



## Features

- 100+ day battery life
- Diffusion and combination diffusion / pump model options
- Internal 4G/2G wireless works in 100+ countries
- Works globally with optional Iridium satellite communication
- Call for help using the SOS latch
- Works seamlessly with Blackline Live cloud-hosted software
- Communicates all data to the Blackline Safety Cloud — no need to collect data from the field
- Blackline Live automates configuration changes, plus firmware updates automatically
- Uses the same plug-and-play gas sensor cartridges as G7c
- Blackline Analytics automates compliance reporting
- Internal GPS and beacon location technology
- Manage G7 EXO area monitors in Blackline Live alongside G7c personal monitors

# G7 EXO

## MOVE YOUR AREA MONITORING PROGRAMME INTO THE CLOUD

Blackline revolutionised personal gas monitoring with the introduction of G7c, the world's only detector with integrated cellular communications and two-way voice calling to a live monitoring team. Delivering a broad range of gas detection and real-time safety features, G7c is the most connected gas detection instrument on the market.

We are changing the gas detection world again. Introducing G7 EXO — the world's first cloud-connected area monitor with integrated 4G/2G communications. From the moment G7 EXO is turned on, it automatically connects directly to the Blackline Safety Cloud and delivers a complete situational view to businesses. G7 EXO defines the ideal cloud-connected area monitor for facilities, maintenance projects, tank farms, fencelines, drilling rigs and disaster responses.

Unlike competitor solutions, G7 EXO area monitors do not need to be set up with a line of sight between each other. No more changing batteries every few days either. G7 EXO combines 100+ days of battery run-time and integrated communications for seamless remote configuration and monitoring.

# PRELIMINARY SPECIFICATIONS (SUBJECT TO CHANGE)

## Gas cartridge features

Under and over limit alerts  
Time-weighted average (TWA)  
Short-term exposure limit (STEL)  
Low and high gas alerts  
Bump test and calibration notification  
Bump test and calibration failure

## User interface

Display: 480 by 640 pixel, eight-color active matrix liquid crystal display  
Menu system: driven by three-button keypad,  
Power button: On/off  
SOS latch: Send emergency alert  
Multi-language support: (EN, FR, ES, DE, IT, NL, PT)

## User notification

Green connectivity light: Blinking (powered), continuous (connected)  
360-degree visible yellow, red and blue lights  
Yellow light: pending and warning alarms  
Red light: Red alert communicated  
Blue LiveResponse light: Confirmation that a monitoring team has acknowledged the alert  
Alarm sound pressure: ~110 dB @ 30 cm (11.8")  
Two-way voice calling sound pressure: ~95 dB @ 30 cm (11.8")

## Gas sensors

Gas	Sensor type	Sensor model	Range	Resolution
Ammonia (NH <sub>3</sub> )	Electrochemical	Citytech, Sensoric NH3 3E 100 SE	0–100 ppm	0.1 ppm
High-range ammonia (NH <sub>3</sub> )	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 (CO <sub>2</sub> )	NDIR	Gas Sensing Solutions, MiniIR	0–50,000 ppm	50 ppm
Chlorine (Cl <sub>2</sub> )	Electrochemical	Citytech, Sensoric Cl2 3E 50	0–20 ppm	0.1 ppm
Chlorine dioxide (ClO <sub>2</sub> )	Electrochemical	Sensoric ClO2 3E 1 O	0–2 ppm	0.01 ppm
COSH	Electrochemical	Citytech, 4COSH Dual Gas CO/ H <sub>2</sub> S Sensor	0–500 ppm CO, 0–100 ppm H <sub>2</sub> S	1 ppm CO, 0.1 ppm H <sub>2</sub> S
Hydrogen (H <sub>2</sub> )	Electrochemical	Citytech, H23E4	0–40,000 ppm	1% LEL (400 ppm H <sub>2</sub> )
Hydrogen cyanide (HCN)	Electrochemical	Sensoric HCN 3E 30 F	0–30 ppm	0.1 ppm
Hydrogen sulphide (H <sub>2</sub> S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulphide CiTiceL	0–100 ppm	0.1 ppm
High-range hydrogen sulphide (H <sub>2</sub> S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulphide CiTiceL	0–500 ppm	0.5 ppm
LEL-infrared (LEL-IR)	NDIR	MIPEX, O2-X-X-X.1	0–100% LEL	1% LEL
Nitrogen dioxide (NO <sub>2</sub> )	Electrochemical	City Technology, 4ND	0–50 ppm	0.1 ppm
Oxygen (O <sub>2</sub> )	Pumped electrochemical	City Technology, 4OxLL Longlife Oxygen CiTiceL	0–25% vol	0.1% vol
Ozone (O <sub>3</sub> )	Electrochemical	Sensoric O3 3E 1	0–1 ppm	0.01 ppm
Photoionisation (PID) ppm	PID	Ion Science, MiniPID 2	0–4,000 ppm*	Dynamic resolution*
Photoionisation (PID) ppb	PID	Ion Science, MiniPID 2	0–10,000 ppb*	Dynamic resolution*
Sulphur dioxide (SO <sub>2</sub> )	Electrochemical	City Technology, 4S Rev. 2 Sulphur Dioxide CiTiceL	0–100 ppm	0.1 ppm

## Pump module

User-upgradeable add-on: Yes  
Number of pump channels: 4  
Sampling period per channel: Adjustable  
Tubing length per channel: Up to 30 m (100 ft)

## Output ports

Intrinsically safe, highly configurable external signal ports designed to integrate with external alarms and electrical systems.

### Four pins per output port:

Pin 1 – Voc=12v, Isc=100mA, Ca=1uF, La=4mH  
Pin 2 – Voc=8v, Isc=100mA, Ca=10uF, La=4mH  
Pin 3 – Ground-side switch, IS requirements TBD  
Pin 4 – Ground

## Power & battery

Rechargeable battery capacity: 144 Ah (LiFePO<sub>4</sub>)  
Battery life in diffusion mode: 100 days at 20°C (68°F), LEL-IR, H<sub>2</sub>S, CO and O<sub>2</sub> config.  
Battery life in pump mode: 30 days at 20°C (68°F), LEL-IR, H<sub>2</sub>S, CO and O<sub>2</sub> config.  
Charge time: 12 hr (preliminary)  
Intrinsically safe trickle-charging port: Yes, supports G7 EXO continuous operation

## Cellular wireless radio

Wireless coverage: 100 countries, 200 wireless carriers  
International: 2G/4G radio, E-GSM 900 MHz, DSC 1800 MHz, 4G Bands 3,7,20  
North America: 3G/4G radio, 3G UMTS bands 2, 5, 4G Bands 2,4,5,12  
Antenna: Internal regionally optimized

## Satellite wireless radio option

User-upgradeable add-on: Yes  
Network: Iridium, global coverage

## Wireless updates

Device configuration changes: Yes  
Device firmware upgrade OTA: Yes

## Location technology

GPS radio: 48-channel high sensitivity  
Assisted-GPS: Yes  
GPS accuracy: ~5 m (16 ft) outdoors, open sky  
Location beacon radio: Yes, Blackline's proprietary location beacon technology and floor/site plans

## Size & weight

Material: Rugged housing built from aluminum, plastic and rubberized bumpers  
Size: 385 mm x 188 mm x 220 mm (15.1" x 7.4" x 8.7")  
Weight: 11.8 kg (26 lb)

## Environmental

Storage temp.: -40°C to 60°C (-40°F to 140°F)  
Operating temp.: -40°C to 55°C (-40°F to 131°F)  
Charging temp.: 0°C to 45°C (32°F to 113°F)  
Ingress protection: Designed to meet IP65

## Approvals (targeted)

RoHS, CE, RCM  
Canada & USA: Class I Division 1 Group A,B,C,D T4;  Class I Zone 0 AEx da ia IIC T3; Ex da ia IIC T4 Ga  
IECEX: Ex da ia IIC T4 Ga  
ATEX: Ex da ia IIC T4 Ga  II 1 G  
LEL: CSA C22.2 No.152; ISA 12.13.01

## Blackline Live web application

Cloud-hosted safety monitoring web application is highly customisable for every customer requirement. Includes live map, employee address book, user roles, alert management, device configurations, alert setups and reporting

## Warranty

G7 EXO area monitor: three-year hardware warranty  
Blackline Complete lease option: provides comprehensive warranty for full term  
Extended warranty available