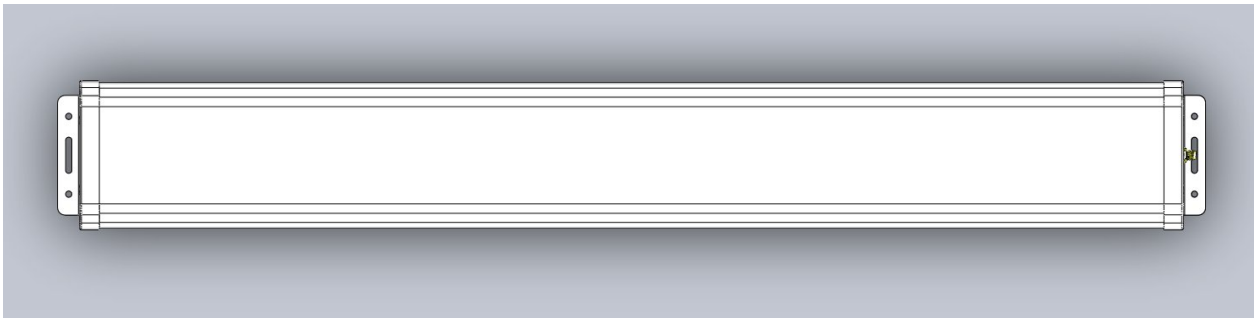


## 12 dBi Rectangular Antenna

### SBA-U2512R

**SBA-U2512R** is a high-performance **UHF RFID antenna** designed for passive tag reading in the **902–928 MHz** frequency band. With its **12dBi high gain**, **circular polarization**, and **wide-angle coverage**, it delivers strong and reliable performance in environments like access control points, smart shelves, and RFID-enabled cabinets. Its slim, rectangular shape allows for easy installation, and its sturdy build supports both indoor and outdoor use.



#### Features and Benefits:

- Operates in 902–928 MHz UHF RFID frequency band
- High gain >12dBi for long-range reading
- Circular polarization ensures accurate tag reads in various orientations
- Wide-angle coverage along the long side (120°) and narrow beam along the short side (18°)
- Slim rectangular design (950×100×30mm) for easy mounting
- Built with durable PVC and copper radiating material
- Works in extreme temperatures: -40°C to +80°C
- SMA-K side-mounted connector for easy coaxial cable connection
- Can be mounted horizontally or vertically, with adjustable tilt
- Supports installation on steel structures or poles using a bracket

#### Applications:

- Access control systems (e.g., vehicle gate entry)
- Smart cabinets and lockers
- RFID-enabled retail or warehouse shelving
- Asset tracking and inventory management
- Industrial automation setups requiring directional tag reading

### SPECIFICATIONS

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| Physical Parameter       |                               |
|--------------------------|-------------------------------|
| Dimensions               | 950mm X 100mm X 30mm          |
| Colour                   | White                         |
| Weight                   | 1.1 Kgs (Excluding Bracket)   |
| Material                 | PVC                           |
| Radiating Material       | Copper                        |
| UHF Technical Parameters |                               |
| Operating Frequency      | 902-928 MHz                   |
| VSWR                     | $\leq 1.5$                    |
| Gain                     | Up to 12 dBi                  |
| H Plane HPBW             | $120^\circ \pm 5^\circ$       |
| E-Plane HPBW             | $18^\circ \pm 3^\circ$        |
| Polarization             | Circular                      |
| Input Impedance          | 50 $\Omega$                   |
| Connector Type           | SMA-K                         |
| Connector Position       | Side-mounted, straight output |
| Environmental Parameters |                               |
| Operating Temperature    | -40°C to +80°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.