

## **austriamicrosystems announces the highest performance NFC Reader IC for payment and automotive applications**



Unterpremstaetten, Austria (October 31, 2011) – austriamicrosystems has announced the AS3911 NFC (near field communications) and HF (high frequency) reader IC. The AS3911 has unique capabilities not available in the market and enables a number of applications, including EMV (Europay MasterCard Visa) payment, access control, automotive, NFC Infrastructure, and ticketing.

With an on-chip capacitive sensor, the AS3911 reader IC requires only 5  $\mu$ A of current and can wake in the presence of a tag. This unique feature allows for the lowest current consumption in the industry. The IC also provides automatic antenna tuning to eliminate manual tuning while providing 1 W of output power, eliminating the need for an external booster circuit. This is an important feature for the 650 mW of power needed to read credit/debit cards. Competing solutions require a complex external booster circuit. The AS3911's high level of integration and exclusive antenna management means halving typical system cost.

austriamicrosystems' AS3911 is the only chip on the market with on-chip error handling for EMV applications. Alternative reader ICs do error correction on the host microcontroller. In addition, the AS3911 includes the analog front end (AFE) and a highly integrated data framing system for handling ISO 18092 (NFCIP-1) initiator, ISO 18092 (NFCIP-1) active target, ISO 14443 A and B reader (including high bit rates) and FeliCa™ (Felicity Card) reader. Other standards and custom protocols can also be accommodated by adjusting the AFE and implementing framing in an external microcontroller. Additionally, the AS3911 is the first reader IC on the market that supports the Very High Bit Rate (VHBR) draft amendment to the 14443

standard, allowing for data rates up to 6.8 Mbit/sec.

Bruce Ulrich, Wireless Product Line Director at austriamicrosystems, commented, "Customers repeatedly requested a reader chip designed for NFC applications. The AS3911 provides the features and performance to optimize the infrastructure readers for NFC. Customers need flexibility, RF performance, and speed to enable them to overcome the weaker performance of the NFC enabled phones. This is where users need peak RF performance and flexibility combined with low power. The AS3911 reader IC gives designers a system solution to speed their time to market."

The NFC and HF Reader IC AS3911 includes features that make it very well suited for low power designs. In addition to the capacitive sensor detecting the presence of a card without switching on the reader field, a card can also be detected by performing a measurement of amplitude or phase of the signal on the antenna. The AS3911 also contains a low power RC oscillator and wake-up timer to wake the system after a defined time period and check for a tag. Additionally, this IC is qualified for use in automotive applications so it can be used for car access, ignition and diagnostic functions.

The AS3911 operates over a wide power supply range -- from 2.4 V to 5.5 V -- and over a wide temperature range of -40 to 85°C and is housed in a 32-pin QFN (5x5 mm) package. For more information on the AS3911 NFC reader IC, visit [www.austriamicrosystems.com/RFID/AS3911](http://www.austriamicrosystems.com/RFID/AS3911) [1]

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**Links:**

[1] <http://www.austriamicrosystems.com/RFID/AS3911>