FIDELITY COMTECH
the smart antenna company

Case Study: Auto Processing Plant

Automotive Processor Manages 400,000 Vehicles a Year with Phocus Array™ Solution

FAPS Inc. is a pioneer in automotive pre-delivery service in North America. Its founder, John Anthony LoBue, is credited with originating the port-side service facility concept to address the needs of manufacturers' distributing shipments of automobiles to the USA. However, in 2005, FAPS' ability to deliver on those needs was somewhat challenged by a narrowband wireless network that was growing less reliable In order to be able to continue to handle 400,000 vehicles in the course of a year, FAPS required a cutting-edge real time RF environment to effectively manage its inventory, cargo releases, services, and electronic invoicing.

As a port-side automotive pre-delivery service, FAPS provides auto processing facilities and services to sort and manage vehicles imported by overseas manufacturers. Prior to dealer delivery FAPS inspects, accessorizes and repairs (if required) the automobiles to factory fresh condition. A key component of their ability to handle large volumes and varied services is the availability of a wireless network and IT infrastructure to support the critical task of tracking those vehicles throughout its 200 plus-acre facility. The wireless network allows field technicians to place a vehicle anywhere in the facility and store the parking space location by vehicle identification number (VIN) in a central database. When a particular vehicle needs to be retrieved, a technician enters the VIN into the database and retrieves the corresponding parking location.

FAPS' previous narrowband wireless system needed to be updated. Loss of coverage resulted in field technicians believing they had stored vehicle location information when in fact it had not reached the database. The impact created unnecessary searches across the facility for vehicles whose location information was not available. FAPS needed an iron clad wireless network solution that could reliably deliver wireless access across the entire facility to support its inventory, as well as cargo release services and electronic invoicing applications.

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Solution Requirements Driven by the Bottom Line

In 2005 FAPS' IT Manager, Chris Heizmann, began an exacting selection process to replace both the wireless network and the handheld devices used by the company's field service staff. Chris and his team were committed to conducting a thorough evaluation and pilot deployment program to ensure they were investing in a solution that would meet FAPS' unique requirements.

"We did a thorough analysis of the different RF technologies available to make sure we had a system that met our demanding requirements," says Chris. "We were determined to make sure we made the right choice. We couldn't afford otherwise."

A key component of the selection criteria was minimal infrastructure impact. FAPS did not want to add more poles or a high number of access points to the facility, both of which could significantly increase the total cost of ownership of a wireless solution. The additional system start-up and lifecycle cost would contribute to an increased time to a return on investment. "A quick return on investment was important to our business. We could not afford to wait for a solution that required a lot of infrastructure changes that would delay deployment," says Chris.

Phocus Arrays™ Provide Reliable Coverage for Less

When the RF system proposals were compared, FAPS found that Fidelity Comtech's Phocus Array™ System exceeded its infrastructure requirements while providing robust RF coverage. Because of the Phocus Array's™ beamshaping capability, the RF coverage provided by Fidelity Comtech is superior to other vendors. Competitor solutions over-broadcast RF signals in an attempt to meet coverage requirements, inadvertently adding interference into the wireless network and requiring a significantly greater number of access points to cover a given area. The Phocus Array™ system directs wireless coverage where it is needed utilizing Fidelity Comtech's proprietary beamsteering technology, FlexVMT™. This allows FAPS to focus the coverage footprint where it's needed, thereby increasing signal range and improving network performance.

Competitor system proposals required up to 85 access points to provide the level of coverage provided by the Phocus Array™ system. The site survey conducted by FCI determined that only 20 Phocus Array™ access points were necessary to cover the 200 plus-acre facility. This is due, once again, to FlexVMT™. The circular, eight-element Phocus Array's™ antenna has a variable footprint ranging from a standard 360 degree "super" omni-directional pattern to an extended long-reach focused 43 degree co-phase pattern. The result is that fewer access points are needed to achieve optimal RF coverage. On average, an RF system designed with the Phocus Array™ requires one-seventh the number of access points as the competition.

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Thanks to the capabilities enabled by FlexVMT™, FAPS' selection of the Fidelity Comtech Phocus Array solution delivered immediate savings in three critical areas: upfront CAPEX, ongoing maintenance and support, and TCO. In addition, the Phocus Array™ solution provides the reliable coverage and performance that FAPS requires from a wireless network.

"We are extremely satisfied with the Phocus Array™ RF solution. Fidelity Comtech exceeded our expectations in every area we considered, and we are extremely confident in their ability to meet our needs as we continue to grow our business," says Chris.

About Fidelity Comtech

Since 2001, Fidelity Comtech, Inc. (FCI) has been the premier provider of RF amplifiers and antennas to commercial and government end customers, system integrators, and original equipment manufacturers (OEMs). Our customers use our products in security, ultra-high mobility, mobile network, mobile asset tracking and management, and data wireless local area network (WLAN) applications. Located at the base of the Rocky Mountains in Longmont, Colorado, Fidelity Comtech designs, manufacturers, and Services products for our customers from amplifiers and antennas to complete system products like the Phocus Array™ System family of wireless access points and routers.

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