STMicroelectronics adds network-ready convenience & dual-wireless resilience to IoT module for metering, asset tracking

New ST87M01 module integrating embedded SIM with certified Vodafone profile and switchable NB-IoT/wM-Bus for easy, secure, and flexible connections

ST NB-IoT module

GENEVA, SWITZERLAND, October 21, 2024 /EINPresswire.com/ -- STMicroelectronics is making large-scale IoT deployments easier to connect and manage with new enhancements to its cellular data-communications module, accelerating the adoption of sustainable smart grids and smart industry.

The ST87M01 module platform is NB-IoT certified, with an optional state-of-the-art ST4SIM embedded SIM (eSIM) for accessing connectivity services. Furthermore, the modules now come pre-loaded with a Vodafone profile so customers can have quick and easy access to Vodafone's extensive global connectivity footprint.

Also, ST has added wireless Meter-Bus (wM-Bus) connectivity in the same module, that provides an additional standardized channel, backing up the cellular connection, for collecting data such as household utility consumption. Using wM-Bus can provide cover in case of a cellular network outage and gives flexibility for drive-in and work-in meter readings.

Maddalena S.p.A, a leading innovator in smart water metering, chose the ST87M01 to accelerate its cutting-edge solutions for the latest advanced water-meter product line. "Collaborating with ST has allowed us to integrate state-of-the-art NB-IoT technology, selecting the only ultra-compact industrial module in the market that provides certified cellular NB-IoT connectivity out of the box," said Filippo Fontanelli, CTO of Maddalena S.p.A. "This enables our new meters to provide unmatched speed in deployment to our customers. This collaboration underscores the growing importance of partnerships in the tech sector, allowing us to deliver reliable, high-performance solutions that meet the evolving demands of the market."

“Our combined eSIM and NB-IoT solution in the module simplifies management and reduces system costs compared to integrating separate solutions, while ensuring data protection and extra-security,” commented Domenico Arrigo, General Manager, Application Specific Product Division, STMicroelectronics. “And with the convenient option to load Vodafone’s mobile network profile, the ST87M01 delivers significant advantages for customers looking to deploy turnkey IoT solutions at scale.”

Central to this module’s flexibility is the software-defined radio that ST has specially designed for this device, which enables dynamic switching between cellular NB-IoT and sub-GHz wM-Bus communication modes. This lets the module support a wide variety of use cases and adapt to specific needs including using wM-Bus as backup communication for extra resilience. Further flexibility comes from letting users embed their own code directly in the module for simple applications or connect to a separate host microcontroller in more sophisticated use cases.

In addition, the Vodafone profile is available in the ST87M01 variant that integrates NB-IoT with a multi-constellation GNSS receiver to enable location-based applications such as safety monitoring for remote workers, asset tracking, and general intelligent logistics. The embedded GNSS receiver saves power by operating during NB-IoT sleep time slots. All the ST87M01 module variants are industrial-grade qualified and come with a 10.6mm x 12.8mm package enabling designers to create reliable and cost-effective products with an ultra-compact overall form factor.

By combining location and multi-connectivity options on the same module, the ST87M01 platform can be used for industrial condition monitoring, factory automation, smart agriculture, environmental monitoring, and in smart buildings, smart cities, and smart infrastructure.

The module itself and all the internal components are entirely conceived, designed, and industrialized by ST, which ensures the complete control and management of the bill of materials and supply chain. This represents a unique market offer in terms of product quality, security, and longevity.

The ST87M01 platform is in production now and only available directly from ST. Please contact your local ST sales office for pricing and sample options.

Please visit st.com/st87m01 for more information.

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