



What is Polarity?

Polarization refers to the orientation of the electric field component of an electromagnetic wave with respect to the Earth's surface. An electromagnetic wave is composed of electric and magnetic fields propagating perpendicular to each other. Radio and light are both electromagnetic waves. Electromagnetic waves can propagate with linear, circular or elliptical polarization. Linear polarization is the most popular method used in WiFi communications and can take two forms, vertical and horizontal. Some antennas utilize dual polarity which provides access and interoperability with both vertical and horizontal polarized antennas. Other polarization options include cross polarization where one element is $+45^\circ$ polarized and the other is -45° polarized. The two opposing 45° angle of the elements produces a cross or X orientation. Circular-polarized antennas have equal response to either horizontal or vertical polarized antennas. These antennas are designed to either support right hand or left hand polarization to suit varied wireless connectivity applications.

