IoT Solutions Group

A Smarter Future, Today

FREQUENTLY ASKED QUESTIONS

Contents:

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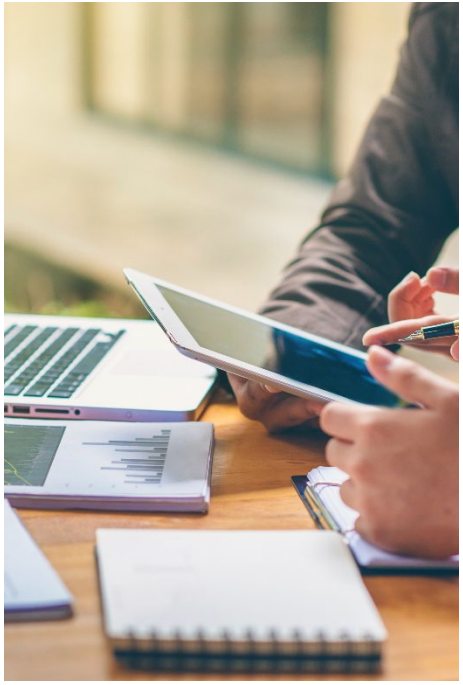
General Information



Internet of Things

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What is IoT?

IoT stands for the Internet of Things. It describes the network of physical objects ("things") embedded with sensors, software, and other technologies to connect and exchange data with other devices and systems over the internet.

Popular examples of IoT technologies are fitness trackers or smart watches, smart thermostats in the home, smart speakers such as Alexa and video buzzers/doorbells. These devices collect information, send it to the cloud or other devices for processing, and then share it with you, usually via phone or computer.

The Internet of Things is becoming more accessible and mainstream for individual use. Additionally, various IoT sensing options are available to support business efficiency and insight, from monitoring office usage to the function and temperature of different machinery.

What IoT solutions can you provide?

We have a range of solutions, co-developed in the industry, that are now available to order.

Examples of our solutions include remote monitoring sensors for vulnerable independent people, water temperature monitoring for legionella mitigation and smart parking sensors. We also offer fill level and other waste management and environmental monitoring sensors to detect homes at risk of damp and mould.

Additionally, we can develop complete package Internet of Things solutions for specialist applications. Please get in touch to discuss your monitoring challenges and how IoTSG can help.

These devices don't need an internet connection, Wi-Fi or mobile phone signal; how do they send the data?

These devices send data over specialist networks designed for sharing small packets of data, known as Low-Power Wide Area Networks. These LPWAN networks (NB-IoT and LTE-M standards) were intended for IoT communications and provide

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99% population coverage across the UK, even in areas without regular mobile phone signals or Wi-Fi access.

Can multiple sensors be used together?

Yes, customers can deploy multiple types of sensors, all viewable through the same dashboard.

Where are your devices manufactured?

Our devices are designed and manufactured in the UK.

Ordering

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Can I have a demonstration of the services you provide?

Yes, we offer virtual demonstrations for all of our IoT monitoring solutions. Additionally, we have a limited number of trial devices available for short-term in-situ trials.

What is the lead time for delivery from the placement of an order?

Lead time is typically six to eight weeks from placing an order. However, small orders can normally be delivered sooner. We recommend contacting your IoTSG Account Manager to discuss how we can meet your required delivery time frame.

How much do these sensors cost?

We aim to keep pricing as low and simple as possible to make these powerful technologies widely available. As a result, our IoT-as-a-service package pricing varies depending on device type, quantity and contract length.

For more information on pricing for your project, please get in touch with your IoTSG Account Manager or email hello@iotsg.co.uk.

What else do I need to set up or order besides the sensors?

Virtually nothing! We deliver our IoT sensors as a managed "IoT-as-a-service" package. Our devices are designed to be installed within minutes without any connectivity setup. If required, we can

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provide installation as an additional service – it is highly recommended for outdoor installations, such as parking and bin sensors.

As standard, all pricing includes:

- All sensor hardware devices with factory-fitted SIM cards
- LPWAN connectivity between the devices and the cloud infrastructure
- Hardware replacements of any faulty or battery-expired sensor devices within two working days of notification to the IoTSG support team
- Cloud software analytics and email event/alert messages to dedicated personnel
- Software user accounts for staff to access the cloud platform dashboard
- 24x7x365 support per contracted service period
- Training to operatives on the use of IoTSG dashboard and data visualisation

What is included with the IoTSG service?

- Device firmware programming to the customer's specific deployment requirements
- Sim activation on both the respective IoT data networks
- Customer user account setup on the IoTSG platform
- Device activation on the IoTSG platform
- All associated cloud server resource allocation
- End-to-end final system verification testing before shipping

What is the warranty on your products?

As an IoT-as-a-service package, all devices are warranted for the entire duration of your contract.

Sales Support

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How do I check the status of my order?

You can email hello@iotsg.co.uk or speak to your account manager to find out the latest delivery times for your order. Our team aim to respond to all queries within 24 hours.

What aftercare and support does IoTSG offer?

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All IoTSG customers have direct contact with their dedicated project team throughout the installation process, solution handover, and contract period.

This support includes a kick-off meeting with your IoTSG project team once your system has gone live. This kick-off call ensures that all systems are operating as expected and that all users are confident with accessing and navigating the IoTSG dashboard.

IoTSG monitors the health of all devices 24 hours a day and will get in touch if any of your deployed devices go offline or have limited remaining battery life. In this event, a new device will be sent directly to the customer or installer, depending on your preference.

IoTSG also offers a support function via support@iotsg.co.uk. IoTSG aims to answer all queries within 24 hours of receiving a support request.

What happens to the sensors at the end of the contract period?

The sensors are returned directly to our UK factory at the end of their use. The devices are then refurbished or recycled by IoTSG, ensuring that all WEEE regulations are met and all components are disposed of responsibly.

I have a query regarding an invoice or payment; whom should I contact?

Please email accounts@iotsg.co.uk for assistance. Our team aim to respond to all queries within 24 hours.

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Product Information

DORIS care

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Whom is this product designed for?

This product is ideal for Vulnerable Independent People (VIPs), helping enable them to live independently with confidence and dignity. DORIS care supports residents who don't want to wear an alarm pendant or have to reach a pull cord in an emergency. Instead, DORIS care raises the alarm for concerning patterns of behaviour or declines in activity without relying on user interaction.

What data does the sensor collect?

DORIS care measures and records data on atmospheric conditions, sending it to the IoTSG cloud analytics platform. Intelligent analytics in the cloud then identify a period of activity and display it on the dashboard. This period of activity can be triggered by activities such as boiling a kettle, opening a window, cooking or washing the dishes. DORIS care also continually monitors the ambient temperature, which can be used to identify potential cases of fuel poverty or property overheating in the summer.

No audio, video, personal or location data is transmitted or recorded.

What is the battery life of the DORIS care sensor?

The device is powered by factory-fitted lithium batteries giving it an expected battery life of at least three years. However, these devices come as part of our 'IoT-as-a-service' package, which includes device monitoring and replacement in the event of low battery.

Where can this sensor be used?

DORIS care is designed to be used in the kitchen to paint the most accurate picture of a resident's activity patterns.

How many sensors do I need?

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Just one sensor in the kitchen is required to monitor the activity patterns and receive alerts to any concerning declines in activity patterns.

If care providers are concerned about low/high temperatures or humidity for mould risk, additional sensors can be used around the home as required.

DORIS care can also collect data from other sensors to provide additional key insights as required. For example, currently, we can offer pipe sensors for monitoring water temperature to indicate water usage in the kitchen, toilet, shower or bathroom. This additional data can give insights into hygiene concerns if needed.

How is this product different from others on the market?

We believe this is the only product on the market that can detect concerning changes in activity without user interaction and without any phone line, mobile phone signal or internet connection.

What is the installation process?

The customer can complete the installation; they simply place the preassigned device in the resident's kitchen and remove a battery isolation tab on the back of the device. Within minutes of the tab being removed, IoTSG will receive a message confirming that the device is live and operational.

How long does it take to install?

Each DORIS Care sensor takes approximately one minute to install. The battery isolation tab is simply removed from the back of the device before placing the device on a kitchen shelf or work surface out of direct sunlight.

Where can I download a copy of the User Guide?

The user guide can be downloaded from your dashboard.

Where can I download other fact sheets to find out more?

Product-specific fact sheets can be requested from the IoTSG team via hello@iotsg.co.uk.

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Efficient Homes

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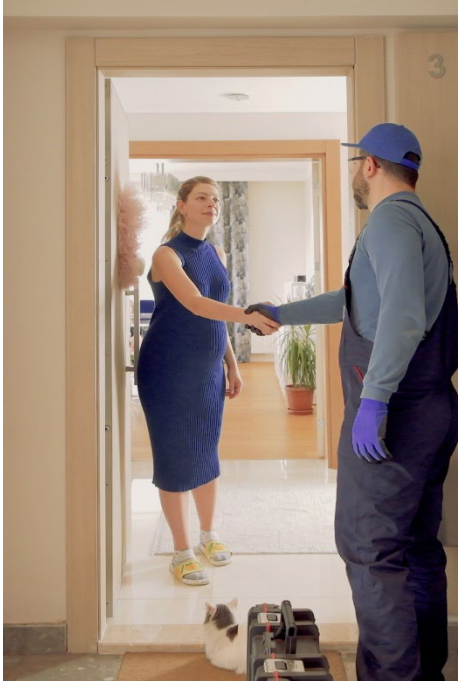

Whom is this product designed for?

This product is designed for owners, managers and landlords of social or privately rented properties who would like to monitor the environmental conditions of their buildings.

What data does the sensor collect?

Depending on the device configuration, these sensors can continually collect data on temperature, relative humidity, dew point and CO2 levels.

What is the battery life of the sensor?

The battery life of these sensors is up to three years, depending on the configuration. However, these devices come as part of our 'IoT-as-a-service' package, which includes device monitoring and replacement in the event of low battery.

Where can this sensor be used?

This sensor can be used in any room of concern; a kitchen, bedroom, living room or even an office or communal space.

How many sensors do I need?

This system gives a clear picture of the home's general condition with just one sensor. However, if you have individual rooms of particular concern, multiple devices can be placed in numerous rooms to deliver room-specific data.

How is this sensor installed?

The customer can complete the installation by placing the device in the resident's home and removing a battery isolation tab on the back. Within minutes of the tab being removed, IoTSG will receive a message confirming that the device is live and operational.

How long does it take to install?

Each environmental monitoring sensor will take approximately one minute to install. Please request an installation instruction sheet from your Project Manager or hello@iotsg.co.uk

How is this product different from others on the market?

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We believe this is the only product on the market that can detect concerning changes in environmental conditions with virtually zero installation, no onus on the resident and without the need for any phone line, mobile phone signal or internet connection.

Where can I download a copy of the User Guide?

The user guide can be accessed on your dashboard.

Where can I download other fact sheets to find out more?

Product-specific fact sheets can be requested from the IoTSG team via hello@iotsg.co.uk.

Legionella Mitigation

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Whom is this product designed for?

Our solution enables landlords, water hygiene consultants, and estate and facilities managers to monitor the temperature of the water piped around their properties. These insights allow them to minimise the risk of a Legionella outbreak, protecting staff, residents and visitors through continual monitoring and alerts for conditions that could lead to bacterial growth.

What data does the sensor collect?

After being attached to a water pipe, the sensor monitors the temperature of the water running through it. This temperature data is then used to monitor when the temperature rises over certain thresholds that can affect the growth of waterborne diseases and confirm that the heating system is working as intended.

This data is then sent to our cloud platform, presented using our online dashboard and triggers custom alerts as needed.

What is the battery life of the sensor?

The device is powered by factory-fitted lithium batteries giving it an expected battery life of at least three years. However, these devices come as part of our 'IoT-as-a-service' package, which includes device monitoring and replacement in the event of low battery.

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Where can this sensor be used?

This sensor can be used on any domestic or commercial water system. Typically, these sensors are placed on hot and cold pipes close to sentinel points and have also been used near calorifiers to check the outputted water temperature.

How many sensors do I need?

We typically mount two pipe sensors at each sentinel point; one on the hot water feed and one on the cold water feed.

Each location also requires a hub/modem. This hub is usually placed in the corner of the room (ideally near the ceiling, out of reach). This discreet device collects the data from the pipe sensors and transmits it using the LPWAN network to our cloud without requiring any internet or Wi-Fi connection to send its data.

The number of hubs required will depend on the layout and fabric of the building. The radius for the LPWAN hub to receive the data from the pipe sensors is 50 – 200m, depending on obstructions and any interference.

How is this sensor installed?

Customers can easily complete the installation following comprehensive installation instructions provided by IoTSG. Alternatively, IoTSG can provide an installation service. Please get in touch with your Account Manager to discuss this further.

How long does it take to install?

Each modem/hub will take approximately one minute to install, and each water temperature pipe sensor will take about two minutes to install. Please request an installation instruction sheet from your Project Manager or hello@iotsg.co.uk

How is this product different from others on the market?

We believe this is the only product on the market without protruding antennas or cables and without the need for complicated setup or W-Fi/3G/4G/phoneline connectivity.

- Unobtrusive design – ideal for schools and healthcare settings (can be mopped over, no moving parts)
- Easy install – can be installed in a few minutes (no pipe cutting or plugging in)
- Complete package solution – managed service included as standard for ease of use

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- National coverage with no connectivity setup needed – can be installed anywhere

Where can I download a copy of the User Guide?

The user guide can be accessed on your dashboard.

Where can I download other fact sheets to find out more?

Product-specific fact sheets can be requested from the IoTSG team via hello@iotsg.co.uk.

Smart Parking

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Whom is this product designed for?

Our smart parking solution is designed to help civil enforcement officers, parking teams, and local councils monitor their parking spaces. This sensor can then be used to detect unauthorised use of resident parking bays, accessible parking spaces, and parking infringements caused by drivers being parked too long in a time-limited spot.

What data does the sensor collect?

Our smart parking sensor uses a sophisticated array of remote sensing technologies which can accurately detect when a car is parked above it and when it leaves. An additional option is to place a small Bluetooth-enabled tag inside the users' cars, permitting them to park in certain areas without infringement.

This data is then sent to our cloud platform, where it is presented using our online dashboard and triggers custom alerts, such as notification of the location and type of parking infringement.

What is the battery life of the sensor?

The device is powered by factory-fitted lithium batteries giving it an expected battery life of at least three years. However, these devices come as part of our 'IoT-as-a-service' package, which includes device monitoring and replacement in the event of low battery.

Where can this sensor be used?

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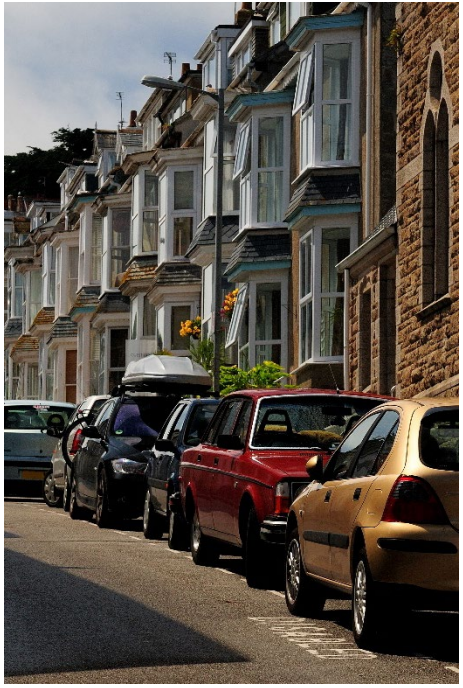

The smart parking sensor can be embedded into any disabled, time-limited, or community car parking space to monitor when and how it's used.

How many sensors do I need?

We recommend installing a smart parking sensor in each bay where parking rules need to be enforced, such as accessible bays or time-limited spots.

How is this sensor installed?

IoTSG will supply and install all parking sensors using our highly trained highways team. All parking sensors are bonded to the road/parking surfaces using a two-part resin mix that has been rigorously tested and trialled to ensure an easy install with the maximum bond that will last the duration of the parking deployment.

What do I do after they have been installed?

Once the installation has been completed, the IoTSG team enter the locations of each sensor into the user dashboard, making them easy to identify in the street. Then, after approximately 48 hours, you can log on to the dashboard to see the data.

How long does it take to install?

Each parking sensor will take approximately two minutes to install. In addition, the resin will take about 10 – 20 minutes to cure, depending on the surface temperatures on the day. Unfortunately, our team is unable to install them in freezing temperatures or heavy rain conditions due to the nature of the resin used.

How is this product different from others on the market?

Our solution is unique because it can be installed simply and easily and then requires little monitoring and maintenance to operate. In addition, it has been refined over years of use and is trusted by the parking authorities which deploy it.

Where can I download a copy of the User Guide?

The user guide can be accessed on your dashboard.

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Where can I download other fact sheets to find out more?

Product-specific fact sheets can be requested from the IoTSG team via hello@iotsg.co.uk.

Waste Management

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Whom is this product designed for?

This product is designed for local councils and waste management companies to enable them to monitor how and when their bins are used and identify when they are full. This sensor then allows waste managers to avoid full/overflow events, monitor for unusual behaviour, and quickly identify potential incidents of people, animals or fires in bins.

What data does the sensor collect?

Our solution uses a set of range-finding sensors that can accurately determine a bin's usage over time. In addition, the movement of the lid can be monitored using an accelerometer, enabling us to determine when and how often it is opened.

It also uses temperature sensors to detect changes that could signify animals, people or a potential fire inside the bins.

By assigning small Bluetooth keyfobs to authorised users, our sensors can detect who uses which bin and at what times.

All collected data is then sent to our cloud platform. It is then presented using our online dashboard and triggers custom alerts, such as notifications and locations of full bins or a potential animal or fire in the container.

What is the battery life of the sensor?

The device is powered by factory-fitted lithium batteries giving it an expected battery life of at least three years. However, these devices come as part of our 'IoT-as-a-service' package, which includes device monitoring and replacement in the event of low battery.

Where can this sensor be used?

Our sensors have been designed to be adapted to any bin type, including wheelie bins, street bins, front loader bins and more. Our

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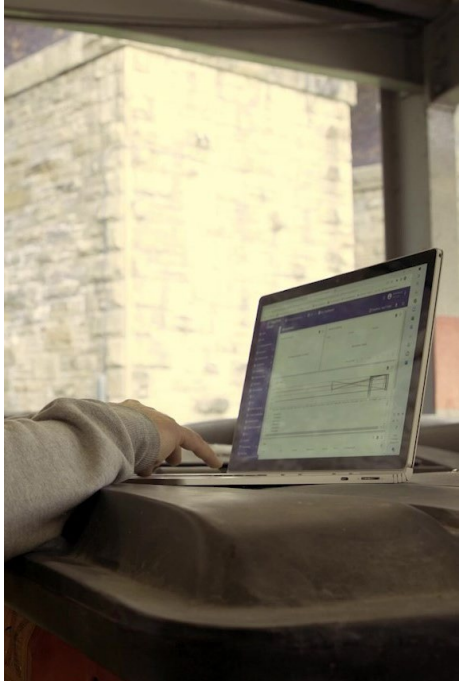
clients use it to monitor their larger industrial containers, residential recycling, and general waste bins.



How many sensors do I need?

We recommend installing a sensor into each bin where fill level or other additional monitoring is desired.

How is this sensor installed?

A customer can complete the installation following comprehensive installation instructions provided by the IoTSG team. Alternatively, IoTSG can provide an installation service; please contact your Account Manager to discuss this further.

How long does it take to install?

Depending on the type, each bin sensor will take 10-15 minutes to install. Please request an installation instruction sheet from your Project Manager or hello@iotsg.co.uk

How is this product different from others on the market?

Compared to the alternatives on the market, our product is a low-powered, long-life, and user-friendly complete package solution requiring very little maintenance after installation. It has been used for years and is a trusted solution by many local authorities and private companies such as Biffa and Northern Trains.

Where can I download a copy of the User Guide?

The user guide can be accessed on your dashboard.

Where can I download other fact sheets to find out more?

Product-specific fact sheets can be requested from the IoTSG team via hello@iotsg.co.uk.

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Key Team Members

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Emma Mahy
CEO & Founder

Emma makes sure the whole organisation works in harmony, directing the sales team and leading on all things commercial.

Neal Forse
CTO & Founder

Neal is the engineering lead, deploying years of experience to ensure our solutions continue to evolve and excel.

Sarah Levett
Head of Marketing

Chartered Marketer Sarah looks after our strategy, marketing activities and sustainability, as well as supporting the sales team.

Andy Hodges
IoT Specialist & Project Manager

Andy is a highly competent and experienced IoT specialist with over 8 years' experience in design, networks and deployment.

Case Studies and Testimonials

"IoT Solutions Group have been a great partner to work with and have demonstrated that exploring new technology doesn't have to be complicated! The ease and speed of the installation means that there has also been minimal service disruption."

Chris Griffin
Head of Commercial Development

"As a local authority we are under increasing pressure to deliver improved services for a growing population, with reduced budgets. We know the importance of exploring innovative methods of tackling these challenges and are excited by the potential demonstrated through the activities we are undertaking with IoT Solutions Group."

Adrian Hale
Smart Place Strategy & Programming Lead

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A Smarter Future, Today

Please direct any additional queries to the IoTSG team via:

hello@iotsg.co.uk

0333 200 5855