

UK maker of wearable RFID scanner chooses UHF RFID reader IC from ams for its small size, high performance and low power consumption

The 1153 RFID reader from Technology Solutions Limited provides all-day power and Bluetooth connectivity for use by on-the-move warehouse, retail and delivery operators

Unterpremstaetten, Austria (7 October, 2015), ams AG (SIX: AMS), a leading provider of high performance sensors and analog ICs, today announced that the 1153, a rugged, wearable new RFID scanner made by UK-based Technology Solutions Limited, uses the highly-integrated, low-power AS3993 reader IC.

The small, light 1153 Bluetooth® Wearable RAIN (UHF) RFID Reader, which measures 10.2cm x 5.5cm x 5.6cm and weighs just 157g, has a palm strap so it can easily be worn on the back of the user's hand, as well as an anchor point for attachment to a tablet computer. Intended for use by retail, healthcare, document-tracking, laundry and delivery staff, the 1153 reader from Technology Solutions Limited offers long battery run-time, ideal for applications in which it is away from a charging point for long periods.

The primary design constraints facing the 1153's development team were performance, size and power consumption. The reader IC that Technology Solutions Limited chose, the AS3993 from ams, is housed in a compact 7mm x 7mm QFN48 package. It operates from a supply voltage as low as 2.7V, compatible with the 1,130mAh lithium-polymer battery in the 1153 reader. In normal mode, the AS3993 draws an operating current of just 65mA.

The designers at Technology Solutions Limited also benefited from the high level of integration in the AS3993 as they worked to accommodate a complete RFID reader in a wearable form factor. Combining an RF front end with RFID protocol-handling circuitry, the AS3993 implements a complete EPC Class 1 Gen2 RFID system with only the addition of a simple external 8-bit microcontroller.

In the 1153, the AS3993 reads from and writes to ISO18000-6C UHF transponders. The capabilities of the AS3993 also include support for ISO18000-6A/B in Transparent mode.

Featuring selectable Receive sensitivity of up to -90dBm, and integrating a power amplifier with a Transmit (output) power of 20dBm, the AS3993 gives the 1153 a very large link budget for robust performance even in challenging operating conditions. The 1153 is specified with a nominal Read range of up to 2m and a Write range of up to 1m.

The 1153 RFID reader is available now in versions for Europe, North America and Australia, and with or without a 2D barcode imager.

'We chose the AS3993 because it provided the best possible combination of reader performance with low power consumption for an ultra-compact, wearable UHF RFID reader,' said Dr David



Evans, managing director of Technology Solutions Limited. 'Our requirement for efficient Read performance with very low power consumption made it obvious that we should choose the ams AS3993.'

'The goal of ams when developing the AS3993 RAIN RFID reader IC was to offer OEMs the best performance and power consumption in the smallest package. The device has found an ideal application in the 1153 reader, which is an outstandingly small and light design offering remarkably long battery run-time,' said Johnsy Varghese, marketing manager of the Wireless Connectivity division at ams AG.

The AS3993 is available now in production volume. Unit pricing is \$35 in order quantities of 1,000. Demonstration kits and reference design boards are available from the ams ICdirect online shop. For more information and for sample requests, go to www.ams.com/UHF-Reader-IC/AS3993.

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 1,800 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 Technology Solutions UK Ltd

Technology Solutions UK Ltd (TSL) is a global leader in the design and manufacture of mobile UHF RFID readers and other multi-technology, mobile device peripherals used to identify and track products, assets, data or personnel. TSL works with a worldwide network of distributors, system integrators and software developers to offer complete, innovative mobile data capture solutions for a variety of applications such as supply chain management, stock inventory control, ticketing, data management and biometric scanning.

For two decades, TSL has delivered innovative, *Bluetooth*-compatible RFID products and mobile technology solutions to Fortune 500 companies around the world. Visit www.tsl.com to learn more.

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