

12dBi Circular Polarization Pure Antenna

SBA-U2512PC

SBA-U2512PC is a 12dBi circularly polarized UHF RFID antenna engineered for high-performance applications within the 902–928 MHz band. With a balanced $40^\circ \times 40^\circ$ beamwidth, low VSWR, and a strong front-to-back ratio, this antenna ensures precise and stable tag reads over long distances. Housed in a durable aluminum body with IP64 protection, it is ideal for demanding RFID environments both indoors and outdoors.

Features and Benefits:

- Frequency Range: 902–928 MHz
- Gain: 12dBi for extended read range
- Circular Polarization for reliable multi-angle tag detection
- Beamwidth: 40° horizontal / 40° vertical for symmetrical directional coverage
- $VSWR \leq 1.3$ for maximum signal efficiency
- Front-to-Back Ratio ≥ 25 to minimize rear-side interference
- Connector Type: N-type socket
- Max Input Power: 100W
- Rugged aluminum construction with IP64 waterproof rating
- Operating Temperature: -20°C to $+60^\circ\text{C}$
- Lightning Protection via DC grounding
- Supports pole mounting ($\Phi 40$ –80mm), wind resistant up to 50m/s

Applications:

- Vehicle tracking and automated gate systems
- Long-range RFID portals and access points
- Outdoor asset monitoring in logistics and yards
- Industrial automation in challenging environments
- Container and pallet identification in large facilities



SPECIFICATIONS

Physical Parameter

Dimensions	445mm X 445mm X 42mm
Colour	White/Black
Weight	3.92 Kgs (Gross)
Packaging Dimensions	600mm X 480mm X 110mm
Material	Aluminium
Pole Diameter	φ40-80mm
Maximum Wind Resistance	50 m/s
Waterproof Rating	IP64

UHF Technical Parameters

Operating Frequency	902-928 MHz
Gain	Up to 12 dBi
Beam Width	Horizontal: 40°, Vertical: 40°
VSWR	<=1.3
Front Back Ratio	>=25
Polarization	Circular
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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