



# Free LoRa Development Kits

## Get Started with Low-Power Data Transmission

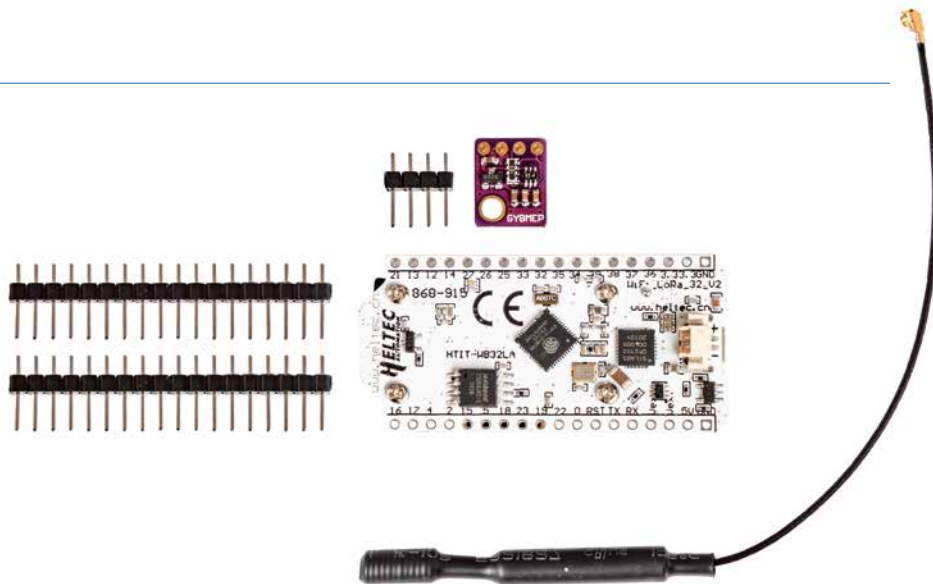
Contributed by Thomas-Krenn

Interested in IoT development? With a free Long-Range Wide Area Network (LoRaWAN) developer kit from Thomas-Krenn, you can easily start a data acquisition and transmission project.

Server manufacturer Thomas-Krenn is awarding free Long-Range Wide Area Network (LoRaWAN) developer kits to IoT developers. The kits contain two boards — each with an ESP32 microcontroller, LoRa module, OLED display and Wi-Fi as well as Bluetooth and micro-USB interfaces and the corresponding USB connection cables. Also included is a BME280 sensor for measuring temperature, air pressure and humidity. In other words, the kit contains all the necessary components to start a data acquisition and transmission project. Interested parties can apply directly on the Thomas-Krenn website [1] with a short description of the planned application.

LoRaWAN is a technology for wireless data transmission at low data volumes over distances of several kilometers. It is characterized by its very low energy consumption and, in conjunction with the appropriate sensors, is suitable for measurement data in IoT networks — for example, in industry, logistics, smart buildings, environmental technology, traffic or agriculture.

As an open standard, LoRaWAN offers the ability to dock to all IoT frameworks and does not require an additional provider unlike other low-power networks, making it a cost-effective and future-proof automation option.



“We see great potential in LoRaWAN technology in the IoT space,” said Bernhard Seibold, Vice President of Systems Engineering and responsible for the company’s IoT and edge computing strategy. “With the free LoRa kits, we want to make IoT tangible in the truest sense of the word. We want to allow developers to gain experience, but also to learn more about possible applications ourselves and, of course, to pass on our know-how.”

For example, Thomas-Krenn has published extensive information about the technology used and step-by-step instructions for installation and programming using the Arduino IDE on its technology wiki, and also provides data on 3D printed housings for the boards [2]. Besides the supplied

sensor, other sensors or actuators can be used with the boards, such as those using the I<sup>2</sup>C standard.

In addition to classic industrial bus systems for real-time data or IT protocols with high bandwidths, such as those used in image and video processing, the wireless transmission of small amounts of data over greater distances and across building boundaries will play an increasingly important role in the IoT technology mix. “In the field of Systems Engineering, we at Thomas-Krenn are constantly confronted with a wide variety of requirements for integrating sensor technology and measurement data acquisition into IT,” says Seibold. “Hardware-side implementation of such custom projects, where we work

closely with developers and integrators, is currently the fastest-growing area of our business. Gathering and understanding the customer’s requirements is a critical step in this process that often determines the overall success of the project — in sensor technology and beyond.”

Thomas-Krenn has therefore launched a portal for customized developments under the domain *custom-hardware.com*. Customers can define their individual requirements here step-by-step in a similar way to the Thomas-Krenn server configurator. This way, they receive an exactly fitting custom hardware offer in the shortest possible time. ◀

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#### About Thomas-Krenn

Thomas-Krenn.AG is a leading, fast growing provider of individual server- and storage-systems. Since 2002, the company has been supplying end-users, resellers and data center operators with high-quality hardware on a build-to-order basis. As a solution provider for individual customer projects, Thomas-Krenn.AG stands for the highest service quality in hardware-related development, contract manufacturing, product finishing and logistics. The company is a recognized reliable partner for industry, IT service providers as well as small and medium-sized enterprises from every sector. With currently 160 employees, Thomas-Krenn.AG assembles all servers in Freyung, Germany.

#### WEBLINKS

- [1] Free LoRaWAN developer boards: <https://www.thomas-krenn.com/en/company/campaigns/lora-sensors.html>
- [2] Setting up LoRaWAN connections with the developer kit: [https://www.thomas-krenn.com/de/wiki/LoRaWAN\\_P2P\\_Verbindung\\_Transceiver\\_Receiver\\_einrichten](https://www.thomas-krenn.com/de/wiki/LoRaWAN_P2P_Verbindung_Transceiver_Receiver_einrichten)
- [3] Custom Hardware Portal: <https://www.custom-hardware.com/en/index.html>