blacklinesafety

G7ˣ + 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

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")

G7x wireless radio

Works with G7 Bridge satellite base station
Radio: 902.0 – 928.0 MHz, 1 Watt
AS/NZ Radio: 915.0-928.0 MHz
Antenna: Internal
Radio link range: 2 km (1.25 mi)

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

GPS Radio: 48-channel high sensitivity
Assisted-GPS: Yes (G7c model only)
GPS Accuracy: ~5 m (16 ft) outdoors
Indoor location technology: Blackline Safety location beacons
Location update frequency: G7c 5 min, G7x 15 min defaults

Approvals

G7c: SAR, RoHS, CE, RCM
Unit ID 3570xxxxxx
FCC ID: W77G7C2 **IC:** 8255A-G7C2
Contains FCC ID: XPY1EIQ24NN **IC:** 8595A-1EIQ24NN
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or
Unit ID 3567xxxxxx
FCC ID: W77G7C **IC:** 8255A-G7C
Contains FCC ID: XPY1CGM5NNN, **IC:** 8595A-1CGM5NNN
or
Unit ID 3566xxxxxx
Contains FCC ID: XPY1CGM5NNN, **IC:** 8595A-1CGM5NNN
Canada & USA: Class I Division 1 Group A,B,C,D T4; Class I Zone 0 AEx da ia IIC T4; Ex da ia IIC T4 Ga
IECEx: Ex da ia IIC T4 Ga
ATEX: Ex da ia IIC T4 Ga
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
G7x: SAR, RoHS, RCM
FCC ID: W77G7X **IC ID:** 8255A-G7X
Canada & USA: Class I Division 1 Group A,B,C,D T4; Class I Zone 0 AEx da ia IIC T4; Ex da ia IIC T4 Ga
IECEx: 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

Radio: UMTS 800/850/900/1900/2100; Quad-band GSM/GPRS 850, 900, 1800, 1900; Iridium Satellite (1621 MHz); ISM band radio (915 MHz)
900 MHz Radio: Americas: 902 – 928 MHz Australian/New Zealand: 916 – 927 MHz, 1 Watt

900 MHz Radio Link 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

Gas	Sensor type	Sensor model	Range	Resolution
Ammonia (NH₃)	Electrochemical	Citytech, Sensoric NH3 3E 100 SE	0–100 ppm	0.1 ppm
High-range ammonia (NH₃)	Electrochemical	Sensoric NH3 E3 500 SE	0–500 ppm	1 ppm
Carbon monoxide (CO)	Electrochemical	Citytech, 4CF+ CiTiceL	0–500 ppm	1 ppm
High-range carbon monoxide (CO)	Electrochemical	Citytech 4CM	0–2000 ppm	5 ppm
Hydrogen resistant carbon monoxide (CO-H)	Electrochemical	Citytech 2CF3	0–500 ppm	1 ppm
Carbon dioxide (CO₂)	NDIR	Gas Sensing Solutions, MinIR	0–50,000 ppm	50 ppm
Chlorine (Cl₂)	Electrochemical	Citytech, Sensoric Cl2 3E 50	0–20 ppm	0.1 ppm
Chlorine dioxide (ClO₂)	Electrochemical	Sensoric ClO2 3E 1 O	0–2 ppm	0.01 ppm
COSH	Electrochemical	Citytech, 4COSH Dual Gas CO/H₂S Sensor	0–500 ppm CO, 0–100 ppm H₂S	1 ppm CO, 0.1 ppm H₂S
Hydrogen cyanide (HCN)	Electrochemical	Sensoric HCN 3E 30 F	0–30 ppm	0.1 ppm
Hydrogen fluoride (HF)	Electrochemical	Sensoric HF 3E 10 SE	0-10 ppm	0.1 ppm
Hydrogen sulfide (H₂S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulfide CiTiceL	0–100 ppm	0.1 ppm
High-range hydrogen sulfide (H₂S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulfide CiTiceL	0-500 ppm	0.5 ppm
LEL-MPS™ See Blackline's LEL-MPS datasheet for more information	Molecular property spectrometer™	Nevada Nano, LEL MPS™	0–100% LEL	0.1% LEL
LEL-infrared (LEL-IR)	NDIR	MIPEX, 02-X-X-X.1	0–100% LEL	1% LEL
Nitrogen dioxide (NO₂)	Electrochemical	City Technology, 4ND	0–50 ppm	0.1 ppm
Oxygen (O₂)	Pumped electrochemical	City Technology, 4OxLL Longlife Oxygen CiTiceL	0–25% vol	0.1% vol
Ozone (O₃)	Electrochemical	Sensoric O3 3E 1	0–1 ppm	0.01 ppm
Photoionization (PID) ppm	PID	Ion Science, MiniPID 2	0–4,000 ppm	Dynamic resolution*, 0.1 ppm
Sulfur dioxide (SO₂)	Electrochemical	City Technology, 4S Rev. 2 Sulfur Dioxide CiTiceL	0–100 ppm	0.1 ppm

All specifications subject to change without notice.
* Dependant on correction factor