



VantageNode™

Modernize Small Intersections with AI-Powered Detection

Overview

Many agencies rely on aging detection systems like in-ground loops that are increasingly difficult to maintain and expensive to replace. Iteris VantageNode™ modernizes these locations with AI-powered multimodal detection in a single-mount design that delivers reliable performance, simplified installation, and lower total cost of ownership.

Purpose-built for small and infrastructure-constrained intersections, VantageNode combines proven Iteris detection expertise with advanced AI algorithms trained specifically on intersection imagery, enabling multimodal detection and data insights without the complexity of convention detection systems.

AI-Powered Performance

VantageNode's detection system is powered by AI, using algorithms optimized for enhanced signal actuation and multimodal visibility across up to three lanes per approach, 120 feet across the intersection. Its models deliver:

- High-precision vehicle, pedestrian, and bicycle detection
- Accurate multimodal counts for planning and reporting
- Reliable performance in low-light, overcast, and rural conditions

Key Features & Benefits



Built for small intersections

Optimized for small, fixed-time locations transitioning to actuated control



AI-powered detection

Vehicles, pedestrians, and bicycles detected with high reliability



Expanded multimodal visibility

Single-mount, quad-camera design



Lower installation and maintenance costs

Significantly lowers total cost of ownership compared to conventional systems



Count and volume data collection

Provides actionable insights for planning and funding



SPECIFICATIONS

Processor	
Power	12VDC, 12.5A
Video Output	Compressed Digital Stream
Status Indicators	Power
Communications	Ethernet (x2)
	USB Type A (x2)
	Wi-Fi
	Cellular
	POE (x4)
	HDMI
I/O Module	
Detector I/O	SDLC communications
Status Indicators	Power
	Online
	Video input status
Communications	USB Type A
General	
Operating Temperature	-35°F to +165°F (-34°C to +74°C)
Humidity	0% to 95% non-condensing
Vibration	0.5G, 3 axes, 5-30Hz
Shock	10G in all 3 axes
Regulatory	NEMA TS-2 compliant
	FCC part 15, Class A
Dimensions	10" L x 14" D x 4.5" H
	(254mm L x 356mm D x 114mm H)
Weight	11.65lbs (5.28kgs)
Warranty	3 years limited warranty

Camera	
Power	POE (IEEE 802.3at Type 2 Class 4)
Imager	Imager Focal Length 37° tele to 99° wide
	Lens - Varifocal 3.2mm-8.1mm F1.9-3.2
	Sensor 1/2.7" Progressive Scan
	Dynamic Range >120dB
	Noise Reduction - 2D Spatial Filter, 3D Temporal Filter
	Minimum Illumination - 0lux with IR illumination
Connections	RJ45
Video Output	Compressed Digital Stream
Operating Temperature	-35°F to +165°F (-34°C to +74°C)
Humidity	10% to 100% condensing
Vibration	0.5G, 3 axes, 5-30Hz
Shock	10G in all 3 axes
Ingress Protection	NEMA 4X, IP 67
Regulatory	NEMA TS-2 compliant
	FCC part 15, Class A
Dimensions	Diameter 10", Height 6.31"
	(Diameter 255mm Height 92mm)
Weight	4.4lbs (2kgs)
Warranty	3 years limited warranty

ISO 9001:2015 certified.

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