

# EM9305 *BLUETOOTH*® MODULE FACTSHEET

## DESCRIPTION

The EMREF9305QFN EM9305 *Bluetooth*® low energy module is a small module embedding the EM9305 *Bluetooth*® low energy chip in a QFN package from EM Microelectronic. It has an efficient PCB antenna and one of the lowest power consumption available.

EM | Bleu (EM9305) is a compact, high performance, and low energy Bluetooth 5.4 qualified IC, including support for the latest Bluetooth features, such as AoA/AoD & Direction Finding, Isochronous channels & Broadcast Audio, and Periodic Advertising With Response & ESL. Its highly flexible architecture allows it to act as a companion IC to any ASIC or MCU-based product, or as a complete System-on-Chip (SoC). Custom applications can execute on an efficient 32-bit ARC processor from a 512kB flash using a cache and DMA to optimize power consumption. DSP and floating-point units can be exploited to implement advanced audio and tracking algorithms. See the following website for more information:

<https://www.emmicroelectronic.com/product/standard-protocols/em-bleu-em9305>

The *EMREF9305QFN* Module can be used with the *EMDVK9305SOC* for product development



## FEATURES

- Automated power management configuration (supply from 1.1V to 3.6V) when used with 9305 DVKs
- Small form factor: 16.5mm x 24.1mm
- Low current consumption (3V supply)
  - 3.1mA typical receiver current
  - 3.4mA typical transmitter current @0 dBm output power
  - 390nA BLE sleep mode current (4kB retention)
  - 7.5nA disable mode current
- 512kB flash memory for stack and applications
- 64kB data/instruction RAM, with steps of 4kB retention for leakage current optimization
- High sensitivity : -94/-97/-103dBm RX sensitivity for 2Mbps/1Mbps/125kbps modes
- Programmable RF output power from -57dBm to +6dBm
- High Data Rate (HDR) and Long Range (LR) support
- Angle-of-Arrival and Angle-of-Departure support
- Isochronous channels for audio applications
- Periodic Advertising with response support
- SPI and UART HCI Transport Layers
- Integrated PCB antenna
- FCC certified 2ACQR-EM9305v1
- CE certified
- Contains *Bluetooth*® 5.4 controller (QDID **241806**)
- Contains *Bluetooth*® 5.4 host (QDID **191704**)
- Contains Full Speed USB (TID 9038)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## ORDERING INFORMATION

The following products can be ordered directly from the EM Microelectronics website:

Part Number	Description	Container	Units per Container
EMDVK9305SOC	Bluetooth Low Energy SOC Development Kit - Includes 1x EMREF9305QFN	Box	1
EMREF9305QFN	EM9305 QFN Module	-	1