



Add Environmental Temperature Monitoring to Your Supply Chain Solutions With Zebra's ZS300 Electronic Sensor

The Opportunity

Changes to legislation, along with a greater interest in sustainability and the desire to reduce waste, is driving food and pharmaceuticals manufacturers, distributors, and supply chain parties to look for new ways to gain more insight across cold chains.

2.7
billion

people lack access to vaccines due to insufficient supply chains and logistics capabilities related to cold chains

seforall.org

3.3
billion
tonnes

the carbon footprint of wasted food

[greenmatch](https://greenmatch.com)

560
million
tonnes

of all food doesn't make it to market

[foodunfolded](https://foodunfolded.com)

The cold chain monitoring market was valued at **\$6.7 billion** in **2024**, and is projected to reach **\$21.4 billion** by **2034**, rising at an annualized average rate of **14%**¹. Give companies the supply chain visibility they need by working with Zebra's compact, IoT-based temperature sensor to add timely temperature monitoring into your existing or new applications. Insight which helps customers accelerate decision making, follow regulations (e.g. 21 CFR Part 11, EN12830), and reduce spoilage and waste for temperature-sensitive goods.

¹ Research And Markets



The ZS300 Electronic Sensor and ZB200 Bridge

The smart ZS300 provides temperature monitoring to ensure quality, compliance, and sustainability across supply chains. It can monitor and alert customers to temperature events in a wide range between -40°F to 185°F / -40°C to +85°C. Connected wirelessly with the Wi-Fi-enabled ZB200 Bridge, or an Android mobile computer running Zebra’s ZSFinder app, data is shared automatically with the Zebra Cloud for seamless connectivity to your applications with minimal disruption to their workflow. Temperatures are logged and alerts raised which your solutions can use to provide actionable intelligence. The sensors are easily fixed to consignments (pallets, boxes, shipping containers, and more), and are built tough with an IP67² rating for life on the road. They are powered via an integrated battery which lasts 12 to 18 months.

To align with your customers’ sustainability goals, sensors are supplied in multi-packs using biodegradable packaging. At end-of-life you or your customers can return the sensors for no-cost recycling (less than 1% reach landfill).

Applications by Sector

Manufacturing (food & pharma)	Transport & logistics	Healthcare & pharma	Retail (food & grocery)
Monitor temperature during processing, packaging, storage, and transport for regulatory compliance. Monitor excursion risks to maintain product quality and extend shelf life.	Gain real-time visibility into shipment conditions. Ensure processes are followed so that perishables arrive in optimal condition, reducing spoilage and inventory loss.	Protect sensitive vaccines and medications in distribution so they maintain their efficacy. Comply with strict pharmaceutical storage regulations.	Maintain optimal conditions during storage and transport. Ensure customer satisfaction by delivering quality products.

² IP50 for the Bridge

Everything you Need to Enhance Supply Chain Visibility

With our long experience of working with original equipment manufacturers, trust in Zebra to provide the tools you need to create new apps. And to seamlessly integrate temperature monitoring into existing enterprise systems to provide visibility across the entire supply chain:

- **APIs** – REST calls for sensor configuration and data retrieval.
- **IOS and Android Development tools** – Leverage mobile devices to pull sensor data.
- **Alarm integration** – use webhook notifications for temperature excursions.
- **Cloud Storage** – Upto 7 years of data securely backed in Zebra cloud.
- **ZS300 Demo App** – show customers what can be done via a demo to create tasks, set temperature limit and intervals, receive alarms and download csv files for data analysis.
- **ZSFinder App** – discover and communicate with ZS300 electronic temperature sensors over Bluetooth Low Energy (BLE) when the sensor is in range (up to 30 meters/100 feet, line of sight). The app connects to the sensor, retrieves data and transfers it to the Zebra Cloud via a required Encrypted and Authenticated Connection, to ensure security and trusted confidence.



Benefits for Your Customers

- **Clarity** – provide visibility over supply chains
- **Actionable intelligence** – near real-time data enable teams to react quickly to temperature events
- **Compliance** – meeting stringent regulatory requirements for temperature monitoring
- **Enhanced service** – customers can take decisions to protect products through distribution
- **Location aware** – add location capabilities too
- **Workflow optimization** – analyze data to identify common issues to enhance operations

Next Steps

For further information, visit our [website](#), or request support from a Zebra account manager.



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