

Pan Tilt Unit

Dual Axes Tracker

The Dual Axes Tracker is traditionally used with the Pandora Spectrometer System, but is adaptable to a wide range of remote sensing applications. The tracker employs high precision motors with absolute mechanical encoders for accurate positioning of the optical sensor.



The new sun tracking system is equipped with state of the art motors operating in closed loop mode, capable of achieving highly accurate positioning of larger inertia loads. The motor controller allows for easy networking and simplified multi-axis control with RS-485 Communication protocol. The tracker is designed for continuous operation and can handle sudden load fluctuations during high wind events. It has the capability of completing a full rotation in both the zenithal and azimuthal directions with precision 0.01° and rotation speed of up 1200 degree/second. Programmable current and speed will allow the system to handle torques of up 1.48 Nm. Both axes are equipped with electromagnetic brakes to protect the system in the case of power loss.

Specifications

Holding Torque	300oz-in
Max Torque	1.483Nm (210oz-in)
Precision/resolution	0.01 °
Input Voltage	24VDC
Communication Protocol	RS485
Weight	4.55kg (10lb)
Temperature Range (without optional cold weather package)	<0°C - 40°C
Range of motion	Default: Azimuth: 360°, Zenith: 180° (Customizable)
Max Load	10kg

The tracker is housed in a weatherized aluminum enclosure, and can be equipped with an internal heating element for operation in colder environments. Optional tripod provides a secure base on which to mount the tracker and is well suited for most applications, however custom mounting options can be accommodated.

Tracker Assembly

