



## AL-1100C-SC

S&C Band, Conical Scan, Auto-Tracking Feed

### Typical Applications



Aeronautical Test Telemetry

### Supported Bands

S

C

2185-2485

5091-5250

Frequency [Mhz]

### The World's Smallest High-Performance Dual Band S&C Feed Solution

ORBIT's new Conical Scan feed system provides a breakthrough solution for simultaneous operation in multiple telemetry communication frequency bands. This solution was developed to address the telemetry market's growing adoption of C-band frequencies – in parallel to the widely used S band. Based on its concentric coaxial cavity technology, ORBIT can offer a single feed supporting both bands for any antenna reflector size.

ORBIT's innovative Conical Scan feed can simultaneously receive S and C bands and auto-track any of those bands per customer configuration. With the smallest footprint on the market, the S&C band feed uniquely addresses the needs of tactical forces and field telemetry operations for fast deployment and transportability.



### Features

- ✓ Efficient reflector illumination small as 1.2 meters (4')
- ✓ Simultaneous support of S & C bands
- ✓ High G/T performance
- ✓ Wide-range tracking capabilities
- ✓ Auto-tracking using Conical Scan technique
- ✓ Single feed supporting two bands
- ✓ Low axial ratio

### Conical Scan Operating Specifications

Scan Rate	50 Hz (3000 RPM)
F/D ratio	0.37-0.45
Polarization	Simultaneous reception and tracking Dual Linear (V&H) or Dual Circular (LHCP& RHCP)
VSWR	<2.0:1 (On output ports)
Axial Ratio	2.0 dB Max
Size	Length: 23.6" (600 mm) Diameter: 7.1" (180 mm)
Pressurization	Dry air at 5 psi max

### Conical Scan Environmental Specifications

Altitude	Up to 6.3 km (20,000 ft) operational Up to 12.6 km (40,000 ft) storage
Temperature	-20°C to +55°C (-4°F to +130°F) operational -40°C to +70°C (-40°F to +158°F) shipping
Rainfall	< 100 mm/hour (4"/hour)
Humidity	0-100% relative
Transportation	The feed should be kept in ORBIT's case during transport

### System Performance – Minimum GAIN [dBi]

Reflector Diameter	S Band	C Band
	2.3 GHz	5.2 GHz
1.2 m / 4 ft	3	9.3
3 m / 9.8 ft	11	17.3
4.5 m / 14.7 ft	14.5	20.8

\* All measurements are subject to change without prior notification

For additional options (such as: higher velocity, wider temperature range, etc.), please contact our sales department