blacklinesafety

G7

Changing the game.

Safety theory states that every incident is preventable. But we live in a practical world, limited by time and resources. The key is making better use of what's available. In an ever-connected world, can the safety industry do better while remaining practical and economic?

We say yes. For a decade, Blackline Safety has created technology that keeps teams connected while at work. And, we've raised the bar for connected safety and gas detection solutions — again.

G7 empowers your teams to monitor their environments for hazards and respond instantly should something happen. Our G7 solutions incorporate state-of-the-art technology to address the shortcomings of our competitors. By integrating connectivity, linking workers in the field with live monitoring personnel and automating safety monitoring processes, G7 can make the ultimate difference.

We are all about situational awareness, helping you make the difference no matter what scenario you are faced with. Don't fall victim to outdated technology and inefficient methods — gain control over the safety of your team with solutions from Blackline Safety.

You may not know them by name — but you've probably used their products

In the 1980's, Cody Slater founded **BW Technologies**. He was a key innovator in the portable gas detection market, creating the world's first disposable gas monitor and the Rig Rat — the industry's first wireless gas detector. Cody is now the CEO & Chairman of Blackline Safety.

Dr. John Finbow was a founder of **City Technology**, the world's largest supplier of gas sensors. In the early days, Cody and John collaborated to bring smaller and more affordable gas detectors to market. Dr. Finbow now occupies an influential position on Blackline's Board of Directors.

The leader in connected.

Supporting every ground-breaking innovation is a strong foundation. There's no replacement for experience and passion, and just like every successful team, we started out by recruiting the best people — setting out to revolutionise the world of safety.

This isn't our first time. The people at Blackline Safety have already hand-delivered some of the world's most advanced solutions in communications, location technology and gas detection.

It's not just about the tens of millions we invested into safety monitoring technology or how many cups of coffee helped inspire our team. You don't have to worry about how we researched customer needs, painstakingly examined user experiences and integrated our discoveries. It's all about the difference that G7 makes for your employees, their families and your organisation.

Blackline Safety was named Manufacturer of the Year for its outstanding contribution at the 2018 Oil and Gas Awards. To be eligible for this category, manufacturers must demonstrate innovation and leading adoption of its products and services by clients in the region.

G7 encapsulates our diverse history in designing and manufacturing connected safety technology while delivering revolutionary services to customers around the world.

There's been an H₂S leak...

With Blackline G7

00m 00s
Worker is exposed
to 90 ppm H₂S gas

00m 01s
G7 sends a
high H₂S alarm
to the Blackline
Live portal

00m 02s
Monitoring team
receives alert
showing 90 ppm
H₂S and worker's
location

00m 015s
Monitoring team
initiates emergency
response

00m 31s
Voice call
established with
worker who is in
obvious distress

01m 20s
Team members in
affected area receive
voice alert, mustering
them to safe areas

01m 40s
Closest appropriate
team members
are despatched to
worker's location with
breathing apparatus

02m 30s
Worker
rescued

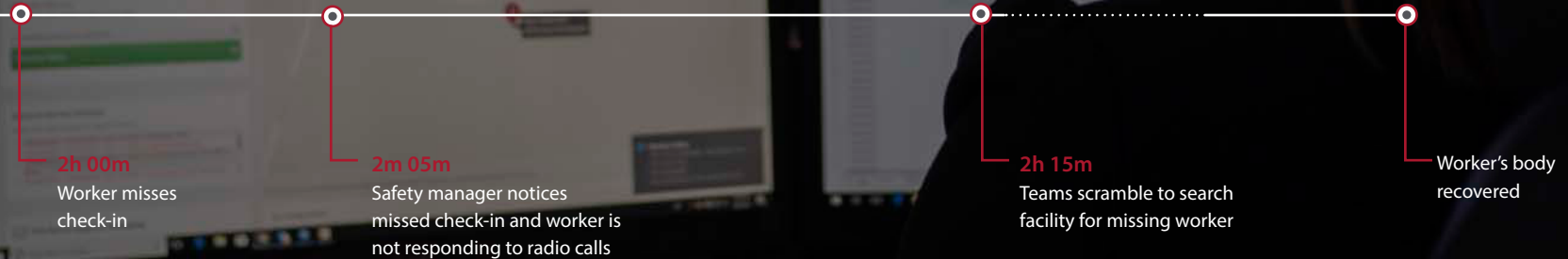**Traditional gas detector**

00m 01s
Gas detector beeps
and flashes, but no
one is nearby to
hear it

Every second counts.

When an incident occurs, the clock starts — and it doesn't stop until help arrives. What happens in between is in your hands. If an employee falls from a ladder, dangerous weather is approaching, or an explosion or gas leak has occurred, each passing minute without action could mean a worker not going home to their family.

G7 gives you the chance to control time. During an alert, integrated 2G/3G cellular connectivity links workers to live monitoring teams in real-time, meaning no call for help will ever go unanswered. Our cloud-hosted monitoring platform displays the whereabouts and well-being of team members in the field — easily identify if someone has encountered a potential hazard, along with all environmental data collected by their device, for empowered emergency responses.

Rest easy knowing you can deliver your team to safety and account for every single employee along the way. No one is left behind.

2h 00m
Worker misses check-in

2m 05m
Safety manager notices missed check-in and worker is not responding to radio calls

2h 15m
Teams scramble to search facility for missing worker

Worker's body recovered

The connected worker.

Our technology was designed to address every aspect of your safety programme, without any of the hassle. When things go wrong, industry-leading tools and technologies are in place to professionally detect and manage the incident in the shortest possible time.

G7 devices constantly stream situational data to our Blackline Live safety platform. The safety status of every team member is visible at a glance, and should something happen, identify precisely where to send help and how to prepare first responders for the incident.

With a fully-customised emergency response protocol, all your bases are covered. Choose to be notified by call, text or email in the event of an incident, or allow Blackline's Alarm Receiving Centre partners to professionally manage every alert. Always be in control, even when you can't physically be there.

Everything is at your fingertips, from alert management and calibration status to real-time gas readings — all updated to your web portal, directly from employee-worn G7 devices. With online device configuration and automatic over-the-air updates, your equipment is always up-to-date with zero downtime.

G7 INSIGHT

You want to keep your people safe — not replace sensors, upgrade software or retrieve compliance logs. G7 Insight does it all so you don't have to.

G7 Insight is the world's first fully-integrated gas detection programme. Replacing conventional 'beep-and-flash' gas detectors, G7 Insight bundles highly configurable plug-and-play gas sensor cartridges with a live compliance dashboard and automated reporting.

Traditional practices leave room for human error and often mean the compliance status of equipment is unknown at any given moment. Needing only a few minutes of connectivity each shift, G7 Insight automatically communicates all gas detection and compliance data recorded throughout a shift to the Blackline Safety Network. The end result is hassle-free compliance reporting. Act in the moment using data from the online dashboard — quickly see who is using compliant gas detectors and who isn't.

G7 Insight provides more information than any conventional detector, and delivers effortless review — giving time back to teams, allowing them to focus on what's important.

Big data, big insights.

Utilising integrated connectivity and automated data collection, G7 builds a body of data to provide measurable performance for today and tomorrow. It's never been easier to dive deeper into data to uncover safety insights that help power your business.

G7 devices collect and communicate more data than ever before, and automatically compile it in Blackline Live for easy review, quickly delivering valuable observations to enable rapid decisions. Gain insights into how and where equipment is being used, where hazards are being encountered and even identify which gas detection assets are performing well and which can be better utilised.

Included with Blackline Live, our live compliance dashboard and Blackline Analytics reports give you a real-world view of your fleet's operational and compliance status, empowering efficient and informed decision making. With G7, manually retrieving gas detection data logs from the field, compiling and reviewing reports is a thing of the past.
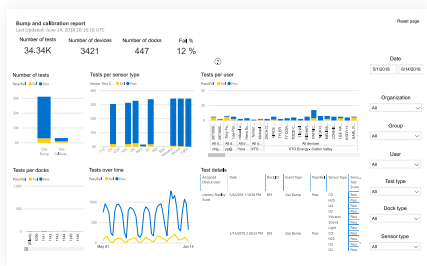
Gas detection compliance dashboard

Device usage report
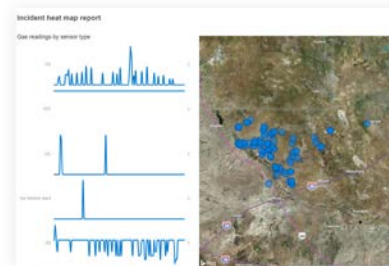
Incident heat map

Customise with real-time options

Address incidents as they happen. Real-time services utilise G7's wireless connectivity to link employees with live monitoring personnel.

- Real-time alerts
- Blackline 24/7 live monitoring
- Two-way voice calling
- Push-to-talk ᴺᴱᵂ

When the difference is between rescue and recovery, the ability to connect with a live monitoring team means that someone will always answer the call for help, the moment something happens.

Bump & calibration Report

Edit report | Explore | Refresh

Reset page

Bump and calibration report
Last Updated: 10/16/2018 7:00:14 AM MDT

Number of tests	Number of devices	Number of docks	Fail %
159.04K	10.74K	984	11 %

Date
4/16/2018   10/16/2018

Organization
All

Number of tests
Fail ● Fail ● Pass

Tests per sensor type
Sensor Test S... ● Fail ● Pass

Tests
Pass/Fail ● Fail ● Pass

Group
All

User
All

Tests per docks
Pass/Fail ● Fail ● Pass
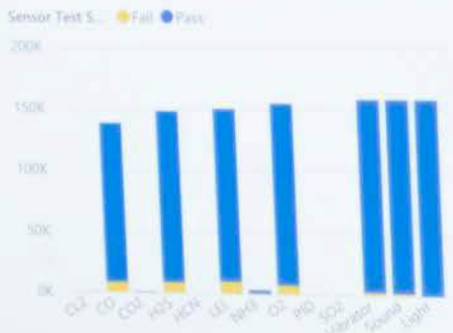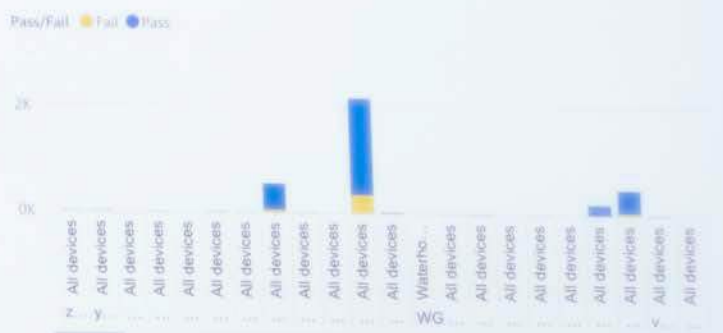
Tests over time
Pass/Fail ● Fail ● Pass

Test details

Assigned Device User	Date	Device ID	Dock ID	Cartridge ID	Event Type	P...
!Michael Smith	6/26/2018 4:13:12 PM	3566005578	1034	12545	Gas Bump	P...
	7/10/2018 6:18:34 AM	3566005578	904	12545	Gas Calibration	P...

Jul 2018   Oct 2018

Test type
All

Dock type
All

Sensor type
All

Maximise device up-time.

G7 features an exclusive modular interface with the industry's first plug-and-play gas sensor cartridges. With four cartridge options to choose from, customise your system to accommodate every gas detection or lone worker application.

Keep your devices in the field where they're needed. Cartridges are field-replaceable and eliminate downtime, ensuring seamless gas detection and safety monitoring while minimising maintenance costs. If a sensor fails or reaches the end of its serviceable life, simply switch out the cartridge with a new one in seconds. Best of all, our cartridges are covered with a lifetime service warranty.

Future-proof your investment — a single G7 device can go from a lone worker monitor, to a single gas or multi-gas detector as your needs and business change. Need a pump or a five-gas detector? We have those too.

Standard (no-gas) cartridge   *Single-gas cartridge*   *Multi-gas diffusion cartridge*   *Multi-gas pump cartridge*

Sensor portfolio

- Ammonia (NH_3)
- High-range ammonia (NH_3)
- Carbon dioxide (CO_2)
- Carbon monoxide (CO)
- High-range carbon monoxide (CO)
- Hydrogen-resistant carbon monoxide (CO-H)
- Chlorine (Cl_2)
- Chlorine dioxide (ClO_2)

- Combustible (LEL-infrared)
- CO+H_2S (COSH)
- Hydrogen (H_2)
- Hydrogen sulphide (H_2S)
- Hydrogen cyanide (HCN)
- Oxygen (O_2)
- Sulphur dioxide (SO_2)
- Photoionisation (PID)

Smarter confined space entries and leak checks

As the newest addition to our cartridge portfolio, the multi-gas pump cartridge features the world's smallest integrated pump. When installed on G7, the pump cartridge provides on-screen flow-rate monitoring. Never wonder if a pump is working properly again.

Users can toggle between pump and diffusion configuration modes — including pre-entry and leak check modes — without changing their hardware.

Taking advantage of G7's built-in assisted GPS technology, every confined space entry and leak check is location tagged for review in Blackline Live. Know who performed the activity, how long it took them and what the readings were throughout.

Automated productivity.

Safety and productivity are integral to the sustainability of every business. When both are aligned, businesses thrive. Our G7 portfolio focuses on streamlining the real-world activities of teams in the field through connectivity and real-time data collection.

- Quickly see if teams are where they should be, what they're doing and if there are groups or individuals that could use further instruction

- Achieve full control over your gas detection programme, automate equipment configurations and dig deep into data with ease

- Use your data to ensure efficient shutdowns and turnarounds. G7 has your safety and productivity needs covered

Push-to-talk

To manage tasks and meet deadlines, teams need to be able to talk to each other throughout a shift without interrupting their work flows. Our new push-to-talk capability delivers two-way walkie-talkie functionality integrated directly into G7. With a push of a button, team members can collaborate with others in real time. Work doesn't need to stop in order to coordinate activities and ensure everyone's safety.

Best of all, this new capability is cost effective and eliminates the need for employees to maintain multiple communication and safety devices.

Shutdowns and turn-arounds

Businesses are under more pressure than ever to perform, having to work smarter and do more with less. G7 with Blackline Live and our interactive turnarounds report give you all the answers in a straightforward, integrated solution.

Not only does G7 supercharge your gas detection programme, it provides you with the big-picture.

Easily analyse movement patterns throughout a site, compare groups and identify areas for efficiency optimisations. All the while, you're able to respond to any incident, at any moment. Need to evacuate your teams? We have that covered too.
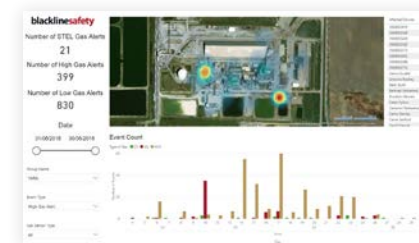
Meet the family.

G7c STANDARD

- Fully-connected personal safety monitor with intrinsically safe hardware
- Two-way text messaging
- Optional two-way voice calling (G7c)
- Fall, no-motion and missed check-in detection
- Manual SOS latch
- Assisted-GPS location technology
- Indoor location technology

G7c SINGLE-GAS

- Includes all features offered by G7 Standard
- Single-gas sensor cartridge with choice of: CO, high-range CO, CO_2, Cl_2, ClO_2, H_2, H_2S, HCN, NH_3, high-range NH_3, O_2, PID, SO_2
- G7 gas cartridges can be returned to Blackline at the end of their service life
- Lifetime gas sensor warranty

G7c MULTI-GAS DIFFUSION

- Includes all features offered by G7 Standard
- Multi-gas sensor cartridge with choice of: CO, high-range CO, CO-H, CO_2, COSH, Cl_2, ClO_2, H_2, H_2S, HCN, NH_3, high-range NH_3, O_2, PID, SO_2
- G7 gas cartridges can be returned to Blackline at the end of their service life
- Lifetime gas sensor warranty

G7c MULTI-GAS PUMP

- Includes all features offered by G7 Standard
- Multi-gas sensor cartridge with choice of: CO, high-range CO, CO-H, CO_2, COSH, Cl_2, ClO_2, H_2, H_2S, HCN, LEL-IR, NH_3, high-range NH_3, O_2, PID, SO_2
- G7 gas cartridges can be returned to Blackline at the end of their service life
- Lifetime gas sensor warranty

Meet their friends.

BLACKLINE LIVE

- Monitor all devices with one, easy to use cloud-hosted portal

- Quickly locate a worker on the live map

- Customise device configurations with real-time, over-the-air device updates

- G7 firmware updates are triggered in Blackline Live, performed over-the-air

- Access control tools allow you to tailor user access according to administrator, monitoring team and supervisor roles

- Use the live compliance dashboard to review fleet compliance status

- Dive deep into data and review reports in Blackline Analytics

G7 DOCK

- Affordable and simple design

- All calibrations and bump tests managed using G7 device interface and intuitive menu

- Calibration and bump test logs are communicated to the Blackline Safety Network via the inserted G7 device

- Supports G7 devices equipped with single-gas, multi-gas diffusion and multi-gas pump cartridges

- G7 Dock server-synchronised configurations are automatically updated when G7 is bumped or calibrated

LOCATION BEACON

- Compact, wireless, self-powered positioning signal transmitters

- Ideal for use in areas where GPS may be inconsistent or unavailable

- Beacons broadcasts a unique ID number that is received by nearby G7 devices

- Beacon locations can be recorded on custom floor or site plans in Blackline Live, providing valuable situational context

- Precise positioning empowers the fastest emergency response — time is never wasted looking in the wrong places

Detailed Specifications.

Standard G7 Safety Alert Features

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

Additional 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 27 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 27 mm (2.52" x 5.04" x 1.06")
Weight: 167 g (5.9 oz)

G7 with Quad-gas Cartridge
Size: 66 mm x 150 mm x 27 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)

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.

Wireless Updates

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

User Interface

168 by 144 pixel graphical, high contrast, liquid crystal display with front lighting, menu system driven by three-button keypad, power button (on/off), check-in button (check-in/silent SOS), SOS latch (send emergency alert)

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")
Voice calling: Speakerphone and phone modes (G7c model only)

G7c Wireless Radio

Wireless coverage: 100 countries, 200 wireless carriers
North America: 2G/3G radio, GSM 850 MHz, PCS 1900 MHz, 3G UMTS bands 2, 5 and 6
International: 2G/3G radio, E-GSM 900 MHz, DSC 1800 MHz, 3G UMTS bands 1 and 8
Antenna: Internal regionally optimised

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

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

Approvals

G7c: SAR, RoHS, CE, RCM
Unit ID: 3567xxxxxx
FCC ID: XPY1CGM5NNN | **IC ID:** 8595A-1CGM5NNN
Contains FCC ID: XPY1CGM5NNN, IC: 8595A-1CGM5NNN
OR
Unit ID 3566xxxxxx
Contains FCC ID: XPY1CGM5NNN, IC: 8595A-1CGM5NNN
Canada and USA: Class I Division 1 Gr 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 C€ ⟨Ex⟩ II 1 G

LEL: CSA C22.2 No. 152; ISA 12.13.01

Gas sensor specifications

Gas	Sensor type	Range	Resolution
Ammonia (NH₃)	Electrochemical	0–100 ppm	0.1 ppm
High-range ammonia (NH₃)	Electrochemical	0–500 ppm	1 ppm
Carbon monoxide (CO)	Electrochemical	0–500 ppm	1 ppm
High-range carbon monoxide (CO)	Electrochemical	0–2000 ppm	5 ppm
Hydrogen resistant carbon monoxide (CO-H)	Electrochemical	0–500 ppm	1 ppm
Carbon dioxide (CO₂)	NDIR	0–50,000 ppm	50 ppm
Chlorine (Cl₂)	Electrochemical	0–20 ppm	0.1 ppm
Chlorine dioxide (ClO₂)	Electrochemical	0-2 ppm	0.01 ppm
COSH	Electrochemical	0–500 ppm CO, 0–100 ppm H₂S	1 ppm CO, 0.1 ppm H₂S
Hydrogen (H₂)	Electrochemical	0–40,000 ppm	1% LEL (400 ppm)
Hydrogen cyanide (HCN)	Electrochemical	0–30 ppm	0.1 ppm
Hydrogen sulphide (H₂S)	Electrochemical	0–100 ppm	0.1 ppm
High-range hydrogen sulphide	Electrochemical	0-500 ppm	0.5 ppm
LEL-infrared (LEL-IR)	NDIR	0–100% LEL	1% LEL
Oxygen (O₂)	Pumped electrochemical	0–25% vol	0.1% vol
Photoionisation (PID)	PID	0–6,000 ppm	0.1 ppm (0–100 ppm), 2 ppm (100–6,000 ppm)
Sulphur dioxide (SO₂)	Electrochemical	0–100 ppm	0.1 ppm

Environmental

Storage temperature: -30°C to 55°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 IP67

Warranty

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

All specifications are subject to change

COMING SOON — THE NEXT BIG THING FROM THE CONNECTED SAFETY LEADER

blacklinesafety

www.BlacklineSafety.com