MULTI-POLARIZED ANTENNAS
who we are

MP Antenna develops and manufactures Multi-Polarized antennas that improve signal penetration and connectivity in dynamic environments.

Our three-dimensional patented antennas outperform all other NLOS, purported antennas in quality, reliability, and price while providing network users with increased data throughput, enhanced voice clarity and multi-path mitigation.

our mission

To be the world leader in passive Multi-Polarized Antenna Technology by offering products and solutions which provide all users the best possible wireless experience at any frequency.
intellectual property

MP Antenna products and technology are protected under one or more of the United States Patents, and other United States and Foreign patents applied for.

6,496,152 Dual Polarized Antenna
7,030,831 Multi-Polarized Feeds for Dish Antennas
7,139,956 Apparatus and Method for a Multi-Polarized Ground Plane Beam Antenna
7,236,129 Apparatus and Method for Multi-Polarized Antenna
7,348,933 Compact Multi-Polarized Antenna for Portable Devices
7,791,555 High Gain Multiple Polarization Antenna Assembly
7,916,097 Enhanced Band Multiple Polarization Antenna Assembly
D,623,633 Antenna Design
D,634,308 Antenna Design
D,659,127 Antenna Design
MULTI-POLARIZED ANTENNAS

differentiators
• World’s only passive 3D Multi-Polarized antenna
• Built in polarization and spatial diversity
• Multi-path mitigation
• Effective patterning
• Throughput and signal stability
• Single feed with wide band capability
• High quality
• Applies to any frequency

Networks that are deployed with standard antenna technology are commonly disturbed by weather and obstructions that cause reflectivity, multi-path, absorption, and phasing. Multi-Polarized antennas have built in polarization and spatial diversity and reduce signal degradation to provide users with consistent voice and data communications in any situation.
polarization diversity

Radio waves reflect, diffract, refract, and scatter on their way from the transmitting antenna to the receiving antenna, and these anomalies can alter the signals' polarization. For example, a vertically polarized transmitted wave is well received at a vertically polarized antenna, and likewise for horizontal polarization. But a vertically polarized wave induces a minimum amount of signal in a horizontally polarized antenna. Multi-Polarized antennas transmit and receive in all polarizations allowing users to experience more stable throughput and signal levels.
spatial diversity

When randomly polarized waves undergo whole or partial cancellation, the receiving antenna will see peaks or hot spots and nulls in signal strength and produce dropouts in communications. A singularly (vertically) polarized whip-style antenna, for example, will experience a degrading signal and lose communication for one or both of these reasons. In addition, antennas with narrow radiation patterns can ignore signals arriving from a variety of directions. Multi-Polarized antennas are three dimensional and offer built-in spatial diversity that allows for a portion of the antenna to be in a null while another portion is receiving a useable signal.
multi-path mitigation

Because of the different lengths of various signal paths available between antennas and the variations in phase among these signals, multi-path signals can add and subtract at the receiving antenna and partially or even completely cancel the resultant wave. The outcome is a substantially decreased or totally unusable signal at the receiving antenna. With built-in spatial diversity, Multi-Polarized antennas are able to overcome multi-path issues in real-world environments.
effective patterning

MP Antenna utilizes patented three-dimensional designs and offers various pattern and gain options that meet the needs of even the most demanding deployments. Multi-Polarized antennas outperform a similarly sized standard antenna in most locations, but especially so in those areas that would require higher signal saturation for conventional antennas to perform adequately.
throughput stability

Multi-Polarized antennas provide users with higher, more stable throughput levels by utilizing all polarizations and remaining connected in obstructed environments.
signal stability

Multi-Polarized Antennas transmit and receive in the X, Y and Z planes, allowing RSSI readings in a dynamically obstructed environment to show improved performance over a singularly polarized antenna.
**Applications**

**Land Mobile Radio**

With standard antenna technology, Line-of-Sight paths are commonly disturbed by weather and obstructions that cause reflectivity, multi-path, absorption, and phasing. Multi-Polarized antennas reduce signal degradation and provide users with consistent voice and data communications in any situation.
monitoring and control

Monitoring and controlling devices remotely? MP Antenna offers products to meet the needs of any deployment or communications challenge. Multi-Polarized Antennas provide users with greater throughput speeds and less drop outs, especially in difficult to reach locations.
**indoor networks**

Why settle for poor in building coverage? MP Antenna products permeate any structure providing increased coverage and faster throughput for wireless devices. Unlike standard antennas, Multi-Polarized antennas utilize patented technology and designs to transmit and receive in all polarizations, allowing users to be heard loud and clear.
Reliable underground communication is not only expected by users, it is also very difficult due to the use of heavy machinery and Non-Line-Of-Sight conditions. With Multi-Polarized antennas, underground communication issues are a problem of the past. MP Antenna products transmit and receive in all polarizations allowing for reflected signals to become usable in any obstructed situation.
outdoor networks

Trees, buildings, and dynamic conditions reeking havoc on your deployment? Multi-Polarized antennas can solve all real-world connectivity issues when obstructions are to blame.
ham and scanner

Key up with one of the most efficient antennas on the market. MP Antenna offers a variety of products allowing users to transmit, receive and monitor behind hills, in valleys and every other tough to reach location.
home wireless

Tired of your wireless devices only being able to connect in certain parts of your home? Take your wireless further with Multi-Polarized antenna products and eliminate dead spots and slow connections.
MP Antennas Achieve Coverage Into Lead Lined Radiology Lab

**Objective:** Address concerns of major New York City hospital with a previously-installed in-building repeater system. The hospital had subpar performance in the areas already covered by the system, and also needed to expand the footprint, all while keeping the system as "stealth" as possible. The building itself presented a challenge for any repeater system; lead-lined walls, miles of pipe and conduit in every floor and ceiling, and postwar solid-concrete construction. Upon completion of a site survey, all four national carriers had almost no (-102dB or worse) signal in the existing coverage area. To make things worse, the proposed expansion area was absolutely devoid of cellular penetration.

**Result:** By changing the donor antenna to a Mobius, the system saw a 15dB improvement and dropped calls were reduced. With the replacement of the indoor antennas, tests showed 50 out of 50 connected calls from locations throughout the building and another 10dB improvement.
SenComm-NMO North Star Test

Objective: A statewide communication agency needed to improve communication either by building more towers or finding a better mobile antenna solution. They tested MP Antenna against SenComm-NMO against their legacy antenna supplied by a leading manufacturer.

Result: Results show the most significant improvement with the SenComm was found in the weakest signal areas, proving that MP antenna technology ensures more reliable communication.
CASE STUDIES

40% Improvement Over the Competition

Objective: Skycasters uses their mobile satellite trailer for point-to-multipoint communications to enhance emergency response capabilities everywhere. The company was looking for a way to improve wireless signals over distances as far as a thousand feet from their trailer.

Result: During their field evaluation, Skycasters ran comparison tests and chose MP Antenna High Gain Omni 8 dBi Omni because it performed the best and showed a 10dB improvement over their existing High Gain antenna.