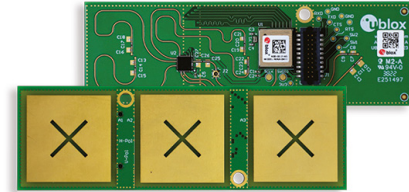


Bluetooth 5.1 direction finding antenna board

Compact Bluetooth Low Energy angle-of-arrival antenna and sensor board

- Runs u-locateEmbed software for high-precision indoor positioning
- Outputs the final angle information, which is ready to use at the application level
- Compact three-element antenna array on a small PCB footprint
- Bluetooth SIG compliant
- Low power consumption



29.5 x 93.5 mm

Product description

The ANT-B11 is a compact antenna board designed specifically for Bluetooth angle-of-arrival (AoA) direction finding systems. It features three-patch antenna elements in an arrangement combining performance and small PCB size. It can measure the angle of an incoming Bluetooth Low Energy radio signal and determine with great accuracy the direction of a Bluetooth LE device in an indoors environment. It features the NINA-B411 Bluetooth 5.1 standalone module running the u-locateEmbed software, which implements the unique u-blox direction-finding algorithm for high-precision indoor positioning. The digital interfaces of the NINA-B411 module are connected to a standard, widely available pin header, allowing easy connection to an application board, thus forming a complete AoA anchor point.

Angles from three or more ANT-B11 boards can be combined with suitable positioning engine software to achieve 2-D indoor positioning. ANT-B11 is fully compatible with u-locateEngine, the unique positioning engine from u-blox.

Patch antenna characteristics

Frequency	2.402 – 2.480 GHz
Polarization	Dual (Horizontal/Vertical)
Peak gain	-4.2 dBi

Environmental data

Operating temperature	-40 °C to +85 °C
Storage temperature	-40 °C to +85 °C

Mechanical data

Size	29.5 x 93.5 mm
Connector	20-pin surface mount header connector (1.27 mm pitch)
Mounting	3.2 mm holes for fastening to development/application boards

Certifications and approvals

Type approvals	Europe (ETSI RED); Great Britain (UKCA); Canada (IC RSS); US (FCC/CFR 47 part 15 unlicensed modular transmitter approval); Australia (ACMA) ¹ ; New Zealand ¹ ; Japan (MIC) ¹ ; South Korea (KCC) ¹ ; Taiwan (NCC) ¹ ; Brazil (Anatel) ¹ ; South Africa (ICASA) ¹
Health and safety	EN 62479, EN 62368-1, IEC 62368-1
Medical Electrical equipment	EN 60601-1-2:2015
Bluetooth qualification	5.1 (Bluetooth Low Energy)

¹ = Certification or approval pending

Product variants

ANT-B11	Bluetooth 5.1 direction-finding antenna board with NINA-B411 standalone Bluetooth module and three-element antenna array. Runs u-locateEmbed software.
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* Note: u-locateEmbed was previously named u-connectLocate.

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Further information

For contact information, see www.u-blox.com/contact-u-blox.

For more product details and ordering information, visit www.u-blox.com/product/ant-b11-antenna-board.