

9dBi Linear Polarization Antenna

SBA-U2509L

SBA-U2509L is a compact and efficient 9dBi UHF antenna designed for RFID applications operating within the 902–928 MHz range. With its linear vertical polarization, balanced 65° beamwidth in both horizontal and vertical planes, and weather-resistant IP54-rated aluminum body, it is ideal for reliable medium-range tag reading in both indoor and semi-outdoor environments. The antenna supports pole-mount installations and performs well under moderate environmental stress.

Features and Benefits:

- Frequency Range: 902–928 MHz (UHF)
- Gain: 9dBi for effective medium-range coverage
- Vertical Linear Polarization for consistent tag capture in specific orientations
- Beamwidth: 65° H / 65° V for wide directional coverage
- VSWR ≤ 1.3 for enhanced signal reflection control
- Front-to-Back Ratio ≥ 20 for reduced interference from behind
- Connector Type: N-type socket
- Durable aluminium build with IP54 waterproof protection
- Mounts on poles with diameters from 40–50mm
- Wind resistance up to 50m/s and operating temperature range of -20°C to +60°C
- Lightning protection through DC grounding



Applications:

- Shelf-level or zone-based inventory tracking
- Access control at medium-range RFID gates
- Warehouse management and logistics
- Industrial workstations requiring focused tag reading
- Smart retail and POS systems

| <u>SPECIFICATIONS</u> | |
|---------------------------------|--------------------------------|
| Physical Parameter | |
| Dimensions | 258mm X 258mm X 33.5mm |
| Colour | White |
| Weight | 1.1 Kgs (Gross) |
| Packaging Dimensions | 290mm X 290mm X 80mm |
| Material | Aluminium |
| Pole Diameter | φ40-50mm |
| Waterproof Rating | IP54 |
| Maximum Wind Resistance | 50 m/s |
| UHF Technical Parameters | |
| Operating Frequency | 902-928 MHz |
| Gain | Up to 9 dBi |
| Beam Width | Horizontal: 65°, Vertical: 65° |
| VSWR | <=1.3 |
| Front Back Ratio | >=20 |
| Polarization | Vertical |
| Input Impedance | 50 Ω |
| Maximum Input Power | 100 W |
| Lightening Protection | DC Grounding |
| Connector Type | N-Type Socket |
| Environmental Parameters | |
| Operating Temperature | -20°C to +60°C |
| Storage Temperature | -40°C to +85°C |
| Working Humidity | 5% to 95% RH No condensation |

Soochak Bharat, with its technical expertise in RFID technology, focuses on designing, developing, innovating, and deploying RFID hardware solutions.

*Read range is dependent on tag size and design.

*Soochak Bharat reserves the right to make changes in the above specifications without notice.

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