



DATA SHEET

INNOVIZTWO RAVEN SYSTEM

High-Performance LiDAR for Smart Applications

InnovizTwo Raven is a high-performance bundled LiDAR sensing system with unsurpassed 3D performance for smart applications. The rugged, reliable, and cost-effective LiDAR is lightweight, low-power, and resilient to sunlight and weather conditions. The sensor delivers a dense, highly accurate, 3D point cloud with unrivaled angular resolution for distances up to 250m. The system includes the Innoviz Media Converter (iMC) which connects the LiDAR to a Gigabit Ethernet network.

KEY FEATURES

1m-250m Detection Range	0.1°x 0.1° Maximum Angular Resolution (HxV)	120°x24° Field of View (HxV)	10 FPS Frame Rate
2.88M Pixels/Second Maximum Pixel Rate	IP67 Ingress Protection	51.5x141x140.5mm Dimensions (HxWxD)	Gigabit Ethernet Network Interface
		-10°C to +65°C Operating Temperature	

MARKET APPLICATIONS



Mapping



Smart Cities



Logistics

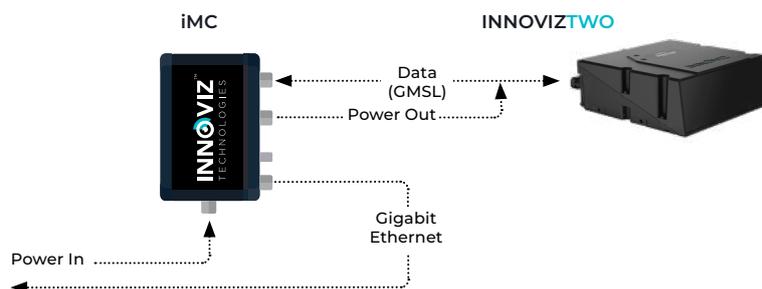


Construction

COMPLIANCE



INNOVIZTWO RAVEN SYSTEM



SPECIFICATIONS

PERFORMANCE

	Raven Configuration
Maximum Angular Resolution (HxV)	0.1°x0.1°
Field of View (HxV)	120°x24°
Frame Rate	10FPS
Scanned Lines within FOV	240
Detection Range	1m-250m (110m @ 90% TPR, 1% FAR, 100Klux, 10% reflectivity)
Wavelength	905nm
Laser Product Class	Class 1, Eye-safe (IEC-60825-1)
Range Resolution ¹	2cm
Range Accuracy (Bias) ²	15cm
Range Precision ¹	Up to 50% of detection range: 5cm Above 50% of detection range: Maximum 10cm or 0.2% of ground truth
Angular Resolution Accuracy	0.025° @ 1σ (in nominal conditions)
Communication Protocol	1000Base-T (Gigabit Ethernet)
Points Returned per Second	2.88M
Pixel Latency	100ms (counted from emitting laser until pixel arrives on the Ethernet port)

NOTES:

¹ 25°C ambient temperature; 10FPS; 10% Lambertian target; 100Klux ambient lighting; defined scanning configuration; native VFOV setting; 0° LiDAR roll/pitch; clear weather; no blockage on window; LiDAR is operating in Normal power mode. True Positives = 90% per pixel and False Positives = 1% per pixel based on the above configuration for long-range detection. False positives are pre-configured in the firmware from 0.01% to more than 10%.

² Based on a normal target with Lambertian reflectivity up to 100%.

MECHANICAL/ELECTRICAL

	LiDAR	iMC
Power consumption ¹	19W	<9W
Operating Voltage	8.5VDC to 17VDC	
Operating Temperature	-10°C to +65°C	
Dimensions (HxWxD)	51.5x141x140.5mm	157x47.5x129.3mm
Weight	1.2kg	770g
Connectors	Data-Out	RJ45
	Power-In	M12 female

NOTES:

¹ Depends on environmental temperature.

REGULATORY COMPLIANCE

	Standard/Regulation
Product Safety	EN-62368-1:2018 – Audio/video, information and communication technology equipment - Part 1: Safety requirements
Laser Safety	IEC 60825-1 – Safety of laser products. FDA 21CFR1040.10 (Laser products) and FDA 21CFR1040.11 (Specific purpose laser products): Comply except for conformance with IEC60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
Electromagnetic Compatibility (EMC)	EN 55035; EN 55032; FCC 47 CFR Part 15, Subpart B; EU Directive 2014/30/EU; CISPR/KN 32; CISPR/KN 35; TR CU004/20
Environmental	DIN/EN/IEC 60068-2; Directives 2011/65/EU and (EU) 2015/863 (RoHS); REACH; Securities Exchange Act of 1934, Section 13(p) – Conflict Minerals disclosure.

ORDERING INFORMATION

Model	Part Number
InnovizTwo Raven Kit	INN2-RVN1-IPEM-KIT-A1