



Technical Note

## **AS WipLL 900 MHz**

Wireless IP-Based Local Loop System

# **BSR External Antenna Specifications**

Leading the World in Wireless DSL

| Revision Record: BSR External Antenna Specifications |        |                           |
|--|--------|---------------------------|
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## 1. Introduction

The AS WipLL BSR operating in the 900 MHz band, provide N-type receptacles for connecting up to two third-party external antennas. The BSR provides two N-type receptacles for antenna diversity.

This document lists the specifications of these external antennas intended for the BSR.

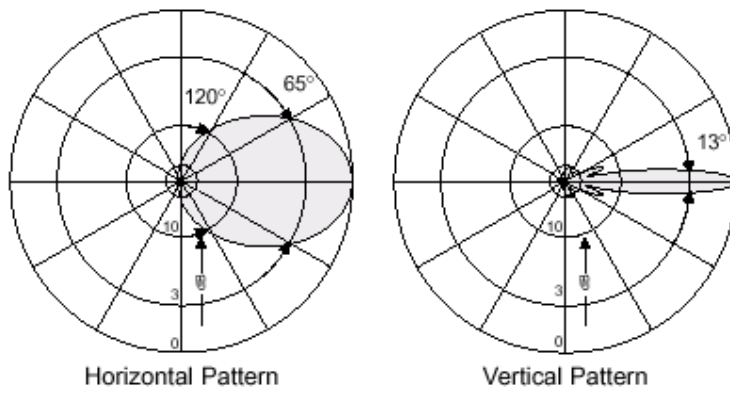
## 2. BSR Third-Party External Antennas

Airspan provides the following external antennas for BSR devices operating in the 900 MHz band:

- Sector antenna
- Dual Polarization Sector antenna

## 2.1. Sector Antenna

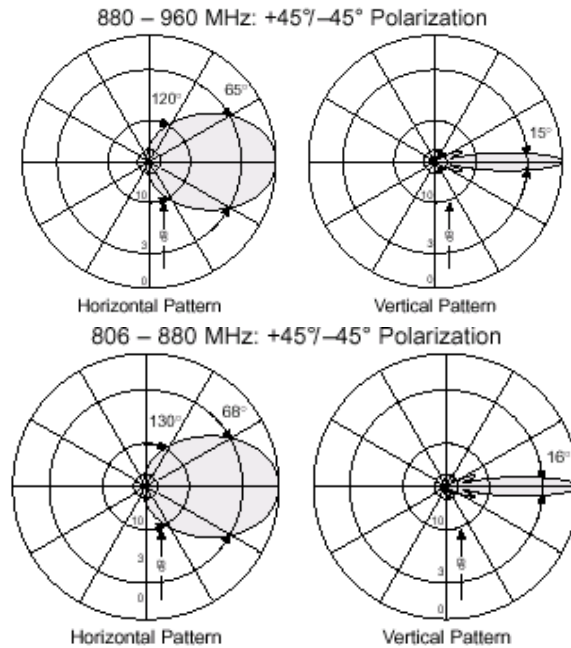
This antenna is designed for best non-line of sight performance with Airspan's BSR operating in the 900 MHz band. Advanced features include: high gain and mechanical downtilt.



| <b>Electrical specifications</b>                    |   |
|---|---|
| <b>Frequency range</b>                              | 870 –960 MHz  |
| <b>Polarization</b>                                 | Vertical  |
| <b>Gain</b>   | 15.5 dBi  |
| <b>Half-power beam width</b>                        | <ul style="list-style-type: none"> <li>• H-plane:65°</li> <li>• E-plane:13°</li> </ul>  |
| <b>Front-to-back ratio</b>                          | >25 dB  |
| <b>Impedance</b>                                    | 50 .  |
| <b>VSWR</b>   | <1.3  |
| <b>Intermodulation IM3<br/>(2 x 43 dBm carrier)</b> | <-150 dBc   |
| <b>Max.power</b>                                    | 500 W (at 50 °C ambient temperature)  |
| <b>Mechanical specifications</b>                    |   |
| <b>Input</b>  | 7-16 female   |
| <b>Connector position</b>                           | Bottom  |
| <b>Weight</b>                                       | 6 kg  |
| <b>Wind load</b>                                    | <ul style="list-style-type: none"> <li>• Frontal: 220 N (at 150 km/h)</li> <li>• Lateral: 140 N (at 150 km/h)</li> <li>• Rearside: 490 N (at 150 km/h)</li> </ul> |
| <b>Max.wind velocity</b>                            | 200 km/h  |
| <b>Packing size</b>                                 | 1422 x 272 x 160 mm   |
| <b>Height/width/depth</b>                           | 1294 /258 /103 mm   |

## 2.2. Sector Antenna Dual Polarization

This antenna is designed for best non-line of sight performance with Airspan's BSR operating in the 900 MHz band. Advanced features include: high gain and mechanical downtilt.



| <b>Electrical specifications</b>                    |  |  |
|---|--|--|
| <b>Frequency range</b>                              | <b>806 –880 MHz</b>  | <b>880 –960 MHz</b>  |
| <b>Polarization</b>                                 | +45°, –45°   | +45°, –45°   |
| <b>Gain</b>   | 2 x 15 dBi   | 2 x 15.5 dBi   |
| <b>Half-power beam width<br/>Copolar +45°/ –45°</b> | <ul style="list-style-type: none"> <li>• Horizontal: 68°</li> <li>• Vertical: 16°</li> </ul>   | <ul style="list-style-type: none"> <li>• Horizontal: 65°</li> <li>• Vertical: 15°</li> </ul> |
| <b>Front-to-back ratio, copolar</b>                 | >30 dB   |  |
| <b>Isolation</b>                                    | >30 dB   |  |
| <b>Impedance</b>                                    | 50Ω  |  |
| <b>VSWR</b>   | <1.4   |  |
| <b>Intermodulation IM3<br/>(2 x 43 dBm carrier)</b> | <-150 dBc  |  |
| <b>Max. power per input</b>                         | 600 W (at 50 °C ambient temperature)   |  |
| <b>Mechanical specifications</b>                    |  |  |
| <b>Input</b>  | 2 x 7-16 female  |  |
| <b>Connector position*</b>                          | Bottom or top  |  |
| <b>Weight</b>                                       | 10 kg  |  |
| <b>Wind load</b>                                    | <ul style="list-style-type: none"> <li>• Frontal:230 N (at 150 km/h)</li> <li>• Lateral:130 N (at 150 km/h)</li> <li>• Rearside:500 N (at 150 km/h)</li> </ul> |  |
| <b>Max. wind velocity</b>                           | 200 km/h   |  |
| <b>Packing size</b>                                 | 1422 x 287 x 165 mm  |  |
| <b>Height/width/depth</b>                           | 1296 /262 /116 mm  |  |

\* Inverted mounting: connector position top. Change drain hole screw