

BlueNRG Modules

Simplifying the adoption of Bluetooth Low Energy technology



BlueNRG-M0 and BlueNRG-M2 modules for fast time-to-market and significant engineering cost savings

Bluetooth Low Energy (BLE) modules simplify connectivity adoption in every design. No expertise in Radio Frequency is required, and ready-to-use products are provided to enable wireless connected solutions.

Available in a tiny form factor, ST's BlueNRG Modules are Bluetooth SIG End-Product-certified, and have obtained pre-certification across major worldwide regions. They are suitable to operate in industrial environments up to +85 °C and are included in ST's 10-year longevity program.

KEY FEATURES

- Multi-regional certifications and Bluetooth SIG End-Product Certification
- Wireless connectivity as easy as a modular drop-in add-on
- Scalable offer in terms of cost, features and capabilities
- -40 to 85°C operating temperature range

KEY BENEFITS

- Engineering and certification cost saving
- No RF expertise required
- Fast time-to-market
- Suitable for a wide range of industrial applications

- Guaranteed supply for 10 years (10-year longevity program)

KEY APPLICATIONS

- Human Machine Interface
 - Remote Monitoring
 - Remote Configuration
- Machine to Machine communication
 - Cable replacement
- Smart Home and Building Automation
 - Lighting Control
 - Presence Detection
- Beaconing and Asset Tracking
- Assisted Living

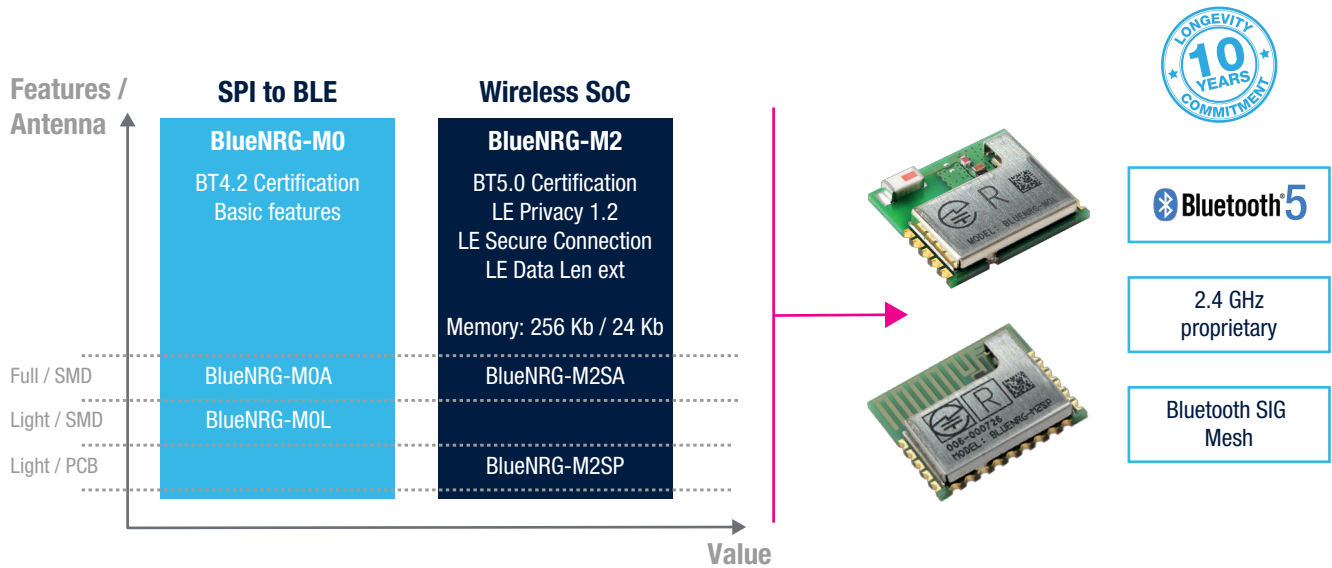
BlueNRG Modules product family

BlueNRG-M0A and BlueNRG-M0L modules are built around the BlueNRG-MS BLE4.2 network processor chip. BlueNRG-M2SA and BlueNRG-M2SP modules are built around BlueNRG-2: BLE5.0 wireless processor chip based on ultra-low power Cortex-M0 core,

embedding 256 kB programmable Flash and 24 kB RAM with data retention. Download BlueNRG Navigator GUI, part of STSW-BLUENRG1-DK, to browse, flash, and run application examples. While -M0A and M2SA devices include a 32 KHz oscillator and an SMPS inductor for very low-

power applications, -M0L and M2SP are specifically designed for cost constrained applications. Moreover, -M2SP modules use a printed antenna to further reduce costs. All devices are Bluetooth SIG end-product certified, and Bluetooth SIG Mesh-ready.

BlueNRG product family



Device summary

	BlueNRG-M0L	BlueNRG-M0A	BlueNRG-M2SA	BlueNRG-M2SP
BlueNRG device	BlueNRG-MS Network Processor		BlueNRG-2 Wireless Processor	
Core / Flash size / RAM size	-		Cortex-M0 up to 32 MHz / 256 KB Flash / 24 KB RAM	
Bluetooth / SIG end-product certification	BLE4.2 / D043964 – QDID 122868		BLE5.0 / D043965 – QDID 121363	
Regional certification	Europe, USA, Canada, Japan		Europe, USA, Canada, Japan, China ^(*)	Europe, USA, Canada, Japan, India
LSE clock presence / Regulator / Antenna	no / LDO / SMD	yes / SMPS / SMD		no / LDO / PCB
Sensitivity / Output Power	-85 dBm / +6 dBm		-85 dBm / +5 dBm	-85 dBm / +7 dBm
Size / Temperature range / Power supply range	13.5 X 11.5 X 2 mm -40 TO +85 °C / 1.7 TO 3.6 V			
Hardware evaluation kit	-	X-NUCLEO-IDB05A2	STEVAL-IDB008V1M	X-NUCLEO-BNRG2A
Software development kit	X-CUBE-BLE1		STSW-BLUENRG1-DK	X-CUBE-BLE2 ^(*)

Note: (*) Acting as Network Processor, (**) Expected in Q2 2020



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