Ultra-sensitive Single-chip Delivers Precise Time and Positional Accuracy at Low Cost

u-blox announces the immediate availability of the UBX-G6010-ST-TM, a precision timing single-chip based on GPS technology with extreme acquisition sensitivity. It is designed for high-volume applications requiring low-cost precision timing with accuracy down to 15 nanoseconds such as femtocell basestations delivering 4G LTE (Long-Term Evolution), CDMA and WiMAX services.

Femtocell technology is attractive to telecom service providers as it allows them to deliver mobile communications services via the Internet, for example ADSL or cable. The service is then distributed wirelessly to users in localized areas such as home or office via small femtocell basestations. This approach lowers the cost of serving consumers by eliminating the requirement for large, expensive cellular basestations.

The technology also extends mobile phone coverage to remote or weak signal strength areas while improving battery life and voice quality. It also eliminates the requirement for redundant cordless phones and additional telephone number in the home or office.

Available in a miniature 8 x 8 mm MicroLeadFrame (MLF) package, the chip delivers two precision time pulse outputs at up to 10 MHz frequency, plus complete GPS satellite raw data. The chip is able to operate with only one GPS satellite visible (“single-satellite tracking”). The unbelievable timing accuracy of 15 nanoseconds is achieved using the built-in quantization error compensation. Additionally, an integrated time mark and counter unit can provide precise time measurement of external events.

The chip is qualified according to AEC-Q100, and is manufactured at ISO/TS 16949 certified facilities. It is guaranteed to operate from –40°C to 85°C.

For more information, visit the u-blox product page at: www.u-blox.com/en/gps-chips/timing-a-raw-data-chip.html [1]

Posted by Janine E. Mooney, Associate Editor

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