



NEWS RELEASE

RAKwireless Collaborates with Ambiq to Power WiseConn's Precision Agriculture Solutions with the RAK11720 LoRaWAN+BLE Module

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Shenzhen, China, Mar 19, 2024 – RAKwireless, a trusted IoT solution innovator, and Ambiq, a leading energy-efficient semiconductor provider, demonstrated the real-world impact of technology on agriculture by implementing WiseConn's precision irrigation systems using the RAK11720 hybrid LoRaWAN + BLE module enabled by the Ambiq Apollo3 Blue MCU.

WiseConn, notable for its precise irrigation solutions used across the diverse agricultural regions in the US, Europe, Latin America, and Australia, has launched its latest innovation with an integration for RAKwireless' RAK11720 to address its need for extensive signal reach and robust connectivity.

ADVANCED CONNECTIVITY FOR
AGRICULTURE

The major challenges faced in agriculture, specifically connecting large machinery in expansive fields, called for a solution that extends signal coverage without compromising reliability. WiseConn's move to RAK11720 provided the connectivity critical in linking pumps and equipment spread out over large distances, ensuring efficient water use and crop management.

The RAK11720's combination of LoRa® and Bluetooth® capabilities, enabled by Apollo3 Blue, not only overcame limitations seen with previous communication protocols but also introduced new, user-friendly features together



with NFC, that made system installation and management more convenient for farmers.

ENHANCED AGRICULTURAL SENSOR TECHNOLOGY

Constructing sensors that can withstand farming environments while providing essential insights into resource management was a complex task. By leveraging the mixed-technology features of the RAK11720 module, WiseConn succeeded in producing devices that gather crucial data on soil and weather conditions. Importantly, these devices are more than mere data collectors; they are critical tools in operational robustness and data-driven farming strategies.

“WiseConn is a company that empowers sustainable farming through precise irrigation solutions,” said Vicente Ossa, Marketing Manager at WiseConn. “Our system, designed for ease of use, enables farmers to have comprehensive management over their irrigation, making it the most complete system they can access.”

The introduction of the RAK11720 module into our cloud-based automation solution enhances our ability to provide detailed insights from initial water source analysis to final agronomic implementation. This advancement allows us to support a wider range of farmers in implementing effective irrigation programs that optimize water usage and significantly reduce operational costs, including those for fertilizer, energy, and labor”

COMPREHENSIVE IOT SOLUTIONS WITH RAK11720

RAKWireless’ expertise in developing modules that harness both LoRa and Bluetooth technology is evident in the RAK11720. This innovation has allowed WiseConn to code their application directly onto the module, reducing both component costs and power requirements and boosting the effectiveness of the solutions.

“By incorporating Ambiq’s ultra-low power Apollo3 Blue into our RAK11720 module, we’ve crafted a pioneer in IoT,” said Ken Yu, CEO of RAKwireless. “This partnership signifies a leap forward in our drive to offer IoT solutions that are robust and remarkably energy-efficient. We’re addressing the ever-changing demands of the connected device market. More importantly, we’re introducing a cost-effective solution for hybrid networks and expanding the RAKwireless WisDuo product family, enabling device makers to connect to the LoRaWAN® network in multiple, straightforward ways.”

“Our collaboration with RAKwireless raises the bar for high-performing and energy-efficient LoRa technologies,” said Terry Pan, VP of Sales, China at Ambiq. “The RAK11720 module, equipped with our Apollo3 Blue, delivers on the promise of connecting data-driven devices and enabling intelligence everywhere.”

Selecting Ambiq’s Apollo3 Blue chip for the RAK11720 was a strategic decision to provide customers with efficient IoT solutions. Its compact size and pin-to-pin compatibility with RAK3172, ensures flexibility on hardware development without needing complicated circuit redesign. Embedded with the simple and customizable RUI3 firmware, the RAK11720 offered WiseConn an Arduino-compatible API environment. This ease of development empowered WiseConn’s engineers to create custom solutions and accelerate innovation efficiently.

WISECONN’S SELECTION OF RAK’S
ONE-STOP SERVICE FOR ANTENNA
DESIGN AND CERTIFICATION

Apart from implementing the RAK11720 module, WiseConn also leveraged the comprehensive services offered by RAKwireless. Understanding that innovation doesn’t stop at the hardware, WiseConn maximized the one-stop service RAKwireless provides, which includes its **antenna design service** and global certification assistance.

Antenna performance is extremely important for LoRa technology. Well-matched antennas can significantly extend battery life, provide longer communication range, and ensure stable data throughput—all critical factors in the performance and reliability of precision agricultural technology.

EXPANDING IOT APPLICATIONS
BEYOND AGRICULTURE

The RAK11720’s dual connectivity opens up opportunities in various sectors, such as building automation, construction monitoring, and smart cities. Its ability to connect beacon devices to the LoRaWAN network for wider coverage and to transmit consolidated data to the cloud makes it a versatile solution for numerous industrial applications.

This collaboration between RAKwireless and Ambiq, showcased through WiseConn’s story, is advancing agriculture and transforming industries with IoT. Focusing on practical benefits and real-world applications, RAKwireless and WiseConn’s success demonstrates how innovative technology can solve pressing problems, paving the way for a smarter, more connected world.



Learn more about the RAK11720 module

Learn more about Ambiq Apollo3 Blue

About RAKwireless

RAKwireless is a leading provider of private network solutions. Headquartered in Shenzhen, RAKwireless helps businesses scale their IoT solutions, from small-scale projects to enterprise-level deployments

Visit the RAKwireless website: <https://www.rakwireless.com/en-us>

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About Ambiq

Ambiq's mission is to develop the lowest-power semiconductor solutions to enable intelligent devices everywhere by developing the lowest-power semiconductor solutions to drive a more energy-efficient, sustainable, and data-driven world. Ambiq has helped leading manufacturers worldwide develop products that last weeks on a single charge (rather than days) while delivering a maximum feature set in compact industrial designs. Ambiq's goal is to take Artificial Intelligence (AI) where it has never gone before in mobile and portable devices, using Ambiq's advanced ultra-low power system on chip (SoC) solutions. Ambiq has shipped more than 230 million units. For more information, visit www.ambiq.com.

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