



## NXP Semiconductors and Hitachi Solutions Collaborate on Secure DSRC-based V2X Solution for Japanese Market

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- Secure DSRC V2X solution based on NXP modem chipsets and its Software Defined Radio technology
- NXP's DSRC modem is the first and only chip that integrates V2X support for global markets, including those based on Japan's 760 MHz band
- Hitachi Solutions to develop full V2X software stack for Japanese market, adding EU and US stacks for customers soon after

COPENHAGEN, Denmark, Sept. 17, 2018 (GLOBE NEWSWIRE) -- NXP Semiconductors N.V. (NASDAQ: NXPI), the world's largest supplier of automotive semiconductors<sup>1</sup>, and Hitachi Solutions, Ltd., a leader in V2X software platforms for the Japanese automotive market, have announced a partnership to develop a new V2X solution targeted at the Japanese market [J-ITS]. The solution will employ an NXP developed V2X modem and processor and a full Hitachi Solutions V2X software stack, providing automakers that target the Japanese market with a head start in the development of their own V2X solutions, whether they are on board units (OBUs) or full Telematics Modules. The solution's ability to address 5.9GHz and 760MHz V2X implementations means that other markets, such as those in Europe and the United States, could be addressed with a single, reusable design, offering savings in automotive development costs.



NXP and Hitachi Solutions have announced a partnership to develop a new V2X solution targeted at the Japanese market and beyond.

V2X technology allows vehicles to “see” around corners and communicate with other cars and infrastructure. It is instrumental in safety critical applications such as platooning and emergency braking and delivers low latency for real-time communication. The technology also operates in a range that exceeds one mile, even in areas where cellular network connections are not available. Providing vehicles with V2X capability requires extensive and costly electronic pre-development work. To meet this need, carmakers have a choice between developing the foundation for these technologies in-house or working with innovative companies to source pre-made solutions.

To address these expensive pre-development challenges, Hitachi Solutions and NXP have partnered to provide developers for the Japanese automotive market with a flexible DSRC-based V2X solution. The partnership will combine NXP's V2X chipset and Hitachi Solutions' V2X Software stack in a solution that is capable of supporting V2X implementations in the EU, US and Korea (5.9GHz) as well as Japan (760MHz).

As part of the cooperation with Hitachi Solutions, NXP will implement the [SAF5400](#), the world's first automotive qualified, high-performance single-chip DSRC modem that also supports Japan (760MHz). Its unique scalable architecture, industry leading features such as fast startup time, long range, dual digital antenna diversity and leading-edge Software Defined Radio (SDR) technologies offer car makers flexible options for global V2X adoption and field upgradeability. SAF5400 is the 2nd generation of the only global V2X solution and has been proven on the road since 2017.

The secure V2X single-chip modem incorporates NXP's Software Defined Radio technology, which provides customers with a platform that supports different regional standards with a single hardware solution. This integration reduces development, qualification and maintenance efforts significantly and eases the challenges of global V2X rollouts. The modem includes a hardware engine for secure verification of incoming messages. The ultra-compact, single chip integration of analog RF with digital baseband processing provides a flexible architecture for different processor options, dependent on the need of the customer.

The NXP and Hitachi Solutions V2X solution will be available in Japan by 2019 and additional markets of Europe and North America soon after. Hitachi Solutions will support all layers above the SAF5400 firmware including network, facilities and application. NXP and Hitachi Solutions will offer strong

Japan-based technical support as well as corresponding support in North America and Europe after additional rollouts.

"We believe this solution will be the best choice for automakers targeting Japanese and global V2X market," said Hideji Morita, Vice President and Executive Officer, Hitachi Solutions. "Hitachi Solutions is happy to partner with NXP to offer our mutual customers the V2X solution with our robust software stack and NXP's ground breaking V2X technology."

"We are pleased to collaborate with Hitachi Solutions on a solution that will enable developers in the Japanese auto market to develop the next generation of V2X for Japan and beyond," said Patrick Morgan, VP & GM Product Line ADAS Modems, NXP. "Our unique and broad V2X product portfolio combined with Hitachi Solutions' V2X software stack is a powerful combination."

#### **Recent NXP V2X Announcements**

[NXP Launches World's First Scalable, Single-Chip Secure Vehicle-to-X Platform](#)

#### **Notes**

<sup>1</sup> Source: Strategy Analytics 2017

#### **About NXP Semiconductors**

NXP Semiconductors N.V. (NASDAQ:NXPI) enables secure connections and infrastructure for a smarter world, advancing solutions that make lives easier, better and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the secure connected vehicle, end-to-end security & privacy and smart connected solutions markets. Built on more than 60 years of combined experience and expertise, the company has over 30,000 employees in more than 30 countries and posted revenue of \$9.26 billion in 2017. Find out more at [www.nxp.com](http://www.nxp.com)

#### **About Hitachi Solutions, Ltd.**

Hitachi Solutions, Ltd., headquartered in Tokyo, Japan, provides value-driven services throughout the IT life cycle from systems planning to systems integration, operation and maintenance. Hitachi Solutions delivers products and services of superior value to customers worldwide through key subsidiaries in China, Asia, the United States and Europe. The flagship company in the Hitachi Group's information and communication system solutions business, Hitachi Solutions also offers solutions for social innovation such as smart cities. For more information on Hitachi Solutions, please visit: <http://www.hitachi-solutions.com>.

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