Hughes Telematics, Inc. The next generation of connected cars

Global Telematics Service Provider Brings In-Vehicle Services to Customers with Sierra Wireless AirPrime Embedded Modules

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Hughes Telematics, Inc. (HTI) is a leader in implementing the next generation ofconnected services. The company offers a portfolio of location-based telematicsservices with two-way wireless connectivity for consumers, manufacturers, fleets and dealers.

Business challenge

Consumers buying new vehicles have had a range of connectivity options for severalyears. For the drivers of the estimated 1.4 billion older vehicles now on the roadworldwide, these services have been out of reach. HTI aims to change that with In-Drive®, an aftermarket telematics solution for in-vehicle safety, security, diagnostics and data services.

“With our connected vehicle concept, we have the opportunity to extend vehicleconnectivity services and alerts to a market of over 250 million vehicles in the UnitedStates alone,” says Eric Berkobin, vice president of engineering and general manager ofaftermarket products, HTI. “The solution can also improve vehicle safety by detecting crashes and assisting emergency service dispatchers.”

HTI can also couple In-Drive with partner offerings that leverage the vehicle data andcommunications to offer additional benefits to consumers. For example, HTI has apartnership with State Farm® to include In-Drive as part of State Farm’s Drive Safe &Save™, a program that offers policy holders discounted insurance rates based on safe driving.

Reliable two-way communications are central to all of these applications. To buildcellular-enabled solutions for in-vehicle environments, additional factors must be considered such as extreme temperatures, vibration and limited reception.

“Cellular development is complex by nature,” says Berkobin. “Discovering bugs and

fixesrequires focused efforts, and it is important to find the right partner with people whohave the expertise to understand the technical challenges and engineer solutions.”

Sierra wireless AirPrime Embedded Wireless Modules

As a key component of the In-Drive solution, HTI uses the Sierra Wireless embeddedwireless modules including the AirPrime SL6087 EDGE. The module features theOpen AT Application Framework including the world’s only operating system designedfor machine-to-machine (M2M) application development. The Sierra Wireless solutioncombines application processing and communications processing in a single module,eliminating the need for a separate external processor and allowing HTI to build richcapabilities into a smaller footprint.

“When building a device that has to plug into the OBD-II port inside the cabin of abroad range of vehicles, it needs to be small,” says Berkobin. “We’ve been able to deliverthe most powerful and versatile OBD-II device in the marketplace, while also keepingthe device small and providing superior, innovative capabilities.”

The integrated solution also translates to a significant cost savings. “By sharing thecomputational power of the module, we save the cost of having to use another CPU oradditional memory, as well as the cost of licensing another real-time operating system,”says Berkobin. “We can also benefit from Sierra Wireless’ over-the-air programmingtools, using the same Open AT Application Framework to update application code that we use to update the module’s firmware.”

A Pre-Integ rate d, Pre-Teste d Cellular and GPS Solution

To provide GPS functionality, HTI uses the AirPrime XM0110 extension module. Builtupon SiRFstarIV™ GPS technology, the module provides a comprehensive, field-provensolution that integrates seamlessly with the AirPrime module. With a direct connectionto the wireless module, a shared power supply, simplified software integration and noexternal components apart from the GPS antenna, it is much easier to integrate thanstandalone GPS solutions—accelerating HTI’s development times and speeding the product’s time to market.

Business Flexibility

The business agility of the comprehensive AirPrime roadmap can assist HTI as it plans itsfuture road map. As HTI looks to expand into new markets and work with new carriers,Sierra Wireless

can provide compatible cellular modules for CDMA, 2G and 3G solutions.

“Maintaining a flexible, agile telematics platform is crucial to our business and helpingto innovate for our clients,” says Berkobin. “With Sierra Wireless, when we establisha relationship with another carrier, we can change modules with only nominal reengineeringof the platform. It significantly shortens what would otherwise be a oneyear development cycle.”

The same flexibility also helps HTI plan its long-term shift from 2G to 3G services in the most cost-effective manner.

“As a technology innovator, we must stay ahead of the industry as it is continuouslymoving forward - from 2G to 3G, and beyond. Sierra Wireless can provide a compatibledevice, a development platform, and help us migrate to new technologies more nimbly.”

Results

Today, Sierra Wireless is helping HTI capture the potential market for aftermarkettelematics services. The AirPrime modules provide:

- A reliable solution for demanding in-vehicle environments
- Smart features in a small, compact footprint
- Lower-cost development with the Open AT Application Framework
- Fast time-to-market with a pre-integrated, pre-tested cellular and GPS
- Flexibility to capture new opportunities in any market, with any network operator

In addition, as HTI looks to expand its share of the in-vehicle telematics market, company leaders know Sierra Wireless will provide the ongoing support and expertiseto meet the most challenging business and technical requirements.

Solution:

- AirPrime SL6087 embedded wireless module

- AirPrime XM0110 GPS module

- Open AT Application Framework

Key Benefits:

- Rich capabilities in a small footprint
- Fast development and time-to-market
- Improved business flexibility