

## Transportation/Trucking Applications with Airborne™ Embedded Wireless Device Server Modules and Radios

Airborne™ 802.11 Wireless Device Server Modules and Radios are a highly integrated, automotive grade solution that allows manufacturers to quickly “drop-in” wireless connectivity in a variety of communication and control units for the transportation industry in as little as six weeks. The wireless module is web-enabled and eliminates the need for a cable connection helping to simplify a wireless connection for a wide variety of transportation industry applications.

Truck stops and maintenance facilities have begun installing “hot spots” enabled with Wi-Fi technology. Truck drivers can access the Internet from laptops and WiFi-enabled PDAs just by entering one of the hot spot coverage areas. Using a web browser, truck drivers can therefore transmit tracking and maintenance information.

Data from control units can be transmitted via an 802.11 Wireless LAN to remote data collection servers. The server can then notify service technicians who would be able to respond to the information.

For example, a transportation industry control system enabled with an Airborne module can:

- Be monitored from a central control location, a service center technician's PDA or the web
- Give remote service center technicians access to systems in real-time
- Provide timely data to customers about their shipments
- Share data with transportation company, other departments, and third party technicians or outside agencies
- Send alert messages to maintenance technicians or other personnel via email or text messaging
- Be accessed remotely to set alarm points, monitoring conditions and control points
- Be controlled remotely by other devices or control other devices



Transportation applications that are suitable to integrate an Airborne module include:

- Fleet Management Systems
- Vehicle Diagnostics
- Mobile DVR, Driver Monitoring and Mobile Hotspot
- Route / Shipment Scheduling
- Refrigerated Units
- Weigh Stations
- Automotive Diagnostics
- Vehicle Movement / Tracking
- Rail Telematics
- Shipyard Management

Coordinated data sharing becomes possible when multiple systems are equipped with the Airborne module. Preventative maintenance is improved because diagnostic information is readily available.

The 802.11 Wired Equivalent Privacy (WEP) data encryption standard built into the Airborne module ensures secure and private wireless transmissions.

### **Development and Transportation Industry / Logistics Benefits**

During development, Airborne is easy to integrate into new and existing designs and gives manufacturers a highly integrated solution to quickly differentiate their products. By reducing development time, it lowers costs and facilitates faster time to market. The 802.11 standard supports a high data rate and works with standard enterprise software that is ideal for many transportation companies.

With more accurate real-time data companies achieve increased efficiency and improved processes. In addition, the capture and recording of information helps resolve vehicle issues before they become huge and costly problems, so there is potential to reduce maintenance and repair costs.

Ready data facilitates quicker response times and improves customer service and satisfaction. Wireless technology helps make gains in productivity with the elimination of phone calls and paperwork.

The Airborne module provides competitive advantages to logistics companies and fleet service businesses.

### **Need for Wireless Capabilities in Transportation Industry**

Transportation companies that manage large fleets of tractor-trailer rigs have a constant requirement to manage costs and keep their fleets running. Tracking maintenance and repair records, fuel usage, mileage logs, and scheduling, information can be a time-consuming task.

Customers expect transportation companies to supply accurate, real-time data about their shipments, including a log of the environmental conditions of the cargo during transportation, and assurance of the quality of delivered perishables.

Since '9/11' and the implementation of Homeland Security, there are new requirements to share cargo security information and vehicle movement with various governmental agencies.

Implementing wireless technology into transportation and telematic products has helped many companies share data easier and faster.