Nordic Semiconductor Launches its first µBlue™ Chip – a Complete Bluetooth® Low Energy Solution

Ultra low power (ULP) RF specialist Nordic Semiconductor ASA today launches the µBlue nRF8001. By delivering sub 12.5mA peak currents and connected mode average currents as low as sub 12µA (for 1s connection intervals), µBlue nRF8001represents the industry's lowest power Bluetooth low energy solution. The device is Nordic's first chip in its brand new µBlue Bluetooth low energy product line.

Complementing Nordic's existing ULP nRF24Lxx and ANT™ 2.4GHz RF product lines with a complete and fully qualified Bluetooth Version 4.0 (“Bluetooth v4.0”) low energy solution, the nRF8001 is a highly integrated wireless connectivity solution supplied in a compact 5x5mm, 32-pin QFN package that when combined with its best-in-class ultra low power consumption makes the device ideally suited to the typically space-constrained coin cell battery operated applications that Bluetooth low energy technology was designed to target. These include wireless products and sensors designed to be worn on – or carried close to – the end user's body including mobile phone peripherals such as proximity tags and watches, and sports fitness and health sensors, as well as consumer electronic remote controls, and home and industrial automation devices.

In addition, the nRF8001 integrates a DC/DC regulator that, if enabled, can further cut peak currents and average currents by up to 20 percent when running from a coin cell battery source. The nRF8001 is also the first fully qualified Bluetooth v4.0 low energy design to combine the Radio, Link Layer, and Host into one End Product Listing (EPL), enabling designers to easily create new Bluetooth end products without any additional listing fees.

The nRF8001 chip makes it as straightforward as possible for designers to add Bluetooth low energy wireless connectivity to existing applications by integrating a complete Bluetooth v4.0 low energy Radio, Link Layer, and Host stack supporting Peripheral (“slave”) role operation, and featuring a simple serial interface supporting external microcontrollers of a designer's own choosing given the individual requirements of their application. The nRF8001 chip also integrates a unique low tolerance 32kHz RC oscillator that eliminates the need for external 32kHz crystals, a 16MHz crystal oscillator supporting low cost 16MHz crystals, plus an on-chip linear voltage regulator that provides a supply range of 1.9 to 3.6V as an alternative to its integrated DC/DC regulator.

Production samples and a development kit for the µBlue nRF8001 are available now directly from Nordic Semiconductor. General availability through sales distribution partners will start mid-February this year, with volume shipments beginning in March.

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