Product Overview

The antenna provides an innovative solution for 4G / 3G and 2G networks including Wi-Fi. It is a unique wall- or pole-mountable, dual polarised, full LTE band antenna. Incorporating two separately fed ultra wideband elements in a single housing, the antenna is equipped to provide client-side MiMo and diversity support for the networks of today and tomorrow. This is a cost effective solution for enhancing signal reception and throughput. The antenna increases signal reliability, ensures higher data throughput for users and provides a stable, high quality connection.

This improves subscriber user experience and secures client retention. It is ideal for any application using the GSM network (LTE/ HSPA/3G/EDGE/GPRS).

Features

- High gain directional antenna
- Broadband covering multiple operational frequencies
- Wall or pole mountable
- Lightweight
- Waterproof
- Two cross polarised antennas in one enclosure

Application areas

- Urban and rural areas
- Poor data signal reception (indoor or outdoor)
- Slow data transmission connection areas
- Unstable connection
- Increase system transmission reliability
- LTE fringe areas (close to an LTE area, but just out of reach)
- Network operator flexibility - as the antennas is wideband, a new antenna is not needed per network operator - works on most networks
- Regulatory
## Voltage Standing Wave Ratio (VSWR)

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1. The XPOL-2 delivers superior performance across all bands with a VSWR of 2.5:1 or better.

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Voltage Standing Wave Ratio (VSWR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 - 698</td>
<td>5</td>
</tr>
<tr>
<td>698 - 960</td>
<td>4.5</td>
</tr>
<tr>
<td>960 - 1500</td>
<td>4</td>
</tr>
<tr>
<td>1500 - 1710</td>
<td>3.5</td>
</tr>
<tr>
<td>1710 - 2170</td>
<td>3</td>
</tr>
<tr>
<td>2170 - 2300</td>
<td>2.5</td>
</tr>
<tr>
<td>2300 - 2400</td>
<td>2</td>
</tr>
<tr>
<td>2400 - 2500</td>
<td>1.5</td>
</tr>
<tr>
<td>2500 - 2700</td>
<td>1</td>
</tr>
</tbody>
</table>

## Gain (excluding cable loss)

Gain at 698 - 960 MHz: 8 dBi
Gain at 1710 - 2170 MHz: 6.5 dBi
Gain at 2300 - 2400 MHz: 7 dBi
Gain at 2500 - 2700 MHz: 9 dBi

*Antenna gain measured with polarisation aligned standard antenna.
Radiation Patterns

Azimuth:

Elevation:
## Electrical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Bands:</td>
<td>698 - 960 MHz</td>
</tr>
<tr>
<td></td>
<td>1710 - 2170 MHz</td>
</tr>
<tr>
<td></td>
<td>2300 - 2400 MHz</td>
</tr>
<tr>
<td></td>
<td>2500 - 2700 MHz</td>
</tr>
<tr>
<td>Gain (Max):</td>
<td>9 dBi</td>
</tr>
<tr>
<td>Gain (Min):</td>
<td>6.5 dBi</td>
</tr>
<tr>
<td>VSWR:</td>
<td>&lt; 2.5:1</td>
</tr>
<tr>
<td>Feed Power Handling:</td>
<td>10 W</td>
</tr>
<tr>
<td>Input impedance:</td>
<td>50 Ohm (nominal)</td>
</tr>
<tr>
<td>Polarisation:</td>
<td>0° and 90°</td>
</tr>
<tr>
<td>Port to Port Isolation:</td>
<td>&gt;15dB</td>
</tr>
<tr>
<td>MIMO decorrelation:</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>Cable loss:</td>
<td>0.35dB/m @900 MHz</td>
</tr>
<tr>
<td></td>
<td>0.53dB/m @ 2000 MHz</td>
</tr>
<tr>
<td></td>
<td>0.6dB/m @2500 MHz</td>
</tr>
<tr>
<td>DC Short:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Environmental Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Survival:</td>
<td>&lt;120km/h</td>
</tr>
<tr>
<td>Temperature Range (Operating):</td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td>Environmental Conditions:</td>
<td>Outdoor/Indoor</td>
</tr>
<tr>
<td>Operating Relative Humidity:</td>
<td>Up to 98%</td>
</tr>
<tr>
<td>Storage Humidity:</td>
<td>5% to 95% - non condensing</td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>-40°C to +70°C</td>
</tr>
</tbody>
</table>

## Mechanical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Dimensions (L x W x D):</td>
<td>255 mm x 250 mm x 80 mm</td>
</tr>
<tr>
<td>Packaged Dimensions:</td>
<td>10 in x 9.85 in x 3.15 in</td>
</tr>
<tr>
<td>Weight:</td>
<td>1.55 kg</td>
</tr>
<tr>
<td>Packaged Weight:</td>
<td>1.98 kg</td>
</tr>
<tr>
<td>Radome Material:</td>
<td>ABS (Halogen Free)</td>
</tr>
<tr>
<td>Radome Colour:</td>
<td>Pantone - Cool Gray (1C)</td>
</tr>
<tr>
<td>RAL 7047</td>
<td></td>
</tr>
</tbody>
</table>

## Product Box Contents

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenna</td>
<td>PY-P-PS200-09W-16</td>
</tr>
<tr>
<td>Mounting Bracket</td>
<td>1 x Z-shaped mounting bracket suitable for wall or pole mount</td>
</tr>
<tr>
<td>Cable Length:</td>
<td>5m</td>
</tr>
<tr>
<td>Cable Type:</td>
<td>Black twin siamese HDF 195</td>
</tr>
<tr>
<td>Connector:</td>
<td>2X SMA (M)Gold plated</td>
</tr>
</tbody>
</table>

The cables and connectors are factory mounted to the antenna.

## Certification Approvals and Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability rating:</td>
<td>UL 94-V0</td>
</tr>
<tr>
<td></td>
<td>EN 13823</td>
</tr>
<tr>
<td>Water Ingress Protection Ratio/Standard:</td>
<td>IP 65 (NEMA 4X)</td>
</tr>
<tr>
<td>Impact resistance:</td>
<td>IK 08</td>
</tr>
<tr>
<td>Salt Spray:</td>
<td>MIL-STD 810F/ASTM B117</td>
</tr>
<tr>
<td>Product Safety:</td>
<td>Complies with UL, CE, EN, CSA and IEC standards</td>
</tr>
<tr>
<td>Warranty:</td>
<td>2 year limited manufacturer’s warranty</td>
</tr>
</tbody>
</table>