



Press Release

ams and STMicroelectronics Join to Launch Break-through Solution for Secure NFC Mobile Payments

Reference design combines ams' boostedNFC™ technology with ST's NFC controller and Secure Element to provide fastest, safest, and most reliable secure contactless transactions in phones and wearables with tiny antennas

Unterpremstaetten, Austria and Geneva, Switzerland (26 February, 2015), -- ams AG (SIX: AMS), a leading provider of high-performance analog ICs and sensors, and STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, today introduced an NFC system reference design that assures easy, reliable and secure contactless transactions while suiting the sleek form factor of mobile and wearable devices. On display at Mobile World Congress in early March, the ams/ST design promises to transform and greatly enhance the usability of NFC technology.

The reference design's advanced analog circuitry delivers outstanding NFC performance even in devices with room for only a tiny antenna, that is typically adjacent to metal surfaces or shielded by the user's hand, and mounted in a location hostile to RF transmissions. By combining the new AS39230 analog front end (AFE) with boostedNFC™ technology from ams, along with the ST21NFCC controller and ST33G1M2 Secure MCU from ST, the two partners promise to make the consumer's experience of contactless transactions easy, quick, and completely reliable, whether for payments in shops, ticketing in metro/urban mass transit infrastructure, or access control. OEMs will also benefit from market-proven worldwide certification, including for Common Criteria, EMVCo, GlobalPlatform, and Visa, Mastercard, Amex, and PBOC¹.

"Through this partnership with ams, the undisputed leader in NFC booster technology, ST customers can enjoy complete NFC turnkey solutions with enhanced RF performance and reduced cost of integration and ownership," said Laurent Degauque, Embedded Security Marketing Director at STMicroelectronics. "Our common reference design can be easily integrated into various devices including mobile phones, smart watches, wearables, and secure connected devices, and will significantly improve consumer experiences with contactless transactions."

¹ People's Bank of China



ams' new AS39230 boosts the signal on the antenna, increasing the signal strength up to 10 times when compared with conventional passive load modulation (PLM) methods of transmitting a signal from an NFC tag, card, or card emulator to an NFC reader. In space-constrained designs, the size of the antenna can thus be reduced by as much as 20 times, down to 100mm² or less, while maintaining the same signal strength. The AS39230 even allows for the device's metal casing to be used as an antenna, reducing the board space required for the NFC antenna and its related costs to nothing.

Paired with ams' boosted NFC chip, ST's ST54E System-in-Package (SIP), which contains the ST21NFCC controller and the ST33G1M2 32-bit secure microcontroller for Universal Integrated Circuit Card (UICC), embedded Secure Element, and microSD-card applications.

The ST33G1M2 Secure Element, which supports the latest Global Platform GP2.2 OS and the complete MIFARE® portfolio including MIFARE Classic and MIFARE DESFire®, offers market-proven best-in-class performance for banking and digital-access applications along with full compatibility with major worldwide transportation schemes. Based on the ARM® SecurCore® SC300™ 32-bit RISC core, the ST33G1M2 delivers Common Criteria-certified security features, together with a large and flexible embedded eFLASH, which allows OEMs and service providers to plan for future implementations with proven TSM (Trusted Service Management) infrastructure compatibility.

The AS39230 and ST54E support all important NFC standards governing card emulation, including ISO14443 type A/B, FeliCa at data rates up to 424kb/s, active peer-to-peer bit rates of 212kb/s and ISO18092 communication at up to 424kb/s.

"Consumers will continue to use their phones or smart watches for mobile payments and contactless ticketing only if the technology works faultlessly every time, no matter how they present their device to the reader. By combining the world's best-performing active boost technology in the AS39230 with ST's advanced NFC System-in-Package, OEMs ensure that they are not leaving their device's card emulation capability to chance," said Mark Dickson, Director of Marketing in the Wireless Connectivity and Power Division of ams.

The AS39230 NFC analog front end is available in production volumes now from ams, and the ST54E is available for sampling from ST. Pricing, reference designs, datasheets and an evaluation board are available on request from the appropriate supplier.

ams and ST will be exhibiting the new reference design at Mobile World Congress (Barcelona, 2-5 March 2015). ams is in Hall 6, Stand 6E20. ST is in Hall 7, Stand 7B146.

For more information about the AS39230, go to www.ams.com/NFC-HF-Booster/AS39230.

For more information about the ST21NFCC and ST33G1M2, please go to <http://www.st.com/st-web-ui/active/en/catalog/mmc/FM143>.



About ams

ams is a global leader in the design and manufacture of advanced sensor solutions and analog ICs. Our mission is to shape the world with sensor solutions by providing a seamless interface between humans and technology. ams' high-performance analog products drive applications requiring extreme precision, dynamic range, sensitivity, and ultra-low power consumption. Products include sensors, sensor interfaces, power management and wireless ICs for consumer, communications, industrial, medical, and automotive markets.

With headquarters in Austria, ams employs over 1,700 people globally and serves more than 8,000 customers worldwide. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com.

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About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2014, the Company's net revenues were \$7.40 billion. Further information on ST can be found at www.st.com.

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