



NXP Accelerates Smart Wearable Product Development

February 23, 2016

Multiple open-source reference platforms deliver a wide range of capabilities to wearable designers

Highlights

- NXP announces comprehensive hardware and software reference platforms for the wearable market supporting engineers from the maker community to OEMs with the foundation for their next innovation
- The Hexiwear platform, based on Kinetis MCUs, offers a complete, form-factor hardware and software solution that enables designers to move data from device sensors to the cloud
- Community-driven WaRP7 platform, based on i.MX 7Solo applications processor, built on ARM® Cortex®-A7 and Cortex-M4 cores, is introduced for rapid development of smart features into original product designs

NUREMBERG, Germany--(BUSINESS WIRE)--Feb. 23, 2016-- NXP Semiconductors N.V. (NASDAQ: NXPI) today announced new reference platforms to enable innovation and rapid development for smart wearables at Embedded World 2016.

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From fitness and wellness to industrial and smart devices, these new reference platforms target a range of IoT applications with open-source hardware and software, form-factor flexibility, and expandable solutions for designers to adapt to changing market needs. By offering both MCU and MPU based reference platforms, NXP can scale to address the varied requirements and usage models enabling faster and more cost effective development and design.

"NXP is able to leverage its broad portfolio of products to offer comprehensive, form-factor reference designs for the wearable market, simplifying customer design and accelerating customer time to market," said Geoff Lees, general manager and senior vice president of the microcontroller business line at NXP. "These new reference platforms target OEMs, as well as the larger maker community by offering versatility for designs that need to be smart, low-power, and expandable."

Hexiwear Reference Platform enhanced by NXP

Based on Kinetis MCUs, the Hexiwear platform combines the style and usability

NXP's Hexiwear platform offers a complete hardware and software solution that enables designers to move data from device sensors to the cloud. (Photo: Business Wire)

found in high-end consumer devices, with the functionality and expandability of sophisticated engineering development platforms, making Hexiwear the ideal form factor for the wearable market, as well as other edge-node IoT solutions. Completely open-source and developed by MikroElektronika, in partnership with NXP, the Hexiwear hardware includes a breadth of NXP products: the low power, high performance Kinetis K6x microcontroller based on ARM Cortex-M4 core; the Kinetis KW40Z multimode radio SoC, supporting BLE in Hexiwear; three advanced NXP sensors: 6-axis accelerometer and magnetometer, 3-axis gyroscope, and an absolute digital pressure sensor; and an NXP single cell battery charger IC.

"NXP offers the most comprehensive portfolio of products for the wearable market and combined with the expansive enablement and community support, NXP was the ideal partner for the Hexiwear reference platform," said Dr. Djordje Marinkovic, director of business development at MikroElektronika. "The Hexiwear platform is also expandable with the option to add nearly 200 different, additional sensors through click boards™."

The Hexiwear software includes open source application software, drivers and cloud connectivity, enabling designers to efficiently move data from the device's sensors to the cloud. Hexiwear is supported with its own application for Android and iOS, so customers can connect the device to the cloud straight out of the box, without any additional software development. Hexiwear uses FreeRTOS, the Kinetis software development kit (SDK) and the Kinetis Design Studio IDE.

"Hexiwear is a complete IoT development system which, when integrated with our cloud platform, delivers feature-packed cloud solutions faster to the market," said Alex Maniatopoulos, CEO of Yodiwo.

At a \$49 USD suggested resale, samples of the Hexiwear platform are available now to early engagers, with full production scheduled to start in April 2016.

Kinetis Designs

The Hexiwear platform is also available for download from Kinetis Designs, the online portal for customers to access the latest open-source hardware and software reference designs based on Kinetis MCUs. Kinetis Designs provides access to information such as software, schematics and user documentation for quick use and customization. In addition to Hexiwear, Kinetis Designs also includes such wearable designs as the Bluetooth Low Energy heart rate monitoring platform. With new reference designs being added regularly, visit Kinetis Designs and Hexiwear at www.NXP.com/KinetisDesigns/Hexiwear.

WaRP7 Wearable Reference Platform enhanced by NXP

Based on i.MX 7Solo applications processors, WaRP7 is one of the most power-efficient MPU platforms for evaluation and rapid adoption into original product designs so wearable device designers can innovate and take a differentiated product to market faster. By utilizing the heterogeneous multicore architecture of the i.MX 7Solo device, WaRP7 allows customers to optimize power efficiency, lower the bill of materials, and it provides the ultimate in performance flexibility to address the varied usage models for the wearables market.

WaRP7 was developed in partnership with element14, a part of the Premier Farnell Group, and leverages the expansive NXP portfolio. The platform includes the new NXP i.MX 7Solo applications processor, PF3001 power management IC, BC3770 battery charger, three NXP sensors: 6-axis accelerometer and magnetometer, 3-axis gyroscope, and an absolute digital pressure sensor, and a near field communication (NFC) IC to enable short range communication and secure payments. The combination of the NFC IC and the extensive hardware security features of the i.MX 7Solo device allows customers to meet the security requirements of the diverse wearables market.

"element14's experience in small form factor design, manufacturing capability and experience with supporting the development community will enable wearable projects to utilize WaRP7 and potentially finally answer the question, where should I start to be successful in the wearables market," said David Shen, Group Chief Technical Officer, Premier Farnell.

WaRP7 hardware and software will be open source to allow developers to take the platform as a starting point and innovate without licensing restrictions. Hardware engineers will benefit from schematics, Gerber files, and CAD files, while software engineers will be able to focus on their differentiation by leveraging NXP's board support packages for Linux and Android optimized to run on the WaRP7 platform. A WaRP7 kit will include the main CPU board, the I/O daughter card and a battery. A touch screen LCD will be an optional choice. WaRP7 is scheduled to start shipping in full production in April 2016 at a \$99 USD resale. More information can be found at www.element14.com/warp7.

Demonstrations at Embedded World 2016

NXP will demonstrate these new wearable reference platforms on February 23-25 at the Embedded World 2016 show, NXP IoT Truck and booth# 4A-220.

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 45,000 employees in more than 35 countries.

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