



# G7<sup>x</sup> + G7 BRIDGE

## THE WORLD'S HARDEST-WORKING PERSONAL MONITOR WITH LAST-MILE CONNECTIVITY

Blackline Safety's G7x system uses integrated satellite and cellular connectivity to wirelessly link your lone workers to real people, while automating data analytics and compliance reporting. Should a gas leak, injury or health event occur, G7x confidently accounts for everyone's well-being and whereabouts in real-time, so no call for help ever goes unanswered — even in the most remote locations. All safety incidents are communicated to live monitoring personnel who can mobilize responders to an employee's exact location or trigger an evacuation in real-time. And with two-way messaging, they can communicate directly with the worker too.

Featuring a modular cartridge design, our G7x system delivers exclusive customizability. Gas detection is tailored to work environments with a selection of plug-and-play cartridges and sensors. Everything else is equally configurable in your Blackline Live portal, from alert and alarms settings to check in timer intervals and more.

G7x collects more information than ever before available, automatically streaming it to the cloud. All event and alert data is time and location-stamped, powering our Blackline Analytics reporting platform. Bump test and calibration data is also communicated seamlessly for live compliance visibility and reporting. Teams can easily analyze their data without ever having to manually collect and compile it themselves.

### G7 Bridge

The G7x system includes the G7x user-worn device and G7 Bridge portable satellite base station. Leveraging the Iridium satellite network, up to five G7x devices can connect with one G7 Bridge through an industrial-quality 900 MHz radio link from up to 2 km away. G7 Bridge can mass-notify employees of the need to evacuate and connect workers to monitoring personnel via two-way messaging. G7 Bridge is self-powered and portable, allowing users to quickly move it from one vehicle to another. It has your teams' back — at all times, no matter their location.

## Features



Fall detection



No-motion detection



Two-way text messaging



Gas alarms



SOS alert



Check-in



Assisted-GPS



Indoor location technology



Dual mode communications



Configuration modes



Blackline Analytics reporting platform



Blackline Live safety monitoring portal

# DETAILED SPECIFICATIONS

## G7X

### Functional settings

Fall detection and No-motion detection: Tri-axis accelerometer, tri-axis gyro, software processing, configurable sensitivity, configurable time for no-motion SOS latch: Pull latch to trigger SOS alert  
 Silent SOS: Press and hold latch to trigger SOS alert  
 Low-battery: Configurable threshold  
 Worker check-in: Configurable timer (30 – 180 min, or off), automatic check-in when driving

### Gas cartridge features

Under limit  
 Over limit  
 Time-weighted average (TWA)  
 Short-term exposure limit (STEL)  
 High gas alert, Low gas alert  
 Bump test and calibration notification  
 Bump test and calibration failure

### Size & weight

G7 with Standard Cartridge  
 Size: 64 mm x 124 mm x 29 mm (2.52" x 4.88" x 1.06")  
 Weight: 162 g (5.7 oz)

### G7 with Single-gas Cartridge

Size: 64 mm x 128 mm x 29 mm (2.52" x 5.04" x 1.06")  
 Weight: 167 g (5.9 oz)

### G7 with Multi-gas diffusion Cartridge

Size: 66 mm x 150 mm x 29 mm (2.52" x 5.91" x 1.06")  
 Weight: 192 g (6.8 oz)

### G7 with Multi-gas pump Cartridge

Size: 66 mm x 151 mm x 38.5 mm (2.6" x 5.95" x 1.52")  
 Weight: 238 g (8.4 oz)  
 Target flow rate: 300ml/min  
 Maximum hose length: 100ft x 0.188" diameter (30.2m x 4.78mm) or 50ft x 0.125" diameter (15.25m x 3.17mm)

### Wireless updates

Device configuration changes: Yes  
 Device firmware upgrade over-the-air (FOTA): Yes

### User interface

Display: 168 by 144 pixel graphical, high contrast, liquid crystal display with front lighting  
 Menu system: Driven by three-button keypad  
 Power button: On/off  
 SOS latch: Send emergency alert  
 Multi-language support: Yes, EN, FR, ES, DE, IT, NL, PT

### User notification

Green SureSafe® light: Blinking (powered), continuous (connected)  
 Yellow top and front lights: Yellow pending alarm and yellow warning alarm  
 Red top and front lights: Red alert communicated  
 Blue LiveResponse™ top and front lights: Confirmation that a monitoring team has acknowledged the alert  
 Alarm Indicators: Speaker, LED lights and vibration motor  
 Speaker sound pressure level: ~95 dB @ 30 cm (~95 dB @ 11.8")

### Wireless communication

Works with G7 Bridge satellite base station  
 NA Radio: 902.0 – 928.0 MHz, 1 Watt  
 AS/NZ Radio: 915.0 – 928.0 MHz  
 Antenna: Internal

### Power & battery

Rechargeable Li-ion battery: 1100 mAh Li-ion  
 Battery Life: 18 hours at 20°C (68°F) under normal usage  
 Charge time: 4 hours

### Location technology

Constellations: GPS  
 Receiver type: 72-channel  
 Assisted-GNSS: No  
 Accuracy: 5 meters, CEP 50%, 24 hours stationary sky-view  
 Indoor location technology: Blackline Safety location beacons  
 Location update frequency: tied to Bridge schedule

### Approvals

FCC, ISED, RCM, SAR  
 Contains FCC ID: 2AZE-H-AMU900, IC: 27118-AMU900  
 Canada & USA: MC267256; Class I Division 1 Group A,B,C,D T4; Class I Zone 0 AEx da ia IIC T4 Ga; Ex da ia IIC T4 Ga  
 IECEx: CSA 17.0005X; Ex ib IIC T4 Gb  
 LEL: CSA C22.2 No.152; ISA 12.13.01  
 LEL Pump Cartridge: CSA C22.2 No.152; 0°C ≤ Ta ≤ 40°C; ANSI/ISA-12.13.01; -10°C ≤ Ta ≤ 40°C

### Environmental

Storage temperature: -30°C to 60°C (-22°F to 140°F)  
 Operating temperature: -20°C to 55°C (-4°F to 131°F)  
 Charging temperature: 0°C to 45°C (32°F to 113°F)  
 Ingress Protection: Designed to meet IP67

### Warranty

G7: two years limited warranty  
 Cartridges: lifetime with service plan  
 Blackline Complete: three year operating lease with three year warranty

## G7 BRIDGE

### Size & Weight

Size: 73 mm x 107 mm x 141 mm (2.87" x 4.21" x 5.55")  
 Measurements do not include mount  
 Weight: 540 g (19.04 oz)

### Wireless Communication

Antennas: Internal  
 Cellular Radio:  
 4G LTE 1, 12, 13, 18, 19, 2, 20, 26, 28, 3, 38, 39, 4, 40, 41, 5, 7, 8  
 3G UMTS 1900, 2100, 850, 900  
 2G GSM 850/900/1800/1900  
 Iridium Satellite (1621 MHz);  
 Radio link with G7x:  
 NA Radio: 902.0 – 928.0 MHz  
 AS/NZ Radio: 915.0-928.0 MHz  
 Range:  
 General use: up to 2 km  
 Hilltop to hilltop: 10+ km Terrain, foliage, and buildings will affect overall 900 MHz radio link range

### Power & Battery

Rechargeable Li-ion battery: 6800 mAh capacity  
 Battery Life: 50 hours @ 20°C (68°F); 44 hours @ -20°C (-4°F); 14 hours @ -40°C (-40°F); It is recommended that the hard wire kit is used anytime below -20°C  
 Charging connector: Micro USB  
 Antenna: Internal

### Environmental

Storage temperature range: -30°C to 60°C (-22°F to 167°F)  
 Operating temperature: -20°C to 55°C (-4°F to 131°F)  
 Charging temperature: 0°C to 45°C (32°F to 113°F)  
 Ingress Protection: Designed to meet IP65

### Warranty

One-year limited warranty

Gas	Sensor type	Range	Resolution
Ammonia (NH <sub>3</sub> )	Electrochemical	0–100 ppm	0.1 ppm
High-range ammonia (NH <sub>3</sub> )	Electrochemical	0–500 ppm	1 ppm
Carbon dioxide (CO <sub>2</sub> )	NDIR	0–50,000 ppm	50 ppm
Carbon monoxide (CO)	Electrochemical	0–500 ppm	1 ppm
Chlorine (Cl <sub>2</sub> )*	Electrochemical	0–20 ppm	0.1 ppm
Chlorine dioxide (ClO <sub>2</sub> )*	Electrochemical	0–2 ppm	0.01 ppm
Combustible-infrared (LEL-IR)	NDIR	0–100% LEL	1% LEL
Combustible MPS (LEL-MPS)*** <small>See Blackline's LEL-MPS datasheet for more information</small>	Molecular property spectrometer™	0–100% LEL	1% LEL
COSH	Electrochemical	0–500 ppm CO, 0–100 ppm H <sub>2</sub> S	1 ppm CO, 0.1 ppm H <sub>2</sub> S
High-range carbon monoxide (CO)	Electrochemical	0–2000 ppm	5 ppm
High-range hydrogen sulfide (H <sub>2</sub> S)	Electrochemical	0–500 ppm	0.5 ppm
Hydrogen cyanide (HCN)	Electrochemical	0–30 ppm	0.1 ppm
Hydrogen fluoride (HF)*	Electrochemical	0–10 ppm	0.1 ppm
Hydrogen resistant carbon monoxide (CO-H)	Electrochemical	0–500 ppm	1 ppm
Hydrogen sulfide (H <sub>2</sub> S)	Electrochemical	0–100 ppm	0.1 ppm
Nitrogen dioxide (NO <sub>2</sub> )	Electrochemical	0–50 ppm	0.1 ppm
Oxygen (O <sub>2</sub> )	Pumped electrochemical	0–25% vol	0.1% vol
Ozone (O <sub>3</sub> )*	Electrochemical	0–1 ppm	0.01 ppm
Photoionization (PID) ppm	PID	0–4,000 ppm	Dynamic resolution**, 0.1 ppm
Sulfur dioxide (SO <sub>2</sub> )	Electrochemical	0–100 ppm	0.1 ppm

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All specifications subject to change without notice.  
 \*Sensor does not work with pump cartridge. \*\*Dependant on correction factor.  
 \*\*\*Operating pressure: 80 to 120 kPa (11.6 psi to 17.4 psi).