

CASE STUDY

SIERRA WIRELESS AirLink™ Solutions

Digital Payment Technologies

Founded in 1997, Digital Payment Technologies (DPT) is a leader in the design, manufacture and distribution of parking management technologies for the North American parking industry. Based in British Columbia, the Canadian company's highly advanced multi-space parking pay stations are supported by the Web-based Enterprise Management System (EMS), a best-in-class management software program designed specifically for the parking industry. EMS allows parking operators to manage their lots and pay stations in real-time from anywhere in the world. DPT machines account for every single penny that comes into them. Both the company's on-street and off-street solutions track when parking is purchased and when payment expires and allow for the generation of stall reports to provide an extended receipt of all payment details.

"Cities look to parking to generate revenue in lean times, and just putting our machine in the ground increases revenue by up to 30 percent almost instantly," explained Robert Choquette, technical product manager for DPT. "When people are provided the convenience of using a credit card to pay for parking, they tend to stay longer. And there is no such thing as extra time left on the meter, so you can't piggyback on someone else's payment."

Business Challenge

Enlisted in 2003 by University of California at Santa Barbara (UCSB), DPT developed pay stations that connected to the Internet, allowing all payment information collected at each distributed station to be viewed online at a central location. DPT originally developed the parking payment solution using WiFi for connectivity. Unfortunately, DPT experienced "all kinds of problems with the WiFi connectivity."

As wireless technologies developed, DPT began to re-think its connectivity choice. The company saw cellular coverage growing, while both power consumption and cost were shrinking. The need for reliable connectivity, secure data transmission and low power consumption prompted DPT to begin investigating a 3G cellular solution.

Sierra Wireless AirLink™ Solution

With the guidance of Wireless MobileData, a value-added reseller of Sierra Wireless AirLink products, DPT selected the AirLink Raven XT. Wireless MobileData was instrumental in testing the Raven XT platform for use in DPT's pay stations and acting as liaison to arrange cellular service for one of DPT's largest parking group customers in the US.

"We chose Sierra Wireless because of the company's reputation for professionalism," said Choquette. "Build quality is huge and important to us, and we know we will always get a consistent device with the AirLink Raven line of communications gateways."

The Raven XT is built on a powerful, intelligent platform and processing environment that provides remote monitoring and two-way communication required for unmanned applications. The communications gateway allows instant and continuous remote data collection and is designed to be installed in extreme conditions, which was required for DPT's military spec machines that are exposed to wide temperature ranges.

The Raven XT gateway's sleek, compact form factor enables integration within existing infrastructure and enclosures, and its low power needs allow DPT the flexibility to use a more popular, yet power-hungry, Windows®-based platform that facilitates delivery of the advanced features that Digital customers have come to expect.

"When it comes down to power consumption, the Raven XT was tested quite rigorously," said Choquette. "Digital Pay Stations can utilize both solar and battery power, and with the Sierra Wireless devices, we saw quick setup time, ease of configurability and quick wake-up; the device didn't use a lot of power and just kept working."

One of the most critical aspects of DPT's pay station solutions is the ability to securely collect and verify credit card payments in real-time. DPT is the only pay station manufacturer with both a Payment Card Industry Data Security Standard (PCI-DSS) organization-level certification and Payment Application Data Security Standard (PA-DSS) product-level certification required for credit card transactions.

"Because of the security inherent in 3G CDMA cellular technology, when we take our pay stations and bolt in a Raven XT, security issues are out of scope," said Choquette. "People love the idea of putting our machines in the ground because we're certified; it reduces their stress because we've taken care of it all."



AirLink Raven XT



POWERED BY: ALEOS

CASE STUDY: Digital Payment Technologies

Sierra Wireless AirLink™ Solution, continued

Of DPT's total pay station deployments, about 90 percent of pay stations shipped are setup with real-time credit card transaction capabilities, and about half of those are wireless. The Raven XT intelligent communications gateway allows for real-time credit card validation, saving operators from lost revenue resulting from overdrawn accounts or stolen card usage.

"Now that cellular coverage is ubiquitous, we are focused on going cellular," explained Choquette of the hundreds of pay stations currently deployed using the Raven XT for wireless connectivity. "We've had no degradation issues with cellular."



Results

Choquette listed landline Ethernet as the most expensive connectivity method and only feasible at universities that have invested in good infrastructure. And though cellular can be more expensive than WiFi in large scale solutions, Choquette points out that cellular allows the operator to "set it and forget it."

"Cellular service and product providers have the infrastructure and people to manage your solution for you. There are no headaches or up-front cost associated with building a WiFi network, for which you are responsible for every aspect for the life of the network," said Choquette.

Digital Payment Technology's innovative parking management systems utilizing the Sierra Wireless Raven XT communications gateway on today's 3G CDMA cellular network has provided DPT with the following benefits:

- **Cost and time savings** – Reduce overall solution costs by eliminating potential need for landline installation or up-front costs of building a WiFi network. Lowers operating expenses by collecting payment data over-the-air.
- **Security** – 3G cellular technology and the AirLink Raven XT provide data security standards that meet the PA-DSS certification required for credit card transaction solutions, while ALEOS provides an IPsec compliant VPN.
- **Rugged specifications** – The Raven XT is built to rugged specifications for the harshest environmental conditions that fulfill DPT's temperature and power consumption requirements.
- **On-demand access to real-time information** – Payment data can be viewed at anytime and from anywhere with an Internet-enabled device.
- **Improved connectivity** – Intelligent, cellular solution powered by ALEOS provides the ability to establish and maintain a solid Internet connection, offering reliability and coverage not afforded by WiFi alternative.

"In the parking industry, margins are so thin that every penny counts," continued Choquette. "The return on investment for the operator comes in the form of real-time credit card authorization, so no revenue is lost. Also knowing that your solution is reliable and just keeps working brings peace of mind that is immeasurable."

Sierra Wireless - Connecting people and systems to mobile broadband networks around the world

Sierra Wireless modems and software connect people all over the world with mobile broadband networks that keep them in touch, informed, and productive from wherever they need to be. The Company offers a diverse product portfolio addressing enterprise, consumer, original equipment manufacturer, machine-to-machine, and specialized vertical industry markets. Sierra Wireless also provides professional services to customers requiring expertise in wireless design, integration, and carrier certification. For more information, please visit our website, www.sierrawireless.com.



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