

GFG - Grace Fixed Gateway

User Information



Grace Fixed Gateway (GFG) is a wireless bridge that manages the data signaling between Grace Lone Worker safety Pendants and the Grace Connected Safety[™] Cloud Monitoring Portal. GFG contains a wireless signaling link to a Worker's safety Pendant such as WorkForce[®], SuperCELL[®], and TPASS[®] and uses a customer-supplied Ethernet or Wi-Fi internet connection for data signaling with the Cloud Monitoring Portal.

IMPORTANT: Please Read All User Information Before Use

- Always test Grace Fixed Gateway (GFG) prior to use in accordance with the user information.
- GFG requires an internet connection plus an active Grace Connected Safety[™] account. Set up your account at www.GraceConnectedSafety.com
- Grace Fixed Gateway requires a power connection to a battery-backed UPS (uninterruptible power supply) with surge protection.

Grace Connected Safety[™] System Overview

GFG is part of the **Grace Connected Safety**[™] system which includes worker-worn **Pendants**, fixed or mobile **Gateways**, and **Grace Cloud Connect**[™] Portal dashboard.



- Rechargeable lithium battery powered, intrinsically-safe models available.
- Interoperable with Legacy Grace RadioH products and systems.

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Model	GFG				
Enclosure	Polycarbonate Resin, Flame Retardant, UV Stabilized				
Size	7.63 x 4.63 x 3.09 in. (193.8 x 117.6 x 78.5 mm)				
Weight	2.2 lb. (1kg)				
Mounting Options	GFG is designed for desktop placement or wall-mount. Mounting holes on the base of the enclosure can be used to secure the GFG to a desktop or wall.				
Antenna	5.75 in. antenna can fold and rotate to properly orient in vertical (pointing up) position. NOTE: For best performance, always orient the antenna in the upward, vertical position and at least 6 in. away from vertical, metal surfaces				
Power	120VAC to 5VDC power adapter with wall plug and screw-latching connector for secure connection to GFG. Customer supplied battery-backed UPS (uninterruptable power supply) with surge protection is required.				
USB Ports	4, USB 2.0 Type A				
Status LED Indicators (four)	Grace Cloud Connect [™] Network Status, Grace Radio, Network (Wi-Fi), Power				
Audible Alert	Approximately 82 dBA				
Radio Frequency	902-928 MHz license-free FHSS North America ISM, other frequencies/ countries supported				
Compatibility	Grace Telemetry Systems using RadioH platform including - WorkForce [®] , SuperCELL [®] , TPASS [®] , MicroRepeater, T3 Repeater, and others.				
Environment	5°F to 122°F (-15°C to 50°C), RH ≤ 95%				
Radio Certifications	FCC ID: Contains J5MXHEM, 2ABCBRPI3BP. Meets FCC Part 15				
	IC: Contains 5916A-MXHEM, 20953-RPI3P. Complies with Canadian ICES-003				
GFG Network Specific	cations				
Note: It is highly recommended to verify all network configurations and settings changes with the Network Administrator					

Connection Type	2.4GHz IEEE 802.11.b/g/n/a wireless LAN or 10/100 Mbit/s Ethernet port
Data Usage	Typically less than 250MB per month (based on GFG update settings and number of Pendants)
Security	Integrated Linux Firewall does not interfere with customer network security. Uses built-in AES-128 Encryption.



GFG Status LED Indicators



1.	Grace Cloud	I Connect [™] Network Status LED			
	Solid Green	GFG connected to Grace Cloud Connect [™] Network			
	Flashing Green	System check-in			
	Flashing Red	GFG establishing connection to Grace Cloud Connect [™] Network			
	Solid Red	No GFG connection to Grace Cloud Connect [™] Network			
2.	Grace Radio	Status LED - GFG to Pendant Transmit/Receive			
	Solid Green	Successful radio connection			
	Flashing Green	GFG receiving RF signal from Pendant			
	Flashing Red	GFG transmitting RF signal to Pendant			
	Solid Red	No communication between GFG and Pendant			
3.	Network Sta	tus LED			
	Solid Green	GFG connected to internet			
	Flashing Green Internet connection in process				
	Flashing Red GFG establishing internet connection				
	Solid Red	No GFG connection to the internet			
4.	Power Indica	ator			
	Solid Green	GFG Active			
	LED OFF	GFG off			
5.	Alarm Indica	ator			
	Flashing Red	Alarm Signal received by GFG from Pendant When an RF Alarm signal is received by the GFG, its audible alarm will sound. The alarm will continue until the alarm condition is cleared. GFG can be silenced by momentarily pressing the Sound On/Off Button			
6.	Sound On/O	ff			
		Press and hold the Sound On/Off Button for 3 seconds to silence the audible alarm tone. The audible tone will be re-activated when a new Pendant RF Alarm Signal is received.			

GFG Ethernet Connection

IMPORTANT: DO NOT Power ON or activate any Pendant device before Powering ON and activating the GFG. Verify all Pendants are powered off.

GFG is a stand-alone bridge device that connects a worker's Pendant to the Grace Cloud Connect[™] Monitoring and Alerting Portal by way of an internet connection from Ethernet or Wi-Fi. By default, the GFG will attempt to acquire an IP address automatically using DHCP. If successful, no further setup is required.

If your network supports DHCP, simply plug in an Ethernet cable with internet access from the GFG Ethernet port to your network. Power ON the GFG by connecting it to a power source using the supplied 120VAC to 5VDC power adapter. Use the screw-latching mechanism to secure the power adapter plug to GFG.

NOTE: It is recommended to connect the GFG via Ethernet connection for best reliability. WiFi connection is available by using either of the following configuration methods.

GFG Wi-Fi Configuration via Online Portal

When the GFG is connected to an Ethernet connection and has established a link to the Grace Cloud Connect[™] Monitoring and Alerting Portal, the GFG can also be configured for a WiFi connection.

1. On the FIXED GATEWAY tab of the Gateways section, click the (i) info button.

A	Home		M	onitor Gateway	y Activity								
•	Assets Pendants	0	M	OBILE GATEWAY 0 FIX	(ED GATEWAY 1								
÷	Gateways	1		Fixed Gateway Data									
***	Groups			Status	Gateway ID	Name		Timestamp	Connection	Location	Settings	Alerts	
\otimes	Grace Check-In			Coline	E1095	Main Chan		10/2/2022 10:50:15 414	Ûŧ		*	A	
	Quick Command				F1905	Main Sliop	·	10/3/2023, 10.39.13 AM	ŧU				
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- 2. Select the Commands dropdown.
- 3. Click the Request Wifi button. The window will close and the status of the gateway will change to Scanning Wifi.

GFG Info						
Info	^					
Gateway: F1985						
Connection: ethernet						
Status: Online						
Serial: 0000000		Monitor Gatev	vav Activity			
Version: v0.4.85 9-26-23			vay / totivity			
Temp: 39.92 °C (103.86 °F)						
Timestamp: 10/3/2023, 11:00:02 AM		MOBILE GATEWAY 0	FIXED GATEWAY 1	MS3000 🕕	PORTABLE WORKSITE ALARM 0	
Commands	^	Fixed Gateway Data				
		Status	Gateway ID	Name	Timestamp	Conn
👌 FORCE RESTART 🔹 REQUEST WIFI		Scanning Wifi	F1985	Main Shop ,	✔ 10/3/2023, 11:01:39 AM	4

GFG Wi-Fi Configuration via Online Portal

4. Once this scanning operation is complete, the Connection section of the Gateway status bar will change to a button labeled **Setup Wifi**. Click this button to open the Setup WiFi window.

Ν	Nonitor Gate	way Activity					
	MOBILE GATEWAY 0	FIXED GATEWAY 1	MS3000				
	Fixed Gateway Data	a					
	Status	Gateway ID	Name		Timestamp	Connection	
	← Online	F1985	Main Shop	1	10/3/2023, 11:02:11 AM	R SETUP WIFI	¢

5. Select the SSID of the network you wish to connect to from the available networks in the dropdown menu.

Set	tup Wifi	
a 🗮	Network Name (SSID) Rnd_Dev_Only	~
ê	Password	ø
CLO	SE	SAVE

- 6. Enter the password in the password field
- 7. Click the save button when done. This will close the window and the status of the GFG will change to Wifi Set.

Monitor Gatew	vay Activity			
MOBILE GATEWAY 0	FIXED GATEWAY 1			
Fixed Gateway Data				
Status	Gateway ID	Name	Timestamp	Connection
🔶 🗢 Wifi Set	F1985	Main Shop 🏼 🖋	10/3/2023, 11:02:59 AM	ល

8. When the status of the device returns to Online, it is safe to disconnect the Ethernet cable, if configured properly the GFG will switch to the configured Wifi network

Note: If a Wifi connection is configured while the Ethernet connection is maintained, the Ethernet connection will remain the preferred network, the system will not revert to the Wifi Connection unless the Ethernet connection is interrupted. This can be used as a backup in cause of main network loss.

GFG Wi-Fi Configuration via Flash Drive Config Tool

- 1. Connect the supplied GFG configuration USB drive into a Windows PC.
- 2. Run the GFG Configuration Tool by double-clicking **Gfg_Config.exe**, or select open.



3. Select Load Config.

GFG Configu	ration Tool
Lo	Dad Config
GF	G Name: Name
WIFI C	Config
WiFi	Configuration

4. Next, select the **userconfig.ini** file located on the USB drive with the GFG config tool.



GFG Wi-Fi Configuration (continued)

5. Enable Wi-Fi and set the SSID, Password, and Security Protocol of your Network. When finished, press "Save Changes".



Note: The Wi-Fi and LAN MAC address of the GFG will be displayed here, this may be required to allow your GFG to connect to your network.

- 6. After the changes have been saved, eject USB drive safely. USB drive is now ready to configure the GFG.
- 7. With the GFG Powered ON, Plug the Configuration USB drive into any of the 4 USB connections on the GFG
- 8. When connected, the three status LEDs will glow red and data transfer will start. This may take up to 60 seconds to complete.
- 9. When the configuration data transfer is complete, the three status LEDs will flash red, and the GFG audible tone will sound. When the audible tone stops, it is safe to remove the configuration USB drive.
- 10. After the USB drive has been removed, all Status LEDs on the GFG will turn off, the GFG will then reset and Power ON automatically. GFG will now attempt to connect to the Wi-Fi network that was configured. If successful, the Network status LED will turn green to indicate the GFG is connected to the Internet.



11. Further system settings and configuration can be changed through the Grace Cloud Connect[™] Portal.

Note: If a Wifi connection is configured while the ethernet connection is maintained, the ethernet connection will remain the refereed network, the system will not revert to the Wifi Connection unless the Ethernet connection is interrupted. This can be used as a backup in cause of main network loss.

GFG Operating Instructions

STEP 1: Grace Cloud Connect[™] Portal Access:

- Access the website link Grace Industries has provided (by email) to your Master Administrator.
- Login using the provided credentials.
- Continue with configuration and setup of Pendant Monitoring and Alerting.

STEP 2: GFG - Power ON

IMPORTANT: DO NOT Power ON or activate any Pendant device before Powering ON and activating the GFG. Verify all Pendants are powered off.

- **Power ON:** Connect the GFG to a power source using the supplied 120VAC power adapter. Use the screw-latching mechanism to secure the power adapter plug to GFG .
- **NOTE:** GFG 120VAC wall-plug power supply is required to be plugged into a battery-backed UPS (uninterruptable power supply) with surge protection.
- GFG is connected to Grace Cloud Connect[™] when the Grace Cloud Connect[™] Network Status LED is solid Green.

GFG is designed and intended to operate continuously

- In the event it is necessary to shutdown or restart the GFG, ensure all Pendants are powered OFF before doing so. If Pendants are left/powered ON, the Grace Cloud Connect[™] web Portal will go into *Signal-Loss* shortly after turning OFF GFG which will cause alerts to be sent out from Grace Cloud Connect[™] Monitoring Portal.
- GFG is Powered OFF by unplugging it from the power source.

STEP 3: Pendants - Power ON

IMPORTANT: DO NOT Power ON or activate any Pendant device before Powering ON and activating the GFG.

- Power ON: Consult Pendant user manual for instruction to Power ON or Power OFF. .
- Grace Pendants are configured to automatically connect to the GFG when Powered ON. Always ensure the GFG is Powered ON first, then Power ON the Pendant.

GFG ALARM Indicator

- When an Alarm Signal from a Pendant is received by the GFG, an Alarm notification will be indicated by the flashing red Alarm LED and an audible Alarm tone that will repeat until the Pendant Alarm condition is cleared. This Alarm Signal is also transmitted from the GMG to the Grace Cloud Connect[™] monitoring portal.
- Press and hold the Sound On/Off Button for 3 seconds to silence the Alarm sound. The Alarm sound will be re-activated when a new Pendant Alarm signal is received.
- **IMPORTANT NOTE:** When a Gateway receives an Alarm signal from a Pendant, the Gateway will sound its local alarm immediately, however to avoid excessive data usage and nuisance, or unintentional Alarms activating the Grace Cloud Connect[™] Alerts, the Gateway uses a purposeful delay before relaying this Alarm to the Grace Cloud Connect[™] Portal. If the Pendant's Alarm is cleared or reset before the purposeful delay time, the Alarm will not be transmitted to Grace Cloud Connect[™] and the Alerts for this Alarm will not be generated. The default delay time is 10 seconds and can be adjusted. Consult Grace technical support for more options.

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FCC Statements

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to pro-vide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada Statements

This Class A digital apparatus complies with Canadian ICES-003.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. (select the class for your device)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



Grace Industries, Inc. 724-962-9231 305 Bend Hill Rd Fredonia, PA 16124 www.GraceConnectedSafety.com