A Wireless Connection to Reduce Large Vehicle Fleet Maintenance Cost

"Lantronix WiPort has proven to be an ideal fit with our AccuTag product. It provided us the small form factor and quick and easy installation we were looking for."

– Brian K. Pickens

AccuTag Business Application Manager Williams-Pyro

CHALLENGE Create a wireless vehicle status and driver performance monitoring system for large fleets of vehicles that eliminates monthly recurring fees, and lowers operating and maintenance costs.

SOLUTION Taking the complexity and cost out of wireless networking, Lantronix WiPort™ technology provides a feature-rich, secure, easy-to-integrate, low-cost WiFi solution.

Transportation

BENEFIT The small WiFi module provided the ability to wirelessly download vehicle and driver performance data to the AccuTag desktop application, enabling fleet managers to significantly extend the life of vehicles, reduce operating cost, and streamline maintenance activities.

Embedded 802.11b/g WiFi technology offers a variety of wireless connection advantages, including a highly reliable global set of standards. Perhaps the most relevant benefit to businesses is how cost-effective WiFi is versus cellular or other technologies for network deployment and expansion.

The Situation: Need For Wireless Monitoring At Lower Cost than Costly Cellular

Williams-Pyro was founded in 1963 and produces more than 200 unique, products, including the StoveTop FireStop®—America's leading automatic stovetop fire extinguisher—as well as electronics test equipment, cabling, connectors for the U.S. military, aerospace, geophysical sectors, and its new AccuTag Vehicle Systems.

The company's government, municipality, and private customers that manage large vehicle fleets needed the ability to efficiently and cost-effectively monitor and maintain fleet vehicles. These customers also required a small, easy-to-mount device enabling them to monitor location, vehicle status and driving behavior for more efficient and cost-effective operations. Extending the life of a fleet vehicle while reducing operating costs can translate into thousands of dollars saved per year.

Williams-Pyro perfected the front-end interface for the new solution, AccuTag, making it interchangeable by plugging it into a vehicle's diagnostic port. This eliminated the need for hardwiring or for special extension devices. However, establishing the wireless connection presented a

bigger challenge. While most companies in the industry were utilizing a cellular solution that required a monthly fee for airtime, Williams-Pyro wanted to provide comparable features and reliability without the burden of ongoing service charges.

THE SOLUTION: LANTRONIX WIPORT OFFERS EASILY-INTEGRATEABLE AND PROVEN WIFI TECHNOLOGY

Williams-Pyro found 802.11 technology to be a much more cost-effective and proven solution than cellular technology. They selected Lantronix WiPort, an 802.11 b/g wireless embedded device server module. The WiPort was small enough to be easily integrated with Williams-Pyro's design and offered the greatest feature set, including a web interface that simplified integration with the rest of its solution. Lantronix also demonstrated excellent technical and applications support, which enabled easy integration and a faster time-to-market.

With WiPort's 802.11b/g WiFi transceiver, the AccuTag product uses an external antenna to set up an access point and can download all monitoring information to a software application. AccuTag can read location data with a GPS, as well as vehicle diagnostics, such as hours of operation, odometer readings, and diagnostic trouble codes. Users have the ability to set driver limits, such as speed, idle time, maximum miles traveled and aggressive driving.

THE RESULT: AN EASY, COST-EFFECTIVE AND INTERCHANGEABLE PRODUCT THAT SPEEDS TIME-TO-MARKET

By integrating WiPort into AccuTag, William-Pyro enables fleet managers to accurately monitor location, the vehicle status, and driving behavior such as aggressive driving or exceeding authorized miles traveled — both of which can be signs the driver is wasting fuel or participating in fraudulent activity. AccuTag also streamlines maintenance scheduling by alerting fleet managers when preventative maintenance is due, extending vehicle life.

AccuTag typically pays for itself within a year by reducing fuel costs, streamlining maintenance operations and reducing out-of-service time and capital replacement costs. In addition to these benefits, the WiFi connection from WiPort frees fleet managers from the recurring monthly airtime fees of a cellular-based solution.

"Lantronix WiPort has proven to be an ideal fit with our AccuTag product. It provided us the small form factor and quick and easy installation we were looking for," said Brian K. Pickens, AccuTag business application manager for Williams-Pyro.

The Lantronix WiPort Advantage

- **SMALLEST INTEGRATED WIRELESS SOLUTION —** WiPort offers the most compact, integrated solution available for adding 802.11b/g wireless networking to any device with a serial interface, making it ideal for adding wireless networking capability to virtually any type of device.

- **FASTEST TIME-TO-MARKET —** Highly integrated hardware and software platform allows users to significantly reduce product development time, risk, and cost.

- **HIGHEST LEVEL OF INTEGRATION AVAILABLE —** WiPort contains a DSTni x86 controller, memory, 802.11b transceiver, a 10/100 Ethernet transceiver and dual high-speed serial ports to provide a complete networking solution that offers the highest level of integration available in a device server.

- **ROBUST SECURITY -** With IEEE 802.11i-PSK or WPA (PSK, TKIP) encryption, WiPort offers heightened security. WiPort also supports 256-bit Advanced Encryption Standards (Rjindael) encryption for true end-to-end (wired to wireless) secure data transfer.

- **CERTIFIED BY THE FEDERAL COMMUNICATIONS COMMISSION (FCC) —** Certification by the FCC offers solution providers and OEMs automatic approval for devices implementing WiPort, eliminating the need to run specific 802.11b/g testing, saving OEMs time and money.

LANTRONIX®

Network anything. Network everything.