VIDAR Axle Counter Camera

Image-Based Axle Counting with a Single, Intelligent Camera

Vidar Axle Counter is a compact yet robust camera designed explicitly for axle identification and counting. The camera provides side scan images with metadata containing axle count and vehicle category for road tolling, ferry access control, logistics and many other applications. Detection of vehicles is highly accurate thanks to the triggering being based on video analytics.

Complimentary Vehicle Categorization

8 image-based vehicle categories are distinguished. Lifted and retracted axles of truck trailers are also detected.

Estimated Speed Data

Aside from axle number and categorization, Vidar Axle Counter can give you the estimated speed of the captured vehicle based on the images.

Video Analytics-Based Triggering

Triggering is as easy as it gets with Vidar Axle Counter; the onboard intelligence allows the camera to learn the background it's focusing on, so it knows exactly when a vehicle enters the image and how long it is. This guarantees highly precise triggering without the need for installing external devices, such as induction loops.

SIDE SCAN IMAGE:

AXLE NUMBER:
5

CATEGORY:

Precise Image-Based Axle Counting

Designed for the Most Optimal Results

Cameras with single optics create images with distorted edges (fisheye lens) or miss the vehicle's front and end entirely. Instead, the Vidar Axle Counter creates the sidescan image by cropping the middle section of each picture taken of the vehicle and piecing together these crops to form a photo that shows the captured vehicle without any distortion whatsoever. Not only that, but thanks to featuring two optics on board, Vidar Axle Counter also takes an overview image showing the entire vehicle at the moment of capturing. With the dual optics and the 3x optical zoom, Vidar Axle Counter is able to capture images for axle counting purposes within 1.5−8 meters.

Less than ideal conditions such as darkness or bad weather are countered by the built-in mixed 850 nm infrared (IR) and white LED illuminators and the IR pass filter.

Robust and Reliable Design

Long-Lasting Operation Guaranteed

Vidar models come with a highly-resistant design. The IK10 and IP67 certified, 100% aluminum cast protects Vidar Axle Counter from any physical impact.

As a standalone device, Vidar Axle Counter can be placed anywhere. Settings can be easily performed via the camera's interface, which you can access from your browser at any time. Vidar Axle Counter is also prepared from situations when connection is lost: the camera continues capturing side scan and overview images until connection is reestablished.

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Imaging

Resolution	Sensor 1 & 2: 1440x1080
Max FPS	Sensor 1 & 2: 120 FPS*
Sensor	Sensor 1: color + Allpass filter, global shutter Sensor 2: black & white + IR Bypass filter, global shutter
Day/night switch	Automatic brightness control with predefined traffic environments or manual
Lens	Motorized zoom and focus, remotely adjustable
Lens mount	Custom mount
Angle of view	Optics 1 & 2: 79° x 63°
Optical zoom	Optics 1 & 2: 3x
Focal length	Optics 1 & 2: Variable 3–9 mm

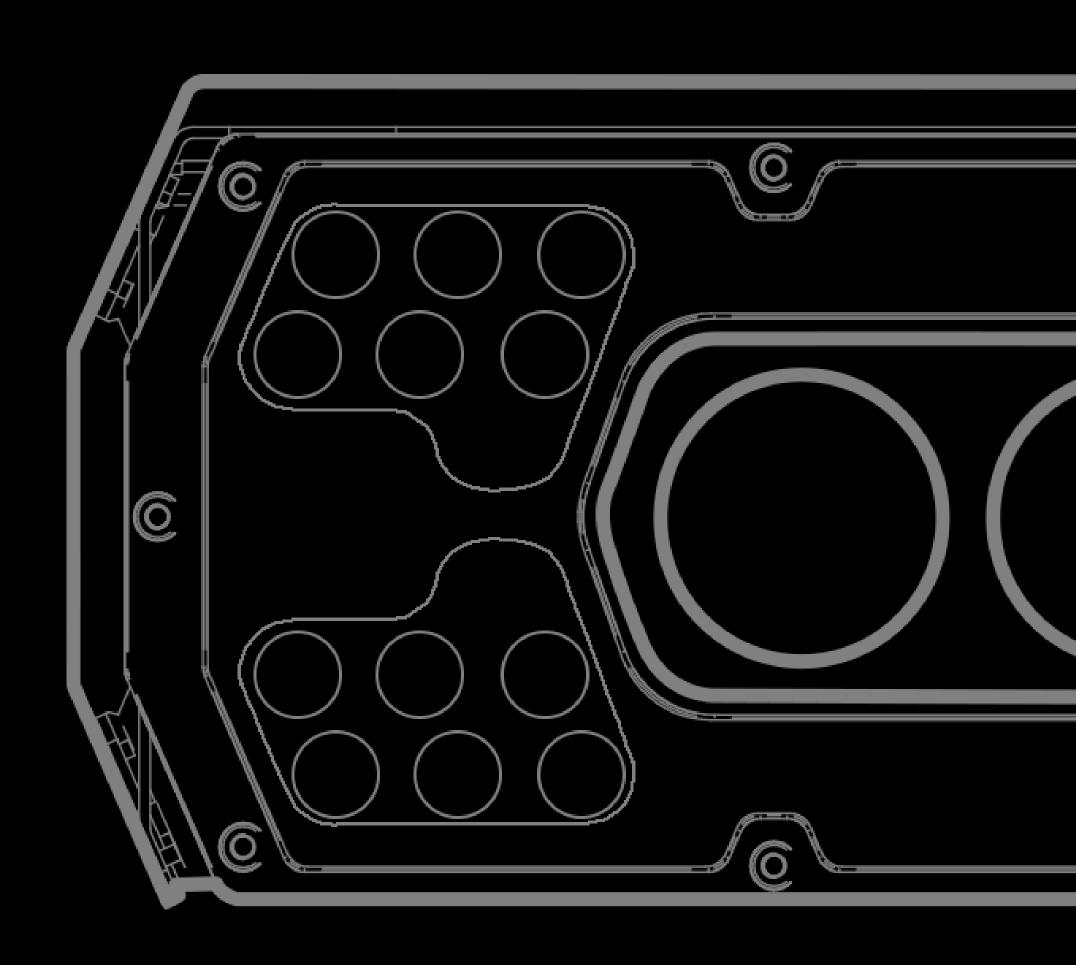** On selected sensor and resolution*

Axle Counting

Axle counting range	1.5 – 8 m (4.92–26.25 ft)
Vehicle speed range (at optimal conditions)	0 km/h – 300+ km/h / 0 mph – 190+ mph

Onboard Intelligence

Carmen® ANPR	No
GDS compliance	Yes
Axle counting data	Number and position of wheels (lifted and retracted axles incl.)
Vehicle categorization	Yes

Illumination

Wavelength	White LED + 850 nm infrared
Illumination modes	Synchronized or continuous
Illumination beam-angle	22°
Variable intensity	Adjustable in 100 increments, parity flash (different intensity for odd and even frames)

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Processing & I/O

Communication protocols	ONVIF, ARP, TCP/IP, DHCP, NTP, FTP, HTTP, RTSP, HTTPs, SFTP, DNS, SNMP, SSL/TLS, NTCIP
I/O ports	12-pin (External Illuminator, UART, GPIO, USB, RS232)
In-built laser trigger	8 mRad point laser
Laser wavelength & safety class	905 nm CLASS 1 (60825-1 2014)

Electrical Data

Power requirement	24-28V AV, 2A
Typical power consumption	18 W

Mechanical Data

Operating temperature*	-45°C – +70°C (-49°F - +158°F)
IP & IK rating	IP67, IK10
Dimensions (LxWxH)	250 x 251 x 145 mm / 9.84″ × 9.88″ × 5.7″
Weight	4.5 kg / 9.92 lbs
In the box	Camera, bracket, shield

Accessories

M12 power cable, Ethernet cable, Junction Box, External IR-light, External GPS, I/O cable

Certificate

Made in EU, NDAA compliant

* Internal
Technical specifications are subject to change without prior notice. This document does not constitute an offer.

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