

Your sensors. Your data. Your choice.

✓ Scalable Protection

The new generation of Black Ghost sensors offers greater flexibility for organisations seeking to reduce mortality and injury from avoidable causes, such as heat stress and falls. The network of sensors can be scaled up or down, depending on the level of threat to life.

✓ Physiological Monitoring

Depending on the use case, the system can be tailored to capture as much or as little physiological data as required. This ensures both maximum comfort and the optimum cost-benefit balance.

✓ Third Party Sensor Integration

The body-wide network can integrate with third-party devices including radiation dosimeters, noxious gas and environmental sensors to provide greater situational awareness.








blackghost

equivital™

equivital™

You protect us:  
Black Ghost protects you

Parameter	EQ02+ LifeMonitor Sensor Electronic Module (SEM)	EX EQ02+ LifeMonitor (Intrinsically Safe) Sensor Electronic Module (SEM)
		
Size SEM (Overall Dimensions)	78mm x 55mm x 11mm	78mm x 55mm x 11mm
Sensor Electronic Module (SEM) Weight	38g	60g
Sensor Belt Weight	100g	100g
Power	3.7V 300mA Lithium-Polymer rechargeable cell	3.7V 300mA Lithium-Polymer rechargeable cell
Li Polymer Recharge Time	From Flat ~1hr	From Flat ~150mins
Operating Temperature	-10°C to +50°C	-10°C to +50°C
Storage Temperature	-20°C to +55°C	-20°C to +55°
Operating Humidity & Storage	0% to 95% RH Non-Condensing	0% to 95% RH Non-Condensing
Battery Life	Partial Disclosure – 12 hours (typical when logging in Bluetooth on mode)	Partial Disclosure – 12 hours (typical when logging in Bluetooth on mode)
Battery Life with an external battery pack	38 Hours	N/A
Sensor Belt Duration of Continuous Use	24 Hours	24 Hours
SEM Internal Memory	8GB	8GB
Hazardous Area Classification	Not Applicable	
EU Classification	Class IIb (SEM) Class I (Sensor Belt)	Class IIb (SEM) Class I (Sensor Belt)
FDA Device Classification	Class II	Class II
IP Rating	IPx7	IPx7
Approvals	Part 15 	Part 15 

HIDA3330-BRO-BG-Gp1

You protect us: Black Ghost protects you.

Equival Ltd  
Unit F, Buckingham Business Park  
Swavesey, Cambridge CB24 4UQ  
United Kingdom  
EQ-000657-MB-1

T: +44 (0) 1954 233 430  
F: +44 (0) 1954 233 431  
E: info@equivital.com

For more information, visit:  
[www.equivital.com](http://www.equivital.com)

[www.equivital.com](http://www.equivital.com)



blackghost

## Keeping you safe in challenging environments

Black Ghost offers a lifeline for anyone operating in hazardous working environments. Whether you're a soldier in a military training exercise, a firefighter on emergency response or a maintenance worker on an offshore oil rig, safety is critical. The Equival LifeMonitor measures heart rate, respiratory rate, body temperature and activity which enables the monitoring of dangers such as heat stress and extreme fatigue.

Heat stress is one of the biggest causes of peace time injury and fatality around the world. The personal protective equipment (PPE) designed to keep you safe can make you more susceptible to heat related injury- but its effect on cognitive function means individuals often fail to recognise the danger signs.



### Key benefits:

- ✓ Health and safety reassurance
- ✓ Improved performance
- ✓ Optimised operational efficiency

#### Measurement

- ✓ Heart rate
- ✓ Heart-rate variability
- ✓ Respiratory rate
- ✓ Activity, including fall alert
- ✓ Body temperature

#### Performance

- ✓ Altitude to 30,000ft
- ✓ Temperature from -10 oC to 50 oC
- ✓ IP67 waterproof rating
- ✓ ATEX, IECEx and ETL approved
- ✓ FDA 510K and CE approved
- ✓ US Army ATEC approved

With its unique heat stress algorithm and a user-friendly interface, Black Ghost displays each individual's key physiological data in real time – enabling you to have up-to-the-minute knowledge of the condition of each member of your team. Black Ghost offers a way of preventing your team members becoming statistics – saving the lives of those who risk their own safety every day in the course of their job.

The Black Ghost system acts as your eyes and ears to protect your team. At its core is the Equival LifeMonitor, a body-worn smart sensor that monitors an individual's key physiological data round the clock. It delivers the data to medics who can view and analyse, in real time, the status of all team members.

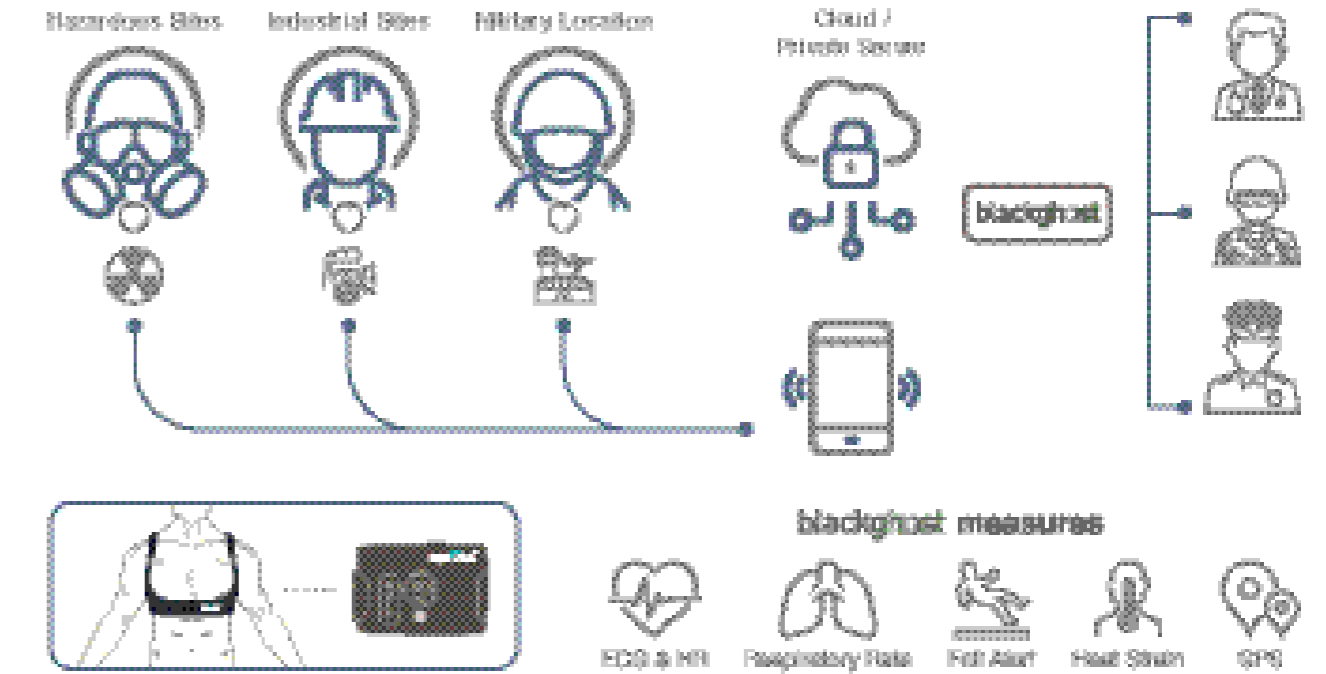
The user-friendly Black Ghost web app is designed to provide the actionable data you need, without information overload. Alerts and thresholds based on heart rate and heat strain can be tailored for each subject.

The system provides a Heat Strain Index (HSI) which scores current heat risk on a level between 1 and 10. It can even provide a valuable Heat risk warning predicted 15 minutes in advance as an individual approaches critical levels. This data can also be used to make informed decisions about work/rest duty cycles.

The system includes GPS location data so that you can pinpoint where your team member is when there is a problem. Exclusion zones can be created, with alerts triggered on entry, exit or proximity. Contextualised data provided by Black Ghost can benefit both training and deployment preparation and execution.

As well as monitoring individuals in real time, the system can be used to review the effectiveness of training schedules – and highlight soldiers who may be at greater risk of heat related injury in the future.

The system can also integrate third-party sensor and website data – providing even greater situational awareness.

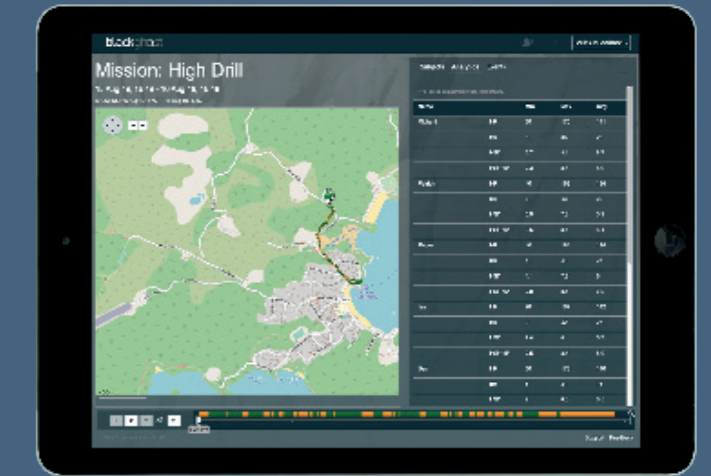


## Black Ghost system

The Black Ghost system comprises the Equival LifeMonitor, communications infrastructure and a customisable, data-driven software application. At its core is Black Ghost's unique heat stress algorithm. The system provides valuable data in real time and for after-action review.

The secure Black Ghost website, hosted in the cloud, maintains HIPAA protection and allows rapid deployment. For organisations requiring additional security, Black Ghost can be hosted locally with no internet connection.

Black Ghost is compatible with android mobile devices, Wi-Fi, and satellite communications. Custom communications options can be provided if required.



The Black Ghost system provides real-time actionable information for critical decision making.

Black Ghost is compatible with android mobile devices, WiFi, TETRA and satellite communications. Custom communications options can be provided if required.