

Product summary

ANN-MB1 antenna

L1/L5 multi-band high precision GNSS antenna

Easy-to-use, reliable multi-band antenna as part of u-blox high precision solution

- L1 /L5 multi-band active GNSS antenna for mass-market applications
- Supports GPS, GLONASS, Galileo, and BeiDou for maximum position availability
- Enables fast time-to-market
- Versatile mounting options to meet diverse installation needs



60.0 x 82.0 x 22.5 mm

Product description

The u-blox ANN-MB1 multi-band (L1/L5/E5a/B2a/NavIC) active GNSS antenna is designed to reduce time-to-market for the new generation of high precision GNSS applications, which require highly accurate location abilities. The compact design, excellent price-to-performance ratio, and versatile mounting choices provide customers with fast, easy, and reliable multi-band antenna solutions. The ANN-MB1 antenna is a perfect match to the u-blox F9 platform (for example, ZED-F9T-10B), supporting L1 and L5 bands, thus providing customers with the valuable antenna solution they need to minimize evaluation and design-in efforts.

Patch antenna characteristics¹

	L1 band	L5/E5a/B2a/NavIC band
Frequency	1559 - 1606 MHz	1164 - 1188 MHz
Impedance	50 Ω	50 Ω
Peak gain	Typ. 3.8 dBic (Zenith)	Typ. 1.3 dBic (Zenith)
Axial ratio	Typ. 3.3 dB (Zenith)	Typ. 3.4 dB (Zenith)
Polarization	RHCP	RHCP

¹ Measured on Ø12 cm ground plane.

Amplifier characteristics

	L1 band	L5/E5a/B2a/NavIC band
Frequency	1559 - 1606 MHz	1164 - 1188 MHz
Gain without cable (at 5 V)	Typ. 29 ± 3.0 dB	Typ. 33 ± 3.0 dB
Noise figure (at 5 V)	Typ. 2.7 dB	Typ. 2.8 dB
Output VSWR	Typ. 2.0	Typ. 2.0
DC voltage	3.0 – 5.0 V	
DC current (at 5 V)	Typ. 15.0 mA	

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Mechanical data

Weight	164 g (typ. including cable)
Size	60.0 x 82.0 x 22.5 mm
Cable	5 m RG174 standard
Connectors (choice)	SMA
Mounting	Magnetic base, fixed installation option
Housing color	Black

Certifications and approvals

CE approval	Based on Radio Equipment Directive (RED) 2014/53/EU and the Restriction of the use of certain Hazardous Substances Directive (RoHS) 2011/65/EU and 2015/863/EU
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Environmental data

Operating temperature	-40 °C to +85 °C
Storage temperature	-40° C to +85 °C
Water proof	IP 67

Product variants

ANN-MB1-00	Multi-band (L1/L5) active GNSS antenna, high precision, with 5-meter cable and SMA connector
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Further information

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

For more product details and ordering information, see the product data sheet.