

3DM-GX4-45™

Using a Chip-Size GPS Antenna

Overview

The LORD MicroStrain® [3DM-GX4-45™](#) high-performance, GPS-Aided Inertial Navigation System (GPS/INS) combines MEMS inertial sensors, a highly-sensitive embedded GPS receiver, and an Extended Kalman Filter to generate optimal position, velocity, and attitude (PVA) estimates. Dimensions are 44.2mm (L) x 24.0mm (W) x 11.3mm (H) (excluding mounting tabs), 36.6mm (Width across tabs).

The 3DM-GX4-45™ is shipped with a [Gilsson Technologies SMA1M09B180-NM](#) general purpose, puck-type GPS antenna. This antenna has a footprint of 58mm (L) x 48mm (W) x 15mm (H). In certain applications, this antenna may have a footprint that is larger than desirable.

The 3DM-GX4-45™ can accommodate a wide range of GPS antennas including the [EAD GPS3626](#) Internal Active GPS antenna. This antenna has very small footprint at 20mm (L) x 20mm (W) x 6mm (H) which allows great flexibility where size and space are a premium.



Figure 1: Gilsson SMA1M09B180-NM and EAD GPS3626 GPS antennas, 3DM-GX4-45™

Notes:

- The antennas and the 3DM-GX4-45™ are shown at actual ½ size.
- The EAD GPS3626 signal cable terminates in an IPEX(U.FL) connector; an IPEX(U.FL)-to-SMA adapter or an IPEX(U.FL)-to-MMCX adapter is needed to connect to the 3DM-GX4-45™.
- IMPORTANT: When using alternate antennas with the 3DM-GX4-45™, the antenna lead must be non-magnetic so as not to interfere with the on-board magnetometers.

Support

LORD MicroStrain® support engineers are always available to expand on this subject and support you in any way we can.

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