# NXP Broadens Product Portfolio to Enable High Resolution Automotive Radar Sensors

- Latest 77GHz radar transceiver completes broad, flexible, high performance radar product portfolio
- Full suite of ICs includes components for complete radar systems including seamless integration with S32R27x/37x automotive processing platform
- Get a glimpse of the future with industry leaders at CES, in the NXP booth, CP-25

**LAS VEGAS – Jan. 5, 2018 –** NXP Semiconductors N.V. (NASDAQ: NXPI), the world's largest supplier of automotive semiconductors [1], has announced the latest addition to its industry leading 77GHz radar portfolio. Adopted by top global automakers, the NXP MR3003 Radar Transceiver is specifically developed for front or corner radar applications in automated driving, where high resolution and long-range capabilities are needed. The new range of NXP system components enables carmakers to match their requirements to true system solutions including high performance imaging radar sensing. At CES, NXP and its partners will demonstrate a range of radar applications to enable broadening the role of radar in future cars.

The rise of automated driving changes the landscape for radar. The increased demand for both front view and 360-degree surround view sensing has led automakers to search for the best RF performance, power consumption and sensor size based on the specifics of the application and the in-vehicle location.

NXP's full suite of radar transceivers completes the industry's only radar portfolio based on both BiCMOS and advanced RFCMOS process technologies, to match carmaker requirements with a complete system solution. Complemented by the NXP S32R automotive radar processing platform, networking ICs, and power management solutions, the NXP radar portfolio enables automakers to develop systems ranging from small, compact radar sensors through high resolution imaging radar sensing applications, enabling broad penetration of radar across the full range of car models. It is estimated that more than 50 percent of all car radar modules shipped in 2017 have utilized NXP radar technology[2].

"The MR3003 radar transceiver delivers superior RF output power, low noise, and multi-channel operation to enable radar sensors with increased range and improved resolution," said Patrick Morgan VP & GM Product Line ADAS Modems at NXP. "By implementing high performance products in both SiGe BiCMOS and RFCMOS technologies, NXP offers a unique and broad radar product portfolio that enables automakers to meet radar requirements across the full range of car models."

**A glimpse of the future at CES 2018 with industry leaders**
At CES 2018, NXP and its partners will highlight two scenarios enabling broad applications for automotive radar sensors.

- A high-resolution imaging radar sensor concept based on a 12 channel TX and 16 channel RX design. Using multiple MR3003 radar transceivers connected inside a single radar sensor, the demonstration will highlight demanding RF performance requirements including high output power, low noise, and scalability required to achieve high resolution imaging radar sensing. Capable of tracking thousands of targets simultaneously, this radar scenario enables real-time sensing of the surrounding environment, essential for L4/L5 autonomous driving.
- A scalable radar platform to cover long-, mid-, and short-range radar requirements. Using a single NXP TEF81x RFCMOS radar transceiver along with the S32R274 processor, the demonstration will highlight the high performance, ultra-compact design and low power consumption enabling up to 12-20 radar sensors to be connected together around the car.

**Product Features and Links**

- The NXP radar portfolio including radar transceivers, microcontrollers, power management ICs, networking ICs

- Features of MR3003 radar transceiver
    - Superior output power and low noise figure allows for short or long detection range
    - Low phase noise and excellent linearity enables superior separation of objects
    - 3 TX channels with precise phase rotators allows each channel to transmit independently for detection of multiple targets simultaneously including beam steering
    - Transceiver cascading options enabling multiple transceivers to be connected together inside a single radar sensor, enabling high resolution multi-channel imaging radar applications and real-time environmental mapping

**Availability**

The MR3003 and TEF810x radar transceivers are sampling now with production release in 2018.

**Notes**

[1] Source: Strategy Analytics 2016

[2] Based on IHS (2015) and Strategy Analytics (Q1 2016) market data.

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**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 30,000 employees in more than 35 countries and posted revenue of $9.5 billion in 2016. Find out more at www.nxp.com.


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