

Kathrein Solutions offers RFID reader for precise goods detection; STMicroelectronics adds NFC support to iOS 13 platform; Antenna Co. ships new antennas, including IoT/BLE; FogHorn intros IoT-based AI platform; Kerlink, SenRa deploy

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Tags: [Logistics](#), [Asset Tracking](#), [RFID Channel](#), [NFC](#), [Internet of Things](#), [BLE](#), [Smart City](#)

Oct 24, 2019—Presented here are news announcements made during the past week by the following organizations: [Kathrein Solutions](#); [STMicroelectronics](#); [Antenna Co.](#); [FogHorn](#); [Kerlink](#), [SenRa](#); and [Nova Mobile Systems](#).

Kathrein Solutions Offers RFID Reader for Precise Goods Detection

[Kathrein Solutions](#) has announced its ARU 8500 RFID reader, designed for complex logistics processes. The ARU 8500 reader comes with an integrated circular switch-beam antenna enabling precise detection of goods and their direction of movement. The reader allow companies to ensure that shipped goods and commodities are tracked at all times for industrial production or logistics processes, the firm reports. According to Kathrein, the device offers high processing capacity, fast reading capability and increased reading accuracy, even under difficult conditions.

The core function of the ARU 8500 is a circular switch-beam antenna that can be swiveled in three areas to track the direction of movement in a gantry or when goods pass through a gate. The pass-through area is divided into three zones, enabling the system to determine direction of movement. The solution can distinguish between transported goods that pass through all three reading zones and static readings that only take place in a single zone. Thus, only moved product are detected, enabling companies to identify the flow of goods, and to control and optimize production and logistics.

The ARU 8500 reader has a robust housing made of industry-standard aluminum injection mold, with a plastic hood for the circular switch-beam antenna. It comes with four LEDs, allowing for a visualization of an active antenna or a feedback of the read goods per antenna. The LEDs provide a signal that can be flexibly adjusted in terms of color, intensity and flashing frequency. The company says the reader can be integrated into existing IT and ERP systems using the CrossTalk AutoID software suite.

According to Kathrein, the device is suitable for registering goods movement in the industrial, logistics and retail sectors. This feature can be used at dock doors to detect products and their direction of movement, and as an anti-theft system to check whether items have been paid for when customers leave a store.

STMicroelectronics Adds NFC Support to iOS 13 Platform

[STMicroelectronics](#), a semiconductor company, has announced that it has enhanced its software support for smartphone app developers to leverage the Core NFC Framework of the newly released iOS 13 operating system. The Framework enables reading and writing interactions with diverse types of Near Field Communication (NFC) tags, including ISO/IEC 15693 type-5 tags.

The newly supported commands include the full standard command set, as well as the extended set specified in ISO/IEC 15693, together with the support of custom commands, to permit interaction with embedded electronics through dynamic tags that can store changeable information, such as fitness-tracking data. The move enables contactless applications beyond payments and ticketing, the company indicates, such as smart retail, bicycle or scooter hiring, smart parking, health care, coupons, loyalty schemes, device pairing and gaming, as well as industrial and automotive use cases.

ST's chip portfolio for mobile devices, payment terminals, automotive and NFC tags includes the ST25T series for type-5- tags and the ST25DV series for type-5 long-range (ISO/IEC 15693) dynamic tags. The tags provide custom instructions and TruST25 digital signature for additional protection. Developers can leverage the company's ST25 software development kit (SDK), ST25DV-DISCOVERY evaluation kit, X-NUCLEO-NFC04A1 STM32 Nucleo Expansion board, ST25 (Mobile) NFC tap application and ST25 NFC tap iOS application for development on iOS 13 devices.

"The mobile world has so far only scratched the surface of the convenience and efficiency NFC can bring to many daily

interactions. With support for the full range of NFC tag functionalities about to arrive on iOS devices, many new and imaginative apps can and will emerge," said Benoit Rodrigues, the general manager of ST's Memory Division, in a prepared statement. "With our strong portfolio of NFC tag ICs and a full suite of tools to support development of tags and unleash the full capabilities of the new Core NFC Framework, we're positioned to have a central role in changing the way people interact with the world through their mobiles."

To help developers begin creating new apps for iOS 13 devices, ST has made source code available for the ST25 NFC tap application. The company has also published a guide offering tips on how to leverage NFC's potential on iOS 13.

Antenna Co. Ships New Antennas, Including IoT/BLE

[Antenna Co.](#), a designer of embedded antennas, has announced production shipments of a Wi-Fi 6 (802.11ax)-compatible MIMO antenna system designed to increase network capacity, as well as extend range and reduce latency in enterprise networks. The antenna system comprises 10 antennas in total, supporting a 4x4 5 GHz and 4x4 2.4/5 GHz Wi-Fi configuration. An additional 2.4 GHz IoT/BLE antenna is included to enable Internet of Things (IoT) use cases, such as location tracking, along with a dedicated 2.4/5 GHz antenna for radio spectrum management.

Wi-Fi 6 enables several features designed to support bandwidth-intensive use cases in dense Wi-Fi deployments. The antenna system supports concurrent operation of dual 5 GHz radios, the company reports, while achieving cross-pair antenna isolation of greater than 40 dB. In dual-radio mode, Antenna Co. indicates, over-the-air speeds of up to 5.2 Gbps can be achieved.

The Wi-Fi 6 enterprise antenna system features a compact design that enables size reduction of enterprise access points by 20 percent or more, the firm reports, without having to sacrifice system performance. It offers low input impedance, essential to achieving peak rates during 1024-QAM operation; an omnidirectional pattern in the azimuth plane, in order to ensure uniform coverage; and robustness against antenna de-tuning from the system environment.

"Antenna Co. has optimized the performance of the antenna system to meet the demanding requirements of enterprise-class products," said David Favreau, the company's CEO, in a prepared statement. "With our scalable design, OEMs can deploy enterprise access-points that offer 4x improvement over previous generation access-points."

FogHorn Intros IoT-based AI Platform

[FogHorn](#), a developer of edge-computing software for commercial and Industrial Internet of Things (IIoT) solutions, has announced the availability of new features for its Lightning Edge AI platform, including tools and enhancements for operations technology (OT) professionals. Drag-and-drop analytic programming capabilities and visualization dashboards enable OT personnel to derive insights from real-time data, the firm explains, without the need for assistance from data science teams.

The Lightning Edge platform provides intelligence at or near the point where data originates and facilitates analysis with low latencies to improve operational outcomes. Artificial intelligence is enabled via built-in closed-loop edge-to-cloud machine learning, where FogHorn Lightning can detect drifts in model accuracies and automatically trigger cloud-based retraining with Google Cloud Platform and Microsoft Azure IoT. The system can republish new models to the edge in an iterative fashion until the expected accuracy is reached.

A visual programming tool, VEL Studio, creates analytic expressions that derive actionable insights from streaming control and sensor data. A drag-and-drop library of more than 100 built-in code blocks lets OT professionals perform data science tasks without requiring programming skills. This functionality allows users to drag blocks to a workspace, fill in required parameters and connect the code blocks. These blocks perform such analytic functions as data cleansing and filtering, data collection and type conversion, event and pattern detection, signal processing, and mathematical and statistical analysis. FogHorn has also released OT-centric blocks for manufacturing-specific use cases to make it easier to create advanced analytics, including anomaly and failure condition detection.

VIZ Dashboards allows OT teams to visualize real-time data streams and monitor the efficiency and health of their environments. Dashboards are a user-defined canvas of widgets that visualize the results of analytic expressions, display the output of machine-learning algorithms, validate sensors and troubleshoot diagnostics of input sources. Based on how a user needs to

employ each dashboard, widgets can be drawn to any size and can include data visualizations, such as line graphs, bar charts, gauges, last-state cards, maps, video feeds, images and containers for nested dashboards.

"Lightning Edge AI was designed with OT professionals in mind as a bridge between subject matter experts and deriving actionable insights from real-time data," said Sastry Malladi, FogHorn's CTO, in a prepared statement. "The simplicity of the new VEL Studio and code blocks empower OT teams to gain meaningful business insights with easy-to-use data science capabilities without the need to code or be an analytics expert."

Kerlink, SenRa Deploy Smart-City Networks in India

[Kerlink](#), a provider of solutions dedicated to the Internet of Things (IoT), and [SenRa](#), a provider of low-power wide-area networks (LPWANs) for long-range (LoRa)-based IoT applications, have announced a partnership to reach a target of 100 smart-city networks in India by the end of 2020.

Building on a SenRa smart-city initiative known as Smart City Mission, the rollouts will utilize Kerlink's products and solutions. These include the company's industrial-grade Wirnet iStation with fully integrated internal antennas and 4G backhaul connectivity, and Wirnet iFemtoCell gateway, designed for indoor applications.



"Kerlink is a global leader in delivering high-performance, robust and reliable IoT networks in any environmental conditions, including India's monsoon season," said Ali Hosseini, SenRa's CEO and founder, in a prepared statement. "In addition, the company's package of highly consistent, future-proof and compact range of solutions enables quick network deployment, update and overall operation."

"Combined with Kerlink Wanesy Management Center as a network management suite, Wirnet iStation is a unique, robust, and reliable connectivity solution with powerful remote-management features," added Girish Dadheech, Kerlink's VP for India, in the prepared statement. "This combination allows large and small municipalities to quickly and continuously experience the benefits of a smart-city applications tailored to their specific IoT network goals."

Smart City Mission was launched to create a more sustainable and citizen-friendly India, the companies explain. SenRa's LoRaWAN networks are dedicated to supporting smart-city projects, such as parking, waste management, street lighting and utilities. SenRa and Kerlink report that they are slated to deploy public LoRaWAN networks in 100 cities by the end of next year.

Nova Mobile Systems Unveils LPWAN NB-IoT Asset Trackers

[Nova Mobile Systems](#), a provider of wireless communications, GPS tracking and remote asset-management systems, has announced a line of tracking and remote monitoring devices for use with low-power wide-area networks (LPWANs), including Narrowband Internet of Things (NB-IoT) and CatM1 4G LTE.

The products are certified and ready for use over multiple cellular networks, the company indicates, including those from AT&T, Sprint, T-Mobile and Verizon. These multi-sensor devices are suitable for a variety of use cases, according to Nova Mobile, such as remote asset and facilities monitoring and management. Enabling access to 5G IoT, Nova's asset trackers are configured to run on both high-power (Cat1-4) and low-power (Cat-M to NB-IoT) networks, giving users the flexibility of operating in varying data and power-usage requirements.

"We are thrilled to introduce the nation's first narrowband capable portfolio of asset management devices," said George Ecker, Nova Mobile Systems' CEO, in a prepared statement. "Our range of products are immediately available to allow our customers to efficiently integrate and leverage the benefits of Narrowband as well as Cat-M to fully benefit from today's low-power wide area networks. The advances in these products offer significant improvements in power management and lower operational costs for

our customers, while providing consistent and reliable network connections."

Nova's products are being used across several industries, the firm reports, including agriculture (fuel and fluid tanks), health care (EMS vehicles), and retail and hospitality (refrigerated food delivery and worker safety). IoT assets are tracked, managed and controlled using the company's NovaAssure IoT Management Platform, which is centered on machine learning to provide real-time alerts, hours of service, and predictive maintenance and analytics.