The Symmetricom® 58532A GPS L1 Reference Antenna is the latest in a line of Symmetricom antennas used to deliver L1 carrier frequency signals to GPS synchronization modules and receivers. Based on a design with proven reliability in tens of thousands of installations, the 58532A, like its predecessors, is characterized by low noise and high gain to provide optimum signal quality.

**Key Features**
- Delivers L1 carrier frequency signals to GPS synchronization modules and receivers
- Durable and easy to install
- Operates reliably in a wide range of environmental conditions

**Key Benefits**
- Low noise and high gain provide optimum signal quality
- Offers improved immunity to induced surge voltages through built-in diode protection

**Outstanding Immunity to RF Interference**
Noise and interference near the L1 carrier can compromise reception of GPS signals. The 58532A features excellent filtering, with narrow bandwidth and steep rolloff to preserve the GPS signal while attenuating unwanted signals near the L1 carrier.

**Improved Immunity to Lightning**
Electromagnetic fields caused by nearby lightning strikes can induce surge voltages in the antenna cable, damaging the antenna. The 58532A offers improved immunity to induced voltages through built-in diode protection.

**Durable and Easy to Install**
Designed for easy installation in outdoor locations, the 58532A features a durable, unobtrusive, cone-shaped cover that prevents snow and debris build-up. In addition, a sturdy aluminum mounting base allows easy attachment to the Option AUB antenna mast. With this type of mounting, the antenna/cable connector (type N) is protected from the weather. If your system requires the 58529A Antenna Line Amplifier with Bandpass Filter, this cylindrical product can fit directly inside the antenna mast to be sheltered from the weather as well.

Power is conveniently supplied to the antenna via the RF cable. The antenna requires 5 Vdc at less than 27 mA. This is available from several different GPS engines.

Mounting hardware kit, including a mast, available [58532A-AUB].
58532A

Specifications

ELECTRICAL SPECIFICATIONS
Frequency Range (3 dB Bandwidth): 1575.42 MHz ± 10 MHz (typical)
Polarization: Right hand circular
Output Impedance: 50 Ω (typical)
Total Gain: >30 dB (38 dB typical @ elevation angle 90°)
Out-of-Band Signal Attenuation: 60 dB (typical) at 1575.42 MHz ± 50 MHz
Noise Figure: <2.2 dB (1.8 dB typical)
VSWR: <2.5 (1.5 typical)
DC Power: 5 VDC ± 0.5 VDC, <27 mA (20 mA typical)

PHYSICAL SPECIFICATIONS
Connector: Type-N Jack
Antenna Dimensions:
Antenna without Mounting Base 90 mm D x 140 mm H (includes connector)
Mounting Base 43 mm I.D., 75 mm O.D., 65 mm H
Mounting Mast [Option AUB] 39 mm I.D., 42 mm O.D., 355 mm L
Antenna Weight:
Antenna without Mounting Base 187 g
Mounting Base 240 g
Mounting Mast [Option AUB] 250 g
Material:
Antenna Radome UV-stabilized polycarbonate
Bottom housing Die-cast aluminum, powder coated
Mounting Base Die-cast aluminum, powder coated
Option AUB Mounting Mast Anodized aluminum with teflon coating or stainless steel
Color, Antenna and Mounting Base White

ENVIRONMENTAL SPECIFICATIONS
Operating Temperature: -40°C to +85°C
Storage Temperature: -45°C to +90°C

Figure 1. Antenna and mounting base dimensions

Figure 2. Mounting mast dimensions (available in 58532A-AUB mounting hardware kit)

Figure 3. Relative amplitude versus frequency response for 58532A GPS L1 Reference Antenna.