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# Qualcomm and Leading Automotive Companies Across the Globe Drive the Commercialization of C-V2X

## Leading Automakers Support for C-V2X Continues;

## Tier-1 Suppliers and Other Ecosystem Participants Seek to Utilize Qualcomm 9150 C-V2X Chipset Solutions for Next Generation Vehicles and Roadside Infrastructure

SAN DIEGO, Feb. 22, 2018 /PRNewswire/ -- Qualcomm Incorporated (NASDAQ: QCOM) today announced that its subsidiary, Qualcomm Technologies, Inc., is working with an ecosystem of leading carmakers and automotive suppliers to accelerate the commercial introduction of Cellular Vehicle-to-Everything (C-V2X) technology using the Qualcomm® 9150 C-V2X chipset solution. C-V2X is a global solution for V2X communications designed to support improved automotive safety, automated driving, and traffic efficiency. Tier-1 suppliers, cellular module manufacturers, software solution providers and system integrators have expressed their support for the deployment of C-V2X technology in upcoming production vehicles and roadside units (RSU) starting in 2019. Qualcomm Technologies is currently conducting C-V2X field validations working with car manufacturers and automotive ecosystem participants in Germany, France, Korea, China, Japan and the U.S.

"The continued advancement of cellular technologies into 5G is a necessary part of connected, cooperative and autonomous vehicles that will be able to support BMW Group's vision of the car of the future," said Maik Böres Head of Future Mobility Team. "As our cities and lives continue to become more connected, C-V2X is a natural solution to both deliver direct and network-based communications to fulfill a growing set of safety and informational use cases respectively, and Qualcomm Technologies' announcement reflects the automotive industry's acceleration to commercialize C-V2X technology with meaningful progress toward vehicle integration starting in 2019."

Automotive ecosystem participants interested in delivering next generation products incorporating C-V2X technology using Qualcomm Technologies' solutions include Tier-1 suppliers LG Electronics, Continental, Ficosa-Panasonic, Lear and Valeo, as well as cellular module manufacturers Gemalto, LG Innotek, Quectel, Sierra Wireless, Telit, WNC and ZTE. Qualcomm Technologies is also working with V2X software stack and application providers Cohda Wireless, Commsignia and Savari, along with system integrators Sasken and Thundersoft, to expedite C-V2X commercialization by helping the automotive ecosystem to take advantage of the industry's decade-long investment in ITS software and standardized protocols such as ETSI-ITS, IEEE WAVE and SAE.

C-V2X is designed to be globally compatible with 5G and complement other Advanced Driver Assistance Systems (ADAS) sensors, such as cameras, radar and LIDAR. C-V2X direct communication mode is designed to offer vehicles low latency communications for Vehicle-to-Vehicle (V2V), Vehicle-to-Roadside Infrastructure (V2I) and Vehicle-to-Pedestrian (V2P) without the involvement of a cellular network, or cellular network subscription, by operating on designated and harmonized 5.9 GHz ITS spectrum. C-V2X continues to gain worldwide support in the automotive industry and broader transportation ecosystem, with trials taking place across the globe. The 5G Automotive Association (5GAA), an industry organization which supports C-V2X, currently has over 70 members including automakers, Tier-1 suppliers, mobile operators, semiconductor companies, test equipment vendors, telecom suppliers, traffic signal suppliers and road operators.

Automakers planning to integrate V2X solutions also benefit from the cost-effectiveness of C-V2X. Analysis from technology consulting firm, P3 North America, found that a fully integrated system with C-V2X integrated with existing LTE-based telematics units is the most cost-effective solution amongst V2X implementations.

The 9150 C-V2X chipset solution features improved direct communication range, reliability and latency in the face of congested roadways. With a strong evolution path in 3GPP to 5G New Radio (NR), Qualcomm Technologies continues to invest in the C-V2X roadmap to offer new and complementary capabilities. To meet automakers' production needs, the 9150 C-V2X chipset solution is planned to be commercially available in the second half of 2018 with select suppliers expected to launch solutions based on the 9150 C-V2X chipset solution shortly thereafter.

"With its superior performance and strong synergy with telematics, C-V2X is poised to offer significant improvements in

road safety compared to previous technologies and support future autonomous vehicles, while complementing Qualcomm Technologies' additional automotive offerings, including high-precision GNSS location, computer vision, compute and machine learning platforms, and sensor fusion," said Nakul Duggal, vice president of product management, Qualcomm Technologies, Inc. "We are pleased to work with carmakers and this ecosystem of leading automotive suppliers in accelerating the commercialization of the C-V2X direct communications using the 9150 C-V2X chipset solution into vehicles as soon as next year."

Qualcomm Technologies is scheduled to demonstrate C-V2X technology during Mobile World Congress, Barcelona February 26 - March 1, Hall 3, Stand 3E10. For more information on C-V2X please visit [www.qualcomm.com/c-v2x](http://www.qualcomm.com/c-v2x).

## **About Qualcomm**

Qualcomm invents breakthrough technologies that transform how the world connects and communicates. When we connected the phone to the Internet, the mobile revolution was born. Today, our inventions are the foundation for life-changing products, experiences, and industries. As we lead the world to 5G, we envision this next big change in cellular technology spurring a new era of intelligent, connected devices and enabling new opportunities in connected cars, remote delivery of health care services, and the IoT — including smart cities, smart homes, and wearables. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, all of our engineering, research and development functions, and all of our products and services businesses, including, the QCT semiconductor business. For more information, visit Qualcomm's [website](#), [OnQ blog](#), [Twitter](#) and [Facebook](#) pages.

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### Qualcomm Contacts:

Pete Lancia, Corporate Communications

Phone: 1-858-845-5959

Email: [corpcomm@qualcomm.com](mailto:corpcomm@qualcomm.com)

John Sinnott, Investor Relations

Phone: 1-858-658-4813

Email: [ir@qualcomm.com](mailto:ir@qualcomm.com)

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