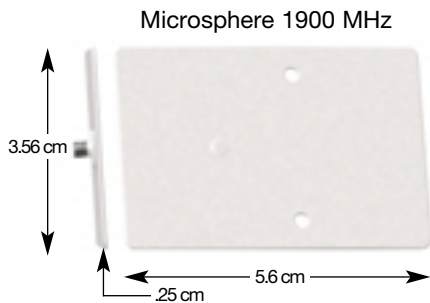


The surprisingly small size of the Xertex Microsphere omnidirectional antenna allows it to be hidden almost anywhere, providing an invisible solution for many applications. Ideal for integrating into almost any device, its small size and exceptionally low profile allow it to easily fit in a variety of locations. The omnidirectional pattern of this antenna is suited to a variety of uses, including hand-held devices, in-building systems or other applications where mobility is a factor. The field pattern is toroidal, providing omnidirectional coverage in any plane around the long axis of the antenna, and two lobes in any plane parallel to the long axis.

The dualband, single-port Microsphere contains an integrated diplexer which allows independent or simultaneous use of the two frequency bands.

With the Microsphere antenna, aesthetics are no longer a concern for in-building applications, as the antenna can be placed behind a switch plate, or attached directly to the ceiling.



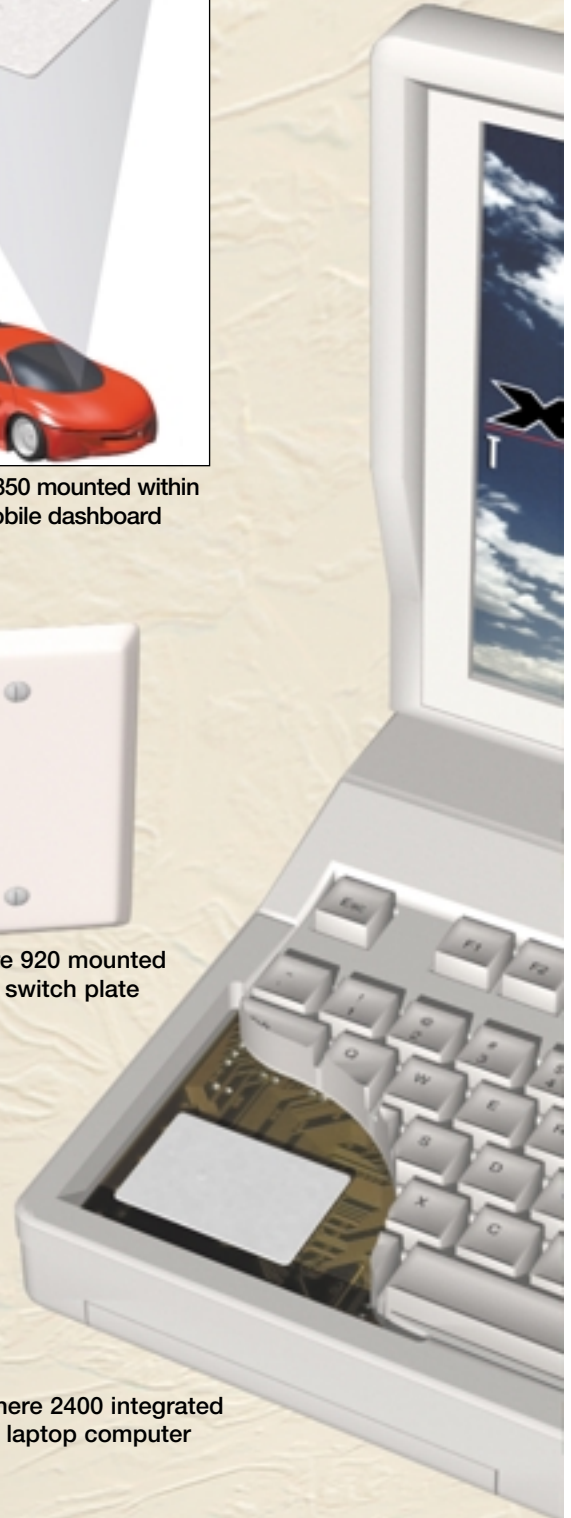
The Best Antennas Go UnseenSM



Microsphere 850 mounted within an automobile dashboard



Microsphere 920 mounted behind a switch plate



Microsphere 2400 integrated into a laptop computer

(Customized and scalable to meet your frequency and application requirements)

	450 Mhz	850 MHz	920 MHz	1800 MHz	1900 MHz	2400 MHz	Dual-Band 850&1900MHz	Dual-Band 920&1800MHz
Element Type	Microstrip	Microstrip	Microstrip	Microstrip	Microstrip	Microstrip	Microstrip	Microstrip
Frequency Range ¹	420-480 MHz	806-896 MHz	880-960 MHz	1710-1880 MHz	1850-1990 MHz	2400-2500 MHz	806-896&1850-1990	880-960&1710-1880
Gain	3 dBi	3 dBi	3 dBi	3 dBi	3 dBi	3 dBi	3 dBi	3 dBi
Polarization ²	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear ⁴
Azimuth 3dB Beamwidth	240°	240°	240°	240°	240°	240°	240°	240°
Elevation 3dB Beamwidth	80°	80°	80°	80°	80°	80°	80°	80°
Impedance	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
Maximum Input Power	50 watts	50 watts	50 watts	50 watts	50 watts	50 watts	50 watts	50 watts
VSWR (Min. Performance)	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Connector ⁵	SMA Female	SMA Female	SMA Female	SMA Female	SMA Female	SMA Female	SMA Female	SMA Female
Size	20.6x14.5x0.25cm	11.4x8.6x0.25cm	10.9x7.9x0.25cm	5.6x3.5x0.25cm	5.6x3.5x0.25cm	4.6x3x0.25cm	15.9x13.6x0.25	12.9x15.6x0.25
Coating Material	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Operating Temperature	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C
Storage Temperature	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C	-40° to +70° C
Model Numbers ³	4500M3W-SM00	8500M3W-SM00	9200M3W-SM00	1800M3W-SM00	1900M3W-SM00	2450M3W-SM00	8190M3W-SM00	9180M3W-SM00

¹Other frequencies available.

²Polarization is along the long axis of the antenna.

³Please contact your Xertex representative for different connector options and their part numbers.

⁴Polarization of 9180M3W is along the short axis of the antenna.

⁵Other connectors available with pigtail version only.

Mechanical:

The Microsphere antenna consists of a flat panel antenna, a choice of mounting configurations, and either a connector directly mounted to the antenna or a cable pigtail termination.

Mounting:

The Microsphere may be mounted directly to a ceiling tile, with the cable passing through the tile. The Microsphere may also be mounted using hook and loop fasteners on the cable/connector side, or with customer hardware.

For in-vehicle applications, the Microsphere may be mounted under the dashboard or rear shelf using plastic ties, hook and loop fasteners, or plastic mounting clips.

Xertex will supply the Microsphere with mounting hardware to customer specifications, or as a "bare" sub-assembly with a pigtail cable for integration into OEM systems.

Environmental:

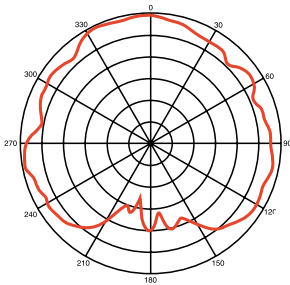
The Microsphere antenna is designed for indoor, in-vehicle, or imbedded applications.

Inherently shock and vibration resistant.

Typical Antenna Patterns

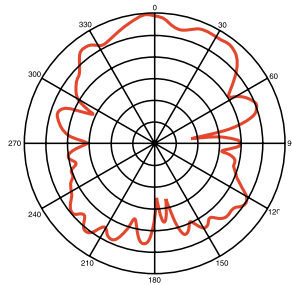
Azimuth Plane

(cut perpendicular to the antenna, parallel to the connector/cable exit, perpendicular to the polarization)



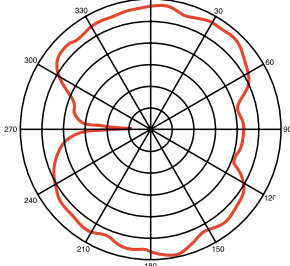
Elevation Plane

(cut perpendicular to the antenna, parallel to the connector/cable exit, parallel to the polarization axis)



Omni Plane

(cut in the plane of the antenna perpendicular to the connector/cable exit)



As shown in these typical antenna patterns, the Microsphere antenna offers excellent omnidirectional reception.



452 Burbank Street
Broomfield, CO 80020
(303) 635-2000 phone
(303) 635-2003 fax
www.xertex.com