



Fleet Management Case Study

Advantech

TREK-743

ARK-1380

MARS-3100R

VITA-350

DVS-350

Managing Mobile Resources is More Efficient, Cost-Effective, with Advantech Fleet Management Solutions

Although there are many communications devices in use in the vehicle today, few solutions are available that enable real-time interaction between the vehicle, its cargo, and a command center. You might think that the plethora of cell phones, laptops, and GPS devices would have solved this problem long ago. But the fact remains: there is no integration between these systems or with the corporate network that oversees their operation.

Portable and mobile computing devices fall short because they lack integration and a direct connection to the vehicle's mechanical infrastructure. This means managers can't always know with certainty where their mobile assets are located, whether they are operating efficiently, if they are using the most efficient route to their destination, and whether they are available to change direction or take on new assignments.

Increasing traffic congestion and rising fuel prices only add to an operator's woes. To keep costs down and avoid raising prices, any business that uses vehicle fleets and moves goods is looking to cut down on the time it takes to go from one place to the next and maximize the value of goods and services delivered on each trip.

Mobile workers too are ill-equipped for efficiency. In spite of all the technology out there that keeps these workers connected to the home office, as well as the barcode readers, surveillance systems and RFID scanners that help them keep track of their cargo, they're stuck doing their "paperwork" the old-fashioned way: on paper!

The lack of integration and real-time communication all lead to inefficiencies in fleet management that add to the cost of operations. Time spent preparing reports, confirming receipt of messages, processing paper invoices, manually transmitting data – all of those activities take time away from productive, income-producing tasks.

Such are the conditions creating an immediate demand for computing solutions that bring efficiency to fleet management. And such are the reasons that Advantech has developed a full suite of fleet management hardware systems that do just that.

"Advantech's industrial-grade fleet management solutions can help you drive productivity and lower your operating costs."

—Clay Fazio
Product Manager



Harsh Conditions Demand Rugged Systems

When it comes to computing equipment, the operating conditions inside a vehicle are quite harsh. To survive the bumps, jolts, vibration, temperature fluctuation, dust, wind, grease and water that continuously pelt every moving vehicle, computing systems must be rugged and built to military-grade specifications. They must operate in a fully sealed fanless enclosure. And handheld systems must communicate wirelessly, run efficiently on batteries, and have the ability to withstand being dropped to a hard surface.

Specialized platforms are also needed to integrate with the mechanical functions of the vehicle to measure things like vehicle weight, speed, fuel efficiency, and route traveled. And dashboard mounted systems that process paperwork need to run common operating systems and software and must be able to connect to a network to transmit data.

Advantech's Fleet of Solutions

Advantech engineers understand the unique operating conditions and business needs of the fleet management marketplace. And they have years of industry-leading experience in embedded systems design. They're familiar with the requirements of harsh, rugged operating environments. Advantech has used all of this know-how to build an entire division dedicated to fleet management solutions, where every aspect of system and product design is done with the vehicle in mind.

Knowing that different vehicles have different functions, Advantech has created a full suite of hardware solutions that run a variety of applications. Solutions include vehicle-mounted computers, handheld tablet PCs, video capturing devices, and machine-to-machine communications devices. These are rugged systems designed to run in harsh environments. They're available with the latest wireless technology for networked communications at all times.

Although Advantech fleet management computing solutions are application-ready, these hardware solutions can also be modified or custom-built to meet specific customer requirements. With a platform at the ready, it takes little time to bring out such customized solutions, resulting in lower costs to the end customer.

And because Advantech platforms use common hardware architecture and are built to industry standards, customers can select from among the entire Advantech fleet management product portfolio to build a single, integrated, yet scalable solution that delivers some features in one vehicle, and different features in others. One software application can run on multiple systems, saving time and resources in the delivery of advanced, feature-rich fleet management solutions.

Are We There Yet?

Any business that operates fleets of vehicles – law enforcement, transportation systems, shipping/receiving, logistics and warehousing, delivery services – needs more efficiency in their operations and management. They need integrated computing, communications and control solutions that allow for real-time interaction and management between headquarters and their vehicles.

But don't go out and build something on your own. The fastest way to get there are with application-ready, off-the-shelf, standards-based hardware solutions from Advantech. These systems deliver maximum scalability and versatility, allowing you to build almost anything your customers need without the high cost of custom development.

Advantech's Fleet Management Division is designed to take you and your advanced vehicle-based computing solutions to market with maximum efficiency. We'll get you from here to there in record time – avoiding roadblocks, potholes, accidents and everything else that might slow you down. Ride along and learn more about Advantech in Fleet Management. It will be a very interesting and rewarding trip indeed.

About Advantech's Vehicle Computing & Fleet Management Solutions

The Vehicle Mounted Computers (TREK Series) provide rugged enclosures that can withstand dust and water penetration. Wireless LAN (IEEE 802.11b/g), GPS, GSM/GPRS modules can be integrated into the TREK units for real-time data exchange, navigation, and communications.

The Industrial Tablet PCs (MARS Series) are built with durability and stability to sustain the toughest environments. They are the ideal solutions to capture, process, and transfer data according to your specific requirements.

Machine to Machine Modules are built for fleet management applications. The VITA-350 offers a 16-channel GPS engine, GSM/GPRS modules, RS-232, and Digital I/O ports to allow GPS location tracking, wireless data transmission and remote sensing and alarm notification.

The Embedded Box Computers (ARK Series) are compact, fanless embedded computers that include a comprehensive set of application ready solutions. Designed with dual display capability and robust casting construction, this ARK Series are ideal for machine automation, industrial, signage, POI/POS applications.

Embedded/Mobile Video Computer (DVR Series) is ideal for transportation surveillance systems, such as in trains or buses. It is built with professional thermal design technology, compact metal chassis and anti-shake & fanless features increase operational stability for mobile DVR systems in harsh vehicle environments.

Advantech Co., Ltd. is a Premier Member of the Intel® Embedded and Communications Alliance, a community of communications and embedded developers and solution providers. For more information, please visit www.intel.com/go/ica



For more information:

Website: www.advantech.com/eservice-applied-computing/industrial-mobile-computers • Email: ECGInfo@advantech.com