



Wind River Introduces Its Next-Generation Software Framework for Connected and Autonomous Cars

Wind River Automotive and Edge Cloud Computing Technologies Enable Carmakers to Evolve Cost Structures and Bring Autonomous Driving to Scale

CES, LAS VEGAS, Nev. – Jan. 8, 2019 – [Wind River®](#), a leader in delivering IoT software to critical infrastructure, has announced enhancements to the [Wind River Chassis](#) portfolio of safe and secure automotive software. The latest updates to the Chassis portfolio include the integration with [Wind River Titanium Cloud](#) virtualization software that delivers high reliability and ultra-low latency to support the rigorous requirements of the world's most demanding computing and communications networks.

Autonomous driving, like other emerging computing applications, will usher in the need to process high volumes of data at faster speeds while avoiding the risk of downtime. Autonomous cars must constantly sense and communicate with the world around them and make complex calculations in an instant, and as a result a vehicle's computing needs will become highly intensive.

"The industry is moving beyond early pilot programs to actual commercial deployments. That means technology must extend past 'what can be done' to arrive at 'what should be done' to reach scale. Technology should do more than match functional requirements; it needs to support the business of automotive," said Marques McCammon, vice president of Automotive at Wind River. "By marrying our Chassis software framework with Titanium Cloud, we're contemplating compute—from the car to the cloud—as one system."

Traditional approaches to tackle increasing complexity, such as adding more computing hardware or simply ruggedizing fragile supercomputers inside cars, could drive up the cost of vehicle production to unreasonable levels. Several challenges can be addressed if cars offload some of the computing strain from the car and move it to the cloud. Designing cars to successfully leverage edge cloud computing can change the cost structure of next-generation vehicles and deliver the low-latency and reliable communications required for autonomous driving.

McCammon continues, "In order for autonomous driving to reach mass production, it will require ultra-low latency and dynamic compute architectures for the cloud as well as in the car. Edge cloud computing will demand flexible infrastructures and the deployment of dynamic applications, along with intensive compute wherever and whenever needed. The combination of our automotive and carrier grade virtualization technologies can provide a flexible and secure cloud-based infrastructure that can be deployed anywhere in the network."

The Wind River Chassis Portfolio

[Chassis](#) brings together automotive software, technologies, tools, and services to help carmakers simplify and maintain vehicle software systems while helping manage their connectivity to the Internet of Things. The portfolio includes the high-performance, market-leading [VxWorks®](#) real-time operating system (RTOS), tuned for both determinism and



responsiveness, with a proven track record in safety- and security-certified environments. Certified to ISO 26262 ASIL-D by TÜV SÜD, VxWorks is used in over 550 safety certification programs by more than 350 customers across multiple industries.

With Linux often serving as the starting point for innovative development, customers can turn to Chassis, which draws from the Wind River legacy as a market leader for commercial Linux, to engage in commercialization efforts for their connected and autonomous vehicle technologies. Wind River offers [Wind River Linux](#) and other commercial-grade open source technologies, technical support, and maintenance to help customers stay up to date on the latest innovations. Able to support customers' diverse range of computing needs, Wind River can create computing environments that accommodate multiple Linux-based workloads that work seamlessly with the hard real-time, deterministic VxWorks RTOS, giving customers the ability to cost-effectively combine open source with the safety and reliability of time-tested certified computing software.

Customers interested in the development of safety-critical applications can explore [Wind River Drive](#), an Adaptive AUTOSAR-oriented software services stack to support abstraction of key software applications and algorithms from hardware architectural dependencies. [Wind River Workbench](#) and [Wind River Diab Compiler](#) are best-in-class tools for building embedded software devices, systems, or networks. [Wind River Edge Sync](#) provides a software framework for remote over-the-air (OTA) updates and software lifecycle management, allowing rapid, safe, and secure updates to software and firmware throughout the vehicle lifecycle.

The Wind River Titanium Cloud Portfolio

[Titanium Cloud](#) provides a virtualized software infrastructure for the rigorous demands of critical edge infrastructure applications. It includes a fully integrated, reliable, and deployment-ready virtualization platform that enables companies to deploy virtualized services faster, at lower cost, and with high uptime. Titanium Cloud provides an application-ready software platform that runs virtualized applications and services with carrier grade reliability and is built to support the intensive performance, reliability, and security requirements of rigorous computing and 5G networks.

Wind River will be showcasing its technologies at [CES 2019](#) in Las Vegas on January 8–10 at booth #1307. More information about Wind River automotive solutions and technologies is available at www.windriver.com/markets/automotive.

About Wind River

Wind River is a global leader in delivering software for the Internet of Things. The company's technology has been powering the safest, most secure devices in the world since 1981 and is found in more than 2 billion products. Wind River offers a comprehensive portfolio, supported by world-class global professional services and support and a broad partner ecosystem. Wind River software and expertise are accelerating digital transformation of critical infrastructure systems that demand the highest levels of safety, security, performance, and reliability. To learn more, visit Wind River at www.windriver.com.

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