



#### Key Features

- IP66 sticker mount combined GPS / GSM antenna
- Groundplane independent
- RoHS compliant

#### General Description

Combined quad band GSM/28dBi GPS sticker mount antenna for internal/external use with tracking/location based applications. It is a well specified and virtually indestructible IP66 design, which mounts on glass in vehicles and provides good overall performance supplied with 4m cable, GPS has SMA Male connector and GSM has FME female connector.

##### Moisture Proof

The antenna should satisfy the electrical characteristics specified after exposure to the temperature  $40\pm 2^{\circ}\text{C}$  and the relative humidity 90 to 95%RH for 96 hours and 1 to 2 hours recovery time under normal conditions.

##### Vibration Resist

The antenna should satisfy the electrical characteristics specified after being applied to the vibration of 10 to 55Hz.

##### Drop Shock

The antenna should satisfy the electrical characteristics specified after dropping onto a hard wooden board from the height of 30cm, 3 times on each facet of the 3 dimensions of the antenna.

##### High Temperature Endurance

The antenna should satisfy the electrical characteristics specified after exposure to temperature  $80\pm 5^{\circ}\text{C}$  for  $24\pm 2$  hours and 1 to 2 hours recovery time under normal temperatures.

##### Low Temperature Endurance

The antenna should satisfy the electrical characteristics specified after exposure to the temperature  $-40\pm 5^{\circ}\text{C}$  for  $24\pm 2$  hours and 1 to 2 hours recovery time under normal temperatures.

##### Temperature Cycle Test

The antenna should satisfy the electrical characteristics specified after exposure to the low temperature  $-25^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperatures.

##### Weatherproof

The antenna should remain 100% waterproof after high pressure water jets being applied.

Rev 1.1

### Key Specifications - Electrical

Temperature range:	-40 to +85°C
Radiating element:	¼ wave dipole
Frequency bands:	850, 900, 1800, 1900MHz ± 3MHz
GSM gain:	2dB ± 1dB @ 900MHz or 1dB ± 1dB @ 1800MHz
GSM VSWR:	2:1
GSM polarization:	Vertical
GSM impedance:	50 Ohms
GPS patch frequency:	1575.42MHz ± 3MHz
GPS patch gain:	3dBi ± 0.5dBi
GPS patch bandwidth:	± 5MHz ± 1MHz
GPS patch VSWR:	1.5:1
GPS patch polarization:	RHCP
GPS patch impedance:	50 Ohms
GPS LNA gain:	28 dBi
GPS LNA noise figure:	1.5dB
GPS LNA voltage:	3v - 5v
GPS LNA current:	8mA - 15mA
GPS filter attenuation:	14dB Min f0+50MHz ± 1.0dB 18dB Min f0-50MHz ± 1.0dB 30dB Min f0 + 100MHz ± 1.0dB 42dB Min f0 – 100MHz ± 1.0dB

### Key Specifications - Mechanical

Dimensions:	71mm x 14mm
Weight:	350g
GSM connector:	2 or 4 metre FME female
GPS connector:	2 or 4 metre with SMA male

### Ordering Details

Part Number	Description
ALPHA6/4M/FMEF/SMAM/S/S/7	Combined GSM/GPS Antenna, 4m Cable, SMA Male/FME Female Connector
ALPHA6/2M/FMEF/SMAM/S/S/7	Combined GSM/GPS Antenna, 2m Cable, SMA Male/FME Female Connector