

## 13.0m Ka-Band Ground Station Antenna GSA-103-L-Ax-D

Temix GSA-103-L-Ax-D 13.0m Ground Station Antenna is designed for worldwide transmit operations able to work in Ka Tx/Rx bands. This antenna system consists of an high precision aluminium reflector and a galvanized mount that results in a high performance rigid antenna especially suited for hard environmental conditions.



- High efficiency, High precision and Strength.
- Subreflector, corrugated feedhorn and waveguide components are precisely processed by numerically controlled machines.
- Customized frequency bands available

### Main Features

- Feeds:  
2-port LP feed  
2-port CP feed  
4-port CP feed  
Multiband Feed available

- Excellent RF Performances:  
exceeds Eutelsat,  
Intelsat &  
MIL-STD-188-164B  
requirements

- Legend:  
X = L Linear Pol.  
X = C Circular Pol.

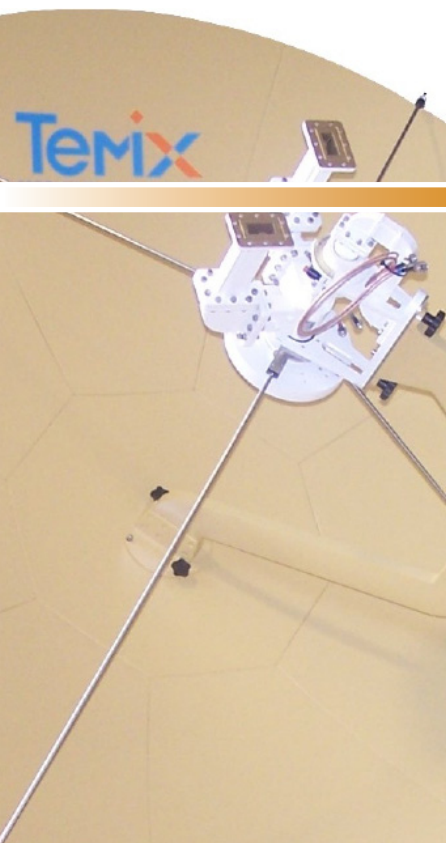
\*The Information included in this data sheet may be changed without advise. rev\_01/14

	Ka-Band Dual Circular RHCP/LHCP	
Antenna Diameter	13.0m	
Optic Geometry	Dual Optic Cassegrain	
Antenna Feed	2-Port Ka-Band	4-Port Ka-Band
Polarization	Circular / Linear	Dual Circular RHCP/LHCP
Frequency Range (GHz) (standard)	CP Rx: 17.700-21.200 Tx: 27.500-31.000	CP Rx: 19.200-21.200 Tx: 29.000-31.000
Frequency Range (GHz) (optional)	LP Rx: 19.700-21.200 Tx: 29.500-31.000	CP Rx: 17.700-21.200 Tx: 27.500-31.000
Gain (midband)	Rx: 66.3 dBi Tx: 69.1 dBi	Rx: 66.2 dBi Tx: 69.0 dBi
G/T (30° EL, Clear Sky)	42.1 dB/K (120°K LNB, 20.100GHz)	42.0 dB/K (120°K LNB, 20.100GHz)
Cross Polarization Isolation (XPD)	LP > 35 dB in 1dB Contour	////
Axial Ration	CP < 0.5dB	< 0.5dB
Isolation Tx/Rx	85/85 dB	85/85 dB
Tx/Tx	20 dB	20 dB
Rx/Rx	20 dB	20 dB
Insertion Loss Tx/Rx	0.25/0.3 dB	0.70/0.70 dB
Power Handling	500W	500W / port
Return Loss Tx/Rx	> 17.0 dB typ (Rx/Tx)	
Physical:		
Feed Interfaces	Rx: WR42 Tx: WR34	Rx: WR42 Tx: WR34

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**Temix**  
communications engineering



# 13.0m Ka-Band Ground Station Antenna GSA-103-L-Ax-D

Mount Geometry	Elevation over Azimuth King-Post Mount
Travel Range (LMA)	AZ: 180° in two 100° overlapping sectors; EL: 0° to 90°; POL: +/-110° (Linear Polarization)
Drive Speed (typical)	Slew: 0.1°/sec AZ & EL; 0.5°/sec POL (Linear Polarization) Tracking: 0.01°/sec AZ & EL
Antenna Controller	Antenna Control Unit for Accurate Antenna Pointing. <ul style="list-style-type: none"> <li>Automatic Satellite tracking: <ul style="list-style-type: none"> <li>Step-Track with Memory Track</li> <li>Program Track (Intelsat 11 Parameters, TLE)</li> </ul> </li> </ul> Satellite Preset (Move to SAT, Move to Angle); Manual Positioning. Beacon Receiver (optional). Angle Readout AZ/EP/POL 0.0002° Resolution. Ethernet SNMP Interface (optional: RS232, RS422, RS485, Web Browser)
Pointing Accuracy	0.0070° RMS, No Wind; 0.0140° RMS, Winds 50 km/h, gusting to 72 km/h
Tracking Accuracy	0.0043° RMS, No Wind; 0.0086° RMS, Winds 72 km/h gusting to 100 km/h
Motor Drive Unit	2-axes (3-axes for Linear POL) floor mounted Outdoor Cabinet, Inverter Based; Local/Remote Control; Manual Control of antenna axes. 26-bit Position Encoding, Hardware Limit Switches, Panic Button
Environmental:	
Wind	Operational: 72km/h; Gusting: to 97km/h; Survival 200km/h (stowed)
Temperature	Operational -20°/50°C; Storage -30°/60°C; (optional: -32°/55°C Operational, -40°/70°C Storage)
Solar Radiation	1000Kcal/h/m <sup>2</sup>
Humidity	100% Condensing
Ice	2.5cm survival
Altitude	up to 5000m

## Main Features

- De-Icing System for reflector and feed
- Environmental hub configurations
- Integrated transmit cross-axis kits
- Integrated LNA or LNB systems (single, 1+1, 2+1)
- GaN BUC, Frequency Converters and M&C systems
- Turnkey Installation, Commissioning and Testing
- Including Packing for sea transport

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Motor Drive Unit



Antenna Control Unit

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