

CASE STUDY

Deploying eSIM for Customized Cold Chain Solutions



Highlights

- Vertical Support for Motion**
ColdChase's three product lines target cold chain shipping, asset tracking, and airport customer experience
- Custom Built Solutions**
ColdChase's team of engineers designs unique IoT solutions for every customer's specific use case
- Secure and Dependable Connectivity**
By utilizing Soracom's eSIM, ColdChase deploys secure and reliable IoT solutions

ColdChase creates customized IoT solutions designed to fit the needs of an evolving roster of customers. The company operates three unique brands that address the needs of cold chain operations (ColdChase), shipment and asset tracking (AssetChase), and a suite of products focused on improving the passenger experience at airports (PaXChase).

Over the years, the company has helped to resolve countless tracking and monitoring challenges across the supply chain – finding innovative ways to utilize temperature, pressure, and GPS sensors, among other specialized devices, to create unique solutions to individual company issues.

“Every client is different in what they require,” said **Rosy Amlani**, CPA, the CEO of ColdChase. “So every sensor we sell is customized for every client, which is why our team has to closely interact with the customer to really understand what they need.”

“ We view Soracom as a partner because whenever we pose a question, we get a response right away. What we’ve seen is that Soracom is more solution-driven, trying to figure out the issue collaboratively. If we have a problem, they ask: ‘How do we fix it?’ ”

Rosy Amlani
CEO, ColdChase



The Challenge

Creating a Versatile Tracking Solution That Adapts to Customer Needs

Because ColdChase has a pedigree of designing and manufacturing for other companies, it moved the manufacture of its custom devices in-house, where its engineering staff – representing specialties that range from electrical to simulation to firmware engineering – can craft solutions that perfectly address customer concerns on-site.

At the heart of these solutions is a roster of base devices that can be augmented and tweaked to better suit each application’s needs. These can range from Bluetooth low-energy devices for monitoring applications to cellular sensors ideal for long-distance tracking, with each being augmented to include different sensors and modules as needed. These devices can then be outfitted with GPS, pressure, temperature, light sensors, or other modifications.

“The fact that we have engineers on staff that were part of the company that did a lot of the product development allows us to craft perfectly tailored solutions for our customers,” said Amlani. “That unique understanding of how you put sensors together to create different effects helps make sure that we’re meeting all customer requirements.”

Naturally, when dealing with applications such as airports, cold chain transit, or asset tracking, these devices need to be versatile enough to meet a lot of regulatory, spacing, and power demands. As such, ColdChase sought a connectivity partner that could not only reliably connect their devices wherever they need to deploy but could offer them the versatility to design rugged and reliable devices that can withstand the potentially harsh conditions that abound in asset tracking and cold chain applications.

The Solution

Cellular Connectivity powered by eSIM Technology

The ColdChase team evaluated at least a dozen service providers but struggled to find one that could meet the technical needs of their devices—specifically offering CatM1 and NB-IoT connectivity—and provide reliable coverage across the globe. Eventually, the team found Soracom, which not only met all of these needs but could also provide them with low-profile eSIMs for enhanced durability and lower-profile construction.

“We picked Soracom because it hit all those buttons,” said Amlani. “Not only do we get reliable service, we can get it all in eSIM form, which is very important for us. Since we do our own manufacturing, we prefer to put eSIMs on our boards.”

Because eSIMs are soldered directly onto a device’s System on Chip (SoC), their low profile allows manufacturers to design more compact devices. This construction also makes the SIMs more tamper-proof and resistant to vibration—factors important to applications that involve a lot of moving pieces.

In addition, embedding the eSIM into a device simplifies the connectivity process for the end user, removing a lot of the complexities of managing connections for fleets of mobile devices, many of which cross national borders in transit.

“We didn’t want customers trying to figure out what provider to go with depending on what country that we’re going to,” said Amlani. “So this way, the fact that Soracom has coverage in 150 countries or more, we were able to give that to our customers.”

ColdChase also highlights the benefits of Soracom’s User Console in managing deployed devices. The console can be used to monitor the connectivity status of all devices in a deployment.

Creating Reliable Tracking and Monitoring Solutions for the Cold Chain and Beyond

ColdChase's solutions have found their way into a number of different applications across the supply chain, providing reliable, actionable data that has

helped shape the way business is done. One example shared by Amlani saw ColdChase's sensors helping to avert a loss of more than \$100k worth of meat from spoiling when extreme temperatures caused a commercial freezer to fail.

By partnering with Soracom, ColdChase's customized solutions have enabled scores of customers to improve the efficiency of their operations and better manage their products. With reliable connectivity and the added security of the embedded eSIM, ColdChase is able to create powerful tools for all stages of the supply chain.

Amlani believes the company's success comes from its customer-centric view, which provides solutions to issues that aren't addressed in other technologies. "We focus on providing value to customers that realize how important having a safe, reliable, and functional piece of custom equipment is." By partnering with a connectivity provider like Soracom, ColdChase can confidently count on reliable connectivity for their end customers.



Service in Use

Soracom Air: Cellular IoT Connectivity Over GSM, 4G LTE and Cat-M1