Cellular / GPS

The Laser Clear* transparent antenna is an innovation bought about by the need for discreet and high performance antennas used on cellular systems.

Since its original conception as a UHF (460MHz) antenna for unmarked police vehicles, this planar and transparent antenna, designed to be mounted inside the windshield, has been engineered to give exceptional multi-band performance.

Its patented construction uses a conductive element on a clear and flexible substrate. The geometry of the circuit is designed to give broad-band performance on 806-960MHz (CDMA & GSM). There is also a window of low VSWR on the 1575MHz GPS as well as the 1710-1850MHz and 1850-1990MHz bands.

For vehicle tracking and similar functions a low-profile splitter / amplifier is available. The output from this is two separate cables which go to the respective GPS receiver and cell-phone. The GPS side of the circuit has a built-in LNA providing 23dB gain in addition to the antenna's passive gain (4.5dBi).

“**If you haven’t seen our Laser Clear products, then we’ve done a good job**”

**TRANSPARENT**

hence virtually invisible. Using our patented and proprietary manufacturing procedure, which forms a conductive circuit on a clear polyester backing.

**THEFT & VANDAL PROOF**

being mounted on the inside of the windshield there is no opportunity for theft or vandalism. No problems with wind noise or car wash problems.

**EXCELLENT PERFORMANCE**

compared to currently available “on-glass” wire antennas, superior performance in the order of 3~10dB is achieved through the geometry of the printed circuit artwork and the direct connection of the antenna to the coaxial cable as against the through-glass capacitive coupling used by external “on-glass” antennas.

**MULTI FUNCTION**

the multi-band capabilities of this design enable utilising CDMA-GSM-GPS devices and negates the need for multiple antennas. Other uses such as PORTABLE EFTPOS, DATA-MODEMS, VENDING MACHINES, PARKING-METERS, VEHICLE and INVENTORY TRACKING, are being identified on a regular basis.

* Naming rights for OEM and other situations available
Features of this antenna are covered by
EU Patent No.: 0 903 805 New Zealand Patent No.: 519 721
Patent Pend.: Australia, China, Japan

For Further Information
info@laser-antenna.com
www.laser-antenna.com
**Electrical**

*Radiator:* 2 x full-wave loop with common center element @ 900MHz. Multiple wavelengths @ GPS and 1800MHz.

*Gain:* 4.5dBi @ CDMA - GSM900  
6.5dBi @ GSM1800  
5.0dBi @ GPS +23dB LNA

*VSWR:* <2:1 for specified ranges  
*VSWR:* <1.5:1 @ Band Centers (TX & RX)

*Polarisation:* Mixed  
*Max Power:* 10 Watts

**Mechanical**

*Radiating Element:* Copper plated (10~15um) silver ink track.  
*Substrate:* Clear Polyester/Mylar film (180um). Not affected by UV  
*Adhesive/Dielectric:* 3M 467 Epoxy. This adhesive gets stronger over time and is not affected by UV.

**Cable & Connector**

1 metre RG174 terminated with proprietary Snap-On coaxial connector for antenna end and FME female for equipment or extension cable.

3 metres RG58 Low Loss extension cable terminated with FME male and FME female.

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**Typical Dimensions**

(actual dimension varies for different design center frequencies)

Note: adhesive backing paper on antenna is not yet removed in this photo.

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