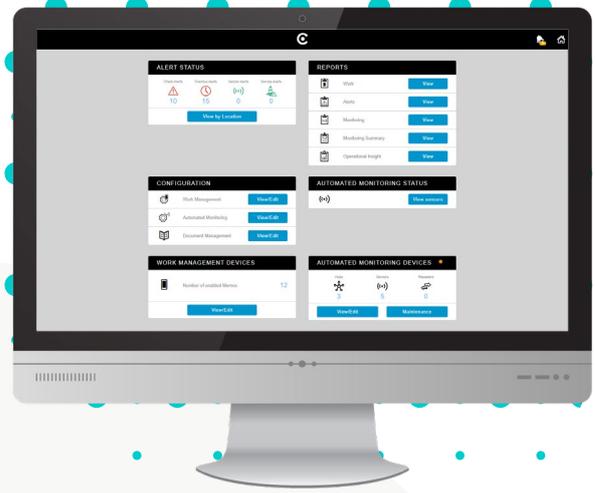


Connected Automated Monitoring

Automated Monitoring combines robust, self-contained wireless sensors and cloud technology to monitor and protect your critical assets 24/7. It integrates fully with Connected Workflow Management, and is perfect for industrial, commercial and medical applications.



Automated Monitoring Functionality



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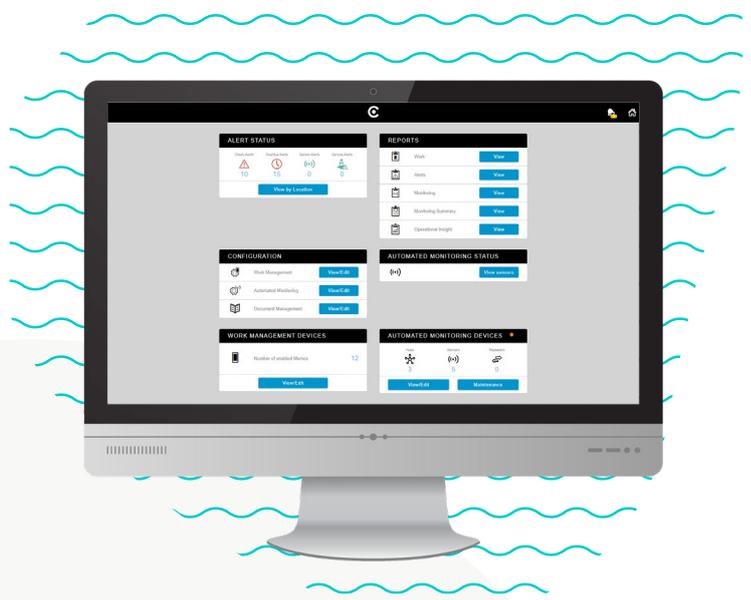
The solution connects and monitors all critical inventory in real time, for hassle-free compliance, maximum uptime and insights that enable instant corrective action.

- A control centre - a secure, resilient cloud platform to store data, manage incidents and generate reports. The intuitive dashboard shows data trends, insights, KPIs and further enables management and configuration of accounts and users.
- A reliable, managed wireless network to gather sensor data
- A wide range of purpose-built robust sensors, developed to monitor the temperature of fridges, freezers and hot holds

These capabilities are available under an innovative subscription model that spreads costs and provides certainty through a contract. For a simple regular fee, our “Peace of Mind” contract model provides both the initial hardware and ongoing calibration, support and hardware failure replacements.

Cloud platform

Cloud platform



Cloud platform – secure online software and storage and permanent access to the latest software

- High availability platform operation with redundant, secure storage of data
- No separate costs for servers, database management and administration

		Automated Monitoring
Sensor data management	Sensor readings are kept securely in replicated cloud stores	✓ 1-5 minute reading intervals Retention 1 year online - archived data can be retrieved on request
Alerting	-Sensor reading limits -Configurable alert delays -Configurable sensor rule timing -System performance alerts (batteries, signal lost etc) -Alert handling workflow -Automated alerts -Automated escalations	✓ ✓ ✓ ✓ 2 stage Email ✓
Reporting and visualisation	-Sensor reading charting -Sensor data report generation -Alert data report generation -Alert reporting API	✓ ✓ csv export ✓ csv export ✓ REST
Security	-Security model	defined role / permission structure

Wireless Monitoring Network

The Automated Monitoring Hub creates a low power, secure wireless network that connects your sensors to the cloud using smart, secure, low power technology. Where necessary, repeaters extend the network to deliver monitoring over a wider area.

Features

- Simple, low cost installation, needs only a standard ethernet or WiFi connection
- Scalable solution, adjust network coverage and add/remove/replace sensors as needed to meet the business needs
- Secure and reliable data capture, transfer and storage guarantees protection of record integrity
- Calibration maintained by easily swapping sensors for newly calibrated parts under Peace of Mind subscription plans
- Real-time, visual sensor alerts, so users can react quickly to protect the business effectively
- Intelligent self-diagnostics, system alerts maximise sensor network efficiency and uptime

Hub and repeaters



Technical Specification

Hub

Dimensions	120.7 x 121.7 x 43.0mm
Weight	240g (inc. wall bracket)
Water resistance	Splash proof when mounted in correct position
Ambient operating conditions	0 to +40°C 32° to 104°F at ≤ 90% humidity (non-condensing)
Power source options	External DC power supply (+5V, 2A) or Power over Ethernet (PoE)
Power backup	≥ 1 hour from internal battery (lithium-ion polymer 3.7V 1300 mAh)
Internet connectivity	10/100Mbps Ethernet with PoE and 2.4GHz Wi-Fi®
Wireless communication protocols	802.11 b/g/n Frequency range: 2.4 GHz: 2412-2484 MHz, max power:18.5 dBm 5 GHz:4910-5825 MHz, max power:18 dBm ZigBee® 2.4 GHz (IEEE 802.15.4) Frequency range: 2400-2500 MHz, Max power:12 dBm (USA) 8 dBm (ROW)
Certification	CE, FCC, UL and NSF compliant
User feedback modes	Push switch and red/green/high intensity blue LEDs for status indication
Max. number of configurable ZigBee sensors/repeaters	< 100 devices (under optimised, balanced network conditions)

repeater

Dimensions	192.3 x 93.3 x 38.3mm
Weight	160g (inc. wall bracket)
Water resistance	Splash proof when mounted in correct position
Ambient operating conditions	0 to +40°C 32° to 104°F at ≤ 90% humidity (non-condensing)
Power source options	External DC power supply (+5V, 1A)
Power backup	≥ 1 hour from internal battery (lithium-ion 3.7V 2250 mAh)
Wireless communication protocols	ZigBee® 2.4 GHz (IEEE 802.15.4) Frequency range: 2400-2500 MHz, Max power:12 dBm (USA) 8 dBm (ROW) CE, FCC, UL and NSF compliant
Certification	CE, FCC, UL and NSF compliant
User feedback modes	Magnetic reed switch and red/green/high intensity blue LEDs for status indication



Sensors

Our sensor range includes self-contained sealed devices suitable for a wide range of fridges, freezers and hot hold units, as well as more traditional sensors that connect to a wireless transmitter (the Sensor+ range). Sensors come with manufacturers' calibration certificates, with ISO 17025 UKAS calibration available where required.

- [Sensor temperature>>](#)
- [Sensor temperature 100>>](#)
- Sensor+
 - [air temperature, air temp and humidity, door>>](#)
 - [ultra cold, hot, ultra hot>>](#)

sensor

temperature



Continuous, automated temperature measurements. Reliably measures and stores temperature data every five minutes. Ensures continuous records for audit and review.

Features

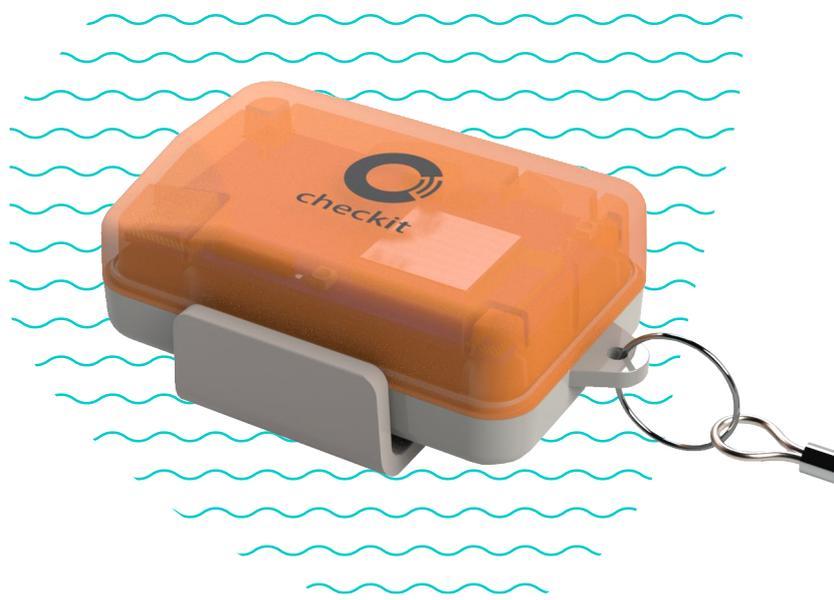
- Simple to install
- Easy to use with no maintenance
- Reliable continuous measurements
- Intelligent data transfer – no lost records
- Supports static or mobile monitoring applications
- Flexible ‘rule’ configuration for sensor measurement and status – triggers alerts exactly when you need them

Technical Specification

Dimensions	49.0 x 75.0 x 27.6mm	
Weight	80g (inc. wall bracket)	
Water resistance	IP67 rated	
Power Source	Non-rechargeable lithium thionyl chloride 3.6V Axial (2600mAh) AA size battery (sealed – not replaceable). Lifetime approximately 2 years over its operating temperature range.	
Ambient operating conditions	-30 to +60° C -22 to +140°F	at 0 to 100% humidity (condensing or non-condensing)
Wireless communications protocols	ZigBee® 2.4 GHz (IEEE 802.15.4) Frequency range: 2400-2500 MHz, max power: 8 dBm	
Sensor type and integration	Measurement Specialties TSY02D (ASIC)	
Temperature range	-30 to +60° C -22 to +140°F	
Temperature accuracy	±1.2°C (-30 to -20°C)	±2.5°F (-22 to -4°F)
	±0.7°C (-20 to -5°C)	±1.2°F (-4 to -23°F)
	±0.4°C (-5 to 50°C)	±0.7°F (-23 to 122°F)
	±0.7°C (50 to 60°C)	±1.2°F (122 to 140°F)
Temperature resolution	0.1°C 0.1°F	
Data sampling/transfer rate	Data sampling every 5 minutes, data transfer every 15 minutes	
Data storage capacity	5 days (small time-drift beyond 5 days offline, data overwrite after 18 days)	
Certification	CE, FCC, UL and NSF. EN 12830 (static locations) EN 12830 class 0.5, 1 or 2 depending on the temperature range.	
User feedback modes	Magnetic reed switch and red/green LEDs for status indication	

sensor

temperature 100



Self-contained, wireless temperature sensor for warm environments. For applications needing a fully wireless sensor capable of operating to 100°C. Reliably measures and stores temperature data every 5 minutes. Ensures continuous records for audit and review.

Features

- Operates up to 100°C
- Simple to install
- Easy to use with no maintenance
- Reliable, continuous measurements
- Intelligent data transfer – no lost records
- Food-safe design suitable for hot hold food displays
- Flexible ‘rule’ configuration for sensor measurement and status – triggers alerts exactly when you need them
- Sealed, water resistant case

Technical Specification

Dimensions	49.0 x 75.0 x 27.6mm	
Weight	80g (inc. wall bracket)	
Water resistance	IP67 rated	
Power Source	Non-rechargeable lithium thionyl chloride 3.6V Axial (1800mAh) AA size battery (sealed – not replaceable)	
Ambient operating conditions	0 to +100° C 32 to +212°F	at 0 to 100% humidity (condensing or non-condensing)
Wireless communications protocols	ZigBee® 2.4 GHz (IEEE 802.15.4) Frequency range: 2400-2500 MHz, max power: 8 dBm	
Sensor type and integration	Measurement Specialities TSY02D (ASIC)	
Temperature range	0 to +100°C 32 to +212°F	
Temperature accuracy	±1.0°C (0 to 100°C)	±1.8°F (32 to 212°F)
Temperature resolution	0.1°C 0.1°F	
Data sampling/transfer rate	Data sampling every 5 minutes, data transfer every 15 minutes	
Data storage capacity	5 days	
Certification	CE compliant	
User feedback modes	Magnetic reed switch and red/green LEDs for status indication	

Warning: Exposure to temperature above 150°C (302°F) may result in fire, explosion and a severe burn hazard. If there is any risk of contacting surfaces above said temperature then use of supplied tether is recommended.

sensor+



Flexible, automated monitoring solutions. Range of sensor heads for a variety of applications. Ensures continuous records for audit and review.

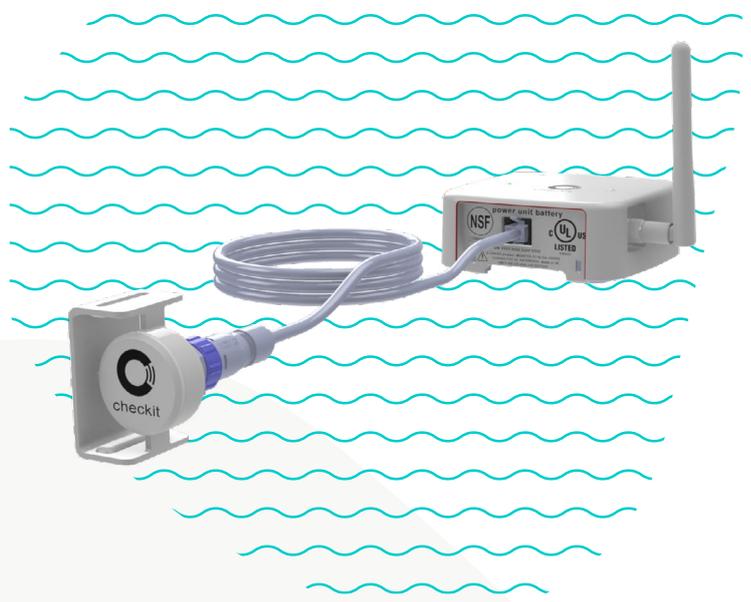
Features

- Easy to install and maintain
- Reliable continuous measurements

- Intelligent data transfer – no lost records
- Supports static or mobile monitoring applications
- Flexible ‘rule’ configuration for sensor measurement and status – trigger alerts exactly when you need them
- Available with calibration

Technical Specification

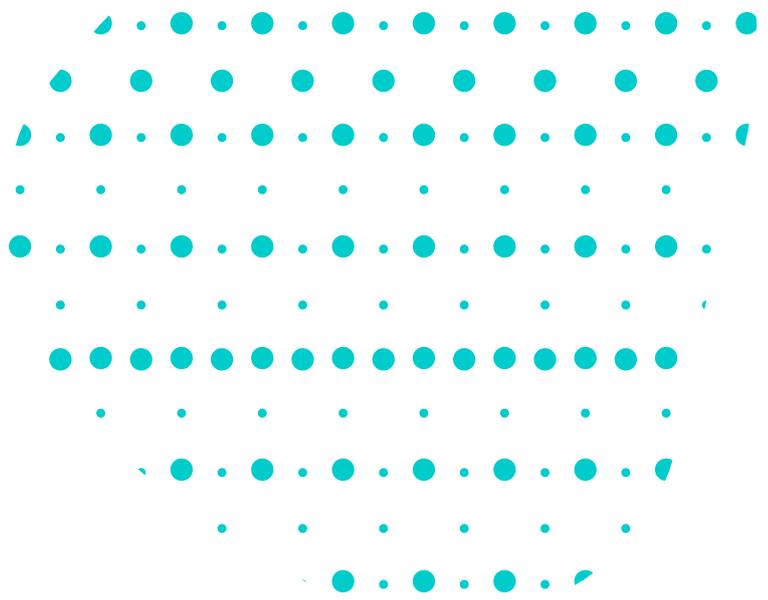
Sensor+	air temperature	humidity and air temp	door
Data sampling/transfer capacity	Data sampling every 1 minute, data transfer every 5 minutes		Real-time read and transfer on door open/close status
Data storage capacity	3.5 days (data overwrite beyond this)		5460 door open/close events
Certification	CE, UL, FCC and NSF		
	EN 12830 (static locations) class 0.5, and 1 depending on the temperature range		
User feedback modes	Magnetic reed switch and red/green LEDs for status indication		
Dimensions	49.0 x 37.4 x 32.9mm		14.0 x 38.0 x 8.5mm (x2)
Weight	90g (inc. wall bracket, sensor and cable)		60g (inc. door magnet, sensor and cable)
Ambient operating conditions	-20 to +60°C, -4 to 140°F, at 0 to 100% humidity (condensing or non-condensing)		
Sensor type and integration	Measurement Specialties TSYS02D (ASIC) with 2m lead	Sensirion SHT21 with 2m lead	Elmdene with 2m lead
Temp measurement range	-20 to +60°C, -4 to +160°F		-
Temperature accuracy	± 0.6°C (-20° to -5°C) ± 0.3°C (-5° to 50°C) ± 0.6°C (50° to 60°C) ± 1°F (-4° to +23°F) ± 0.5°F (+23° to 122°F) ± 1°F (122° to +140°F)	± 1°C (-20° to 5°C) ± 0.5°C (5° to 60°C) ± 1.8°F (-4° to 41°F) ± 1°F (41° to 140°F)	-
Temperature resolution	0.1°C, 0.1°F		
Sensitivity	-	-	Magnetic activation ≤ 10mm from sensor
Humidity range	-	0 to 100% humidity	-
Humidity accuracy	-	±6%ΔRH (0 to 20% and 80 to 100% RH) ±4%ΔRH (20 to 80% RH)	-
Humidity resolution	-	0.1%	-



Technical Specification

Sensor+	ultra cold	hot	ultra hot
Data sampling/transfer capacity	Data sampling every 1 minute, data transfer every 5 minutes		
Data storage capacity	3.5 days (data overwrite beyond this)		
Certification	CE, FCC, UL, and NSF. EN 12830 (static locations)		
	EN 12830 class 2	EN 12830 class 1	EN 12830 class 2
User feedback modes	Magnetic reed switch and red/green LEDs for status indication		
Dimensions	125mm long x 4.25mm diameter, 1820mm inc cable		
Weight	70g		
Operating temperature	-40 to +85°C, -40 to +185° F (electronics) -40 to +260°C, -40 to +500°F (cable) 0 to 100% humidity (non-condensing)		
Sensor type	Measurement Specialties TSY501		
Temperature measurement range	-80 to +25°C -112 to +77°F	0 to +100°C +32 to +212°F	+100 to +260°C +212 to +500°F
Temperature accuracy	± 2°C, ±3.6°F	± 0.8°C, 1°F	± 2°C, ±3.6°F
Temperature resolution	0.1°C, 0.1°F		
Sleeve colour	Blue	Yellow	Red
power unit			
Dimensions	92.3 x 93.2 x 38.3mm		
Weight	145g (inc. wall bracket)		
Water resistance	Splash proof when mounted in correct position		
Power source	Non-rechargeable lithium thionyl chloride 3.6V (2600 mAh) AA size battery, user replaceable, lifetime approx. 8 months for 1 minute sampling over the operating temperature range below.		
Operating Temperature	0 to +40°C, +32 to +104°F ≤ 90% humidity (non-condensing)		
Wireless communication protocol	ZigBee® 2.4 GHz (IEEE 802.15.4) Frequency range 2400 – 2500 MHz, max power: 12 dBm (USA), 8 dBm (ROW)		

Peace of mind contract & service options



Checkit has pioneered the development of a Peace of Mind model that provides everything you need to run your Automated Monitoring system for a simple regular payment. Peace of Mind includes

Hardware – supply and replacements – all required equipment and any replacements needed to maintain performance

- In the event of failure, hardware will be replaced throughout the contract
- Rapid, remote diagnosis of hardware issues to reduce downtime
- Self-swap or engineer site visit

For further clarification on definitions, please refer to our [terms of service](#).

Calibration

- Calibration maintained by switching out sensor elements as needed. Options for customer or Checkit to perform the swaps

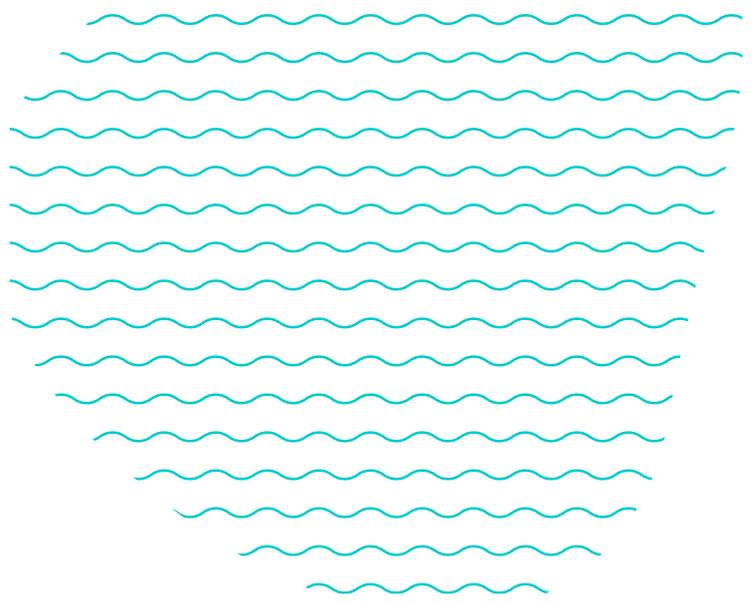
Monitoring & support – 24/7/365 sensor alerts and support service options to ensure you know when something needs attention

- Automated sensor alerts by email
- Helpdesk and support portal: product issues and questions supported remotely (during office hours)

Maintenance - ongoing system maintenance and software upgrades to keep your system running

- Cloud, app and embedded software are periodically updated to improve performance and increase functionality (applies to functionality within the edition purchased)

Peace of mind contract & service options



Supporting regulated businesses:

Automated Monitoring is suitable for businesses operating under the requirements of MHRA / CQC / GMP / 21CFR part 11.

	Automated Monitoring
Hardware	✓
Breakdown replacement	✓
Self-swap	✓
Engineer call out cover	optional - per visit
Calibration	Single point
Initial	✓
UKAS 17025 accreditation	✓ (optional for UK customers)
Ongoing calibration	Sensor swap-out - customer and engineer service options
Preventative maintenance health check	Per visit
Temperature mapping	-
Monitoring & support	
24/7/365 Automated alerting	✓
Helpdesk and support portal	✓
Cloud platform	✓
Software maintenance	✓

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