



# GPS Antenna

## Model 8225

Model 8225 -  
GPS Antenna  
(with included  
PVC mast)



Model 8213 -  
Flat Roof Antenna  
Mount (optional)



- **Tuned to receive 1575.42 MHz L1 band satellite transmissions**
- **Features a weatherproof compact design measuring 3.5" in diameter**
- **Five-Year Limited Warranty**

The Model 8225 is an active GPS Outdoor Antenna tuned to receive 1575.42 MHz L1 band satellite transmissions. The received signals are passed through a narrow band-pass filter and a preamplifier within the antenna. The active antenna circuitry provides 30 dB of gain and requires +5 VDC at 27 milliamps (provided by a Spectracom GPS receiver over the antenna coax). Each antenna is terminated with a type "N" female connector. Model 8225 features a weatherproof compact design measuring 3.5" in diameter.

Each Spectracom antenna includes a mating two-foot PVC mast assembly and two hose clamps used to affix the mast assembly to a vent pipe. Spectracom offers an aluminum base, the Antenna Mount for Flat Roof, Model 8213, for installations in which vent pipe mounting is not practical or desired.

### ANTENNA LOCATION

The GPS antenna must have an unobstructed line of sight to the sky. Rooftops that are clear of other structures or geographic features overhead, with views to the horizon, generally make good installation locations. Such a clear view allows the antenna to track the maximum number of satellites throughout the day. Installations with obstructed views may experience reduced reception quality and may not be able to track simultaneously the maximum number of satellites.

When installing a GPS antenna, select a site at which the antenna will not become buried in drifting or accumulated snow. It should not be covered by foliage or placed in a position where it could become obstructed in this way.

Whenever possible, avoid placing the GPS antenna in close proximity to broadcast antennas or near television or FM radio transmitters.

### ANTENNA CABLE & ACCESSORIES

Spectracom recommends low loss coaxial cable such as Times Microwave LMR-400 for the GPS antenna cable. The attenuation characteristics of the LMR-400, or equivalent, at the L1 frequency (1575.42 MHz), limit the antenna cable length to a maximum of 300 feet (350 feet for 8100 Series). Spectracom offers standard and plenum-rated GPS cable assemblies terminated with weatherproof Male type "N" connectors. Specify part number CAL7xxx for standard (and CALP7xxx for indoor CATVP plenum-rated cables), where xxx equals the length in feet. Contact the factory for standard cable lengths.

Spectracom offers an Inline Preamplifier, Model 8227, for installations in which the antenna cable length exceeds 300 feet. The receiver powers the GPS antenna and the Preamplifier. The Preamplifier permits an additional 400 feet of coax, extending the antenna-to-receiver distance to 700 feet.

Spectracom recommends installing a lightning protection device in the antenna line to protect the receiver and connected devices. Spectracom offers a Surge Protector, Model 8226, to shunt potentially damaging voltages on the antenna coax to ground.

## GPS ANTENNA SPECIFICATIONS

### ELECTRICAL

**Type**

Active

**Frequency**

1575.42 MHz

**Temperature Range**

-30° to +80° C (-22° to +176° F)

**Gain**

30 dB

**Connector**

N type, female

**Recommended Cable**

Low Loss LMR-400 Equivalent

**Maximum Cable Length**

300 ft. maximum

LMR-400 equivalent with Inline Amplifier - Model 8227: 700 ft. maximum

**Power**

5 Volts, 27 milliamps, powered by receiver

### MECHANICAL

**Assembled Length**

26" (66 cm)

**Housing Diameter**

3.5" (8.9 cm)

**Housing Material**

PVC

**Assembled Weight**

1.3 lbs. (.60 kg)

**Shipping Weight**

3.5 lbs. (1.6 kg)

**Mounting**

Hose clamps (furnished) on vent pipe

Antenna is weather-proof and must be mounted outdoors.

### WARRANTY

**5-Year Limited**

## FLAT ROOF MOUNT ANTENNA SPECIFICATIONS

### MECHANICAL

**Materials**

Aluminum Base

**Height**

6" (15.24 cm)

**Diameter**

15.625" (39.7 cm)

**Weight**

17 lbs. (7.7 kg). When filled with ballast (not included) for stability.

## ORDERING INFORMATION

### GPS ANTENNA SYSTEM

1. GPS Antenna - Model 8225

### ADDITIONAL ACCESSORIES

2. Flat Roof Antenna Mount - Model 8213
3. GPS Antenna Splitter - Model 8224
4. Antenna Surge Suppressor - Model 8226
5. Surge Protector Grounding Kit - Part Number 8226-0002-0600
6. Inline Pre-amplifier - Model 8227
7. Low Loss Antenna Cable - Model CAL7xxx
8. Indoor Plenum-rated Antenna Cable, CMP equivalent - Model CALP7xxx

0209-8225(H)

Specifications subject to change or improvement without notice.  
Spectracom is a company of the Orolia Group. © 2009 Spectracom Corp.