



Fellow Smart Pill Box Keeps Patients on Track with Medications

A Sierra Wireless® Healthcare Solution

CUSTOMER CRITICAL CHALLENGE

- Design and launch a “smart pill box” that ensures patient compliance with prescription protocols

SOLUTION

- MyFellow Smart Pill Box with AirPrime® LTE Module

BENEFITS

- Compact, convenient, price-competitive solution which improves patient compliance and outcomes
- Enables doctors and family members to monitor patient adherence to medication protocols
- Product can be easily adapted for new markets



BACKGROUND

Fellow (formerly known as TowerView Health), is a health technology startup based in Philadelphia, PA, dedicated to helping people manage their medications. The company was formed when late co-founder, Nick Valilis, was diagnosed with Acute Myeloid Leukemia (AML), a rare form of blood cancer and struggled to manage a very strict medication regimen. Though Nick succumbed to the disease, his Fellow associates persevered to develop and design a solution to solve this challenge.



"The module allowed for an affordable, direct on-board mounting solution for meeting our 4G wireless radio needs. Our development cycle was short because Sierra Wireless made FCC and ODI certifications manageable by providing a familiar programming interface and guidelines for physical requirements such as layout."

Ankur Aggarwal,
Co-founder and CTO at Fellow.

Business Challenge

According to [AHIP](#), failure to take medications as prescribed results in unnecessary health care spending and lost productivity, costing \$100B to \$300B each year. AHIP's study draws a direct relationship between poor medication adherence and increased hospital admissions, medication treatment failures and preventable deaths.

Fellow wanted to develop a technology service that could help customers and their families stay on top of their medications and get better together. In addition to a health assistant to guide the patient, their smart pill box would contain "wells" for medications – 4 for each day of the week. The smart pill box would be equipped with sensors that detect when the pill box has been opened and when medications have been removed from a given well. A schedule could be wirelessly sent to the pill box and, at the appropriate time, the box would emit both a visual and audible alarm. Patients could also opt to receive emails, texts or phone calls. Fellow would be able to provide patients and, with the patients' permission, their loved ones, doctors or caregivers with a HIPAA-compliant dashboard, where they could track the history of medication adherence.

Fellow would assign a personal health assistant to each patient to make sure they get any follow-up needed to stay on their medications, as well as get answers to financial, insurance and logistical questions related to obtaining medications from the pharmacy, in order to make refilling their medications easier.

In order to send data from the pill box to their backend server, Fellow wanted to find a module that would send data reliably from the pill box over the air. Fellow needed a low-cost, well-supported module with easy to-mount package, well-documented interfaces and the ability to make reliable connections with LTE networks.

Sierra Wireless AirPrime® Solution

After considering a range of suppliers, Fellow chose Sierra Wireless based on competitive pricing, product footprint, and support through their local distributor – Premier Wireless Solutions.



"The LTE module allowed for an affordable, direct on-board mounting solution for meeting our 4G wireless radio needs. Our development cycle was short, because Sierra Wireless made FCC and ODI certifications manageable by providing a familiar programming interface and guidelines for physical requirements such as layout. Sierra Wireless was also highly responsive to questions, thorough and professional in their assistance," said Ankur Aggarwal, co-founder and CTO at Fellow.

"Working with Sierra Wireless, we can easily adapt our products for global distribution. Sierra's products are certified on most cellular networks so when the time is right, we can take advantage of this opportunity," said Mr Aggarwal.

Results

The Fellow smart pill box offers a compact, convenient and price competitive solution to a very serious challenge. Equipped with an embedded LTE module, the pill box keeps users on their medication regimen through its controlled reminders and provides doctors with accurate information about medication compliance. Forgetting to take medications is approximately 50% of the cause of medication non-adherence, and Fellow's solution offers a huge step towards reducing medication non-adherence. Fellow's Health Assistants also help make sure that patients regularly refill their medications through the most affordable and convenient options available, thereby addressing other challenges that patients have with staying adherent to their medication regimens.

"Having an LTE cellular connection enables our pill box to connect with the internet to send and receive data and updates (alert schedules, musical chimes, feature updates) from our server, without any effort on the part of the patient...it's a truly plug-and-play product!" explained Ankur Aggarwal. "This module has given us great coverage in our deployments so far. We use the module to securely change dose schedules for our pill boxes, as well as transfer sensor data into our backend systems."

Looking forward, Fellow plans to add additional features to connect end users and their families with features like customized audio reminders, a digital platform to assist with additional prescription questions and potentially other wellness-focused devices.

About Sierra Wireless

Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is an IoT pioneer, empowering businesses and industries to transform and thrive in the connected economy. Customers Start with Sierra because we offer a device-to-cloud solution, comprised of embedded and networking solutions seamlessly integrated with our IoT services. OEMs and enterprises worldwide rely on our expertise in delivering fully integrated solutions to reduce complexity, turn data into intelligence and get their connected products and services to market faster. Sierra Wireless has more than 1,400 employees globally and operates R&D centers in North America, Europe and Asia.

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