TELEDYNE OPTECH
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ILRIS MC

Summary Specification Sheet

Key Features

- 10 kHz repetition rate
- Real time data stream
- Rapid survey method
- Extended-range mode

Benefits

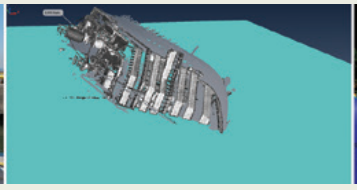
- Ruggedized and adaptable to most environments
- High-density laser scanning at long range
- Real time visualization output
- Fast and efficient processing workflow

Get Moving with ILRIS

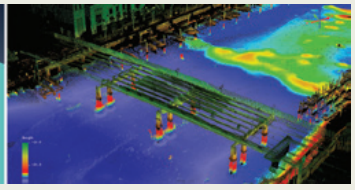
The Optech ILRIS Terrestrial Laser Scanner enables surveyors to capture and define the world point by point. From single to multiple scans, you can coordinate and document your subject in 3 dimensions. An ideal complement to a surveyor's tool-kit, the ILRIS brings high-density engineering and survey-grade data to the table—even at extremely long range.

The Optech ILRIS Terrestrial Laser Scanner is a fully portable, laser-based, ranging and imaging system for the commercial survey, engineering, mining and industrial markets. A compact and highly integrated instrument with digital image capture and sophisticated software tools, the ILRIS is an industry-leading solution that addresses the needs of commercial users. The ILRIS is field-ready and requires no specialized training for deployment. Similar in size to a motorized total station, with an on-board high-resolution digital camera and a large-format LCD viewfinder, the ILRIS has a visual interface similar to that of a digital camera.

Port Infrastructure



Floating Structures



Bridge Inspection

www.teledyneoptech.com

ILRIS MC

Parameter	ILRIS-HD	ILRIS-HD-ER	ILRIS-LR
Range 80% reflectivity	1250 m (4101 ft)	1800 m (5905 ft)	3000 m (9842 ft)
Range 10% reflectivity	400 m (1312 ft)	650 m (2132 ft)	1330 m (4363 ft)
Minimum range	3 m (9 ft, 10 in)		
Laser repetition rate (peak and effective PRF) [1]	10,000 Hz		
Efficiency (effective PRF/peak PRF)	100%		
Raw range accuracy [2,3]	7 mm @ 100 m		
Raw range accuracy [3,4]	4 mm @ 100 m		
Raw angular accuracy	8 mm @ 100 m (80 µrad)		
Scanner Performance			
Field of view	40° × 40° (-20° through 90°, -90° through 20° with 3_6D option)		
Minimum step size [5]	0.001146° (20 µrad)		
Maximum density (point-to-point spacing)	2 cm @ 1000 m (1 in @ 3280 ft)		
Rotational speed	0.001 to 20°/sec		
Rotational step size (minimum)	0.001146° (20 µrad)		
Beam diameter (1/e²)	19 mm @ 100 m		27 mm @ 100 m
Beam divergence	0.008594° (150 µrad)		0.014324° (250 µrad)
Laser wavelength	1535 nm		1064 nm
Laser class [6,7]	1 or 1M		3
Integrated camera	3.1 MP		
Physical and Environmental			
Size (L × W × H)	320 × 320 × 240 mm (12.6 × 12.6 × 9.5 in)		
Weight	14 kg (31 lbs)		
Operating temperature	-20°C to +40°C (-4°F to +104°F)		
Storage temperature	-20°C to +50°C (-4°F to +122°F)		
Relative humidity	0 – 95% non-condensing		
Power consumption	75 W		
Battery operation (standard battery pack, hot-swappable)	5 hours operation		
Data storage	Removable USB drive		
Optional Configuration			
3_6D	Automated pan/tilt base (7 kg/16 lbs)		
MC	Motion compensation option: Enables GPS timestamping (from INS system)		

Standard Accessories	
Scanner control software for Windows-based computers	Data extraction software to generate user-selectable file formats
Automated alignment software	2.0-GB USB memory drive
User manuals	Universal AC voltage power supply
Interconnect power/battery cables	Rugged carrying case
Optional Accessories	
Manual pan/tilt base	GPS/external camera mounting kit
PDA, UMPC, Notebook PCs	Batteries and chargers
Backpack	Cold-weather jacket

1 PRF is pulse repetition frequency.
2 All ranges quoted are with ER Mode enabled.
3 All accuracies are 1 sigma, as performed under Optech test conditions. Details available on request.
4 Average of 4 shots minimum.
5 Independent fully-selectable vertical and horizontal step size selection.
6 Laser class in accordance with IEC 60825-1 and US FDA 21 CFR 1040.
7 ILRIS-LR laser Class 3 when viewing between 0-114 m (0-374 ft). Class 1M when viewing at ranges greater than 114 m (374 ft).

Data output to a variety of user-selectable formats and XYZ coordinates, including return intensity and digital photograph.
User interface: PDA, UMPC, tablet or notebook via wired/wireless connection (802.11b/g).
Digital imaging: Internal 3.1-Megapixel camera with calibration file for creating true color RGB point clouds.
Display: On-board 6.5" XVGA color LCD panel for image, system status, and data display.