

# GPS+ORBCOMM ANTENNA

## State-of-the-art Antennas Featuring Both GPS and VHF Technologies

### Overview

Magellan is pleased to present a new dual band antenna design for use with both the Global Positioning System and OrbcComm's LEO satellite constellation. Configured in a single integrated device, this antenna provides a separate feed line for the GPS and VHF frequency band.

### Architecture

A 3.5 dB microstrip patch antenna with 25 dB gain LNA serves the GPS function. A rugged, low profile, encapsulated Flex Mast antenna rounds out the VHF element. Several mounting configurations of the antenna are available: rooftop, for permanent installation; magnetic, for temporary usage; and trunk lid, for semi-permanent installation without the need to drill holes.

Many connector configurations are possible, with SMB connectors on both antenna leads being the most common. Others are available upon request including SMA and TNC.

### Applications

- Fleet Management
- Fixed Asset Monitoring
- Advanced Vehicle Location
- Emergency Response Services
- Personal Messaging



471 El Camino Real, Santa Clara, CA 95050  
T: (408) 615-5100 • F: (408) 615-5200

W: [www.magellangps.com](http://www.magellangps.com) • E: [wireless@magellancorp.net](mailto:wireless@magellancorp.net)

### General Characteristics

- Combined ORBCOMM+GPS antenna
- Rugged low-profile antenna design
- Three mounting options are available
  - Roof top mount
  - Magnetic mount
  - Trunk mount

### GPS (L1)

Frequency range	1.575 GHz $\pm$ 10 MHz
Axial ratio	<3 dB
Gain	>3.5 dBi
Amplifier Gain	25 dB
Noise Figure	<2 dB
Power Supply	+ 5 Volts, @ 30 mA

### ORBCOMM (VHF)

Frequency Range	137-151 MHz
Gain	>-2 dBd (Flex Mast)

### Physical Characteristics

Base Dimensions	2.5" dia. X 1.0" high
Flex Mast Dimensions	7" (Flex Mast)
Cable Length	20 feet (5 M)

### GPS-VHF DUAL-BAND ANTENNA MOUNTING OPTIONS AND ORDERING INFORMATION

Part #	Mounting Method	GPS Connector	VHF Connector	VHF Radiator
<i>For use with the GSC100</i>				
109785	Roof Top Mount	SMB	BNC	Flex Mast
109787	Magnetic Mount	SMB	BNC	Flex Mast
109786	Trunk Mount	SMB	BNC	Flex Mast
<i>For use with the Asset Tracker</i>				
TBD	Roof Top Mount	SMA	BNC	Flex Mast
TBD	Magnetic Mount	SMA	BNC	Flex Mast
TBD	Trunk Mount	SMA	BNC	Flex Mast
<i>For use with the S@tellite Modem (OM200)</i>				
109782	Roof Top Mount	SMB	SMB	Flex Mast
109784	Magnetic Mount	SMB	SMB	Flex Mast
109783	Trunk Mount	SMB	SMB	Flex Mast

Other connector combinations are available on request.

