PRESS RELEASE

Chirp + UWB Fusion for Industrial Applications

Nanotron's *swarm* bee product family - a common platform for both.

Berlin, July 26, 2016 – nanotron Technologies, the leader in easy-to-use solutions for location-awareness today outlined a new category of combined Exclusion Zone and Collision Avoidance fusion applications. The *swarm* bee family of compatible UWB and Chirp modules can be deployed side by side for enhanced safety from collisions between vehicles and between vehicles and people.

"Long range accurate and robust performance of Chirp can be easily combined with the enhanced resolution of UWB at closer ranges." explains Thomas Foerste, Vice President Sales and Marketing at nanotron: "For the first time this enables customers to harness the combined power of both technologies creating entirely new and diverse industrial safety and productivity applications".

The Chirp-based *swarm* bee LE (Low Energy) module has been optimised for radio robustness and provides up to 1.2km of range. It features extremely rapid ranging cycles with just 1.8mS air-time, which provides an excellent low-latency platform for collision avoidance systems (CAS). The very short air time per ranging cycle means that systems constructed with *swarm* bee LE modules are particularly well-suited to managing high-speed vehicles even in congested areas with large numbers of personnel. The *swarm* bee LE module is complemented by the recently released nanotron *swarm* bee ER (Enhanced Resolution) module. This device is optimised for enhanced resolution providing an impressive 10cm accuracy even at close range.

In a fork-lift application for instance *swarm* bee modules are used both on fork-lifts and also inside personnel tags worn by the people. Warnings are triggered before collision conditions develop between vehicles and/or when a person gets too close. "The diverse operating speeds of these machines means there is the requirement for combined long range collision warnings and short range exclusion zones" comments Foerste.

Both products utilize the same *swarm* API, allowing software engineers to rapidly develop applications then cut and paste for the different technologies. For the first time engineers can easily and rapidly combine Chirp and UWB radio technologies into a single design leveraging the combined benefits of both radio technologies and providing access to a new genre of smart industrial IoT applications.

The new *swarm* bee ER development kits (DK+) follows the proven software and hardware platform for application development that was pioneered by the Chirp version of the module. The kits comprise of three DK+ boards, *swarm* PC tools, and a comprehensive data package to facilitate easy and rapid development of location-aware applications. Customers benefit from several *swarm* tools including the *node configuration device* (NCD) boosting productivity if large numbers of radio nodes require configuration as part of network maintenance. Additional development boards are purchased separately if customers want to evaluate larger location-aware networks.

Both the *swarm* bee LE and *swarm* bee ER modules and the associated DK+ kits are available and shipping in volume now.

swarm bee ER

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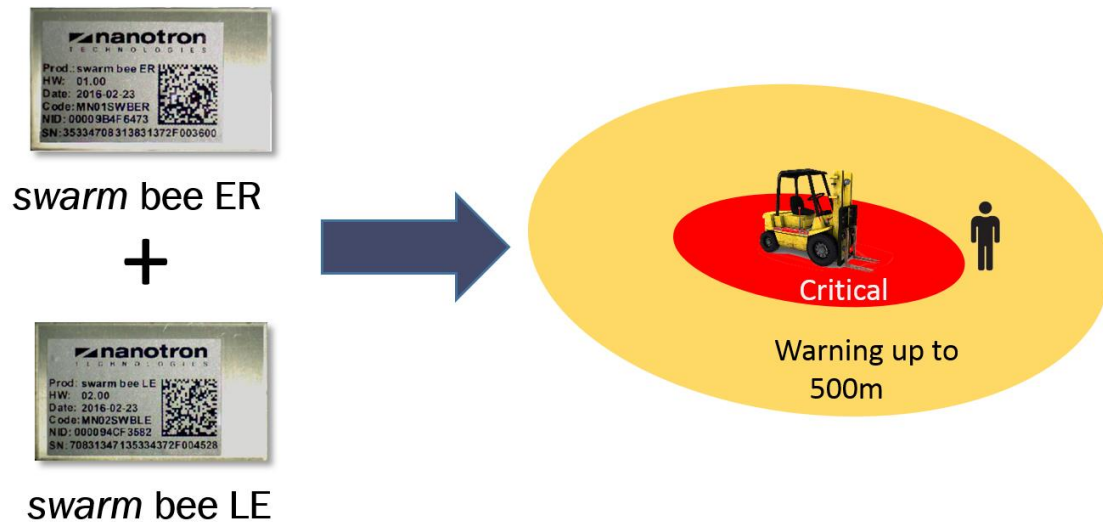
swarm bee LE

Caption: *swarm* bee LE and ER used in a fork lift truck implementation.

About the *swarm* product family

Swarm bee modules are available with Chirp or UWB radio technology. Both versions are sharing the common *swarm* API. The *swarm* product family targets the growing market for autonomous smart items and cuts time to market for location-aware products by 12 months. Very precise low-cost location technology can now be used without the need for RF-design capabilities or expertise on low level device drivers. Developers focus on application design.

About nanotron Technologies

Today nanotron's *embedded location platform* delivers location-awareness for safety and productivity solutions across industrial and consumer markets. The platform consists of chips, modules and software that enable precise real-time positioning and concurrent wireless communication. The ubiquitous proliferation of interoperable location platforms is creating the location-aware Internet of Things. More information on www.nanotron.com. Follow nanotron Technologies on LinkedIn.

Press Contact:

Dr. Thomas Förste
T +49 30 399 954-0
Email t.foerste@nanotron.com