

EW TRACKING SYSTEMS

The **IAS (Integrated Antenna System)** tracking system is comprised of four (4) antenna assemblies, HPAs, waveguide/feed pressurization unit, integrated servo amplifier and pedestal controller, and TV/optical tracking subsystem. The IAS is an example of E-O Imaging's system-level capability, providing three (3) of these systems plus spares in 9 months.



PAYLOADS:

- 10-ft Antenna System
- 6-ft Antenna System
- 4-ft Antenna System
- 3.5-ft Antenna System
- High Power Amplifiers (4)
- IFF Antenna and Electronics
- Pressurization System
- 60x Zoom Optical System
- RF Cabling System
- Counterweights
- Waveguide
- Payload >1500 lbs

SYSTEM CONFIGURATION:

- Remote Operator's Station
- Servo Controller on Pedestal
- Simultaneous bus Interface
- Remote Polarization Control
- Remote Designate

PEDESTAL CHARACTERISTICS:

CHARACTERISTICS

AZIMUTH

ELEVATION

MOTOR (Dual Opposed Drive)

0.5 HP (2x)

0.5 HP (2x)

GEAR RATIO

888:1

846:1

RATED TORQUE

2,000 ft-lb

2,000 ft-lb

RATED GEAR STRENGTH

4,000 ft-lb

4,000 ft-lb

Engineering High Performance Tracking Solutions

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BACKLASH	0.0°	0.0°
ANGULAR TRAVEL (Operational)	±410°	-5° to +80° (limited by IFF Sys)
ANGULAR TRAVEL (Electrical)	±415°	-7° to +90.5°
ANGULAR TRAVEL (Mechanical)	±440°	-10° to +93.5°
STOW POSITION	0°	0° and +90°
MAXIMUM VELOCITY	>15°/sec	>15°/sec
MAXIMUM ACCELERATION	>15°/sec ²	> 5°/sec ²
COMPLIANCE, TORSIONAL	5 x 10 ⁻⁷ rad/ft-lb	5 x 10 ⁻⁷ rad/ft-lb
POSITION FEEDBACK (absolute M/T encoder)	24 Bit Resolution	24 Bit Resolution
LIMIT SWITCH	CW and CCW Primary Interlock Secondary	UP and DOWN Primary Interlock Secondary
POWER INPUT	Powered by RPM DE-2017A Controller	
WEIGHT	Pedestal: Payload Support: Counterweights: Total Weight:	900 lbs (est) 450 lbs (est) <u>1,040 lbs (est)</u> 2,390 lbs (est)
TEMPERATURE	-20°C to +55°C Operational -30°C to +60°C Non-operational	

SERVO CONTROLLER CHARACTERISTICS:

LOCAL DISPLAYS	Power ON/Interlock Indicator
REMOTE CONTROLS	Ethernet, UDP/IP
Controls	Position Mode, Velocity Mode, Analog Velocity Mode, Standby Mode, Servo On/Off, Position Offset, Max Position Velocity, Max Acceleration
Feedback	Position, Position Offset, System Status (Interlock, Servo Mode, Servo On/Off, Servo Status), Max Position Velocity, Max Acceleration
INPUT DATA FORMATS	Ethernet and Serial Digital Interface
DATA OUTPUT FORMATS	Ethernet and Serial Digital Interface
SERVO DRIVE OUTPUT	340 Volts DC
INPUT POWER	240 VAC, 50/60 Hz, 20 Amps
SIZE	19-in W x 10.5-in H RETMA Chassis
WEIGHT	60 lbs (est)

