

TRACKER+

LOSCOM Solution



S-PLANE's TRACKER+ is the latest evolution of S-PLANE's very successful TRACKER 100 solution. It is a stand-alone GNSS-based antenna tracker with integrated primary and secondary software defined mesh network radios and a combination of directional and omni-directional antennas. Clients can select their configuration from various radio and antenna options to customise the solution to their applications. The TRACKER+ is able to dissipate the heat generated by specialised high-power radio systems.

This proven and rugged product sees daily service in the harshest of environments and is comprehensively qualified to RTCA DO-380. Its modular design facilitates deployment at a new

site within 20 minutes, whether mounted on tripods, vehicles or masts. Thanks to the sophisticated Tracker Control Unit (TCU), calibration at a new site is fast and accurate and doesn't require any external equipment or specialised skills.

The TRACKER+ boasts a state-of-the-art backlash-free pan/tilt synchronous harmonic gear drive system combining high torque and speed in a super-compact and affordable package. It's ideal for reliable communication between mobile or stationary ground units and moving targets (e.g. aircraft). The TRACKER+ can also connect directly to backbone and mobile networks or be daisy-chained to each other to cover very large operational areas.

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Technical Specifications



PERFORMANCE			
Actuator Accuracy	< 1.5 arcmin	Max Continuous Pan Torque	50 N.m.
Max Pan Rate	20 °/s	Max Continuous Tilt Torque	50 N.m.
Max Tilt Rate	15 °/s	Max Available Torque	176 N.m.
Pan Rotation*	-225 ° to +225 °	Max Power	400 W Nominal; 800 W Peak
Tilt Rotation	-8 ° to +80 °	Normal Operating Voltage	28 VDC
Max Operational Wind Speed	60 km/h (Antenna dependent)	Input Voltage Range (no links)	22 to 30.2 VDC (protected)
ENVIRONMENTAL (RF LINK DEPENDANT)			
Operating Temperature	DO-380, Section 4, Category B2, -20 to +50 °C (excl. radios)	Operating Life	100 000 hours @ 80% rated torque
Ingress Protection	Water: DO-160G, Section 10, Category W Sand/Dust: DO-380, Section 12, Category S	Storage Temperature	DO-380, Section 4, Category B2, -55 to +85 °C
Qualification Method	Comprehensive RTCA DO-380	Humidity	DO-380, Section 6, Category C, 95% RH @50 °C
Operational Shock	DO-380, Section 7, 3 g, 11 ms	Vibration	DO-380, Section 8, Table 8-1, Fixed and Mobile
Salt Fog	DO-380, Section 14, Category F	Wind Resistance	DO-380, Section 15
Power Input	DO-160G, Section 16, Category C	Solar Radiation	DO-160G, Section 18, Category A
TYPE AND CONSTRUCTION			
Drive System	3-phase synchronous with harmonic gearing	Data Port	Ethernet/RS422/RS232
Structure	6082-T6 Al	Loom Length (Customised on request)	Up to 45 m
		Mass (excl. rugged tripod)	70 kg
RADIOS & ANTENNAS			
Primary Link	4x20 W L/S/C-band MIMO Mesh (enquire for options)	Secondary Link	Various L/S/C/UHF-band MIMO Mesh and PtP (enquire for options)
LOSCOM Range to 3 dB Omni-directional rover antenna	> 200 km	Alternative Radios, Tx Power & Antennas	Please enquire
Primary Directional Antenna	2x 21 dBi (S-band) / 24 dBi (C-band) 600 mm Parabolic	Secondary Directional Antenna	600 mm Parabolic or Yagi-Uda for UHF
Primary Omni-directional Antenna	3 dBi Dipole	Secondary Omni-directional Antenna	3 dBi Dipole
Primary Data Rate	3 to 30 Mbps (range/bandwidth setting dependent with Ethernet and Serial options)	Secondary Data Rate	3 to 30 Mbps (range/bandwidth setting dependent with Ethernet and Serial options)
FEATURES & EQUIPMENT			
Tracker Control Unit	Onboard with Level-2 Network Switch	Boresight Camera	2064x1544 GigE Vision 16 ° FOV
RF Cabling	Ultra-low-loss Co-axial	Positioner	Heavy Duty 2-axis Pan & Tilt
Sensors	Multi-GNSS, 3-axis IMU & Magnetometer	Calibration	Automatic, with Optical Assistance

Specifications are dependent on the specific links and antennas used.

* Auto cable management / de-rotation and optional slip rings to allow unlimited pan rotation.



Contact Details

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