

CASE STUDY

IoT & Single SIM



MetTel Single SIM Ensures Safe Delivery of Temperature-Sensitive Medication.

100% wireless network availability enables success of IoT solution and collaboration effort of two MetTel customers.

Healthcare Company

Our customer is a distributor of pharmaceuticals, a global manufacturer and distributor of medical and laboratory products, and a provider of performance and data solutions for healthcare facilities. With more than 50 years of experience, this organization is a crucial link between the clinical and operational sides of healthcare, serving U.S. hospitals, pharmacies, and specialty physician offices and clinics. In addition, the organization provides millions of patients with critical home healthcare products, while their digital ecosystem supports medication adherence, currently reaching millions of patients and dozens of payers (i.e., health plan providers, Medicare, Medicaid, etc.).

Temperature Control Technology Company

Our customer creates, designs, and develops temperature-controlled products that offer precision, control, and accuracy. Pioneers in temperature control technology for a variety of uses, and with more than one hundred granted patents surrounding temperature control, data, and connectivity, they have a product designed for the healthcare space. This self-refrigerated, cloud-based shipping box ensures temperature-sensitive medicines arrive at the required temperature range, ready for use.

Challenge

The healthcare company needed to ship temperature-sensitive medicine throughout the U.S. and the world. They partnered with the cold storage technology company to use their innovative product, the world's first self-refrigerated, cloud-based shipping box designed to ship temperature-sensitive medication; a reusable, environmentally sustainable solution.

Impact

SAFE MEDICATION DELIVERY

100% network availability allowed more medication to be safely delivered and prevented unnecessary medication waste.

FULL TRANSPARENCY

With the MetTel Single SIM never being off the grid, the two organizations always knew where the shipping containers were and always knew the temperature of the medication they were carrying.

COST SAVINGS

With thousands of shipments and with some shipments costing as much as \$30,000, the ability to ensure safe delivery of the medication resulted in significant cost savings.

SUSTAINABILITY

In addition to reducing medication waste, this solution eliminates the use of cardboard, Styrofoam, and disposable ice packs. The IoT device in the storage unit automatically communicates with the shipping company and creates a digital return shipping label to schedule a pick-up. The storage unit is then returned and reused to ship more medication.

For more info, contact your MetTel agent or visit [mettel.net](https://www.mettel.net).



This shipping box contains a cellular radio to report real-time temperature and humidity, as well as GPS location information which can be viewed via the company's proprietary cloud-based dashboard. With an IoT data only SIM card, the storage unit is capable of relaying data and being monitored remotely to ensure that it never drops below the critical temperature for each medication. If the shipping box dropped below this temperature, the healthcare company's medication would spoil.

The operation was set up, and during testing it was realized that there were pockets of the shipping journey where the storage unit lost network connectivity. As a result, during those segments of the journey there was no way of knowing whether it dropped below the critical temperature, and so no way of determining whether the medication had spoiled. The container needed an IoT device to be in constant connectivity in order to communicate the temperature and humidity of the medication, and it became clear that a single wireless carrier solution would not suffice.

Solution

MetTel's exclusive Single SIM was the solution to their network connectivity issue. The MetTel Single SIM intelligently roams to find the strongest signal in any location – regardless of carrier – and maintains steady, consistent connectivity. By leveraging an extensive network of 650+ carriers across 165 countries, devices and/or sensors are always connected.

The Single SIM was placed into the storage unit and testing began, first in the U.S. and then internationally. There was 100% connectivity in all tests.

The team then began to fine tune the solution and enhance connectivity by customizing the programming of how the device searches for networks. By restricting the device's spectrum and excluding networks that have incompatible technology, the device spends little to no time trying to connect to networks to which it cannot connect. This maximizes the device's ability to attach to compatible networks, and it is able to do this much faster.

Customizing the programming also resulted in conserving the battery life of each device, as a considerable amount of battery life is used searching for networks. This significantly reduces the number of devices that lose power in the middle of a journey, while creating cost savings for both organizations, as batteries need to be replaced less often.

More than 2,000 devices were rolled out throughout the U.S. as a first phase of this solution. With the success of phase one, this expanded to over 3,000 devices.

The use of the MetTel Single SIM in the shipping unit has resulted in a more consistent and reliable delivery of the healthcare organization's medication. It also provides a more sustainable solution, as the cloud-connected storage unit communicates with the shipping service once it has been emptied so that it can be picked up and reused. This eliminates the need to use cardboard, Styrofoam, and disposable ice packs, all of which are thrown away after just one use. Lastly, this solution has allowed the two organizations to work with just one trusted provider, which

Summary

COMPANY PROFILE

- The healthcare organization is a distributor of pharmaceuticals, a global manufacturer and distributor of medical and laboratory products, and a provider of performance and data solutions for healthcare facilities.
- The temperature control technology company creates, designs, and develops temperature control products, such as the cold storage shipping unit, that offer precision, control, and accuracy.

CHALLENGE

- The healthcare organization needed to ship temperature-sensitive medicine throughout the world.
- They partnered with the temperature control technology company to use their innovative cold storage unit, the world's first self-refrigerated, cloud-based shipping box designed to ship temperature-sensitive medication.
- The self-refrigerated, cloud-based shipping box lost network connectivity at various points in the shipping journey, preventing the team from continually monitoring the temperature and safety of the medication.
- 100% network coverage and consistent connectivity were critical.

FEATURED SOLUTION

- MetTel IoT Single SIM Card.

KEY RESULTS

- The MetTel Single SIM enabled the storage units to maintain 100% network connectivity throughout shipments.
- The healthcare organization's medication in the cold storage units was consistently monitored for safe delivery.
- The healthcare organization successfully delivered more of its medication.
- The reusable shipping containers provided a more environmentally sustainable solution.

simplifies coordination and billing, expedites the path to market, and streamlines network security integrations.

The next phase will include expanding outside of the U.S., beginning with Asia, so that medication can be safely shipped in other parts of the world. MetTel's extensive network of 650+ carriers across 165 countries gives our customers the ability to comfortably make this expansion.

ABOUT METTEL

MetTel is a global communications solutions provider for businesses and government agencies. We design and deploy tailored connectivity and networking solutions for voice, data, mobility, and IoT by leveraging our global private network and the industry's broadest portfolio of innovative technology. Recognized as a current Leader in the Gartner Magic Quadrant for Managed Network Services, we digitally transform legacy networks with intelligence, security, and dedicated solutions management. This unique combination of solution design, deployment, and management creates an unparalleled customer experience with enhanced productivity and cost-savings, freeing organizations to focus on their core operations. For more information visit mettel.net, follow us on [LinkedIn](#), or call us directly at (877) 963-8663. MetTel. Connect Smarter.™

“MetTel’s IoT Single SIM has been pivotal in helping us safely ship our temperature-sensitive medications. With thousands of people relying on our medications, it is critical for us to have complete confidence that they are staying within temperature and humidity range, which we now have through the cold storage shipping unit and MetTel’s IoT Single SIM.”

Healthcare Company

“As our revolutionary cold storage shipping unit facilitates the delivery of critical temperature-sensitive medications around the country and soon throughout the world, MetTel’s IoT Single SIM has become a key component to ensure that we’re never off the grid and we always know the temperature of the medications for safe delivery.”

Temperature Control Technology Company