



Teledyne Geospatial



NEW

Class 3B
2,000,000 shots/second

Galaxy CM2000 Corridor Mapper

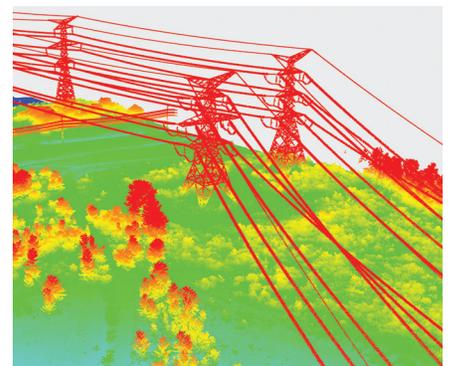
Low flying sensor that captures corridors and context with the highest single-pass point density

The new CM2000 is designed to drive maximum efficiency in all corridor surveying environments. From electric utilities, roads and rail to pipelines, a programmable field of view and 2 million points per second puts all measurements on the ground and delivers unsurpassed resolution. The CM2000's tight laser footprint produces accurate and detailed modeling of complex and partial targets such as electrical towers, wires and conductors. As with all Galaxy models, the Galaxy CM2000— has the smallest form factor for maximum platform flexibility.

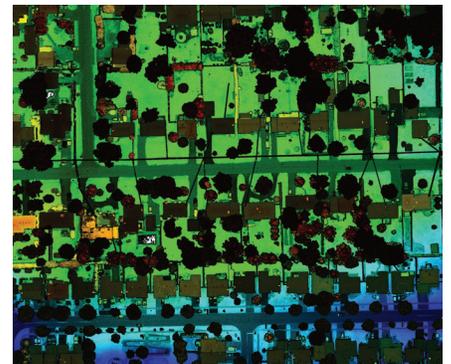


APPLICATIONS

- » Right of Way mapping
- » Vegetation management
- » Electric and cellular network asset management
- » Post storm tower/wire damage assessment
- » Road and rail network surveys
- » Pipeline change detection



Transmission Tower Capture



Detection of Distribution Wires



Seamlessly Integrated Cameras

Galaxy CM2000

Technical Specifications

PARAMETER	SPECIFICATION
Sensor Performance	
Performance envelope ^{1, 2, 3, 4}	150-2000 m AGL, nominal
Absolute horizontal accuracy ^{2, 3}	1/10,000 x altitude; 1 σ
Absolute elevation accuracy ^{2, 3}	< 0.03-0.12 m RMSE from 150-2000 m AGL
Laser Configuration	
Topographic laser	1064-nm near-infrared
Laser classification	Class 3B
Pulse repetition frequency (effective)	Programmable, 50-2000 kHz
Beam divergence	0.16 mrad (1/e) or 0.23 mrad (1/e ²)
Laser range precision ⁵	< 0.008 m, 1 σ
Minimum target separation distance	< 0.7 m (discrete)
Range capture	Up to 8 range measurements, including last
Intensity capture	Up to 8 intensity measurements, including last (12-bit)
Sensor Configuration	
Position and orientation system	POS AV™ AP60 (OEM); 220-channel dual frequency GNSS receiver; GNSS airborne antenna with Iridium filters; high-accuracy AIMU (Type 57); non-ITAR
Scan angle (FOV)	20-60°
Swath width	10-115% of altitude AGL
Scan frequency	Maximum 160 Hz (320 scan lines/sec)
Flight management system	Optech FMS (Airborne Mission Manager and Nav) with operator console
SwathTRAK™	Dynamic FOV for fixed-width data swaths in variable terrain
PulseTRAK™	Multipulse tracking algorithm with no density loss across PIA transition zones
Roll compensation	±5° minimum
Data storage	Removable SSD (primary); internal SSD (spare)
Power requirements	28 V; 400 W
Dimensions and weight	Sensor: 0.34 x 0.34 x 0.25 m, 27 kg – PDU: 0.42 x 0.33 x 0.10 m, 6.5 kg
Operating temperature	0 to +35°C
Optional Peripherals	
External data storage	Ruggedized, removable 2.5" SSD
Image capture	Compatible with all Optech CS-Series and most 3rd party digital metric cameras (integration kits available)
Full waveform capture	12-bit Optech IWR-3 Intelligent Waveform Recorder with removable SSD
Gyro-stabilization	SOMAG GSM4000 integration kit
Multi-sensor mounts and pods	Machined aluminum sensor mounts; single or dual Galaxy configurations + cameras Carbon-fiber sensor mounts supporting nadir and fore/aft oblique cameras Heli-pod mount options for Bell 206/407 (FAA-approved)

1. Target reflectivity $\geq 20\%$; 99% detection probability

2. Dependent on selected operational parameters; assumes nominal FOV of up to 40° in standard atmospheric conditions (i.e. 23-km visibility) and use of Optech LMS Professional software suite

3. Angle of incidence $\leq 20^\circ$

4. Target size \geq laser footprint

5. Under Teledyne Optech test conditions, 1 sigma