



POMA-45N

The SOTM type POMA-45N supports both Ku and Ka band operations. It features a direct drive mechanism for azimuth (AZ) and elevation (EL) with high reliability and a cap design feed for efficient performance and reduced side lobes.

POMA-45N operates independently of GPS by using satellite beacon tracking to correct gyro errors, requiring only manual input of local latitude and longitude before initial satellite pointing. It offers rapid initial satellite pointing, with GPS/BD cold start positioning in under 80 seconds and hot start (or manual input) in under 60 seconds.

SOTMs are ideal for a variety of applications, the POMA-45N provides reliable real-time communication for military operations, stable connectivity for emergency response, and high-quality live broadcasting. It also ensures secure connectivity for corporate networks and consistent satellite communication for maritime and aviation use, maintaining reliability across diverse terrains and weather conditions.

Key Features

- Available in Ku and Ka Band
- High Tracking Accuracy, the Tracking error <0.5 dB RMS without blockage
- Good Tracking Stability, the AZ system uses a closed-loop stabilization algorithm for precise satellite tracking, even during fast movements or "S" travel.
- Blockage recovery in under 3 seconds for blockage times under 5 minutes; recovery in under 5 seconds for blockage times under 20 minutes
- Dynamic Pointing and Switching enables real-time satellite pointing and seamless satellite switching while in motion.



Environmental Data	
Operating wind speed	Max.60m/s at any direction
Working temperature	-30°C-+55°C
Storage temperature	-40°C-+60°C
Protection grade	IP67
Working humidity	0%-98%

RF performance data				
Aperture	0.45m			
Reflector material	Carbon fiber			
Antenna form	Circular symmetrical reflector and cap feed			
	Ku-Band 2 ports, Linear polarized Feed		Ka-Band 2 ports, circular polarized Feed	
	Rx	Tx	Rx	Tx
Working frequency (GHz)	10.70	13.75	17.7	27.5
	12.75	14.50	21.2	31.0
POL form	H/ V linear		LHCP/RHCP	
Antenna Gain at Mid- band ± 0.2 dB (dBi)	33.7	34.8	36.9	40.4
1st side lobe	≤ -14 dB		≤ -14 dB	
Cross POL (dB)	35 (axial)		-	
Axial ratio (dB)	-		1.5	
Tx-Rx isolation (dB)	35 (axial)		-	
Rx-Tx isolation (dB)	85	-	85	-
VSWR	-	30	-	30
	1.50:1	1.30:1	1.50:1	1.30:1

Mechanical	
AZ motion range	360° continuous rotation without limit
EL motion range	-5° - 100°
POL motion range	$\pm 110^\circ$ $\pm 45^\circ$
AZ revolution	200°/s
EL revolution	200°/s
AZ acceleration	200°/s ²
EL acceleration	200°/s ²
Pointing accuracy	$\leq 0.2^\circ$ (R.M.S)
Initial acquisition time	≤ 2 min
Blockage recovery time	≤ 5 s (blockage 20min)
Weight of product	≤ 25 Kg
Radome size	730x490 mm (Dx H)

Electrical data	
Power supply of system	100-230VAC 50-60Hz
Positioning mode	GPS+BD
Steady type	Two axis for stability, three axis for tracking

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