

## Section 5

### CELLULAR MOBILE PHONE ANTENNAS

Updated 18 February 2011

### ALL-IN-ONE Multiband NEXT G, GSM, 3G Cellular Mobile Phone, GPS and Wi-Fi Antenna

Frequency Range  
**804 MHz – 2.48 GHz**



This single model GCRFA antenna will provide reception for ALL of these applications :

- ✓ **NEXT G** cellular mobile phone network.
- ✓ **GSM** cellular mobile phone network.
- ✓ **3G** cellular mobile phone network.
- ✓ **GPS** global positioning system, 1575.42 MHz.
- ✓ **Wi-Fi**, 2.4 GHz.

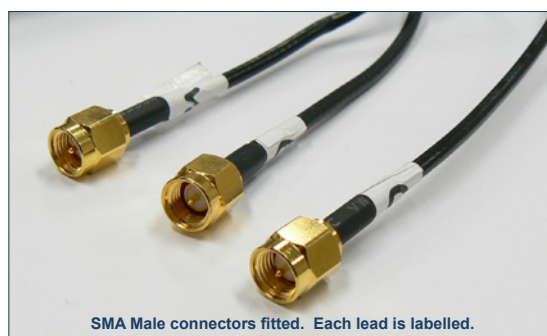
100 mm in diameter, this compact antenna may be secured through a 20 mm hole to any flat surface or bracket using the 28 mm long bottom thread and screw nut.

Typical mounting positions are to a vehicle or in a fixed location on a building.

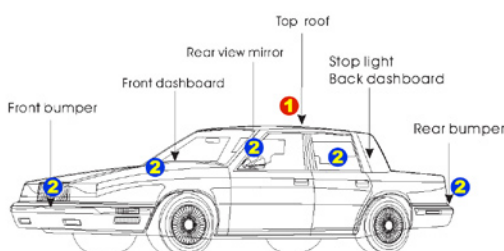
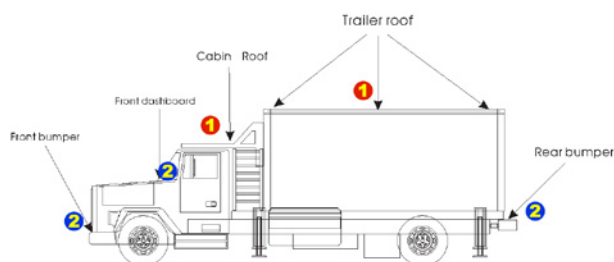
The 5 metre cables bottom exit through the base and are terminated with SMA Male connectors. Each lead is labelled.

The alternative model GCT provides both Mobile Phone and GPS reception, but not Wi-Fi.

Detailed specifications for the GCRFA and GCT antennas appear on the following page.



**1** indicates an ideal location for best omnidirectional performance



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Frequency Range  
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<b>Cellular Mobile Phone Antenna : GCRFA and GCT</b>					
<b>Frequency Coverage</b>	<b>NEXT G, GSM and 3G networks combined</b> 804 – 960 MHz, 1710 – 1880 MHz, 1850 – 1990 MHz, 1920 – 2170 MHz				
<b>Tuning and VSWR</b>	Factory tuned to less than 2:1 across each specified frequency range				
<b>Impedance</b>	50 Ohms				
<b>Pattern</b>	360° Omnidirectional				
<b>Maximum Power</b>	25 Watts				
<b>GPS Active Patch Antenna : GCRFA and GCT</b>					
<b>Frequency Coverage</b>	1575.42 MHz ± 3 MHz				
<b>Tuning and VSWR</b>	Factory tuned to 1.5:1 maximum				
<b>Bandwidth</b>	20 MHz minimum at -10 dB				
<b>Axial Ratio</b>	3 dB Typical				
<b>Impedance</b>	50 Ohms				
<b>Peak Gain</b>	4 dBic minimum (7 cm x 7 cm ground plane)				
<b>Polarisation</b>	Right Hand Circular				
Amplifier Module	Amplifier Gain, no cable	Noise Figure	Output VSWR	DC Voltage	DC Current
Type A	27 dB typical	1.4 dB typical	2.0 maximum	3.0 V to 5.5 V	22 ± 5 mA
Type B		1.4 dB typical		2.7 V to 6.0 V	8.5 ± 4.5 mA
<b>Wi-Fi Antenna : GCRFA (not supported by GCT)</b>					
<b>Frequency Coverage</b>	2.4 – 2.4835 GHz				
<b>Tuning and VSWR</b>	Factory tuned to less than 2:1 across the specified frequency range				
<b>Impedance</b>	50 Ohms				
<b>Pattern</b>	360° Omnidirectional				
<b>Maximum Power</b>	25 Watts				
<b>Mechanical Specifications : GCRFA and GCT</b>					
<b>Construction</b>	ABS Acrylonitrile Butadiene Styrene, PC polycarbonate, Cream in colour				
<b>Weight</b>	280 grams				
<b>Diameter</b>	100 mm				
<b>Radome Height</b>	39 mm				
<b>Mounting</b>	Secure to any flat surface or bracket through 20 mm hole using the 28 mm long bottom thread and screw nut				
<b>Cable and Connectors : GCRFA GCT</b>					
<b>Coaxial Cable</b>	3 x 5 metres of RG174/U		1 x 5 metres of RG174/U 1 x 5 metres of RG58/AU		
<b>Connectors</b>	3 x SMA Male fitted		2 x SMA Male fitted		