Comb Communications' Smart Access Control Solutions

A Sierra Wireless® Smart Security Solution

CUSTOMER CRITICAL CHALLENGE

- To evolve its business from a traditional intercom equipment manufacturer to providing an integrated access and control solution, Comb Communications needed to add cellular connectivity and more processing power to their anti-theft and positioning services

SOLUTION

- Comb Communications uses Sierra Wireless® AirPrime® WP Series embedded modules in CF3® form factor with integrated application processing, GNSS receiver, and cellular modem to provide an all-in-one integrated solution for their next-gen products

BENEFITS

- The integrated module with embedded Linux application framework and cloud services enable Comb Communications to provide smart access control solutions that leverage the IoT to deliver state-of-the-art security

BACKGROUND

Based in South Africa, Comb Communications offers access and control solutions and security-related technology products for multi-tenant homes and commercial buildings. The company combines best-of-breed, existing technologies with their own groundbreaking research, development and infrastructure, leveraging a team of dedicated and experienced professionals to ensure success with every individual implementation.

Customer Challenge

With a track record spanning over ten years and more than a million gate openings daily, Comb Communications has grown into a business that is leading the future of integrated building access control systems and web service platforms.

"We provide smart access control solutions and intuitive management through current technologies and web-based applications, along with the backing of a design-focused development house," said Graham Wild, CEO of Comb Communications. "The functional products we manufacture are seamlessly integrated with web-based platforms that provide users with the power to remotely control any form of building access."

The global smart secuirty market[1] is expected to grow steadily through 2020 and post a compound annual growth rate (CAGR) of more than 22 percent, according to a recent research report form analyst firm Technavio. Comb Communications, while historically considered an intercom equipment manufacturer, has evolved its business to address the biggest pain point they've seen emerging in the access management and control industry: lots of products, but very few comprehensive integrated solutions.

"This is essentially a combination of niche markets with a lot of different vendors providing different pieces, such as biometrics or intercom hardware or web-based management software. But integration between all of these things becomes a headache," said Wild. "We combine best-of-breed products in all areas with our own development expertise to provide integrated solutions that address this pain point."

Combs' IoT intercom system, integrated with Comb Portal, an online management platform, provides a fully integrated environment that gives users control of visitor management with instant, remote access capabilities and real-time reporting to provide the convenience of facility monitoring from anywhere. When looking for a cellular module to provide connectivity and an anti-theft positioning service to its robust solution, Comb turned to longtime partner Sierra Wireless.

Sierra Wireless IoT Solution

The Comb access management and control platform utilizes the AirPrime® WP Series embedded module, built on the industrial-grade common flexible form factor CF3® to provide a future-proof footprint across any LPWA, 4G, 3G, 2G mobile network. The WP Series modules allow OEMs and system integrators to build a connected product with

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integrated application processing, GNSS receiver, and cellular modem on one single module.

"We have a very good long-term relationship with Sierra Wireless and have always received good technical support from their team," explained Comb Technical Tester Brian Ross about their decision to start with Sierra.

Important to Comb was the fact that the Sierra Wireless modules run Legato® Linux open source application framework, which provides the building blocks needed to alleviate the frustration of long development cycles. The WP Series comes pre-loaded with Legato as the build environment, providing a bridge between firmware and user-applications, and provides access to utilities needed to communicate to distributed devices. In addition, the WP Series offers a built-in GNSS receiver to enable tracking and location-based services for anti-theft protection. The modules' ultra-low power mode reduces power consumption by 200x for battery or solar powered applications, and AirVantage® FOTA Edition provides free, unlimited firmware over-the-air updates to keep the IoT intercom system updated with the latest security and feature upgrades.

In addition to wireless connectivity and anti-theft features, the built-in hardware of Comb's platform is tamper-proof and weatherproof for indoor/outdoor environments. Control features include time-based access and departure control. The solution comes with an integrated web portal providing real-time control over user contact information, as well as customizable reporting, such as data usage and gate opening information, along with other benefits for the estate manager, installer, and occupants.

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Results

Security devices are expected to drive smart building market growth in the coming years. Business Insider predicts that 709 million IoT security devices will ship in 2019[2]. With global distribution, Comb Communications plans to be part of that push in smart security adoption.

"Our products allow building managers to save valuable time by being able to go about their daily business without having to worry about packages not getting delivered or intruders trying to enter a gated facility," said Wild. "Having control over access to a building provides convenience, and our state-of-the art offerings combine the best of established technologies with our own customized development, resulting in value that makes our smart security systems affordable."

In addition to Comb's IoT intercom system and web portal, Comb also offers a Tap-Tap remote keypad and BT Loader for easy remote control device upgrades. The company will continue to work with Sierra Wireless to develop products that meet the demand for the new safe, convenient smart security market. In addition, with its latest system, Comb is looking to expand its reach in commercial and corporate environments.

RESOURCES

[1] technavio.com/report/global-it-security-global-smart-security-market-2016 -2020

[2] ironpaper.com/webintel/articles/smart-home-market-size-trends-projections

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