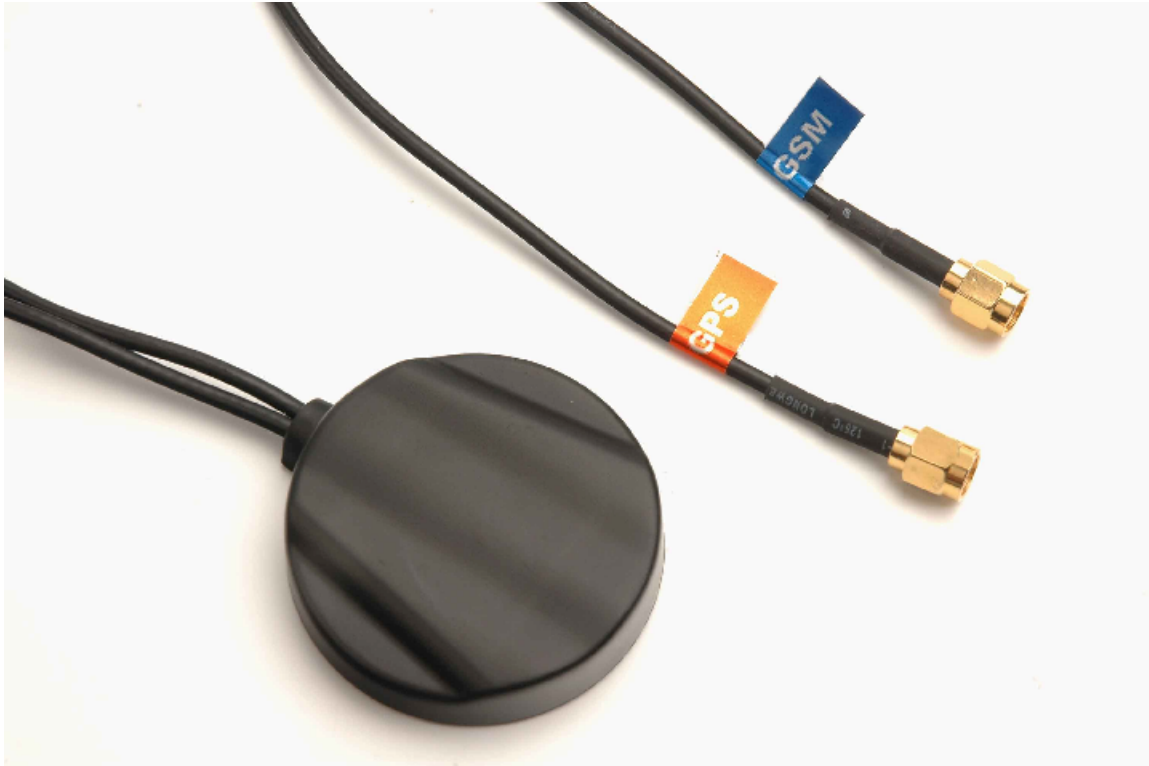




MA-203 Stingray GPS/Cellular Glassmount Covert Antenna



3D view



top view
(this side faces the sky)



underside view
(this side faces the passenger)

This is a combination high performance GPS and Quad-band Cellular (GSM/CDMA/PCS/DCS) antenna to simplify AVL or Fleet management antenna systems worldwide. It's high quality low profile covert housing can be attached onto the glass or even out of sight under the dashboard. This combination of a high gain GPS antenna and a leading edge quad band cellular antenna is ideal for those applications that require durability, small size and covert installation, and reliable reception and transmission crossing through different mobile networks.



Features

GPS

- High LNA Gain up to 32 dB
- Miniaturized to 55.15x12mm
- Low Noise 1.5 dB max
- Low Current Consumption $19 \pm 2\text{mA}$ (at 3~5V dc)

Cellular

- Advanced quad-band cellular antenna (GSM/CDMA/PCS/DCS)

Other

- Quality textured covert design. Low profile.
- UV resistant ABS housing
- Comes with high grade 3M double sided tape for quick and easy mounting
- Optional cables and connectors

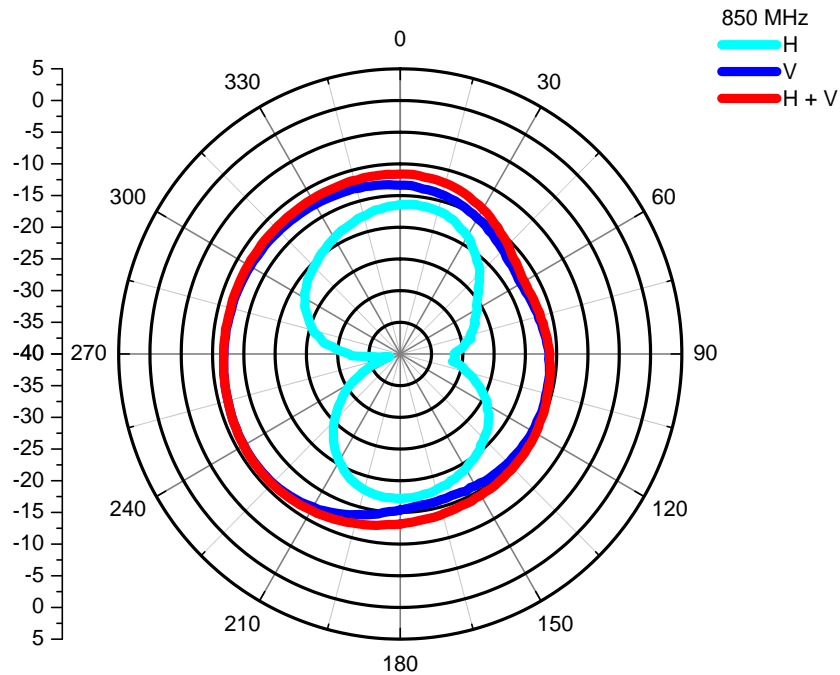
Performance Specifications

Items	GPS Antenna	Cellular Antenna
Features	High performance GPS ceramic patch antenna with cutting edge low noise amplifier	CDMA: 824~896 MHz GSM: 880~960 MHz PCS: 1850~1990 MHz DCS: 1710~1880 MHz
Frequency	1575.42 MHz \pm 2MHz	As above
LNA Gain	30 dB \pm 2 dB typ.	As patterns below
Antenna Gain	Gain at Zenith : 2.0 dBi min	-
	Gain at 10 ^o elevation : -4.0 dBi min	-
Axial Ratio :	2.0 dB max	
Noise Figure	1.5 dB max.	-
Polarization	RHCP	-
Outband Attenuation (LNA)	30dB min fo \pm 50MHz (fo=1575.42MHz)	-
Bandwidth	10 MHz min	-
VSWR	\leq 2.0 dB	\leq 2.5
Impedance	50?	50?
Power / Consumption	$19 \pm 2\text{mA}$ (at 3~5V dc)	-
Cable / Connector	Standard 1,2,3,4 or 5m RG-174 cables Connectors Fully Customisable	Standard 1,2,3,4 or 5m RG-174 cables Connectors fully Customisable
Operating Temperature	-35°C ~ +85°C	-35°C ~ +85°C
Storage Temperature	-40°C ~ +95°C	-405°C ~ +95°C
Size	55.15mm * 12mm	
Housing	UV resistant ABS	

***note: specifications may be subject to change**



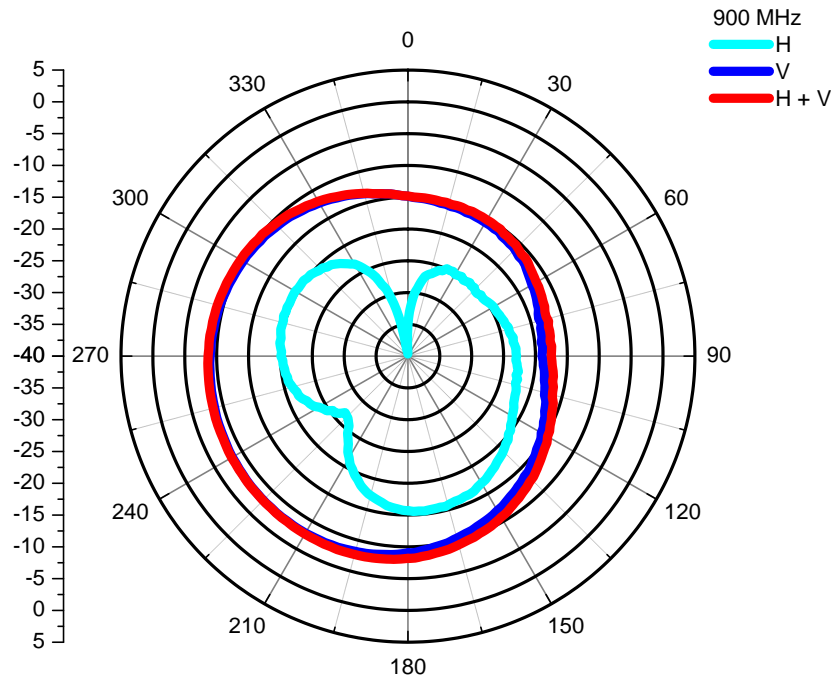
850 MHz



Center Frequency	850 MHz	Center Frequency	850 MHz
Horizontal (dBi) peak	-16.30	Horizontal (dBi)	-20.60
Vertical (dBi) peak	-11.10	Vertical (dBi) average	-13.68
Horiz.+Vert. (dBi) peak	-10.99	Horiz.+Vert. (dBi)	-12.88



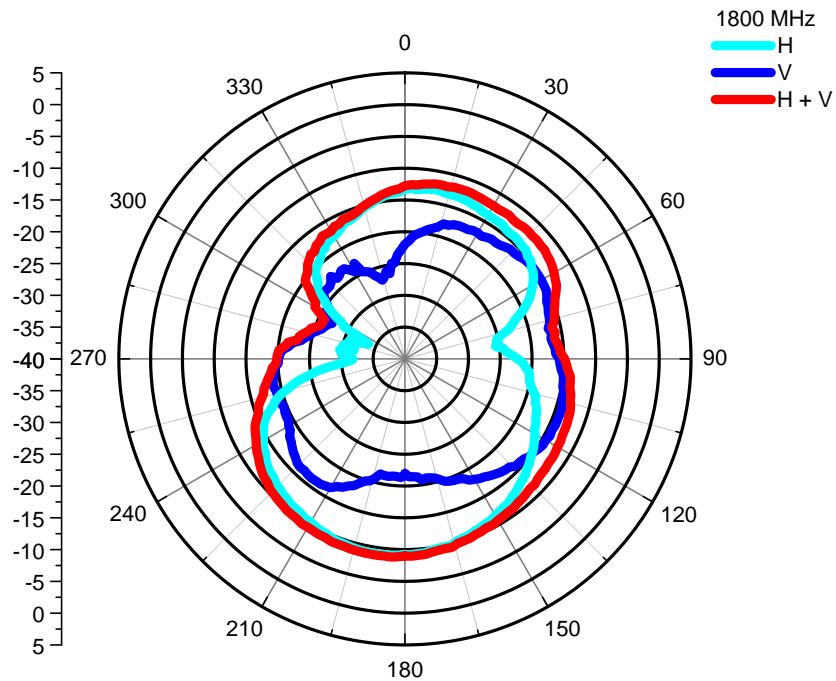
900 MHz



Center Frequency	900 MHz	Center Frequency	900 MHz
Horizontal (dBi) peak	-15.51	Horizontal (dBi)	-20.63
Vertical (dBi) peak	-7.85	Vertical (dBi) average	-11.23
Horiz.+Vert. (dBi) peak	-7.61	Horiz.+Vert. (dBi)	-10.75



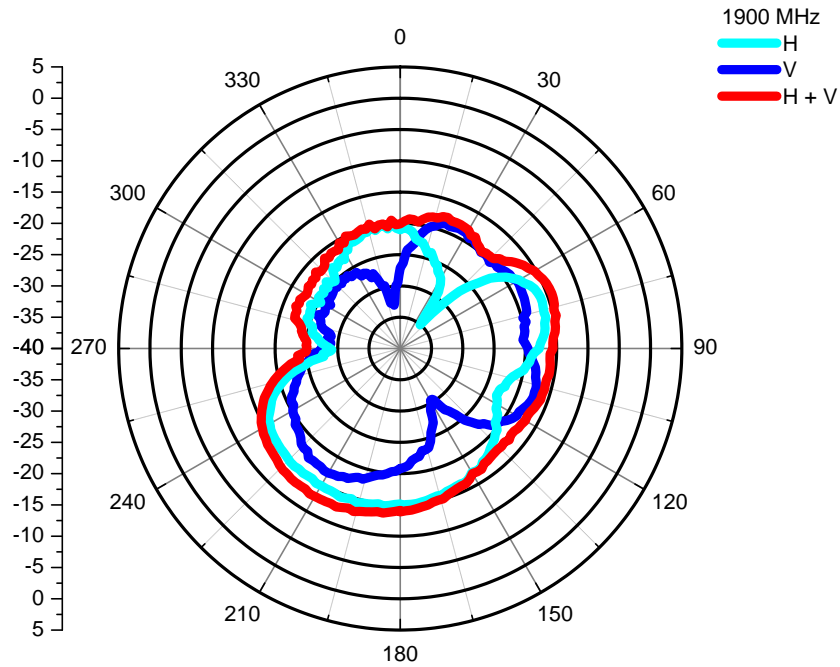
1800 MHz



Center Frequency	1800 MHz	Center Frequency	1800 MHz
Horizontal (dBi) peak	-9.00	Horizontal (dBi) average	-13.95
Vertical (dBi) peak	-14.04	Vertical (dBi) average	-18.04
Horiz.+Vert. (dBi) peak	-8.76	Horiz.+Vert. (dBi)	-12.52



1900 MHz



Center Frequency	1900 MHz	Center Frequency	1900 MHz
Horizontal (dBi) peak	-14.38	Horizontal (dBi) average	-18.49
Vertical (dBi) peak	-16.99	Vertical (dBi) average	-20.86
Horiz.+Vert. (dBi) peak	-14.38	Horiz.+Vert. (dBi)	-16.51