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GNMANTv2: Dual-Band Multi-Frequency Antenna

Powerful Antenna with Strong Out-of-Band Rejection for Comprehensive Multi-GNSS & Augmentation Service Support

The GNMANTv2 is Meinberg's latest multi-GNSS, multi-band antenna with comprehensive support for almost every GNSS service as well as a variety of regional and commercial augmentation systems, including L-band correction services such as Fugro AtomiChron®.

This effective custom antenna solution, optimized for Meinberg's industry-leading timing and synchronization applications, is housed in Meinberg's characteristic IP65-rated dome case for all-weather operation.

Key Features

- Ground terminal for effective equipotential bonding
- Stable performance with any supply voltage from 3.6 V to 5 V DC
- Narrowband frontend filter for effective rejection of out-of-band signals such as LTE / 5G
- Tight phase center variation
- Multi-band reception for support for almost every GNSS service
- Integrated surge protection
- ESD circuit protection (15 kV)
- Dual-band solution for effective rejection of non-GNSS 1255 MHz-1524 MHz range
- High-gain LNA (typically 37 dB)
- Very low noise preamp (typically < 2.0 dB)
- Low axial ratio (typically < 2.0 dB)

Description

Meinberg's GNMANTv2 is a multi-GNSS, multi-band antenna that is engineered and manufactured entirely by Meinberg from the ground up to ensure optimum performance for timing & synchronization applications.

The GNMANTv2 provides dual-band reception with excellent reception of all GNSS constellations (GPS, GLONASS, Galileo, BeiDou), encompassing almost all services in these systems. Additionally, the antenna supports reception of augmentation systems, including SBAS, Fugro AtomiChron®, and QZSS. The GNMANTv2 also features a dedicated narrowband frontend filter for effective rejection of out-of-band signals and a very low-noise preamp, allowing for maximum signal quality with minimal interference. Integrated surge protection helps to protect the antenna from damage from surge voltages and indirect lightning strikes.

Housed in an injection-molded ABS IP65 plastic case with Meinberg's distinctive waterproof 'mushroom' design and specified for operating conditions from -70 °C to +85 °C, the GNMANTv2's construction helps it to withstand the rigors of outdoor use in even the most challenging weather conditions.

The GNMANTv2 is optimized for use with Meinberg's GNS, GNM, and GXL clock technologies, including LANTIME, IMS, and microSync time servers, as well as Meinberg's standalone multi-GNSS receivers.

Characteristics

Compatible Receivers	Compatible with all GNS, GNM, or GXL Type Meinberg reference clocks
Frequency Range	1160 MHz - 1255 MHz (Lower Band) 1539 MHz - 1606 MHz (Upper Band)
Supported Services	**GPS/QZSS** L1 1575.42 MHz L2 1227.6 MHz L5 1176.45 MHz **GLONASS** G1 1602 MHz G2 1246 MHz G3 1201 MHz **Galileo** E1 1575.42 MHz E5a 1176.45 MHz E5b 1207.14 MHz **BeiDou** B1 1575.42 MHz B2a 1176.45 MHz B2b 1207.14 MHz **L-Band Correction Services** 1539 to 1559 MHz

Overall LNA Gain	Typically 37 dB
Antenna Connector	Type-N connector
Operating Voltage	3.6 V to 5.5 V DC (supply voltage via antenna cable)
Form Factor	ABS plastic case for outdoor installation
Grounding	M8 threaded bolt and hex nut for use with corresponding ring lug
Antenna Amplification (Antenna Input to RF Output)	**Lower Band:** 35 dB +/- 2 dB **Upper Band:** 37 dB +/- 2 dB
Out-of-Band Rejection	**Lower Band (1160 MHz - 1255 MHz)** 60 dB > 1427 MHz | > 60 dB **Upper Band (1539 MHz - 1606 MHz)** 60 dB > 1710 MHz - 4700 MHz | > 70 dB 60 dB
Physical Dimensions	[1]Refer to Datasheet
IP Rating	IP65
Product Weight	1.4 kg (3.1 lbs), including mounting kit
Supported Temperature	**Operation:** -70 °C to +85 °C (-94 °F to 185 °F) **Storage:** -70 °C to +95 °C (-94 °F to 203 °F)
Supported Humidity	Max. 95 % (non-condensing) at 40 °C (104 °F)
Warranty	Three-year warranty
RoHS Status of Product	This product is fully RoHS-compliant.
WEEE Status of Product	This product is handled as a B2B (Business to Business) category product. To ensure that the product is disposed of in a WEEE-compliant fashion, it can be returned to the manufacturer. Any transportation expenses for returning this product (at end-of-life) must be covered by the end user, while Meinberg will bear the costs for the waste disposal itself.

Manual

The English manual is available as a PDF file: [2]Download (PDF)

Links:

[1] https://www.meinbergglobal.com/english/products/
[2] https://www.meinbergglobal.com/download/docs/manuals/english/gnmantv2-installation-guide.pdf