



## Product summary

# ANN-MB5

## L1/L5 multi-band standard precision GNSS antenna

### Easy-to-use, reliable antenna as part of the u-blox multi-band meter-level GNSS solution

- L1/L5 active GNSS antenna for mass-market applications
- Supports all major GNSS systems (including NavIC) for maximum position availability
- Compact design with magnetic base
- Enables fast time-to-market



49.1 x 46.1 x 15.9 mm

### Product description

The u-blox ANN-MB5 multi-band (L1/L5/E5a/B2a/NavIC) active GNSS antenna is designed for the new generation of multi-frequency, multi-constellation standard precision GNSS receivers, which can achieve the most accurate, reliable, and robust positioning even in challenging environments. ANN-MB5's compact design, excellent price-to-performance ratio, and easy mounting features ensure a fast, easy, and reliable multi-band antenna solution for mass adoption.

ANN-MB5 works perfectly with the u-blox L1/L5 multi-band meter-level GNSS receiver products (e.g., F10 standard precision platform). With ANN-MB5, customers have the ready-to-use, multi-frequency antenna they need to minimize the evaluation and design efforts, and speed up time-to-market.

### Patch antenna characteristics<sup>1</sup>

	L1 band	L5/E5a/B2a/NavIC band
Frequency	1559 - 1608 MHz	1164 - 1186 MHz
Impedance	50 $\Omega$	50 $\Omega$
Peak gain	Typ. 4.5 dBic (Zenith)	Typ. 4.0 dBic (Zenith)
Axial ratio	Typ. 3.2 dB (Zenith)	Typ. 6.3 dB (Zenith)
Polarization	RHCP	RHCP

<sup>1</sup> Measured on  $\varnothing$ 12 cm ground plane.

### Amplifier characteristics

	L1 band	L5/E5a/B2a/NavIC band
Frequency	1559 - 1608 MHz	1164 - 1186 MHz
Gain without cable	15 $\pm$ 3.0 dB	16 $\pm$ 3.0 dB
Noise figure	Typ. 2.0 dB	Typ. 2.0 dB
Output VSWR	Typ. 2.0	Typ. 2.0
DC voltage	3.0 – 5.0 V	
DC current (at 5 V)	Typ. 17.0 mA	

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### Mechanical data

Weight	104 g (typ. including cable)
Size	49.1 x 46.1 x 15.9 mm
Cable	3 m RG174 standard
Connector	SMA
Mounting	Magnetic base
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	IPX7

### Product variants

ANN-MB5-00	Multi-band (L1/L5) active GNSS antenna, standard precision, with 3-meter cable and SMA connector
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### Further information

For contact information, see [www.u-blox.com/contact-u-blox](http://www.u-blox.com/contact-u-blox).