

- ✓ Better Data
- ✓ Better Decisions
- ✓ Better Performance

EQ02 LifeMonitor

Sensor Electronics Module (SEM)



The EQ02 LifeMonitor is the world's leading multi parameter, ambulatory monitoring device. It is designed with precision to deliver accurate, mobile human condition and performance data.

The LifeMonitor senses, records, monitors and intelligently processes data captured from the human and is able to transmit this over a wireless or wired interface.

Data Channels

The LifeMonitor can output the following channels of data simultaneously:

- ECG; Heart rate; R-R interval
- Respiratory rate;
- Skin temperature;
- Accelerometer X,Y,Z
- Body position; Motion status; Fall alert
- Device alarms; Subject alerts

External Sensor Channels

Using external sensors, with wired or wireless connections, the LifeMonitor can measure the following channels of data:

- Oxygen Saturation (including Photoplethysmograph at 16 bit resolution)
- Galvanic skin response
- Core temperature capsule
- Dermal temperature patch
- GPS

The LifeMonitor Body Area Network (BAN)

The Equivital™ LifeMonitor enables a comprehensive Body Area Network by allowing external Equivital™ sensors and 3rd party complementary sensors to transmit their information to the LifeMonitor.

The data from these sensors is integrated into the LifeMonitor datastream. This can then either be logged to the memory for later download or transmitted in real time.

Data Viewing and Analysis

Data can be transmitted, in real time, to any eqView software suite application. This includes eqView Mobile, a smart phone application currently compatible with RIM and Android operating systems. For more information on the eqView Software suite or our SDKs please refer to the main Equivital TnR Product Range brochure.



Key Features

- Very high data quality with very low data loss rates
- Light weight and optimised for long wear comfort
- Up to 48hrs battery life in full disclosure logging mode*
- 8GB memory gives up to 7 weeks of data logging*
- Easy to follow LED lights status interface
- Flexible software platforms with development modules available for 3rd party application developers.

*Dependant on configuration

Key Use Cases

- ✓ Professional Military training organisations (Health & Safety)
- ✓ Human performance training and research
- ✓ Safety critical applications
- ✓ Customisable for integration with command and control systems
- ✓ Remote patient monitoring for mobile health applications
- ✓ Pharmaceutical clinical trials

EQ02 LifeMonitor SEM Specifications



System Specifications

Memory	8GB	50 days continuous monitoring ¹
Power	3.7V 300mAh Li-Po rechargeable cell	Recharge from flat in ~1 hour
Battery life	>24 hours ¹	
Communications	Class 1 Bluetooth 2.1	100m operating range ²
Sensor belt	2 Lead ECG	
	Expansion derived respiration	
Connectivity	USB	2.0 compatible
Configuration	Via USB or OTA	Over the Air configuration from base updates

Physical Specifications

Weight	38g	
Size	78mm x 53mm x 10mm	
IP Rating	IP67	Waterproof
Operating Temperature	-10 to +55°C	
Operating Humidity	0 to 95% RH Non-condensing	

Measurements

Two Lead ECG	256 Hz	
Heart Rate	25-240 bpm	
R-R Interval	Derived	Short heart rate reporting window or long heart rate reporting window configurable
Breathing Rate	0-70 Breaths per minute	
Skin temperature	0°C to 60°C	±0.3°C Accuracy using IR Thermometer
Core Body Temperature		Wireless receiver compatible with Vitalsense accessories
Body Position	All orientations	Includes fall detection and motion
Physiological Welfare Index	Derived	
Tri-Axis Accelerometry	±2, ±4, ±8, ±16g	Configurable detection sampling rate 25Hz or 250Hz range ³

Approvals

	CE Certified	
	FDA Device Classification Class II	
	EU Device Classification Class IIb	
	Device safety EN60601-1 Classification	

¹ Subject to device configuration ² Subject to environment ³ Release Feb 2012

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