data from the panel to Cloud through the gateway. It also helps in administering the fire detection system. Connects the gateway board to one of the following: • An NFN network control module (NCM, NCM-2, or HS-NCM) • A Notifier panel If the connected panel supplies power, the gateway would get power from the panel through the NUP port.
7	Power	Connects to an external 24-volt DC power when required. It uses a power-limited, regulated, power-supply-listed connection for fire-protective signaling. It is used only when the gateway board is connected with: • A network card, or • A Notifier panel through USB
8	USB	Transfer of fire-related and device-related data from the panel to Cloud through the gateway. It also helps in administering the fire detection system. Connects to a Notifier panel
9	Wireless Antennas	Enables the gateway to have a wireless or mobile Low Energy Antennas for communication with Cloud
10	Cellular	Enables the gateway to report alarms and supervision messages to a central receiving station. It is a 40-pin expansion slot for an LTE communicator.

2.3.2 LED Indicators

The LED indicators on the *GLSS Gateway* board use different colors to identify various operational status of the gateway. To know the location of the LED indicators on the gateway board, refer Figure 2.1: "Printed Circuit Board: Layout" on page 7.

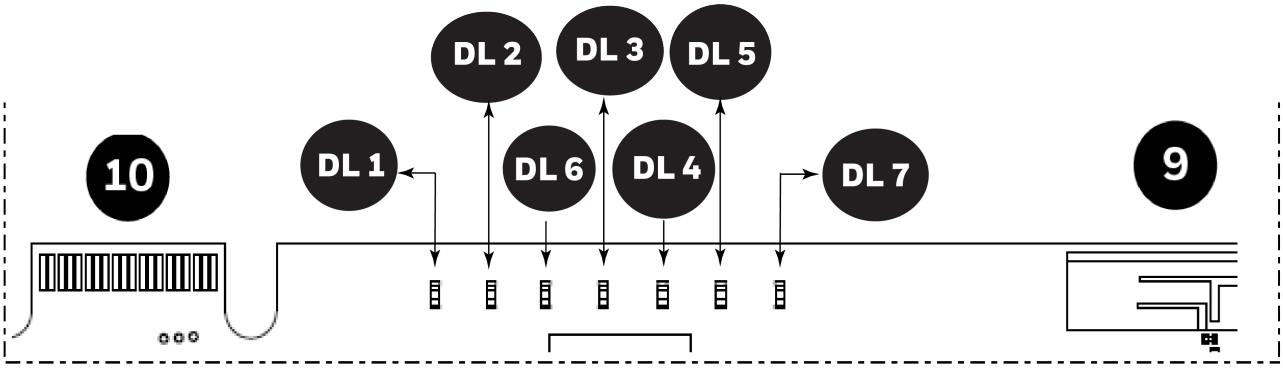


Figure 2.2: The LED Indicators on the Gateway

Table 2.2: LED Indicators and Their Messages

SOM Power-Indicating LED Indicates that the gateway board is using the received power.	
green	**ON** The circuit board is receiving its 24V power from its power source. **OFF** The circuit board is *not* receiving the power.
DL1 LTE Power LED Indicates power supply for the cellular communications.	
green	For future use.
DL2 Trouble LED Indicates the gateway's operational status.	
amber	**OFF** There are no issues. **FLASHING SLOW** (flashes per 1 second). There are communication issues with the panel or the Internet connectivity. **ON** There is a critical error in the system. To fix the issues, you can refer to the 5.3, "Troubleshooting" section, which discusses about a few issues and their solutions.
DL6 Mobile Connectivity Indicates the status of mobile communications between the Cloud and the mobile app.	
Blue	**FLASHING SLOW** (flashes per 1 second) indicates that the mobile connectivity is available, but not yet connected to the app. **FLASHING FAST** (flashes per 0.25 second) indicates that the gateway is connected to the CLSS app. **OFF** The mobile connectivity is disabled.
DL3 Panel Connectivity Indicates the connectivity status of the panel.	
green	**FLASHING SLOW** (flashes per 1 second). A flashing Green indicates that the panel is connected with the gateway board. **FLASHING FAST** A flashing Green per 0.2 second indicates that the gateway is fetching the inventory data from Cloud. **ON** Configuration mode is enabled for configuring the gateway network settings. **OFF** The gateway is *not* communicating with the panel.
DL4 Cloud Connectivity Indicates the gateway connection status with Cloud.	
green	**ON** The gateway is downloading the firmware from Cloud. **FLASHING SLOW** A flashing Green once per second indicates that the gateway is connected with Cloud. **FLASHING FAST** A flashing Green per 0.2 second indicates that the gateway is connected with Internet, but not connected with Cloud. **OFF** The gateway does *not* have Internet connectivity.
DL5 Wireless Connectivity Indicates the gateway connectivity status with wireless devices.	
green	**FLASHING SLOW** (flashes per 1 second). The wireless connectivity is enabled for the Cloud connection. **OFF** The wireless connectivity is disabled.

DL7 Cellular Connectivity Indicates the gateway connectivity status with cellular devices.	
green	**FLASHING SLOW** (flashes per 1 second). The cellular connectivity is enabled for the Cloud connection. **OFF** The cellular connectivity is disabled.

2.3.3 Switches on the Gateway Board

Below table describes about the switches on the gateway board. To locate the switches on the gateway board, refer Figure 2.1: "Printed Circuit Board: Layout" on page 7.

Table 2.3: Gateway Board Switches

Switches	Purpose
S6	For securely configuring the gateway's network settings. Pressing the switch for six seconds switches the gateway board to the configuration mode.
S7	For changing the direction of the 24V power of the NUP connector. NUP IN: The gateway board receives power from the NUP connection. NUP OUT: The gateway board supplies power to the NUP connection.
S8	For enabling mobile pairing. Pressing the switch for ten seconds enables mobile pairing.
S6 and S8	For reverting to factory default settings. Pressing both of them together for ten seconds will start the factory resetting process. The factory resetting process takes 10 minutes to complete.
Tamper 1	For alerting whenever the door is opened. It is located at the front-side of the gateway, next to the LED indicators.
Tamper 2	For alerting whenever the gateway board is removed from the enclosure. It is located at the backside of the gateway.

Section 3: Installation

You can use a fixed gateway or a portable gateway in the fire detection system.

Fixed gateway: Permanently connects the gateway with the building's fire detection system

Portable gateway: Helps to configure the fire detection system and synchronizes data

CAUTION: THE GATEWAY MUST BE INSTALLED INDOORS.

1.1 Wall Mounting the Dedicated Gateway

Distance between the gateway and the panel depends upon the length of connecting cables. The maximum distance between them should be 0.9144 meter (36 inches).

CAUTION: THE EQUIPMENT IS SUITABLE FOR MOUNTING AT A MAXIMUM HEIGHT OF 9.9 FEET ONLY.

Follow the instructions below to mount the gateway enclosure:

1. Open the package and take out the contents.
2. Inspect the contents for damage. If there is any damage, do not proceed with installation. Return the package.
3. Using an Allen key, open the enclosure door.
4. Place the right-side door edge on a flat surface for support.
5. At the right-side door edge, punch out a hole for the screw lock.

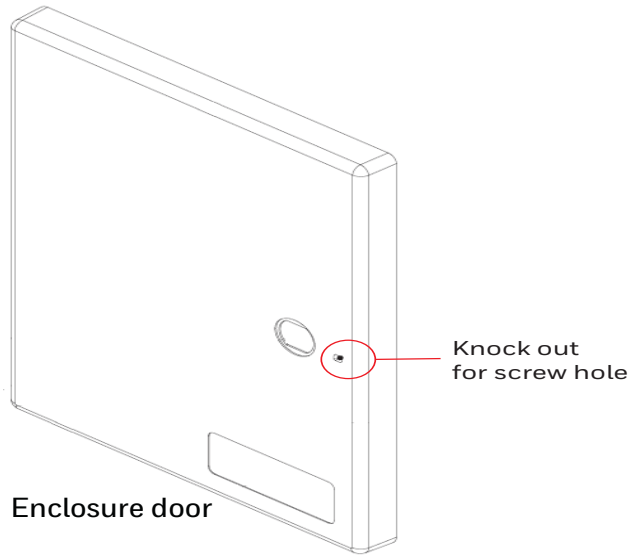


Figure 3.1: Screw Hole Knock Out

6. Depending upon the wall construction, select suitable screws to mount the enclosure.
7. Place the backbox on the wall where the enclosure is to be mounted.
8. Confirm that the placement of the backbox allows the door to swing open freely.

9. Mark and pre-drill the hole for the top keyhole mounting bolt.

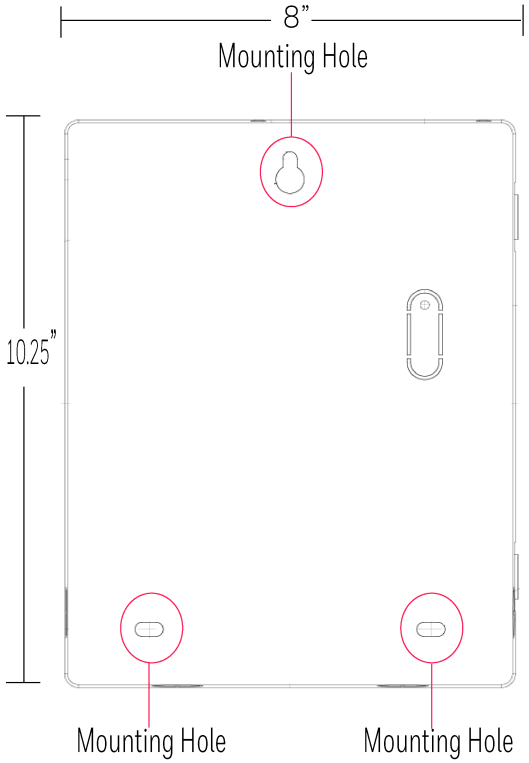


Figure 3.2: Backside of the Gateway Enclosure

10. Remove the backbox.
11. In the top mounting hole, insert the mounting screw.
12. Tighten the screw, leaving required space for hanging the enclosure.
13. Mount the backbox over the top screw and level it.
14. Mark the locations for the two lower mounting holes.
15. Remove the backbox and drill the mounting holes.
16. Mount the backbox over the top screw, then install the remaining fasteners.
17. Tighten all fasteners securely.

3.2 Gateway Board Connections

The gateway board can be connected with a CLSS Cloud, a configuration computer, a panel, a mobile device, and an external power supply.

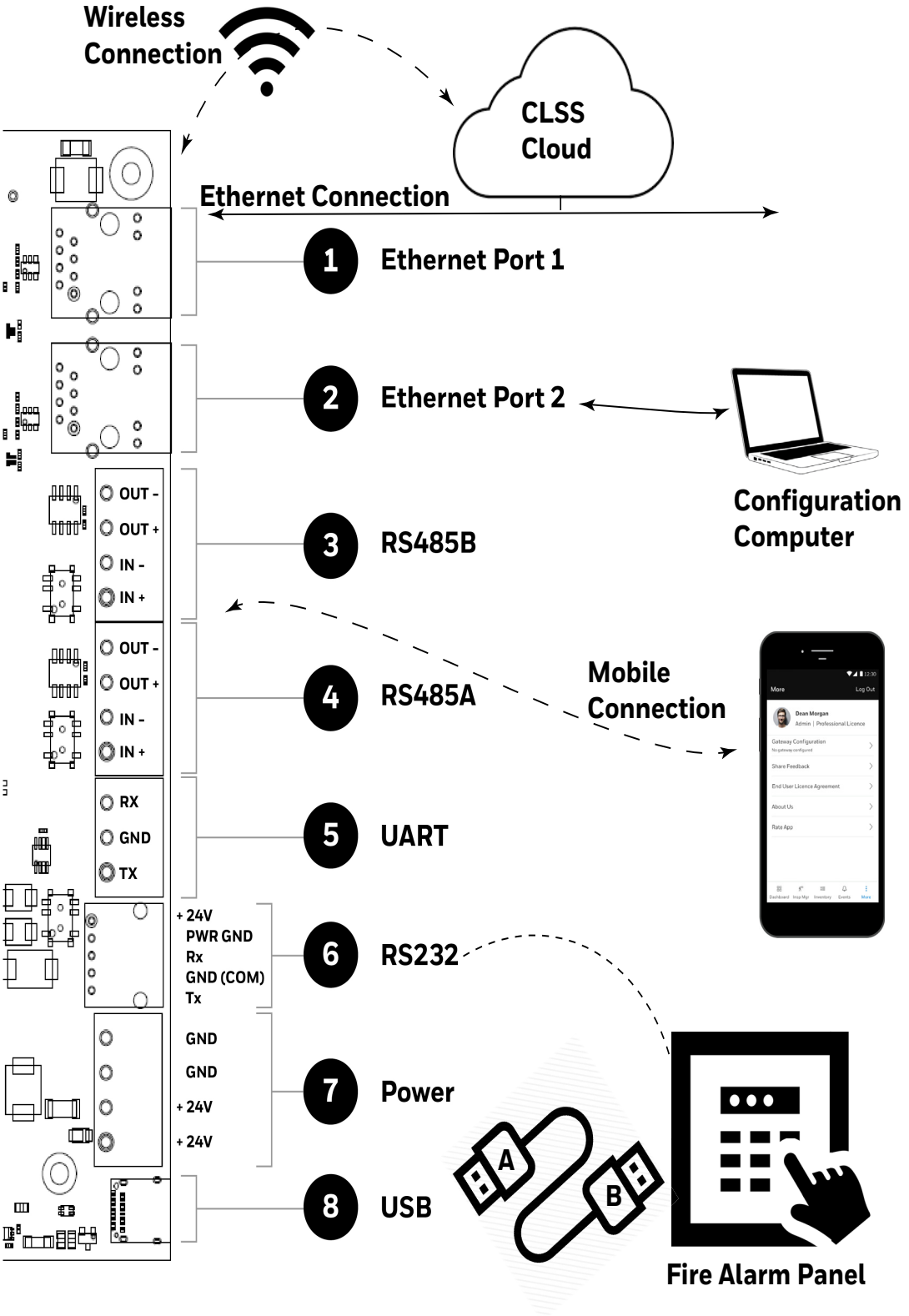


Figure 3.3: Gateway Connections

3.2.1 Connecting to a Fire Alarm Panel

The panel to which the gateway board connects acts as the master panel. It collects data from all its devices, and sends the collected data to the gateway.

WARNING: CONNECTIONS BETWEEN THE GATEWAY, CLOUD, AND THE MASTER PANEL MUST BE PERMANENT.

NOTE: The interfaces of the gateway board and panel must be connected with compatible cables only.

Supported Panels

To know about supported panel variants and their connection options, refer below:

- "Vigilon Panels: Connection Options" on page 15
- "Connection Options" on page 15

Vigilon Panels: Connection Options

Each variant of the Vigilon panel offers various connection options.

The gateway operates only with these Vigilon fire alarm control panels listed in the below table:

Table 3.1: Connection Options

Fire Alarm Panel Models	USB	RS232	UART/TTL
COMPACT-24-N	Yes	Yes	No
COMPACT-PLUS	Yes	Yes	No
VIGPLUS-24	Yes	Yes	Yes*
VIGPLUS-72	Yes	Yes	Yes*
VIG1-24	Yes	Yes	Yes*
VIG1-72	Yes	Yes	Yes*

* Use the add-on I/O card (VIG-IOC-DOM).

Notifier Panels: Connection Options

Each variant of the Notifier panel offers various connection options.

The gateway operates only with these Notifier fire alarm control panels listed in the below table:

Table 3.2: Connection Options

Fire Alarm Panel Models	USB	NUP (RS232)
NCA	No	Yes
NCA-2	No	Yes
NFS-320	No	Yes
NFS-640	No	Yes
NFS2-640	No	Yes
NFS-3030	No	Yes
NFS2-3030	No	Yes
NCM-W	No	Yes
NCM-F	No	Yes
HSNCM-W	No	Yes
HSNCM-MF	No	Yes
HSNCM-SF	No	Yes
HSNCM-WMF	No	Yes
HSNCM-WSM	No	Yes
HSNCM-MFSF	No	Yes

To Make a USB Connection

On the Gateway Side

1. Connect the USB-C side of the cable to the USB port of the gateway.

The USB port is labeled as 8 in the figure "Gateway Connections" on page 14.

On the Panel Side

1. Connect the USB-A side of the cable to the USB port of the panel.

To know more about the panel-side connection steps, refer to the installation document of the respective panel.

Power Connection

After connecting the gateway to the panel through USB, connect the gateway with an external power source for its 24V DC power.

NOTE: This external power connection should be power limited, UL864-listed, and approved for fire alarm signaling.

To Make a NUP/RS232 Connection

On the Gateway Side

1. Connect the NUP cable to the NUP port of the gateway board.
   The NUP port is labeled as 6 in the figure "Gateway Connections" on page 14.
2. Find the SW7 switch next to the NUP port, and switch it to towards NUP_IN.

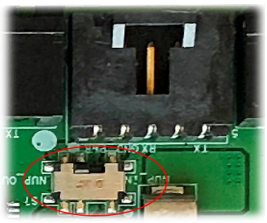


Figure 3.4: DIP Switch

On the Panel Side

Connect the NUP cable to the NUP port of the panel.

Power Connection

The panel supplies the 24V DC power to the gateway board through the NUP connection.

To Make a UART/TTL Connection

A UART/TTL interface can connect the gateway board with the UART/TTL port of the panel.

On the Gateway Side

1. Connect the male UART/TTL cable to the Rx (Red), 0V (Silver), and Tx (White) terminals of the gateway.

The UART/TTL port is labeled as 5 in the "Gateway Connections" on page 14.

On the Panel Side

1. Within the panel, find the backplane PCB board.
2. Connect the 1.5mm phono socket to the P11 connector on the panel's PCB.

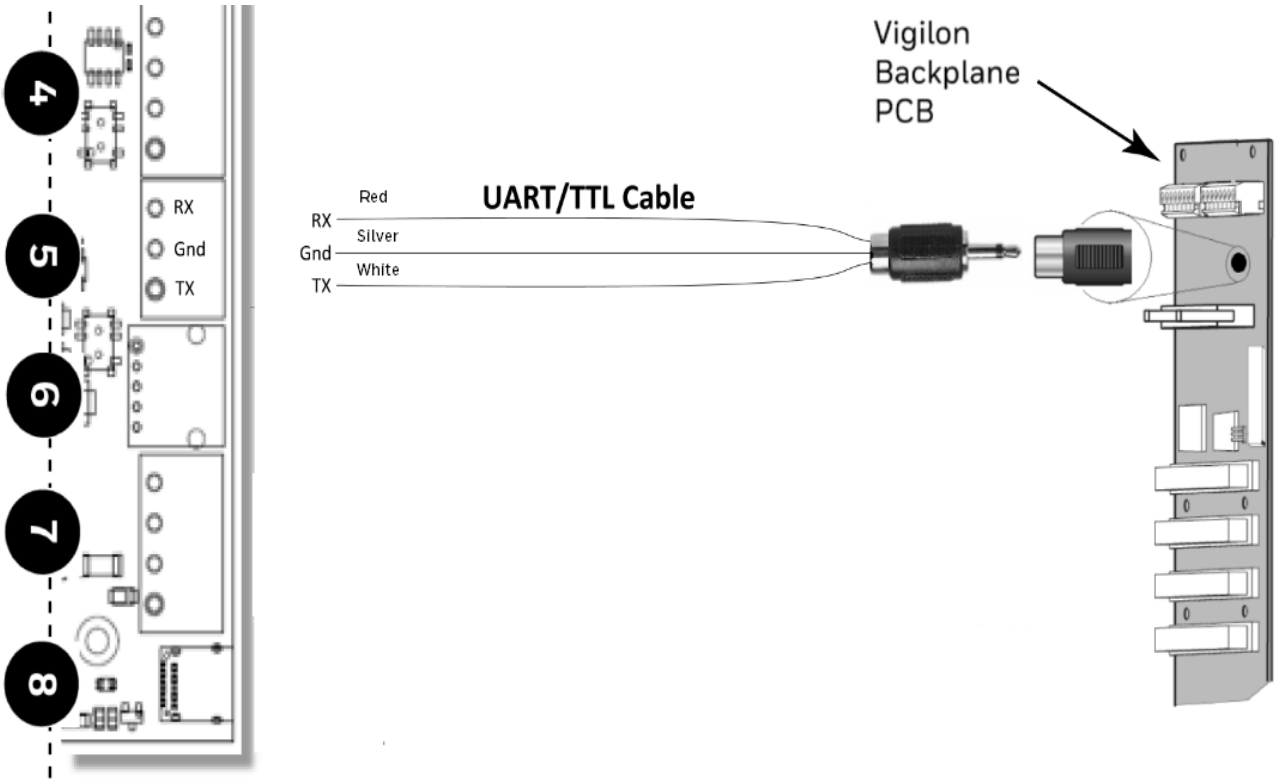


Figure 3.5: UART/TTL Connections

Section 4: Configurations

The gateway settings control the gateway's communications with the mobile, panel, devices, and Cloud.

4.1 Panel Configurations

4.1.1 The Date Settings

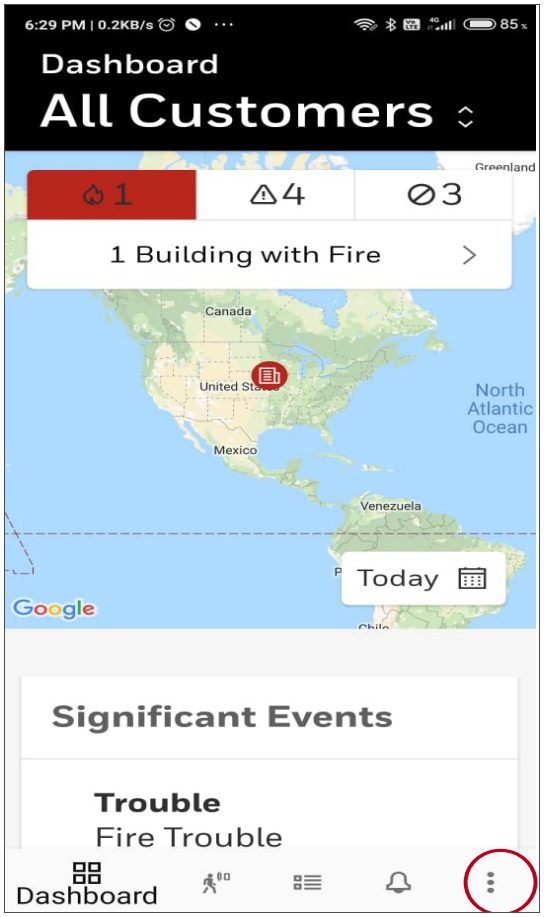
To enable gateway communications with Cloud, the date and time must be set correctly in the connected panel.

4.2 Gateway Configurations

The first-time commissioning of the gateway fetches the data from the panel and sends to Cloud. Subsequent connections synchronize the data between the panel and the Cloud.

4.2.1 To Configure via the Wireless Connection

1. In the mobile device, from Play Store or App Store, download the *Connected Life Safety Services* app.
2. Install the app.
3. From the Honeywell on-boarding email, take the login credentials.
4. On the mobile, log into the *CLSS* app.
5. On the app's dashboard, at the right bottom, tap the **More** icon.

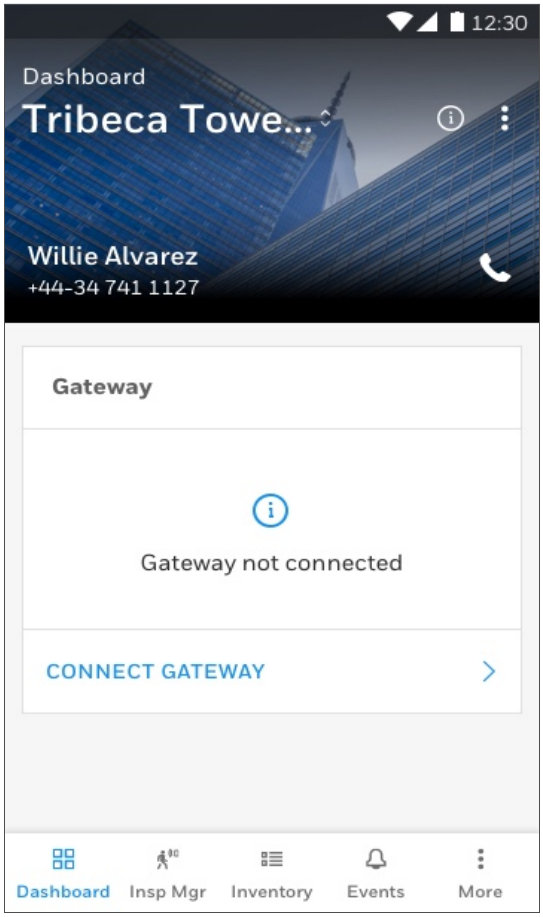


6. Tap **Gateway Configuration**.
7. Follow the on-screen instructions for mobile connectivity.

NOTE: Based on the gateway you are configuring, select either *Portable Gateway* or *Fixed Gateway*.

8. Wait for the app to connect with the gateway, the fire alarm panel, Internet, and Cloud.
   The app notifies about the configuration completion.
9. On the dashboard, from the **All Customers** option, find the required *customer* > *site*.

10. Tap on the specific building.
11. To commission the gateway, tap on **CONNECT GATEWAY** and follow the on-screen instructions.



4.3 Verifying the Gateway Connections

While configuring the gateway, confirm the following LED indicators for successful connections:

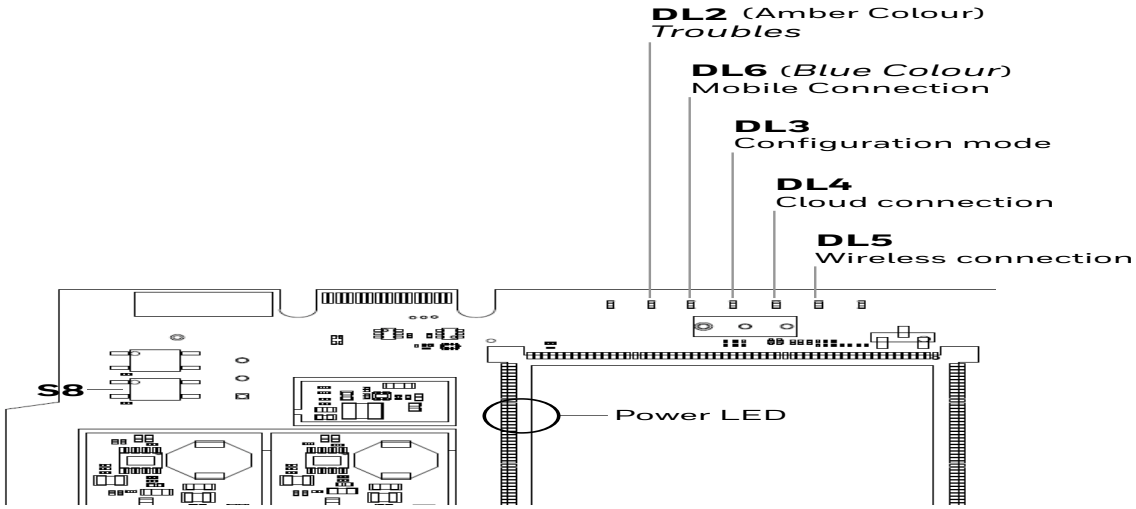


Figure 4.1: Connection Indicators

LED Indicator	State	Meaning
Power-Indicating LED	ON	Successful power connection
DL2	OFF	There are no issues
DL6	Flashing fast*	Successful mobile connection
	Flashing slow†	Ready for connection
	OFF	Disabled mobile connection
DL3	ON	The gateway is in the configuration mode
	Flashing fast	The gateway is fetching the inventory data
	Flashing slow	The gateway is communicating with the panel
DL4	Flashing slow	The gateway is communicating with Cloud
	Flashing fast	The gateway has Internet connectivity, but not the Cloud connectivity
DL5	Flashing slow	The gateway has wireless connection with Cloud

* FLASHING FAST = 0.2 second ON and 0.2 second OFF
† FLASHING SLOW = 1 second ON and 1 second OFF

If the LED is indicating differently, refer to the Table 2.2, “LED Indicators and Their Messages,” on page 10 to know the operational status. If there is an issue, refer to the 5.3, "Troubleshooting" section to fix it or contact Honeywell technical support.

4.4 Testing the Commissioning

After all the CLSS app configurations are done, if required, you can perform a commissioning test.

NOTE: The commissioning test does not generate reports.

1. On the app’s dashboard, at the bottom, tap the **CheckPoint** icon.
2. On the **All Customers** screen, find the *customer* > *site*, and then tap on the specific building.
3. On the building's dashboard, tap **Start New Test**.
4. On the **Select Test Type**, tap **Commissioning**.

5. Follow the on-screen instructions.

Section 5: Post-Installation Activities

The system maintenance provider is responsible for the maintenance and upkeep of *GLSS Gateway*. The maintenance involves avoiding potential issues, taking regular backups, restoring data when required, collecting data for troubleshooting, and so on.

5.1 Maintenance Testing

You can create and offer test plans for a building's maintenance tests. A test plan shows the devices to be tested and the type of tests for each device.

NOTE: In the app, the option to enable the control functionality is available for a duration. The duration is: 60 minutes to 10 hours.

1. On the **All Customers** screen, find the *customer* > *site*, and then tap on the specific building.
2. At the bottom, tap the **CheckPoint** icon, and then tap on the building.
3. Connect to the gateway.
4. Tap **START NEW TEST**.
5. From the **Select Test Type** menu, select **Maintenance**.
6. In the **Test Name** field, provide a name for the test.
7. From the **Select Devices for Testing** section, select the required test type:
   - All Devices: Select it to test all devices or to create a test plan.
   - Test Plans: Reuse already created test plans.
   - Past Test Session: Choose a test session, which was performed earlier.
8. To create a new test plan, tap **All Devices**.
9. From the inventory list, include or exclude devices to be tested..
10. Tap **SAVE & NEXT**.

From the **ACTIVE TESTS** list, your test plan opens.

11. On the test plan, tap **Enable Control**.
12. From the devices list, find the device to be tested, and tap on the **More** icon.
13. Select the type of tests to be done for the device.
14. Repeat steps 11 and 12 until all the required devices and test types are configured.
15. Start the test.

5.2 Upgrading the Gateway Firmware

Honeywell periodically releases updates and upgrades to the gateway's firmware. Using the *Gateway Configuration tool* you can securely make the firmware upgrade to the gateway.

5.2.1 To Upgrade to a Later Release

1. On the gateway side: Connect an Ethernet cable to the Ethernet port.
   The port is labeled as 2 in the Figure 3.3: "Gateway Connections" on page 14.
2. On the configuration computer side: Connect the Ethernet cable to the configuration computer's Ethernet port.
3. On the gateway board, find the S6 button.
4. To switch to the configuration mode, press the S6 button for a minimum of 6 seconds, and then release it.

   The LED indicator DL3 turns ON and SOLID, indicating that the configuration is enabled.
5. Open the Chrome browser and enter the following IP address for the configuration tool: https://192.168.10.190:9443/config/index.html
6. In the **Sign In** page, enter the password.
7. In the list of settings options, click **Diagnostic**.
8. In the **GATEWAY FIRMWARE UPGRADE** section, click **Choose File**.
9. Select the firmware image file and click **Choose**.
10. Once the chosen file is uploaded, click **Upgrade**.

5.2.2 To Verify the Upgrade

1. After the restart, log into the configuration tool.
2. Click **Diagnostic**.
3. Click **About** and verify that the new version of the GLSS Gateway is shown.

5.2.3 LED Indications During the Upgrade

While the gateway is downloading the firmware, the Green-color LED indicator DL4 will be ON.

If the LED is indicating differently, refer Table 2.2, “LED Indicators and Their Messages,” on page 10 to know the operational status. If there is an issue, refer to the 5.3, "Troubleshooting" section to fix it or contact Honeywell technical support.

5.3 Troubleshooting

Issues that may occur during the gateway's operation can be resolved on your own or by contacting Honeywell technical support. The issues can be either LED-indicated issues or other issues.

5.3.1 To Troubleshoot LED-Indicated Issues

When an LED status indicates issues, refer to the below table to know their possible fixes.

Table 5.1: LED-Indicated Issues and Possible Fixes

SOM: Power LED-Indicated Issues		
Power LED Status	**Other LEDs' Status**	**Possible Fixes**
OFF	• All other LEDs are OFF	• Ensure that the gateway board's power source is supplying the required 24V electricity.
ON	• All other LEDs are OFF	• Do the following: 1. Remove all the connected cables. 2. Wait for one minute. 3. Reconnect all the cables. 4. Ensure that the gateway board is getting its 24V electric power. • If the above steps do not fix the issue, contact Honeywell technical support.

DL2: Trouble LED-Indicated Issues		
Trouble LED Status	**Other LEDs' Status**	**Possible Fixes**
ON and SOLID Amber	Any	• It is a critical issue. Contact Honeywell technical support.
Flashing Amber once per second	• **DL3** The panel LED is OFF • **DL4** The Cloud LED is flashing once per second	Check the following and correct if necessary: • The cable connections at the gateway's port and at the panel's port • The cable connecting the gateway board and the panel
Flashing Amber once per second	• **DL3** The panel LED is flashing once per second • **DL4** The Cloud LED is OFF	Check the following and correct if necessary: • Internet connectivity • Eth1 cable connections at the gateway board side and at the panel side • The Eth1 cable

DL3: Panel LED-Indicated Issues		
Panel LED Status	**Other LEDs' Status**	**Possible Fixes**
OFF	• **DL2** The Trouble LED is OFF	Check the following and correct if necessary: • The cable connections at the gateway board side and at the panel side • The Eth2 cable connecting the gateway board and the panel

DL4: Cloud LED-Indicated Issues		
Cloud LED Status	**Other LEDs' Status**	**Possible Fixes**
Flashing Green every 0.25 second	• **DL3** The panel LED is flashing once per second • **DL2** The Trouble LED is OFF	• Associate the gateway board with the user account. • Ensure that the user account is active. • Ensure that the panel's date and time are correct.

DL5: Wireless LED-Indicated Issues		
Wireless LED Status	**Other LEDs' Status**	**Possible Fixes**
OFF	• **DL3** The panel LED is flashing once per second • **DL4** The Cloud LED is OFF	• Ensure that the WLAN settings in the *Gateway Configuration Tool* are correct. • Ensure that the building's IP network has Internet and Cloud connectivity.

DL6: Mobile LED-Indicated Issues		
Mobile LED Status	**Other LEDs' Status**	**Possible Fixes**
OFF	• **DL3** The panel LED is flashing once per second • **DL4** The Cloud LED is OFF	1. On the gateway board, find the S8 button. To find the S8 button, refer to Figure 2.1: "Printed Circuit Board: Layout" on page 7. 2. Press the S8 button until the LED indicator DL6 flashes fast, indicating enabled mobile connectivity.

5.3.2 To Troubleshoot Other Issues

If there are issues, which are not shown by the LEDs, refer to the below table to know their possible fixes.

Table 5.2: Other Issues and Possible Fixes

Events-Related Issues		
Issue Description	**Possible Causes**	**Possible Fixes**
Panel events are not displayed on the Connected Life Safety Services	• The gateway is dissociated	• Associate the gateway board with the user account.
	• The user account is not associated with the gateway	• Ensure that the user account is active.
	• The panel's date and time are incorrect	• Ensure that the panel's date and time are correct.

Appendix A: Gateway Operating Conditions

Table B.1: Operational Requirements

Power Requirements	
Nominal voltage range	Consumes 12V to 40V DC from the panel or from an external power source.
Current	The power requirement varies with the number of interfaces used. Typical current consumption: 0.1A at 24V Peak load: 0.25A at 24V
Room Conditions	
Temperature	-10°C to 60°C (14°F to 140°F)
Relative humidity	1% to 94% Non-condensing

Appendix B: Modulations and Power Used

Radio devices operating on the below frequencies should not be installed next to each other.

Wireless Transmitter Specifications

VBAT = 3.6V

Ambient temperature = 25° C

Output power @module RF antenna port

Target Power that Meets Spectrum Mask and EVM Compliance

Table C.1: Wireless Power Specifications

2.4 GH z TX Power Specifications							
IEEE 802.11	Mod	Rate	BW	Channel	Power	Units	Tol. (dB)
11b	CCK, DSSS	1 to 11 Mbps	20 MHz	1-11	16	dBM	+/-2.0
11g	OFDM	6 to 54 Mbps	20 MHz	1-11	17	dBM	+/-2.0
11n	OFDM	MCS 0-7	20 MHz	1-11	18	dBM	+/-2.0
5 GH z TX Power Specifications							
Std	Mod	Rate	BW	Channel	Power	Units	Tol. (dB)
11a	OFDM	6-54 Mbps	20 MHz	36-48 52-64 100-144 149-165	15	dBM	+/-2.0
11n	OFDM	MCS 0-7	20 MHz	36-48 52-64 100-144 149-165	16	dBM	+/-2.0

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