

Overview

Blackline Safety's connected devices monitor the safety of workers, detect gas exposures, and increase productivity through business intelligence tools, reporting and data science. Blackline's devices communicate directly with the Blackline Cloud using cellular or satellite connectivity. Our connected safety devices collect and communicate data on set schedules depending on several factors.

Data generated by G7 devices has three main purposes:

1. Providing situational awareness for monitoring personnel and responders in an emergency.
2. Communicating data to provide compliance reporting.
3. Storing data for analysis, business intelligence and data science.

Blackline Live Maps Page

Blackline Live – Blackline's online portal software – uses a maps page to display the most recent communication from G7 devices. Data displayed on the Blackline Live maps page includes the last message sent by the device, the location of the device (GPS coordinates and approximate address), gas readings, and communication details. Devices communicate with Blackline Live on a preset schedule. Events can also trigger an immediate communication to Blackline Live. The following chart displays the default communication frequency for all G7 device types.

Frequency of map update on Blackline Live

	G7c	G7x	G7 EXO (cellular)	G7 EXO (satellite)
Normal Operation	5 minutes	30 minutes	30 minutes (if stationary)	2 hours (if stationary)
			30 seconds (if in motion)	30 minutes (if in motion)
Events[†] (incl. alerts)	Immediately*	Immediately**	Immediately*	Immediately*

[†] Delivery time of events from G7 devices to Blackline Live can vary depending on the type and quality of connectivity. Median delivery times are 3 seconds for cellular and 85 seconds for satellite.

*After an event or an alert, these devices continue their normal operation communication frequency.

**After an event, G7x continues its normal operation communication frequency. After an alert, G7x will begin communicating with Blackline Live every five minutes for one hour.

Key Terms

Alert: Immediately communicated to the Blackline Cloud. The following events can trigger an alert on G7 Wearable devices:

- SOS alert
- Missed check-in
- Fall detection
- No motion detection
- Gas detection (gas sensor over limit, high gas, STEL, TWA)

Blackline Analytics: Reports provide historical analysis of data collected by Blackline Safety's G7 devices. Blackline Analytics is accessed through the Blackline Live portal.

Blackline Live: Blackline Safety's online portal for alert management, compliance dashboard and configuration management of fielded devices. The most recent data from each device is displayed on Blackline Live.

Blanking Range: Each sensor has a blanking range which reduces false readings caused by minor sensor drift. Gas levels detected below the blanking range do not trigger a change in data collection by G7.

Event: Any occurrence on a G7 device outside of normal operation. Events include emergency alerts, as well as non-emergency events such as check-in reminders, low battery warnings and low gas alarms.

G7c: Blackline Safety's cellular connected wearable safety device.

Blackline Analytics

Blackline Analytics displays historical data from G7 devices. Devices capture data on a preset schedule. Specific events can trigger a change in data capture frequency. The following chart displays the default data capture frequency for all G7 device types.

Frequency of data capture for Blackline Analytics

	G7c	G7x	G7 EXO (cellular)	G7 EXO (satellite)
Normal Operation	5 minutes	30 minutes	5 minutes	2 hours (if stationary)
	10 seconds (optional)‡		10 seconds (optional)‡	30 minutes (if in motion)
Events (incl. alerts)	All events trigger data collection for analytics purposes.			
Gas is present (above blanking range)	10 seconds	1 minute (cellular)	10 seconds	2 minutes
		30 minutes (satellite)		

‡ Data can be set to 10-second data collection for Blackline Analytics. Contact Blackline Safety Customer Care to discuss the appropriate setting for your organization.

Forensic Data Review

In addition to the data captured for analytics, all G7 devices store logs of the past 22 hours of device usage on internal memory. These logs consist of trace gas and location data at 10 second resolution. In case of a serious incident requiring investigation, Blackline Safety recommends powering down any G7 devices involved following the emergency response. Contact Blackline Safety's customer care team to assist with retrieving the data you require for your investigation.

Working Outside of Cellular Coverage

G7 users may occasionally work outside of wireless coverage. In these cases, all data is stored on non-volatile memory on the G7 device and communicated to the Blackline Safety Cloud when a connection is re-established.

Key Terms (cont.)

G7x: Blackline Safety's cellular/satellite connected wearable safety device. G7x uses G7 Bridge to communicate with the Blackline Safety cloud. Frequency and duration of data communication can depend on whether G7 Bridge is connected via cellular or satellite.

G7 EXO: Blackline Safety's connected area monitor. G7 EXO is connected via cellular by default, but can be upgraded for satellite communication. Changes in the method of communication affects the frequency of data capture.

About Blackline Safety

Blackline Safety is a global safety technology leader. We provide comprehensive live monitoring and wireless gas detection to help teams working in hazardous environments respond to emergencies in real-time and manage efficient evacuations. Our talented team of designers and engineers create and manufacture everything in-house, from wearable technology and personal gas detectors to cloud-hosted infrastructure and web-based interfaces for global industry.

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