

Data Sheet

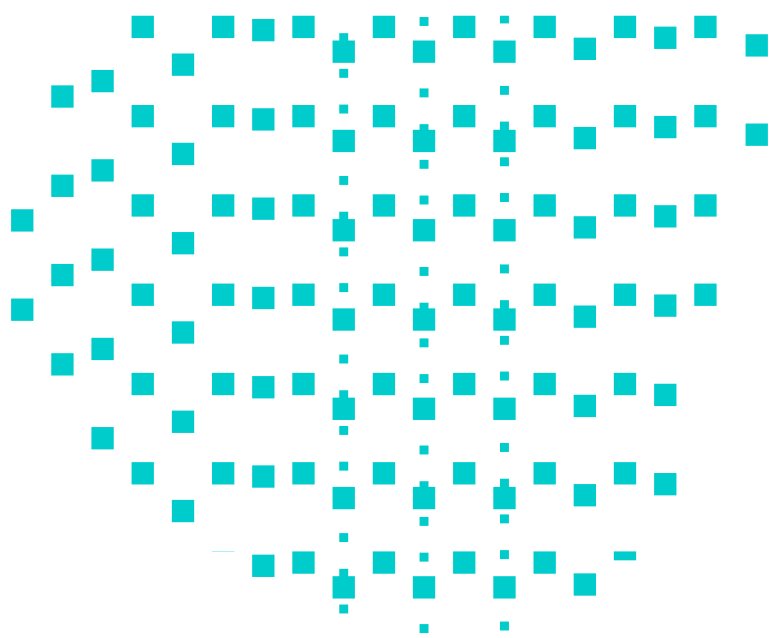
Connected Automated Monitoring+



Automated Monitoring+ is our premium solution designed for the most demanding compliance environments in Healthcare and Life Sciences.



Automated Monitoring+ Functionality



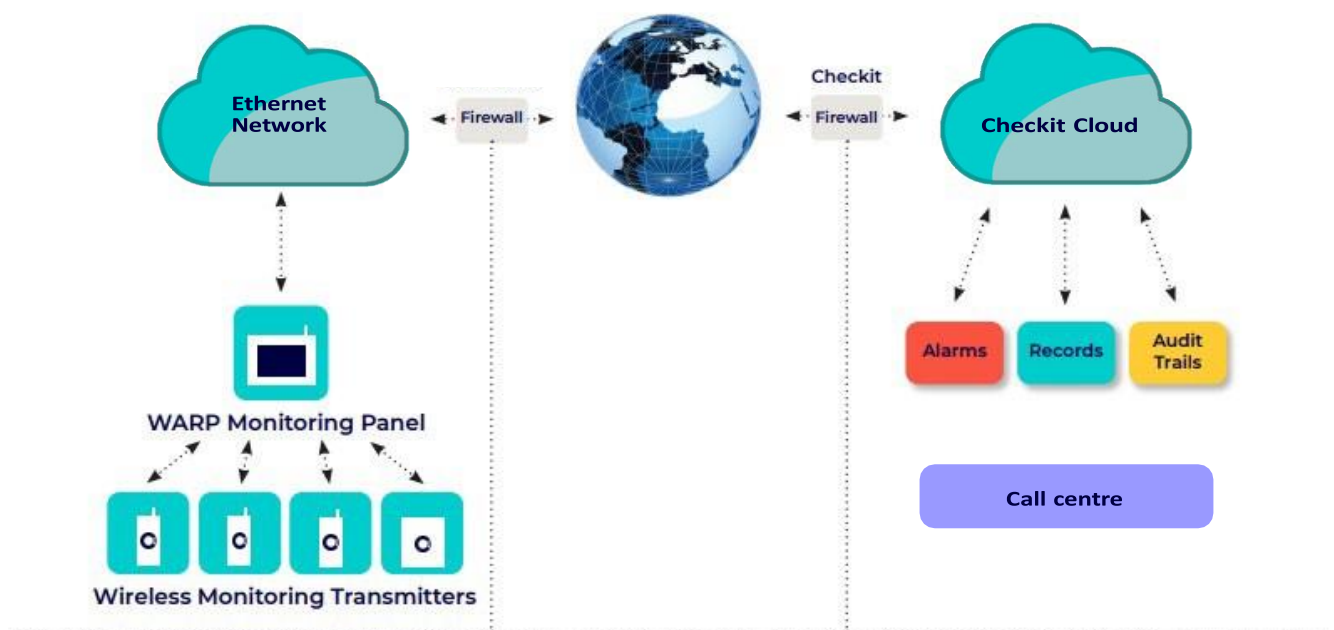
Automated Monitoring+ provides everything you need to monitor and protect your assets in a regulated environment.

- A secure, resilient cloud platform to store data, manage incidents and generate reports
- A reliable, robust wireless network to gather sensor data
- A wide range of sensors, developed to meet the needs of healthcare and life sciences applications for accuracy and calibration

Automated Monitoring+ is designed for organisations that need to comply with exacting standards including CQC, MHRA, 21CFR and GMP.

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.

System overview



Cloud platform

Cloud platform

Cloud platform – secure online software and storage (Checkit Europe Ltd is certified to ISO27001) 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 minute reading intervals Retention 3 years (extended periods available)
Alerting	-Sensor reading limits -Configurable alert delays -System performance alerts (batteries, signal lost etc) -Alert handling workflow -Automated alerts -Automated voice alerts to on duty staff Members supported by 24*7 call centre	✓ ✓ ✓ 4 stage Email, SMS Option
Reporting and visualisation	-Sensor reading charting -Sensor data report generation -Alert data report generation	✓ pdf ✓ pdf ✓ pdf
Security	-Security model -Two credential model for sign offs -Full audit trails for all user actions	configurable permissions per user ✓ ✓

Wireless Monitoring Network

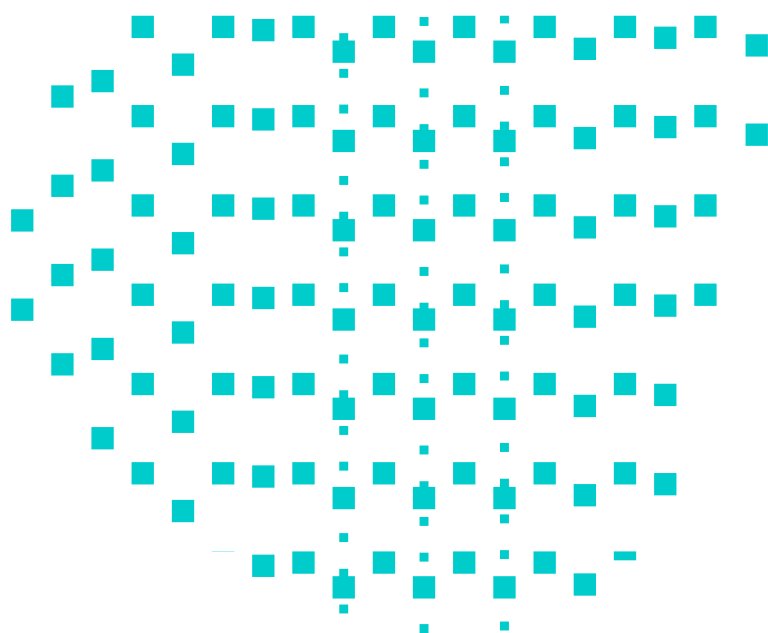
Network components

- WARP Monitoring Panel (base station for sensor network on customer premises)
- Repeaters (extend range of wireless)

Wireless signalling frequency	866MHz UK 915MHz US
Signal range	Up to 70ft
Signalling protocols	Mi Wi based T-Mesh™ self-healing protocols
Remote ethernet connection	Fully configurable IP settings

WARP

monitoring panel



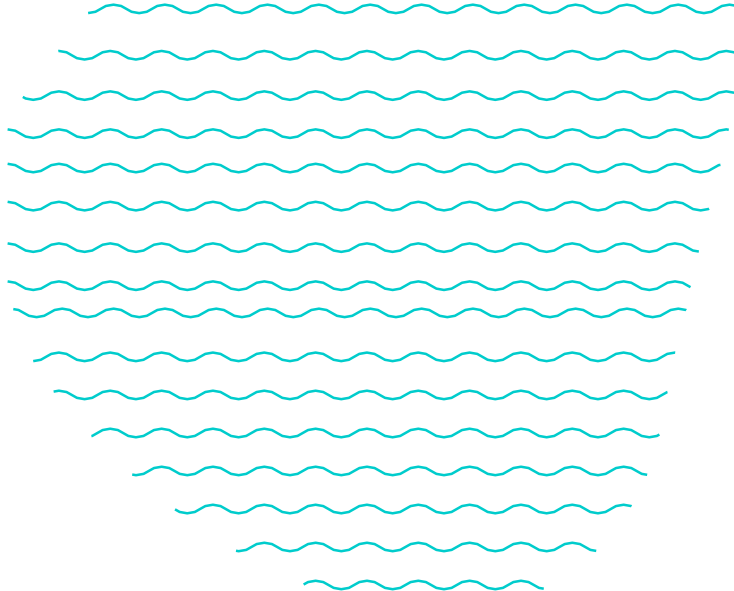
The Wireless Alarm Receiver Panel or WARP receives and records transmissions from the wireless transmitters installed in your facility. The panel is equipped with a multifunction colour screen graphical display and fixed function membrane buttons.

An automatic scrolling window sequentially displays the current value of every sensing probe in the system.

Technical Specification

Part No.	GENII/WARP/100
AC power range	110/240VAC 50/60HZ
Rechargeable battery	7 hours standby time from AC power loss
Storage medium	Solid State Drive (SSD)
Storage capacity	40 years, 246 sensing probes, 1 minute frequency
Logging frequency	1 minute
Sensing probe capacity	Up to 246
Signal repeater capacity	Up to 8
Display	Full colour TFT graphical display screen
Remote Ethernet connection	Fully configurable IP settings
Local Ethernet connection	DHCP Automatic panel IP address 10.95.0.1
User interface	GUI display and membrane push buttons Password protected access to web via local Ethernet port
Audible alarm sounder	Optional external alarm module Optional clean relay contact repeat alarm connection

Repeaters



The Wireless Signal Repeater is designed to boost the transmission signal from distant wireless transmitters to the WARP panel. Each signal repeater requires a 24 hour AC power source and is provided with a rechargeable battery that gives up to 7 hours of standby operation.

Technical Specification

Wireless signal repeater	
Part No.	GENII/SRPT/100
AC power range	110/240VAC 50/60HZ
Logging frequency	1 minute
Rechargeable battery	7 hours standby time from AC power loss
Signal range	Up to 70ft
Signalling protocols	Mi Wi based T-Mesh™ self-healing protocols

The Ethernet Signal Repeater is designed to enable the WARP to connect to sensors located a considerable distance away, such as on separate floors or even in another building.

The Ethernet Signal Repeater captures the signals from the transmitters and sends them via an ethernet connection to the WARP. Each signal repeater requires a 24 hour AC power source and is provided with a rechargeable battery that gives up to 7 hours of standby operation.

Technical Specification

Ethernet signal repeater	
Part No.	GENII/SRPT/100E
AC power range	110/240VAC 50/60HZ
Remote ethernet connection	Fully configurable IP settings
Logging frequency	1 minute
Rechargeable battery	7 hours standby time from AC power loss
Signal range	Up to 70ft
Signalling protocols	Mi Wi based T-Mesh™ self-healing protocols

Sensors

Sensors

Our sensor range provides a wide range of sensing options to a high degree of accuracy, supported by our in-house calibration services. Our hardware interfaces allow additional specialist equipment to be easily added as required.

[PT1000 Fridge / Freezer Temperature>>](#)

[PT1000 LN2 / Cryogenic Temperature>>](#)

[NTC Thermistor Fridge/Freezer Temperature>>](#)

[Instrumentation Transducers>>](#)

[PT1000 / Door Contact Dual Monitor>>](#)

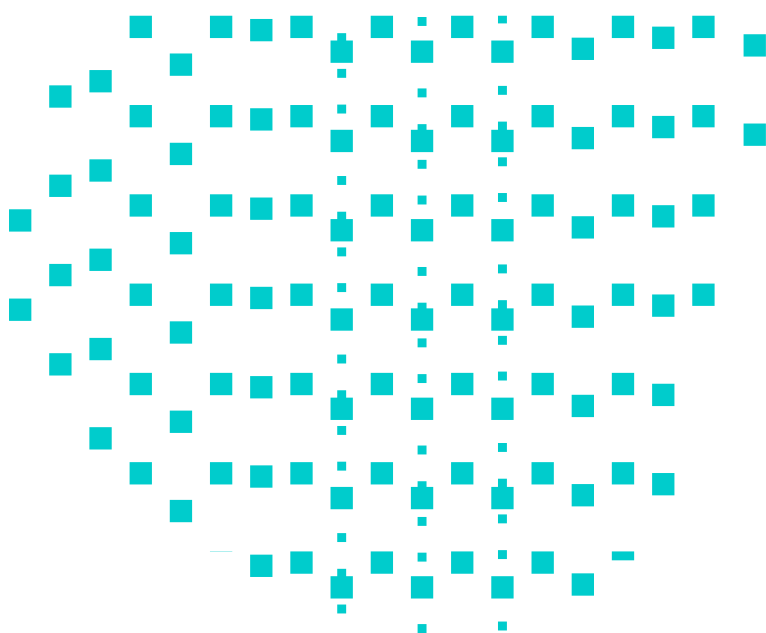
[Dual Alarm / Status Contact Monitor>>](#)

[Room Ambient Temperature and Humidity>>](#)

[Integrated Cold Chain Temperature Monitor>>](#)



PT1000 Fridge / Freezer Temperature



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This temperature transmitter is designed for installation within either a refrigerator or freezer. The wireless transmitter head is mounted outside of the refrigerator or freezer and a pluggable RTD PT1000 temperature probe is installed inside the fixture.

Technical Specification

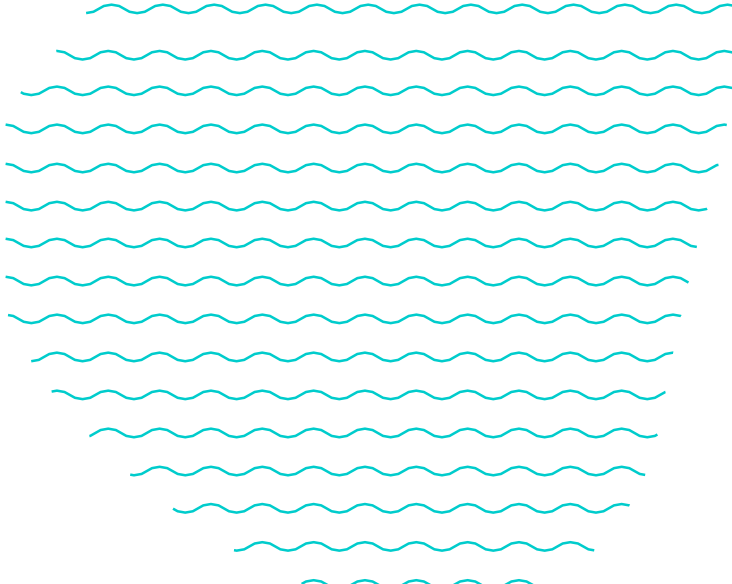
Part No.	GENII/FRZ/101/A
Sensor type	RTD PT-1000 sensor
Temperature Range	-100.0 to +200.0°C
Full Range Accuracy	+/- 0.2°C
Full Traceability	Yes
Unique Serialization	Yes
Probe Cable Length	2.0M (6.5ft)
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

PT1000 LN2 / Cryogenic Temperature

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This temperature transmitter is designed for installation within either a LN2 (liquid nitrogen) tank or flask container.

The wireless transmitter head is mounted outside of the fixture and a special pluggable RTD PT1000 temperature probe is installed inside of the tank or flask.



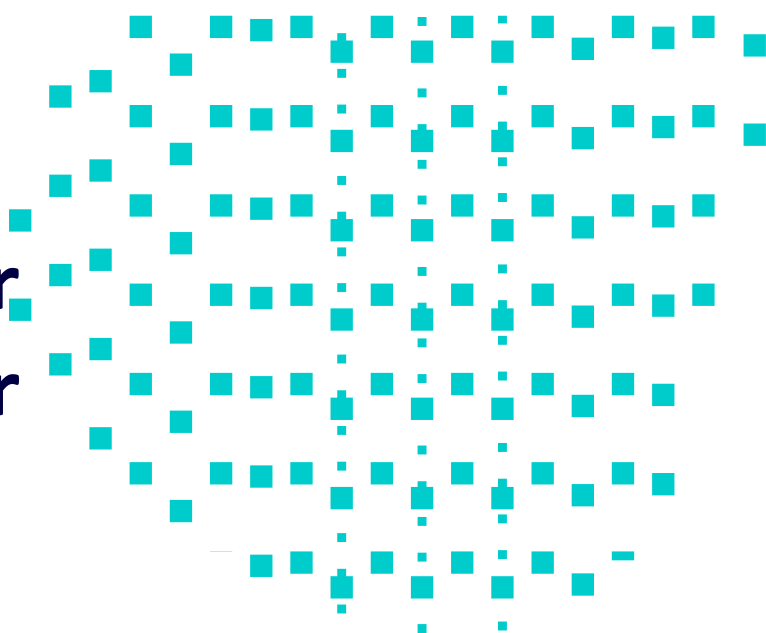
Two probe types are available depending on application. These are:

- A** - Suitable for mounting in LN2 storage tanks
- B** - Suitable for mounting in LN2 storage flasks

Technical Specification

Part No.	GENII/FRZ/101/TNK/A - Suitable for mounting in LN2 storage tanks GENII/FRZ/101/FLK/A - Suitable for mounting in LN2 storage flasks
Sensor type	RTD PT-1000 sensor
Temperature Range	-200.0 to +40.0°C
Full Range Accuracy	+/- 0.3°C
Full Traceability	Yes
Unique Serialization	Yes
Probe Cable Length	2.0M (6.5ft)
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

NTC Thermistor Fridge / Freezer Temperature



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This temperature transmitter is designed for installation within either a refrigerator or freezer when extended probe cable lengths are required, for example, in coolers or walk in freezers.

This transmitter is a single channel (single probe) device.

The wireless transmitter head is mounted outside of the refrigerator or freezer and a pluggable NTC thermistor temperature probe is installed inside the fixture.

The NTC thermistor probe bead characteristic is type 10K3A.

Technical Specification

Part No.	GENII/NTC/101/A
Sensor type	NTC Thermistor type 10K3A
Temperature Range	-50.0 to +40.0°C
Full Range Accuracy	+/- 0.2°C
Full Traceability	Yes
Unique Serialization	Yes
Probe Cable Length	3.0M (10.0ft), 15.2M (50.0ft)
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind) applies)

Instrumentation Transducers

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This transmitter is designed for connection to specialist instrumentation transducers for non temperature applications.

This transmitter type is typically used for the sensing and recording of O₂ (Oxygen), CO₂ (Carbon Dioxide), pressure, differential pressure, high temperature, etc.

Two versions of this transmitter type are available for connecting to a wide range of industry standard transducers. These are:

- Type 1
- 4 – 20ma 24VDC loop powered transducers.
- Type 2
- 0 - 10VDC externally powered transducers.

Technical Specification

Part No.	GENII/420/101/A GENII/010/101/A
Power Source	24 hour AC power
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

PT1000 Temperature / Door Contact Dual Monitor

This temperature transmitter is designed for installation within either a refrigerator or freezer to measure temperature whilst at the same time monitoring a door status contact.

The wireless transmitter head is mounted outside of the refrigerator freezer and a pluggable RTD PT1000 temperature probe is installed inside of the fixture. The door status monitor input is connected to a separate magnetic door switch.

Technical Specification

Part No.	GENII/DCT/102/A
Sensor type	RTD PT-1000 sensor Digital input magnetic door contact switch
Temperature Range	-100.0 to +200.0°C
Full Range Accuracy	+/- 0.2°C
Full Traceability	Yes
Unique Serialization	Yes
Probe Cable Length	2.0M (6.5ft)
Door Contact Cable Length	2.0M (6.5ft)
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

Dual Alarm / Status Contact Monitor

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This transmitter is designed to monitor clean contact digital inputs derived from equipment status and/or alarm contacts.

The wireless transmitter head is mounted outside of the specific fixture and pluggable cables are connected to the appropriate



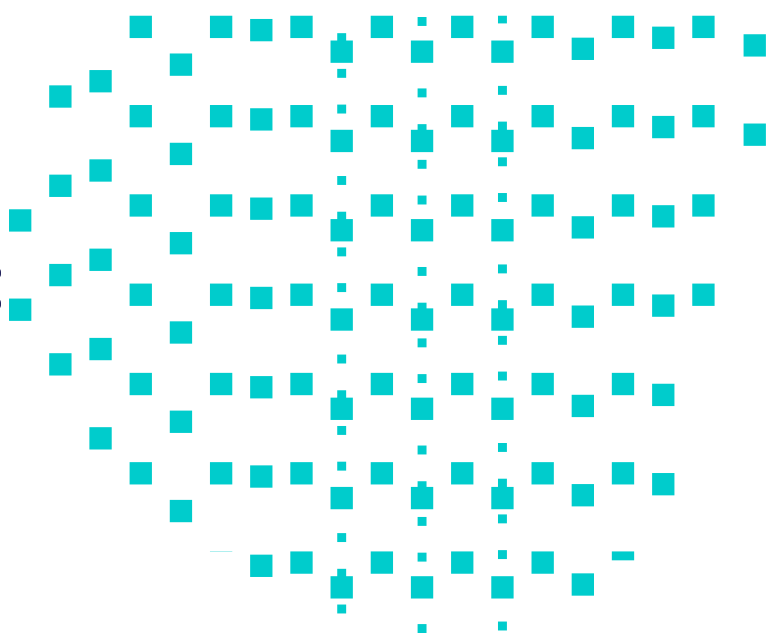
status/alarm contacts provided by the fixture manufacturer.

The clean contact status/alarm input connection cable length is 2.0M (6.5ft). magnetic door switch.

Technical Specification

Part No.	GENII/CCM/102/A
Typical Monitored Contacts	Magnetic Door AC Power Failure Refrigerator/Freezer Fault Incubator Fault Gas Alarmed Systems Incubator CO2 Alarm Refrigeration Plant Status Refrigeration Plant Alarm BAC-T Alarm
Refrigeration Compressor Monitored Contacts	Fault HP Cutout LP Cutout Run Status Motor Trip
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

Room Ambient Temperature and Humidity



The room ambient sensing transmitter is designed specifically for installing into open room environments.

The wireless transmitter is surface mounted on a wall in an appropriate location within the room.

This transmitter is capable of sensing both temperature and humidity levels in an ambient environment.

Technical Specification

Part No.	GENII/AMB/100EA
Sensor type	Sensiron SHT-85 sensor
Temperature Range	-40.0 to +123.0°C
Full Range Accuracy	+/- 0.2°C +/-3%RH
Full Traceability	Yes
Unique Serialization	Yes
Power source	Battery
Battery life	3-4 years
Local memory storage	7 days
Calibration options	Single point Three point
Warranty	12 months (unless Peace of Mind applies)

Integrated cold chain temperature logger

An accurate and robust stand-alone device intended for the monitoring and recording of medical/scientific products during transportation. Providing an uninterrupted chain of temperature recordings and end-to-end product temperature traceability.

Features

- **Journey reporting**
Instantly available at point of delivery with the visual display and pdf journey report file.
- **Journey history integration**
Integrate recorded history logs with our cloud-based, fixed storage temperature monitoring and recording services.

Technical Specification

Part No.	GENII/TTMU/100
Compliance	EN 12830:1999
Sensing Options	Configurable Internal or External PT1000 RTD
Display scale	Configurable °C or °F
Measurement range	-200.0 to +40.0°C (-328.0 to 104.0°F)
Resolution	0.1°C
Tolerance	25.0 to 40.0°C (+77.0 to 104.0°F) = +/-0.5°C (0.90°F) -25.0 to 25.0°C (-3.0 to 77.0°F) = +/-0.3°C (0.54°F) -100.0 to -25.0°C (-148.0 to -3.0°F) = +/-0.5°C (0.90°F) -200.0 to -100.0°C (-328.0 to -148.0°F) = +/-0.75°C (1.30°F)
Logging frequency	Configurable between 5 seconds to 24 hours
Storage capacity	32,000 data points 10 minutes = 222.0 Days, 5 minutes = 111.0 Days, 1 minute = 22.0 Days, 30 Seconds = 11.0 Days, 15 Seconds = 5.5 Days, 10 Seconds = 2.7 Days, 5 Seconds = 1.8 Days
Temperature alarms	Up to 6 individually pre-configured alarm zones. Above temperature threshold value below temperature threshold value alarm delay time.
Battery life	18 months minimum (return to supplier battery replacement)
Certification	12 months calibration/validation certificate
Dimensions	115mm x 50mm x 20mm
Protection	IP52
Equipment warranty	12 months (unless Peace of Mind applies)

Peace of mind contract and service options

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 (Automated Monitoring+ 4R) options available

Calibration – initial and ongoing – calibration options to keep your system operating to specification

- Connected Automated Monitoring+, on-site, non-disruptive traceable annual calibration carried out by our engineers, to your choice of 1, 2 or 3 points (UKAS accredited for UK customers)
- Calibration maintained by switching out sensor elements as needed. Options for customer or Checkit to perform the swaps
- Temperature mapping service also available for Checkit Europe Ltd customers

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

- Automated sensor alerts by text or email, plus alert calling option from our 24/7/365 staffed Alarm Calling Service Centre

(Automated Monitoring+)

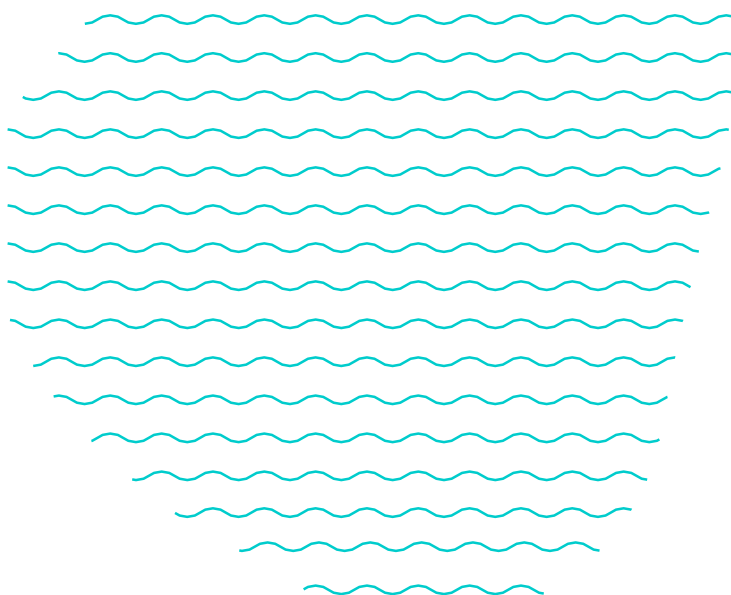
- Helpdesk and support portal: product issues and questions supported remotely (during office hours)

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)
- Annual preventative maintenance health check (Automated Monitoring+ delivered with calibration)

For further information about our Automated Monitoring+ Peace of Mind offerings please refer to our [Peace of Mind Guide](#), together with our [Terms of Service](#) and [Automated Monitoring+ Service Level Sheet](#).

Peace of mind contract & service options



	Automated Monitoring+
Hardware	✓
Breakdown replacement	✓
Self-swap plus engineer site visits as required	✓
Calibration	Single or multiple point options
Initial	✓
Traceable calibration	✓ standard (UKAS 17025 accredited for UK customers)
Ongoing calibration	Engineer on-site service (non-disruptive)
Preventative maintenance health check	✓
Temperature mapping	option for Checkit Europe Ltd. customers
Monitoring & support	
24/7/365 Automated alerting	✓
24/7/365 Alarm Calling Service Centre	option
Helpdesk and support portal	✓
Cloud platform	✓
Software maintenance	✓
Extended data retention	option

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