



AL-1100-LSC

L, S & C Triple-Band, Auto-Tracking Feed

Typical Applications

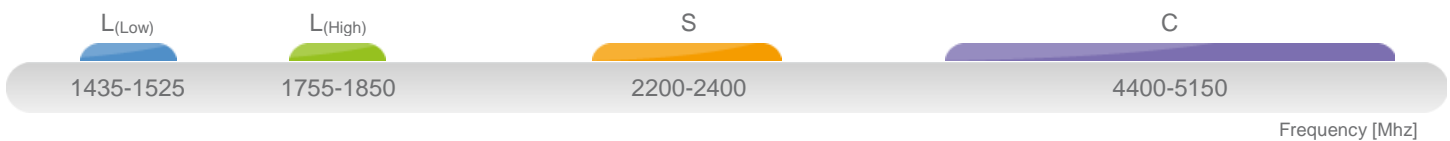


Aeronautical Test Telemetry



Missile Launch Tracking

Supported Bands



Innovative, High-Performance Solution for Cost-Effective Migration to C-Band

In response to the telemetry market's growing adoption of C-band frequencies – in addition to L and S bands commonly used today - ORBIT's new triple-band feed system provides a state-of-the-art solution for simultaneous operation in multiple telemetry communication frequency bands. Based on its concentric coaxial cavity technology, ORBIT can offer a single feed supporting all three bands for any antenna reflector size.

ORBIT's patent pending triple-band feed can simultaneously receive L, S and C bands and auto-track any of those bands per customer configuration. ORBIT's triple-band is the perfect solution for customers who wish to upgrade their operational legacy tracking system to support high performance C-band at a fraction of the cost of a new system.



Features

- ✓ Simultaneous support of L, S & C bands
- ✓ High G/T performance
- ✓ Wide-range tracking capabilities
- ✓ Auto-tracking using single channel mono-pulse technique
- ✓ Single feed supporting all three bands
- ✓ No cross-over gain reduction at boresight
- ✓ Efficient reflector illumination
- ✓ Low axial ratio

Triple-Band Operating Specifications

Scan Rate	10-1,000 Hz (user selectable)
F/D ratio	0.37-0.45
Polarization	Simultaneous reception and tracking LHCP and RHCP
VSWR	<2.0:1 (on output ports)
Axial Ratio	1.8 dB Max
Size	Length: 36.6" (930 mm) Diameter: 13.8" (350.5 mm)
Pressurization	Dry air at 5 psi max

Triple-Band Environmental Specifications

Altitude	0-6.3 km (20,000 ft) operational 0-12.6 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	<4"/hour (100 mm/hour)
Humidity	0-100% relative
Transportation	The feed should be kept in ORBIT's case during transport

System Performance – Minimum G/T [dB/K]

Reflector Diameter	L _(low) Band	L _(High) Band	S Band		C Band		
	1435 [MHz]	1850 [MHz]	2200 [MHz]	2400 [MHz]	4400 [MHz]	5000 [MHz]	5150 [MHz]
2.4m / 8ft	4.2	4.7	9	10	14	16	16.5
3m / 10ft	6.2	6.7	11	12	16	18	18.5
4.5m / 15ft	10	11	14	15.5	19	21.5	22

- * G/T measured at 10° Elevation
- * Typical side lobes for 3m (10ft) reflector ≥ 17dB
- * Typical side lobes for 2.4m (10ft) reflector ≥ 16dB
- * All measurements are subject to change without prior notification
- * ORBIT's tracking feeds are provided only as part of a whole solution

For additional options please contact our sales department at: www.orbit-cs.com/contact-us