

## 12dBi Circular Polarization Flat Antenna

### SBA-U2512FC

**SBA-U2512FC** is a high-gain 12dBi circularly polarized UHF RFID antenna designed for long-range applications within the 902–928 MHz frequency band. Built with a durable aluminum enclosure and offering a narrow 20° vertical beam, it ensures precise and stable tag detection across extended distances. Ideal for fixed installations in demanding environments, this antenna combines performance and reliability for industrial and logistics use cases.

#### Features and Benefits:

- Frequency Range: 902–928 MHz
- Gain: 12dBi for long-distance tag reading
- Circular Polarization for orientation-independent tag detection
- Beamwidth: 70° horizontal / 20° vertical for focused directional coverage
- VSWR  $\leq 1.5$  for effective signal transmission
- Front-to-Back Ratio  $\geq 20$  reduces signal interference
- SMA Connector, supports up to 100W input
- Rugged aluminium construction for long-term durability
- Operating Temperature: -20°C to +60°C
- Built-in DC grounding for lightning protection

#### Applications:

- Long-range RFID gates and vehicle access control
- Outdoor logistics and loading dock monitoring
- Container and pallet tracking in yards
- Industrial automation in harsh environments
- Warehouse zone-level asset tracking



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<b>SPECIFICATIONS</b>	
<b>Physical Parameter</b>	
Dimensions	1200mm X 188mm X 21mm
Colour	White/Black
Weight	3.8 Kgs (Gross)
Packaging Dimensions	1250mm X 230mm X 60cm
Material	Aluminium
<b>UHF Technical Parameters</b>	
Operating Frequency	902-928 MHz
Gain	Up to 12 dBi
Beam Width	Horizontal: 70°, Vertical: 20°
VSWR	<=1.5
Front Back Ratio	>=20
Polarization	Circular
Input Impedance	50 Ω
Maximum Input Power	100 W
Lightening Protection	DC Grounding
Connector Type	SMA Socket
<b>Environmental Parameters</b>	
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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