

# MAKING ROADS, AND EVERYTHING ON THEM, SMARTER

We're moving toward a world of faster, more efficient and more sustainable roadways, connecting people to the places and things that matter. Learn how our Connected Vehicle Technology Platform works to make roads safer for everyone.



- The Internet of Things is a network of sensors, software and technologies that are embedded in physical objects to connect and exchange data. Vehicle-to-everything (V2X) is about the exchange of data—allowing communication between vehicles and everything around them in near real time.
- Sensors carry information from the vehicle to a data platform where information is analyzed and relayed as needed.
- Information can be sent from car to car, to safety and transportation departments, to digital signs or to your car's dashboard, making decision-making easier and faster.
- Alerts regarding bicyclists and pedestrians are also included so that potential collisions are avoided, making the road safer for all.
- V2X is the connectivity foundation of autonomous driving.

## CIRRUS BY PANASONIC

The centerpiece of an intelligent transportation ecosystem, Cirrus by Panasonic® provides cloud analytics data processing, near-real-time analysis and transmission, and data storage capabilities for sharing and updating vehicles and municipalities with road conditions, operations and other safety information.

Cirrus by Panasonic is the collaborator—creating the basis for sharing important data between DOT network operations centers (NOCs) and vehicle information systems.

## COMPONENTS OF THE CIRRUS BY PANASONIC PLATFORM



### ONBOARD UNIT

The V2X onboard unit (OBU) communicates anonymously and continuously with other vehicles' onboard units as well as roadside units using either dedicated short-range communications (DSRC) or cellular V2X (C-V2X) technology. This data enables near-real-time visibility into roadway activity for traffic operators and DOT personnel.



### V2X DATA ECOSYSTEM

Cirrus by Panasonic is the most innovative, widely deployed data platform in transportation, embraced by a growing number of DOTs and building upon more than six decades of automotive expertise. Cirrus by Panasonic is a scalable software-as-a-service solution that offers customers flexible, secure and open digital architecture for traffic management and connected vehicle safety and communications.



### ROADSIDE UNIT

The V2X roadside unit (RSU) is installed along key roadways and acts as a gateway between onboard units in connected vehicles and the communications infrastructure, providing traffic managers with near-real-time situational awareness into circumstances on roadways throughout their jurisdiction.

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