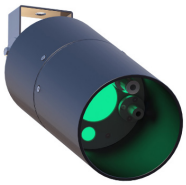


Road Condition Detector Designed for Drones

»Product Introduction

The HY-UAVRSE Road Condition Detector weighs 780 grams. While the drone is in flight, it performs infrared scans of the road surface, using remote-sensing multispectral measurement technology to measure the thickness of ice, snow, and standing water on the road surface, and transmits the detection data to highway management authorities in real time.

The HY-UAVRSE is mounted beneath the fuselage; it is compact and has low aerodynamic drag. The housing is made of lightweight aluminum alloy, while the interior is constructed of ABS engineering plastic, making it both sturdy and lightweight. Temperature, humidity, and barometric pressure sensors are also available as optional accessories. With a power consumption of only 0.9 W, the instrument is suitable for small UAV platforms and can be used for low-altitude highway inspections.



»Technical Indicators

Project	Range
Flight Altitude	10–20 m
Horizontal Velocity	< 60 km/h
Road Conditions	Dry, Moist, Wet, Snow, Ice, Ice-Water Mixture
Water Film Thickness	0–2 mm
Ice Thickness	0–2 mm
Snow Thickness	0–2 mm
Grip	0.01–0.82
Road Surface Temperature	-40 ℃ – +80 ℃
Road Surface Material	Asphalt Pavement, Concrete
Operating Range	-40 ℃ ~ 80 ℃ / 0 - 100%RH
Digital Output	RS485/232/Bluetooth
Size	Ø70 × 147 mm
Power	DC 12 V
Power Consumption	0.9 W
Weight	780 g

»Applications

- Low-Altitude Highway Inspection by UAV
- Detection of Ice, Snow, and Standing Water on Road Surfaces
- Real-Time Road Condition Data for Highway Management Authorities

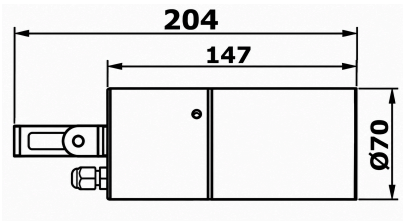


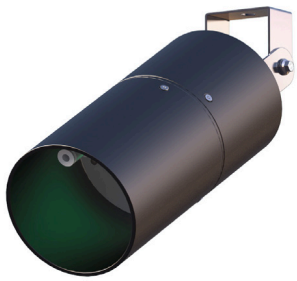
»Key Features

- Infrared remote-sensing multispectral measurement of ice, snow, and standing water thickness
- Real-time transmission of detection data to highway management authorities
- Mounted beneath the fuselage; compact with low aerodynamic drag
- Lightweight aluminum alloy housing with ABS engineering plastic interior; sturdy and lightweight
- Optional temperature, humidity, and barometric pressure sensors
- Power consumption of only 0.9 W, suitable for small UAV platforms



»Product Showcase





Size: Ø70 mm × 147 mm; Weight (Aluminum Alloy): 780 g.