

# Big Brother

## GPS Antenna (High Gain) with Low Noise Amplifier



### Features

- Low noise figure
- Fully weather proof
- Ultra-low power consumption
- Compact construction
- Excellent temperature stability
- Magnet or screw mount base
- New Universal Connector adapter

The Big Brother is the integration of the high performance GPS patch antenna and a low noise amplifier into state-of-the-art very low profile/extremely compact/fully waterproof antenna enclosure. The unit provide excellent amplification to any GPS Receiver with a +5Vdc antenna power at the center pin.

### Physical Construction

Constructions:	Polycarbonate radome enclosure and die-cast-shell at the bottom
Dimensions:	48mm x 15mm x 58mm
Weight:	65g
Standard Mounting:	2 magnet mount, screw mount with 2 M3 tapped holes on the base.
Optional mounting plate:	Metal flanges with holes for permanent mount

### Cable and Connector

RF:	5 meter RG174/U (standard) cable & length (optional)
Pulling strength:	6 Kg @ 5sec.
Connector available:	BNC, TNC, FME, MMCX, MCX, SMA, SMB or SMC. Straight or right angle.
Optional:	Universal Connector Adapter (FME to TNC/BNC/SMA/SMB/MCX)

### Antenna Element

Center Frequency:	1575.42 MHz +/-0.023 MHz
Polarization:	R.H.C.P. (Right Handed Circular Polarization).
Absolute Gain @ Zenith:	+5 dBi typical.
Gain @ 10o Elevation:	-1 dBi typical.
Axial Ratio:	3 dB max.
Output VSWR:	1.5:1 max.
Output Impedance:	50 Ohm

### Low Noise Amplifier

Center Frequency:	1575.42 MHz ±1.023 MHz.
Power Gain:	27dB typically
Bandwidth:	2 MHz min.
Noise Figure:	1.5 max.
Outer Band Attenuation:	20 dB min. @ Fo ±50 MHz.
Supply Voltages:	+4.5 to +5.5V DC
Current Consumption:	28mA ±3mA.
Output Impedance:	50 ohm

### Overall Performance:

Center Frequency:	1575.42 MHz.
Gain:	30 dB typically
Noise Figure:	2.0 max.
Axial Ratio:	3dB max.
Bandwidth:	2MHz min.
VSWR:	2.0max.
Output Impedance:	50 ohm

### Environmental

Operating Temperature:	-40°C to 85°C.
Storage Temperature:	-50°C to 90°C.
Relative Humidity:	95% non-condensing.
Water Resistance:	100% waterproof

### Ordering Information

Part Number	Description
BB GPS	Big Brother GPS antenna, 30 db gain, 1 connector, mounting plate, 5m cable



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