

BEAM STEERING SYSTEM

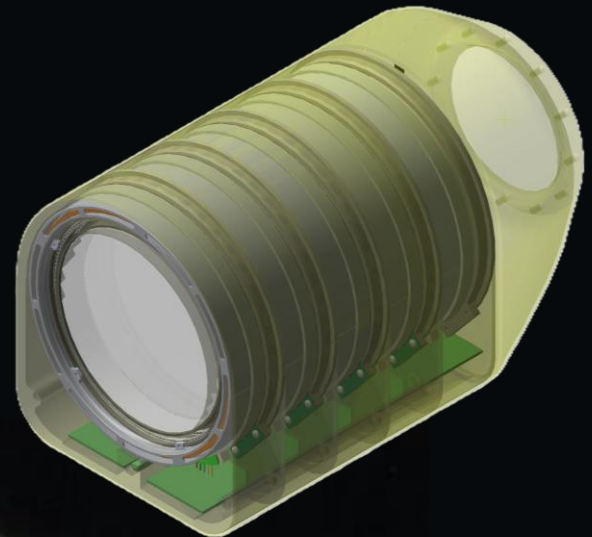
For High Precision Comms & In-Space Data Centers



Laser Comms are the future of in-space communications, capable of 10-100X the data rates as traditional RF, and with added security benefits.

The SPS laser beam steering system uses a series of rotating, angled lenses to provide accurate beam pointing for in-orbit and downlink applications.

This high precision, hollow shaft system is compact and lightweight. It incorporates SPS patent-pending ZNMA technology, so that no momentum from the steering system is imparted back onto the bus.



Accuracy	0.005°
Resolution	Current system is designed to hit a 1in ² receiver on ground from GEO
Optics/Laser	Frequency agnostic with modifications: flexibility with lens change for multiple types of beams (laser, infrared, VIS, etc.) NDA required for current capabilities.
Size	3kg mechanism (5kg with lenses); 7.5in diameter and 9in long System is scalable depending on mission requirements.
Power Consumption	5W peak; 0.5W continuous
Voltage	28 V (10-40V)
Operational Temperature	-150C to +100C
Lifetime	MTTF analysis of 10 years
Built-In Electronics	AI control PCBs, are built-into system.
Design	Includes SPS proprietary ZNMA technology: no momentum is imparted onto the rest of the bus. Custom single HDRM locks down all motors for launch. Custom hollow shaft motors and encoders.

Information above is for the beam steering system only; SPS does not provide the laser or power source.

www.SpacePrecisionSystems.com