

Latest Bluetooth module from Panasonic Industry now in mass production and supporting Bluetooth 6.0

Great performance and minimal power consumption for Matter applications

MUNICH, AUGUST 2025

Now in mass production and offering great performance values and minimal power consumption for all Matter applications, the PAN B611-1 Bluetooth module from Panasonic Industry is based on the powerful Nordic nRF54L15 single chip controller. The product now also supports Bluetooth 6.0 and the cutting-edge Bluetooth Channel Sounding feature, enabling precise distance measurement and improved wireless communication. The PAN B611-1 had been initially announced as PAN B511-1 in February 2025.

All 32 pins available on nRF54L15 are routed out on to a hybrid packaging consisting of castellated edges and LGA in a hybrid layout such that a dedicated number of pins positioned at the edge lending for easy prototyping, with the rest of the GPIOs located at the bottom that allows leveraging the full potential of the wireless SoC platform. The module benefits from very small dimensions of only 10.35 mm × 9.8 mm × 1.9 mm. This way, it combines the advantages of both worlds without compromising on size and enables one of the best pin-to-size ratios for Bluetooth modules currently on the market. Its edge pins facilitate easier hand-soldering and support the use of inexpensive 2-layer PCB designs and optical inspection methods, eliminating the need for costly X-ray machines.

Based on nRF54L15, the module is shipped with an open embedded application processor based on ARM Cortex-M33 processor clocking up to 128 MHz for high performance embedded applications with a 256 kB RAM. Furthermore, the module has a non-volatile memory of 1.5 MB as available on the SoC.

However, Panasonic adds further features above and beyond those available on the SoC. **Pascal Maier, Head of IOT Devices at Panasonic Industry comments:** “Our latest PAN B611-1 Bluetooth module is a versatile device that can support a variety of applications – from ultra-low power battery driven solution to very complex applications like Matter, as well as sophisticated algorithm-heavy features like Channel Sounding. This is why we offer different spec variants to enable a variety of applications. The modules are for example available with additional integrated slow clock crystal for energy efficient battery powered operation and additional 4 MB Flash Memory for more complex applications. We think our clients will love this module for its versatility and power at a competitive price point.”

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An output power of 8dbm makes the module ideally suited for the European market. The main target applications are lighting, home appliances, industrial sensors, medical devices, healthcare wearables and energy management devices and solar farms.

Furthermore, the PAN B611-1 is ideally suited for Matter applications, as dedicated variants exist with additional flash memory, and is fully compatible with the PAN MAX Service that facilitates the production and launch of Matter production. Apart from Matter, the highly versatile module also supports a variety of wireless protocols in the 2.4 GHz spectrum including Bluetooth LE, Bluetooth Mesh and IEEE 802.15.4 - enabling Zigbee and Thread as well as other third-party proprietary technologies, which make it effortless to develop products for smart home standards like Matter and Zigbee and even allow running multiple wireless protocols concurrently.

The PAN B611-1 Bluetooth module is available with an integrated chip antenna (-1C) or as bottom pad version (-1B) to cater to diverse project needs. It is certified for Europe (CE RED), UK (UKCA), USA (FCC), Canada (ISED), Japan (MIC).

For more information on the latest B611-1 Bluetooth module please click [here](#).

About Panasonic Industry Europe GmbH

Panasonic Industry Europe GmbH is part of the global Panasonic Industry organization, one of the eight major operating companies within Panasonic Holding. Panasonic Industry Europe provides products and services for industrial customers all over Europe.

Panasonic Industry Europe is committed to enabling customers to achieve their goals in a broad range of industrial sectors such as mobility, infrastructure, automation, medical, appliances, smart living, and security. With the know-how of devices and solution technologies, cultivated through a global mindset and over a century of tradition, Panasonic Industry collaborates closely with customers to create a sustainable future.

Panasonic Industry Europe's broad and diverse product portfolio encompasses key electronic component sectors including electromechanical and passive components, batteries and other energy products, sensors and wireless connectivity modules, thermal management materials and custom solutions, as well as automation devices & solutions.

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