

VTOL



UAV



HELI



GROUND



BACKPACK

QUICK SPECS

Absolute Accuracy 25-50 mm @ 350 m Range	Dimensions (with Dual Cam) 382 x 160 x 120 mm
PP Attitude Heading RMS Error 0.010° / 0.019° IMU options	Laser Range 775 m @ 30% Reflectivity
Weight (including Dual Cam) 4.65 kg / 10.25 lbs	Scan Rate 500 kHz, up to 4 returns

LASER

RANGE MEASUREMENT PRINCIPLE	Time of Flight
RANGE PERFORMANCE ¹	775 m (50 kHz) to 300 m (500 kHz)
PULSE REPETITION FREQUENCY	500, 200, 50 kHz (Programmable)
BEAM DIVERGENCE (1/E ²)	0.3 mrad
WAVELENGTH	1550 nm
LASER SAFETY CLASSIFICATION	Class 1
LASER WEIGHT	3.5 kg
RANGE RESOLUTION	2 mm
INTENSITY RECORDING	12 bits
MAXIMUM NUMBER OF RETURNS	4 (First, Second, Second Last, Last)
MINIMUM RANGE	1.5 m
RANGE ACCURACY 1 SIGMA ²	10 mm
PRECISION SINGLE SHOT ²	5 mm

SCANNING CHARACTERISTICS

FIELD OF VIEW	360°
LINES PER SECOND (Scan Frequency)	50 – 250 lines/sec

PIONEER P-360

The **Pioneer P-360** is a best-in-class universal survey grade LiDAR mapping system. With a measurement precision of <1cm, the P-360 will capture survey grade data for the most demanding application requirements. The complete system, with integrated dual oblique 24MPix cameras, weighs only 4.65kg; making it suitable for most mid-class commercial unmanned aircraft and robust enough for manned heli applications.

The **Pioneer P-360** supports a wide range of operating parameters in pulse repetition rate, range, and lines per second to allow it to be optimized for the application and data requirements.

FEATURES

- » Narrow beam divergence of <0.3 mrad 1/e² for superior ground detection and canopy penetration
- » Shot-to-shot precision of <1cm for survey applications
- » Scan speed of 250 lines per second for even x-y point distribution at higher vehicle speeds

ENVIRONMENTAL

OPERATING TEMPERATURE (min/max)	-10°/+40° C
STORAGE TEMPERATURE (min/max)	-20°/+50° C
VIBRATION	DO-160H Section 8, Category S, Curve M
SHOCK	DO-160H Section 7, Category A, Standard Shock
DIMENSIONS	310 (L) x 160 (W) x 116 (H) mm
PROTECT CLASS	IP64 (Dust and splash proof)

POWER

POWER SUPPLY INPUT VOLTAGE	11 – 36V
POWER CONSUMPTION	60W

NAVIGATION SYSTEM

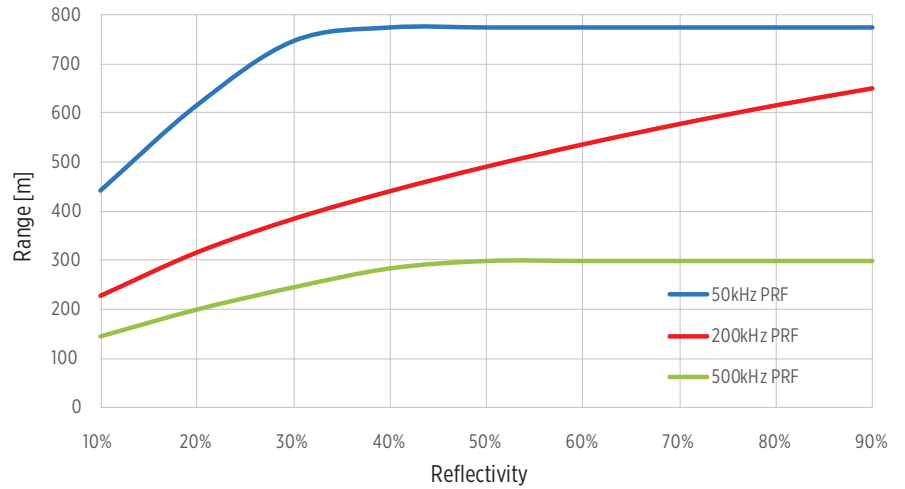
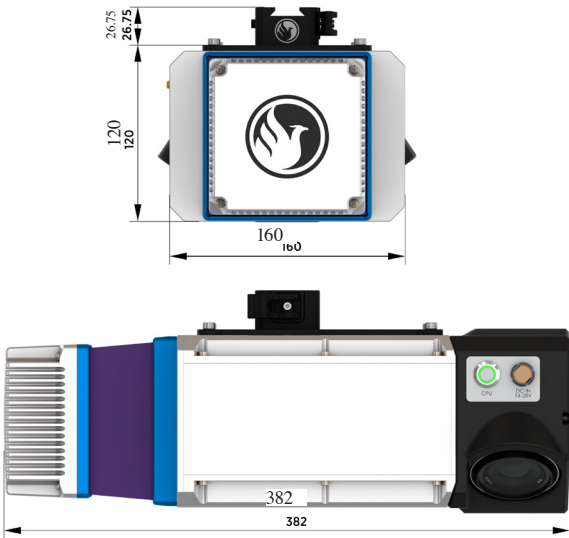
CONSTELLATION SUPPORT	GPS + GLONASS + BEIDOU + GALILEO
SUPPORT ALIGNMENT	Kinematic, Single-Antenna or optional Dual-Antenna
OPERATION MODES	Real-time, Postprocessing optional
ACCURACY POSITION	1 cm + 1 ppm RMS horizontal
PP ATTITUDE HEADING RMS ERROR	IMU 27: 0.019°, IMU 29: 0.010



¹ 99% detection probability, 50 lines/second, 23km visibility, full footprint interception.
² Max Range tested on flat targets, 50 lines/second scan speed, larger than the laser beam diameter, perpendicular angle of incidence and STD Clear visibility (23km).

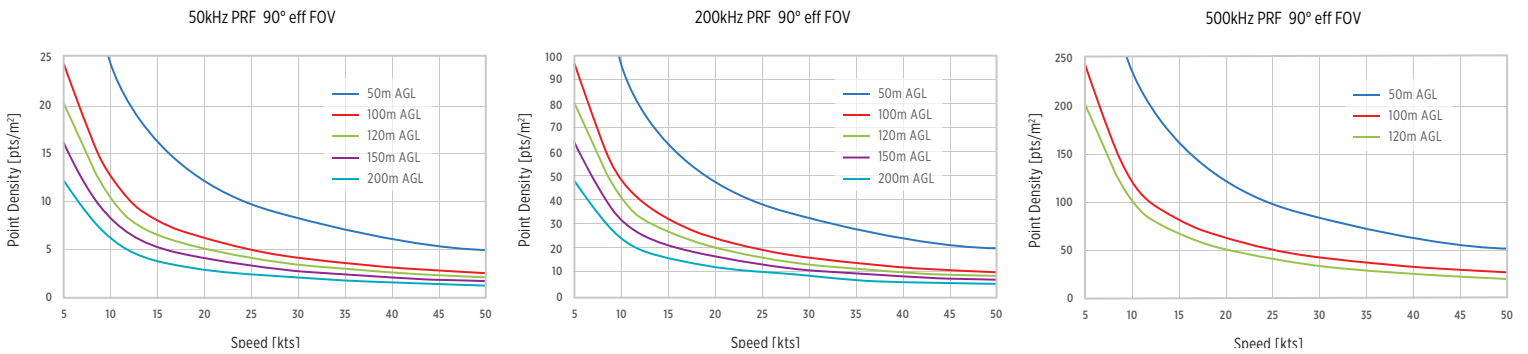
PIONEER P360 DIMENSIONS (mm)

RANGE MEASUREMENT PERFORMANCE



SPEED VS. POINT DENSITY

Source Teledyne Optech Incorporated



PIONEER P-360 ACCESSORIES



EXPLORE A PHOENIX LiDAR SYSTEM FOR YOUR TEAM, CONTACT US!

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