

- High-Speed mount &
- High surface accuracy

POAM Electronics offers **high-speed** tracking antennas in three models: the ATSA-24 (2.4m), ATSA-45 (4.5m), and ATSA-53 (5.3m). These antennas are designed for applications involving Q/V band transmission and reception in low-earth orbit (LEO) or medium-earth orbit (MEO) satellite operations.

The POAM ATSA series features a high-performance antenna system that ensures high accuracy and efficiency through its advanced engineering mount system design and rapid slewing capabilities.

Constructed with **Carbon Fiber Composite**, these antennas provide exceptional surface accuracy, making them suitable for high-frequency applications and ideal for tracking fast-moving targets like the in LEO and MEO satellites.

By utilizing advanced manufacturing techniques, POAM has made significant advancements in the design of affordable precision antennas. The system can accommodate various feeds to support specific applications. With extensive experience in ground station integration within the satellite industry, this antenna is engineered to meet the needs of your network effectively. Additionally, the full sky coverage offered by these antennas, without a zenith keyhole, makes them particularly suitable for LEO and MEO satellite tracking.



Upgraded version of the ATS series  
for use up to Q/V-Band Tracking application

## RF SPECIFICATIONS:

	ATSA-24 (2.4 meter)	ATSA-45 (4.5 meter)	ATSA-53 (5.3 meter)
Frequency band	QV-Band (37.5 to 52.5 GHz)-other bands also available		
Polarization	2CP in Rx and 2CP in Tx		
G/T	33.8 dB/K @40GHz El $\geq$ 10° & 250K LNA	39.4 dB/K @40GHz El $\geq$ 10° & 250K LNA	40.8 dB/K @40GHz El $\geq$ 10° & 250K LNA
Gain	58.5 dBi	63.8 dBi	65.3 dBi
VSWR	$\leq$ 1.25:1	$\leq$ 1.25:1	$\leq$ 1.25:1
Beamwidth	0.21° @ 40GHz	0.11° @ 40GHz	0.09° @ 40GHz
First Sidelobe	< -16dB	< -16dB	< -16dB
Tx Rx Isolation	$\leq$ 85dB	$\leq$ 85dB	$\leq$ 85dB
Cross Pol Isolation	$\geq$ 35dB	$\geq$ 35dB	$\geq$ 35dB

## MECHANICAL/ENVIRONMENTAL SPECIFICATIONS:

Antenna Diameter	ATSA53 (5.3m) ATSA45 (4.5m) ATSA24 (2.4m)
Reflector type	Prime Focus; Carbon fiber Composite
Mount type	Elevation over Azimuth
Antenna travel range	Az = 0 to 360° and Elevation -5 to 185°,
Acceleration (each axis)	0 to 50°/s <sup>2</sup>
Velocity (each axis)	0 to 60°/s
Tracking Accuracy	<0.01°
Pointing accuracy	0.01°
Surface Accuracy	<0.2 mm
Outdoor Operating Temperature	-40° to +55° C
Indoor Operating Temperature	10° to 30° C
Outdoor Humidity	0%~100%
Indoor Humidity	<85% non-condensing
Operational Wind	75 km/h gusting to 85 km/h
Survival Wind	180 km/h (in park position at zenith) gusting to 210 km/h
Seismic	0.3 G horizontal, 0.15 G vertical
Ice Loading	13mm Operational; 25mm Survival
Adaptation	Salt, pollutant, radiation, rain