PSA Peugeot Citroën

PSA Peugeot Citroën device-to-cloud solutions means faster time-to-innovation - A Sierra Wireless® Automotive Solution

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APPLICATION

- Automotive: Connected Cars

CUSTOMER CRITICAL CHALLENGE

- Wanted to move beyond today’s telematics and emergency services to deliver broader range of services, assistance, and communication
- Automotive consumers want the latest digital features, driver assistance, and safety

SOLUTION

- AirPrime® AR Series modules, with 4G cellular connectivity to enable highbandwidth telematics solutions

- Legato Development Platform, the open-source embedded platform used as the application framework and development environment, allowing third-party applications to be built and hosted directly on the module.

BENEFITS

- Provided complete end-to-end solution

- Added value to further distinguish the PSA brand with increased automation, improved safety, and lower costs.

Business Challenge

PSA Peugeot Citroën has connected more than 1.6 million Peugeot, Citroën, and DSvehicles to date, and, since the introduction of its in-vehicle emergency notificationsystems in 2003, has sent more than 13,000 alerts to emergency services operatingin 17 European countries.

Now, looking to the future, the Group is planning to expand into other areas, movingbeyond today’s telematics and emergency services to deliver access to a broaderrange of services, assistance, and communication. The aim is to remain at the forefrontof technology as the automotive industry enters the connected-car era.

To do this, the Group needs to stay ahead of several trends. In-vehicle wirelessconnectivity is quickly moving from luxury models and premium brands to highvolumemid-market models, and studies show that a majority of buyers would switchbrands if it means getting the digital features they want. Also, the IoT is creatingnew possibilities for enhanced driver assistance, increasingly autonomous driving,and unprecedented safety. PSA Peugeot Citroën needs a way to quickly and costeffectivelydevelop, deploy, and maintain new connected-car services on a global scale.

Sierra Wireless Device-to-Cloud Solution

The Group turned to their long-trusted partner, Sierra Wireless. The two organizationshave worked closely on telematics solutions for more than 15 years, and will nowjoin forces once again to design, deliver, and manage the expansion of PSA PeugeotCitroën’s connected-car offerings.

The approach will use a unique combination of device-to-cloud technologies,developed by Sierra Wireless, that simplify the deployment of new software andservices. By leveraging pre-integrated, pre-tested modules, software, and cloudservices, PSA Peugeot Citroën will build on a proven method, optimized for automotive,that reduces time-to-market for comprehensive telematics solutions.

SIMPLE, SCALABLE, SECURE

At the core of these new connected-car solutions are AirPrime AR Series modules,a line of tailor-made devices that equip vehicles with powerful, robust, and reliableconnectivity. The advanced multicore hardware architecture reduces the complexityof integrating wireless communication into automotive applications, with featureslike dedicated application processing and performance that can be counted on forextended vehicle lifetimes.

- ***AirPrime Modules***

  AirPrime AR Series modules are produced using automotive-grade manufacturingprocesses (TS-16949 certified), and conform to automotive-grade quality standards(PPAP, 8D, FA), so they withstand the extreme operating environments associatedwith vehicle operation, including thermal shock cycles and extended temperatureranges. The modules also support GNSS for precise location information, use 4Gcellular connectivity to enable high-bandwidth telematics solutions, and follow amodular format designed to make it easier to meet global requirements.

- ***Legato Development Platform***

  AirPrime AR Series modules are supported by Legato, the open-source embeddedplatform. The Linux-based platform provides an application framework anddevelopment environment that allows third-party applications to be built andhosted directly on the wireless module. There’s no porting necessary, and witheverything in open-source, Legato provides a cost-effective way to port the stackin

the future to any module or application processor as product requirementsevolve. Security and connectivity are already built in and customizable middlewarecomponents, so they can focus on the value-add portion of their applicationsimmediately.

- ***AirVantage Cloud Service***

  The AirVantage cloud is the only integrated set of services that provides everythingneeded to create and operate telematics solutions. The service is designed forhigh-volume data, and uses sophisticated tools to manage an infrastructure thateasily scales to millions of devices. With the integrated AirVantage cloud service,applications can be securely downloaded and updated remotely over the air, so thecarmaker can be more responsive, given new situations, and there are fewer recalls.Pre-integration and pre-testing of AirPrime modules.

Results

Continuing the long-standing partnership with Sierra Wireless for advanced telematicsprovides PSA Peugeot Citroën with a full automotive-grade solution for connectedservices. These services promise to add value and distinguish the automotive brand, byincreasing automation and improving safety, while lowering cost.

The combination of AirPrime AR Series smart automotive modules, the Legatodevelopment platform, and the AirVantage Cloud service, provides an end-to-endvertical solution, optimized for automotive applications, that will position Peugeot,Citroën, and DS vehicles as leaders in the connected-car era.