

KELSIUS

Food Retail

**Digital HACCP &
Wireless Temperature Monitoring**





KELSIUS

Company Story

Kelsius are Ireland's only manufacturer and provider of Wireless Temperature Monitoring and Digital Task Management systems and we take pride in being a Guaranteed Irish company.

Founded in 2003, Kelsius is a technology company that has a strong market presence in Ireland and the UK and exports their products and services to 47 countries across the globe.

Our customers range from restaurants, hotels and caterers to large supermarket chains and foodservice companies.

We are committed to continuous innovation and our systems utilise the latest technologies to provide peace of mind and easy-to-use systems to our customers.

Our customer support team offer unrivalled levels of service and can offer 365/24/7 support when required to global customers.



Our Mission:
To make the world
safer for consumers
of food and
medicine.

ISO9001:2015 Accredited

ISO14001:2015 Accredited

ISO 27001 compliance through our partners AWS

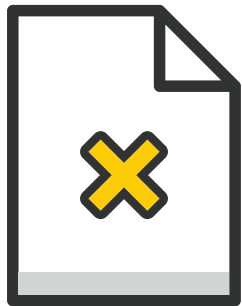
Kelsius system complies with FDA 21 CFR Part 11 regulations

Sustainability

Our Commitment

We are committed to improving global sustainability by focusing on 3 principals.

**Remove
Paper**



**Reduce
Waste**



**Protect
Stock**



By prioritising these principals, we aim to reduce global paper and stock waste through digitised and automated solutions.





Our Solutions

1. Reduce Food Waste:

Every year, the billions of tonnes of food products that go to waste directly contribute to generating 8-10% of associated global greenhouse gas emissions. The vast majority of this waste is due to lack of cold chain traceability or incorrect storage temperatures.

Reliable temperature monitoring ensures storage units and stock are consistently kept at optimal temperatures removing the risk of stock being spoiled. This prevents large amounts of unnecessary food waste.

2. Reduce Paper Usage, Paper Waste and Paper Storage:

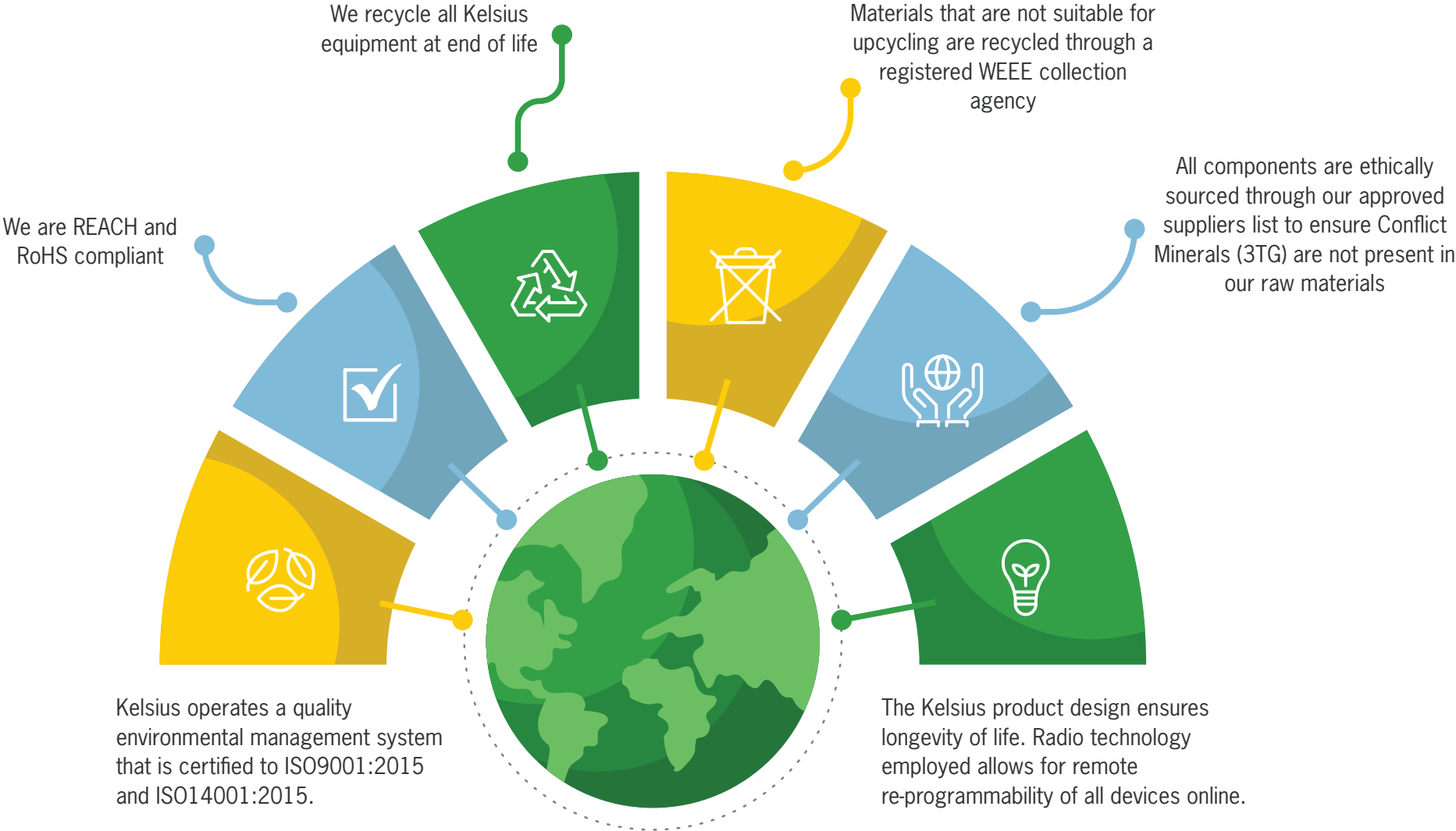
The average small-medium business must have on average 10,000 sheets of paper available annually to conduct manual temperature monitoring, with each sheet taking 6-9 years to decompose.

Our Systems removes the need for manual paper records therefore significantly reducing a company's paper and ink cartridge waste.

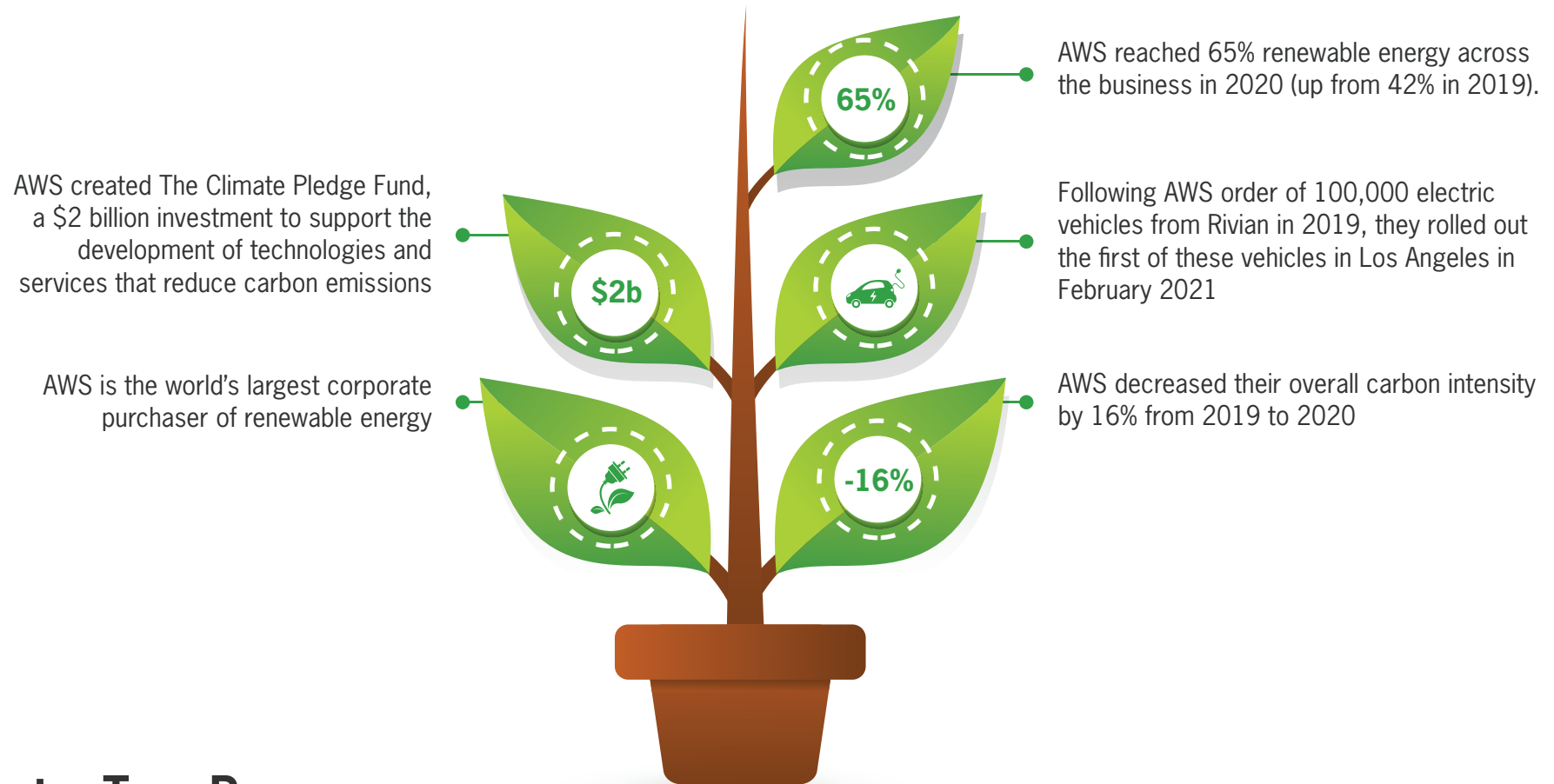


Our Contribution

Our contribution and responsibility is to reduce emissions and environmental impact across our operations.



With the requirement to maintain records for up to 30 years, data storage is a large and important part of our business. We chose Amazon Web Services (AWS) as data storage partner as a result of AWS' focus on Sustainability.



Plant a Tree Program

Reducing global paper usage and waste is one of our main objectives as a company and to enhance this, we have decided to plant a tree for every new customer that comes on board. Trees remove carbon dioxide from the atmosphere, produce oxygen and support the building of biodiversity, so together we will be directly contributing to improving the environment.

Security



Security & Compliance with Kelsius

Your Data and Privacy are Protected and Secured

Kelsius develop secure software design practices that include defining security requirements, threat modelling, code reviews, vulnerability management, incident resolution management and security testing. There are controls in place to validate/reject access to the customer portals including multi-factor authentication, roles and permissions.

- GDPR Compliant
- Data processed and stored in the EU
- Data encrypted at rest (data storage) and in transit (data transfer)

Information is readily available

Daily and incremental backups allow data to be restored to any 5-minute period between backups. Data archived for more than 13 months can be restored from the portal at any time for audits of historical data and there is data retention for 30+ years. There's also an automated disaster recovery plan in place to ensure maximum uptime across 3 geographically dispersed data centre locations within Ireland.

- 24/7/365
- Alerts via email/SMS/voice calls
- Self-healing data storage
- Automated crash recovery over multiple data centres



You are compliant

Kelsius complies with FDA 21 CFR Part 11 regulations – ISO 27001 compliance (AWS). A complete audit trail is available including user activity and change management audit records. There are multiple user roles to customise and control access to data and system configurations, and strong data governance where data is only accessible by the customer and a controlled small number of Kelsius employees.

Strong password policy is enforced and multifactor authentication is used to access the customer portal.





Ham &
CHEESE
PANINI
€5.00

Industry Challenges



Food Retailing is a highly regulated and complex environment that presents quality, compliance, supply chain, environmental and labour challenges on a daily basis.

- Maintaining a manual paper HACCP system means that staff members spend a lot of time on paperwork and manual temperature checks instead of serving the customer.
- Staff time is taken up with repetitive tasks such as manual recording of fridge/freezer temperatures. The average business spends 2-4 hours per day on such tasks.
- Manual HACCP records are open to falsification, difficult to manage and access for auditing, and require costly storage for up to 7 years.
- Missing records can lead to audit failure.
- Failure to comply with Food Hygiene Regulations can lead to food poisoning, loss of reputation, brand damage, legal costs, increased insurance premiums, fines and even closure.

- Traceability and allergen management continue to pose significant risks and challenges to PPDS and food to go retailers.
- Temperature excursions on freezers and fridges can lead to poor quality food produce being served to your customers.
- Stock loss due to freezer/chill failures can lead to substantial financial loss.
- Undetected fridge/freezers breaking down or doors left open can lead to substantial loss of valuable product.
- Loss of key food safety personnel due to vacation/sickness/resignation etc. can seriously disrupt your Food Safety Management System, and makes it difficult to manage Food Safety in their absence.
- Calibration of fridge and freezer sensors are expensive and certificates need to be available for audits.

Any of these serious failures can lead to claims of poor corporate governance and even personal liability claims on senior managers or board of directors.

The Solution



FoodCheck 2.0 ensures tamperproof, HACCP compliance and by using the best available technology that delivers good corporate governance and improved risk mitigation.

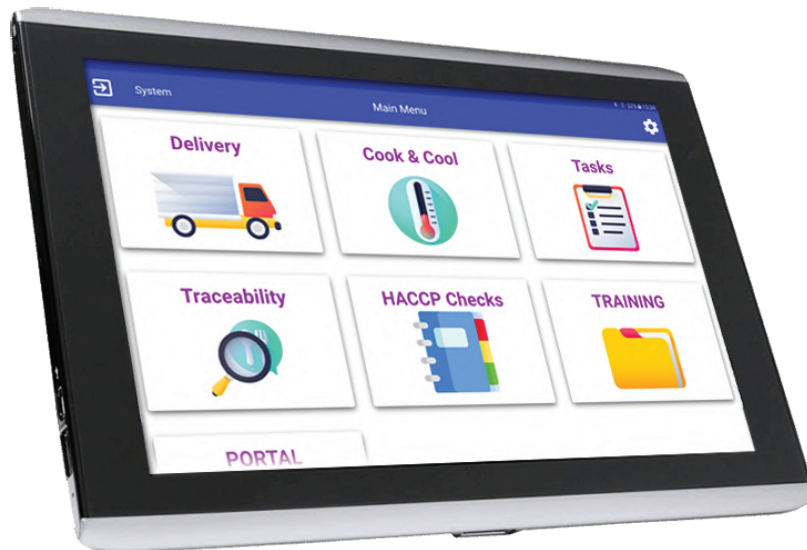
- FoodCheck 2.0 ensures compliance with all aspects of Food Hygiene Regulations and eliminates the risk of fines, potential closure and loss of reputation when used properly.
- The automated sensors record the temperature in each chill or freezer unit every 30 minutes eliminating the need for manual temperature recording.
- This can save between 2-4 hours per day depending on the size of your operation, which can be more than the cost of operating FoodCheck 2.0.
- Automated SMS, email and telephone call alerts can be set up to warn key staff members of temperature excursions, power outages or doors left open to avoid any expensive stock loss and disruption to operations.
- FoodCheck 2.0 eliminates all paper from your HACCP and operations removing the cost of paper, ink cartridge refills and staff time, printing, distributing and filing of paperwork. This is a

much more sustainable way to run your business.

- FoodCheck 2.0's automated reminders for hot temperature check and daily tasks will ensure HACCP is being implemented.
- Real time reporting gives management team visibility of task completion as they happen, maintaining food quality and standards.
- Production traceability with allergen management system ensures that you can protect your business and your customer.
- FoodCheck 2.0 simplifies the auditing process with all records, current and historical, available from any web enabled device.
- Our Web Portal management of your HACCP and operations records eliminates the need to physically store records, saving space, time and money.
- FoodCheck 2.0 is easy to use, intuitive and ensures that essential food safety records are maintained even when key staff are on leave or when new inexperienced staff are behind the counter.
- Annual calibration is included as part of the FoodCheck 2.0 agreement which avoids worrying about the cost of annual calibration or missing calibration records, and ensures that you have all data required for your food safety inspections.

The FoodCheck 2.0 Digital HACCP System

- Robust & Reliable Samsung Tablets with Protective Case, Holder and Wall mounted Bracket.
- Bluetooth Probes which communicate directly with the FoodCheck 2.0 App.
- Bluetooth Label Printer allowing for the Printing of Labels directly from FoodCheck 2.0.
- Flexible & wireless sensor network that supports both large and small environments.



- Easy-to-use, non-disruptive deployment—no need for expensive hard-wired infrastructure.
- Cost-effective, automated record keeping eliminates manual checks and records.
- Secure, centralised, encrypted data keeps your records safe.
- Global access to information when and where you need it— by sensor, by room, by facility.
- Real-time alarming and alerting for temperature compliance and product quality assurance.
- Improved visibility and compliance through online data history and audit trail.

FoodCheck 2.0

Complete Food Safety Control



FoodCheck 2.0 Monitoring System at work:

FoodCheck 2.0 Digital HACCP system removes paper from your HACCP operation. The system is specifically designed to automate and speed up many laborious tasks and checks, saving you and your staff time.

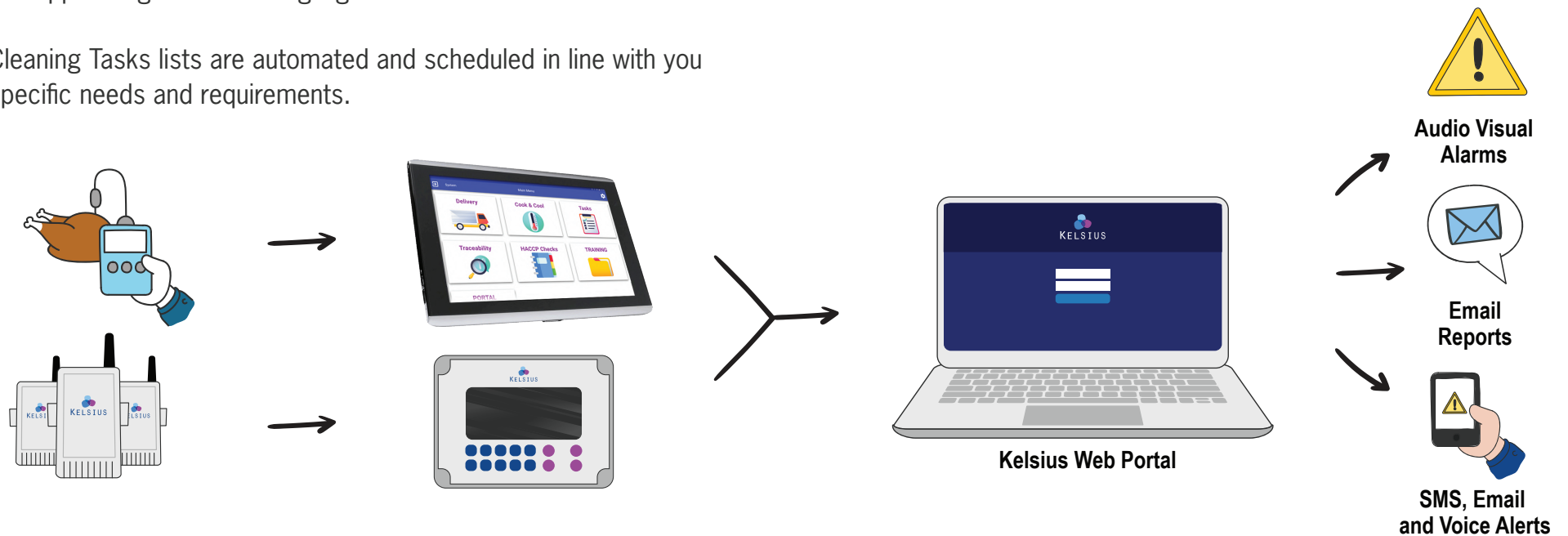
A Bluetooth Probe will electronically transmit the temperature of product to the App with specially designed modules for each type of check you need to complete.

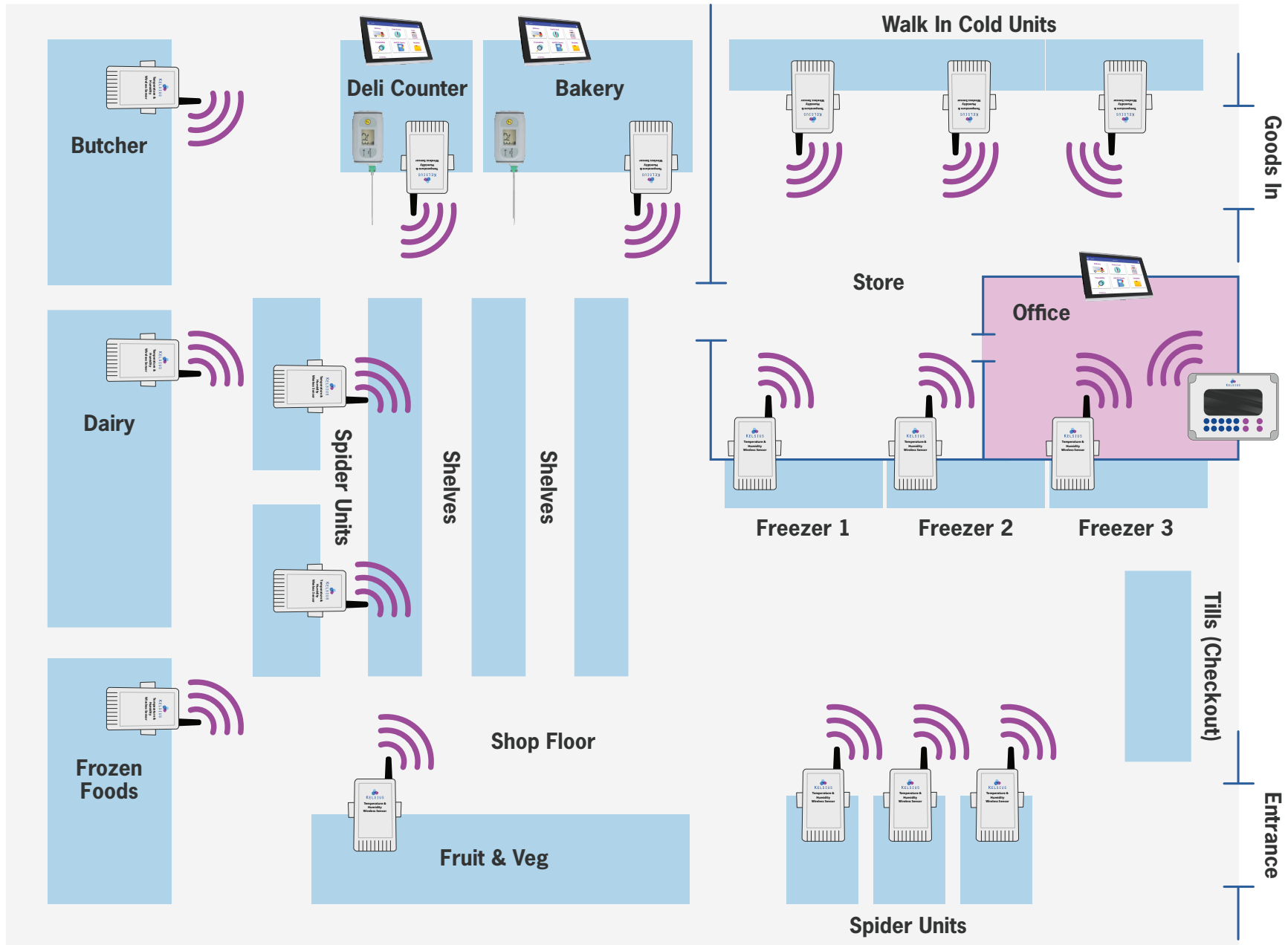
Traceability Module is designed to manage the shelf life of your products with built in reminders to discard of product once it is out of date. Labels can be printed directly from the FoodCheck 2.0 App. Allergens can be highlighted on the labels.

Cleaning Tasks lists are automated and scheduled in line with you specific needs and requirements.

CoolCheck is a fully integrated solution for temperature monitoring which combines wireless sensors which are linked to their own network and web portal.

Wireless sensors are configured with user-defined alarm thresholds and measurement intervals. They are strategically placed inside any number of storage areas to record environmental conditions. The sensors record data and transmit the encrypted information wirelessly to a local Network Controller.





Wireless Temperature Sensor

Tablet

Network Controller

Bluetherm LE probe

Web Portal Reporting Suite delivers:

- Operations leaders use reporting and insights within FoodCheck 2.0 to oversee performance across every site, make data-driven decisions, and prioritize opportunities for improvement.
- Know what's happening across the operation with real-time reporting that drives operational efficiencies.
- Automated reporting and dashboards allow your team to see which tasks and procedures have been completed across the operation, or drill down to reports or submissions at a specific site.
- Automated pdf reports can be set-up daily, weekly or monthly.
- All data is time & date stamped with option to add photograph.
- Allows you to see what tasks and been completed, when and by who.
- Freezer/chills/display units/hot holding temp checks & reports.
- Non-conformances highlighted & corrective actions logged.
- Alerts for any fridge or freezer non-conformance or failure.
- Live & historical data available at all times on Web Portal.





Your Data: Secure & at Your Fingertips

Dashboard
Site Map
Sensor Graphs
Alert Events
Report Wizard
Documents and Manuals
Configuration
Audit Trail
User Profile

Customer Notice
Please note: Flashing icons representing outstanding Corrective Actions will appear in the device boxes below for a period of 7 days, after which the icon will no longer appear. All outstanding Corrective Actions are listed as normal in the Alert Events tab. We've introduced this change to greatly enhance the speed at which your Site Map loads

Legend:
WARNING Sensor has been above the Warning threshold for longer than the delay period
CRITICAL Sensor has been above the Critical threshold for longer than the delay period
MAINTAIN Sensor is in Maintain Mode. No alerts will be generated while the sensor is in this mode
ALARMOFF Alarm has been turned off on this sensor
SERVICE Sensor is in Service Mode. After the Service Timeout this sensor will return to Normal No alerts will be generated while in Service
MISREAD Sensor has recorded a value which the system detects as a bad reading.
COMMFAIL Communication with this sensor has failed
COMMMISS Temporary Communication failure with this sensor

Store
Sensor 1: 1 A, 5.0 °C
Sensor 2: 1 P, 5.3 °C
Sensor 3: 2 A, 4.9 °C
Sensor 14: 2 P, 4.9 °C
MainsPower: ON
Repeater 1: 11.5 V.
Repeater 2: 11.2 V.

Dairy
MainsPower: ON
Repeater 2: 11.1 V.
Repeater 3: 11.0 V.
Fridge 1 A: 3.6 °C
Fridge 1 B: 3.6 °C
Fridge 2 A: 3.8 °C
Fridge 2 B: 3.8 °C

Prep Area
Fridge A: 6.1 °C
Fridge B: 6.3 °C
MainsPower: ON
Fridge C: 5.2 °C
Fridge D: 5.1 °C
Short Stay Fridge A: 3.8 °C
Short Stay Fridge B: 3.9 °C

Spider Units
Fridge A: 3.6 °C
Fridge B: 3.6 °C
Freezer A: -18.0 °C
Freezer B: -18.0 °C
Fridge C: 5.1 °C
Fridge D: 5.6 °C
MainsPower: ON
Fridge E: 5.4 °C

Your Data: Secure & at Your Fingertips

Dashboard

Site Map

HACCP records

Alert Events

Report Wizard

HACCP Records

User Profile

First Cook Tablet [Back](#)

Quick Date Range: [Go](#)

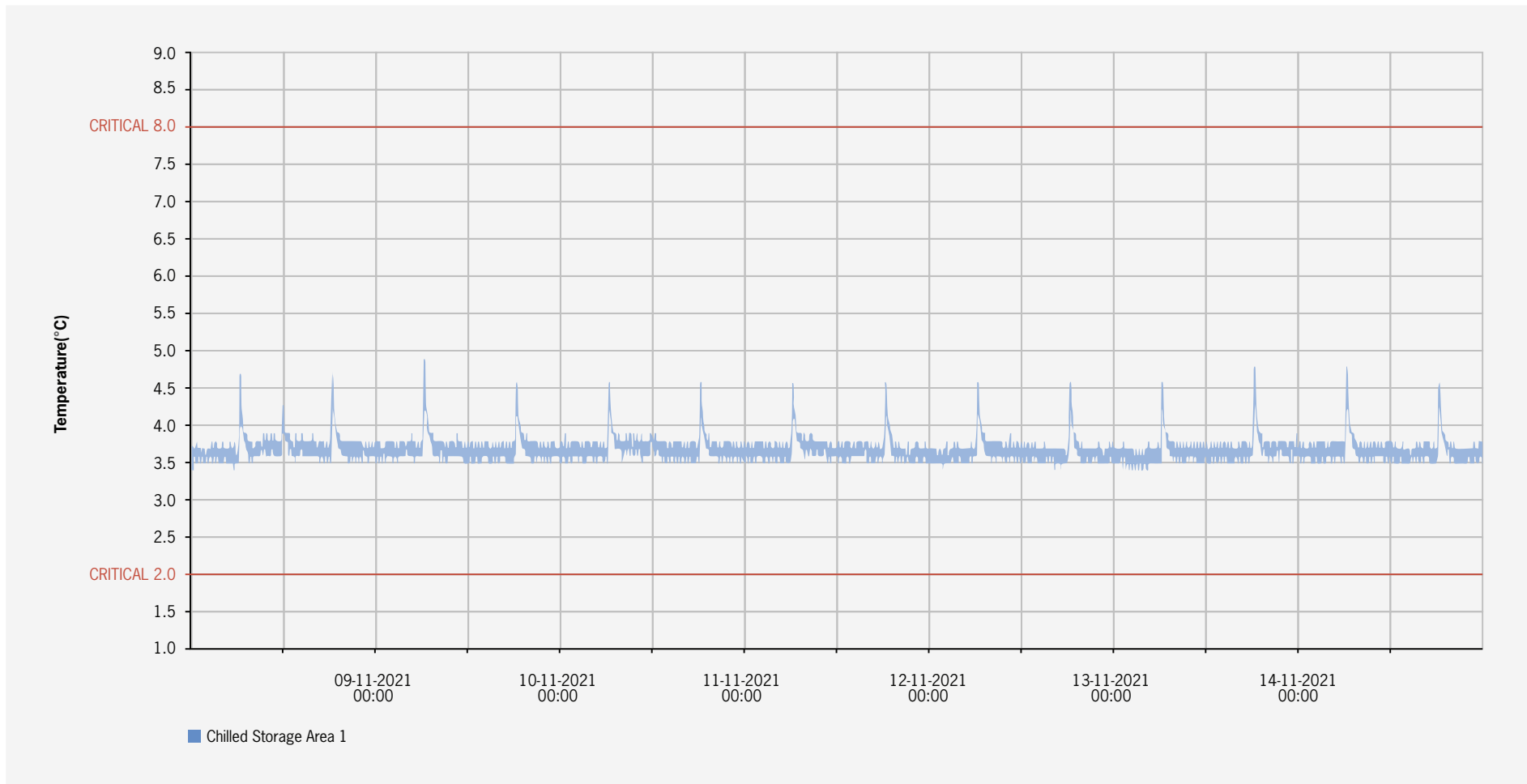
Download detailed records:

Date & Time	Operator	Product	Use by/Best before	Batch Code	Temperature	Corrective Action
2020-03-03 11:04:24	Mary	5 Spice Pork	28-01-2022	407054	76.2°C	
2020-03-03 12:57:15	Dave	5 Spice Pork	28-01-2022	347589	77.0°C	
2020-03-03 11:39:59	Julie	Beef Stroganoff	28-01-2022	180687	76.5°C	
2020-03-03 12:11:16	Kevin	BBQ Chicken	28-01-2022	279899	75.1°C	
2020-03-03 12:28:25	Patrick	BBQ Ribs	28-01-2022	978433	76.7°C	
2020-03-03 12:51:54	Kerry				26.2°C	

Your Data: Secure & at Your Fingertips

cleaning Task 2	Wednesday 01-04-2020
Beakers + cups deep cleaned morning + evening	✓ Mary @07:30
Clean Doors	✓ Dave @08:30
Clean Windows	✓ Julie @09:30
Countertops. Toaster and Water boiler	✓ Kevin @10:30
Dates on cereals & juices & spray bottles	✓ Patrick @11:30
Doors to be cleaned	✓ Mary @12:30
Dustpan and brush to be cleaned	✓ Dave @13:30
Floor mop + Bring to Laundry	✓ Julie @14:30
Paper towel and blue roll dispensers refilled	✓ Kevin @15:45

Your Data: Secure & at Your Fingertips



The Network Controller relays the information to the Web Portal. All data is stored securely and is accessible to authorized users via a web browser; additional software is not required.

The Kelsius Web Portal provides immediate access to real-time and historical data for all locations—and accessible from any web enabled device. Reports are available on demand or can be scheduled using a report wizard which will generate and distribute reports automatically via email.

When an excursion occurs, designated personnel can be alerted through audible/visual alarms, as well as through email, text or automated phone call. Once a problem has been identified and corrective action has taken place, the incident can be recorded in the system's historical audit log.

All information is enter via the FoodCheck 2.0 App and will be safely stored on the tablet until it can be transmitted to the Kelsius Web Portal. All information can be viewed locally on the App via the Auditor Function.

FoodCheck 2.0 incorporates a number of features which greatly reduce and remove the risk of falsification and error.

The Kelsius Web Portal makes data access and reporting easy. The portal's dashboard and site map provide immediate access to key information regarding the current state of all monitored locations. The dashboard highlights current sensor alerts, while the site map provides a quick overview of all sensors, their current readings, and their current status (e.g., normal, warning, or critical).

Information is delivered in the format your organization prefers; data can be viewed on demand or downloaded in multiple formats (e.g., .pdf, .xls, .csv formats) for a given day, week, or specific time period. Reports can also be scheduled for automated daily/weekly electronic delivery through the Report Wizard.

Group Usage Reports are available and will highlight both excellence and non-conformant results across all locations.

Alarming and alerting capabilities are key features of the system. The system can alarm on sensor-level readings (i.e., temperature excursions) or system-level issues such as damage to or removal of sensors, power failure, device malfunction, and network connectivity loss.

Each alert can be configured to notify designated personnel through a variety of methods: local audible/visual alarm beacons, email message, text message, or automated phone call. Full access to add corrective actions and sign-off data. In addition, all data transmissions are encrypted for security assurance.

Audible/visual alarm beacons can be installed at various high-visibility points within the facility to alert on-site staff that an excursion or system-level issue needs attention. Beacons can be configured to alarm for an individual sensor or group of sensors.

Emails and text message alerts can be configured to reach designated personnel with information that includes the exact location and details of the alarm. Escalating, automated phone calls can also be made to designated personnel until someone logs in, investigates the alarm, and takes action.

Corrective actions can be used to document your process controls. Once an excursion has occurred, corrective actions can be entered by authorized users. A user can select from a pre-defined list or can manually enter a corrective action as needed. Every corrective action entered is date and time stamped and includes electronic signatures.

FoodCheck 2.0 Technical Specification

	Temperature Sensor	Bluetherm One LE	Ray Temp Blue
Temperature Range	-35°C - +40°C (-31°F - +104°F) Air & Product	-199.9 to 1372 °C	-49.9 to 349.9°C
Accuracy	+/- 0.5°C (0.9F)	±0.4°C ±0.1% of reading	±1 °C (0 to 100 °C) otherwise ±2 °C
Resolution	—	0.1 °C/°F to 999.9	0.1 °C/°F
Communication Type	Radio Frequency	Bluetooth	Bluetooth
Communication Range	100m	Bluetooth	Bluetooth
Display	—	12mm LCD	0.01 to 1 12mm LCD
RF Band	916MHz (USA); 868MHz (Europe).	—	—
Battery Type	2x 3.6V 2Ahr AA Lithium Battery	1 x AA	3 x 1.5 volt AAA
Battery Life	5 years with a 5 minute read data transmission interval.	3000 hours	3000 hours
Dimensions	36 x 50 x 65 mm	34 x 66 x 109 mm	25 x 56 x 128mm
Weight	75g	165g	140kg
Enclosure	IP67 Polycarbonate	ABS plastic with Biomaster anti-bacterial additive	ABS plastic with Biomaster anti-bacterial additive
Communicates with	Network Controller	FoodCheck 2.0 Tablet	FoodCheck 2.0 Tablet







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