

# Axle Counter

Integrated axle counting system

## ▼ *The new concept of axle counting based on Artificial Intelligence*

The Axle Counter is targeted to free flow tolling applications.

Its advanced embedded processing capability, based on Artificial Intelligence (AI), allows to detect and

count vehicles' axles, at any time of the day and of the night.

The Axle Counter gantry installation is made easy thanks to the Power-over-Ethernet (PoE) interface that provides a single cable connection to the camera for power and data transfer.

Additionally, for optimal performances the Axle Counter is triggered by

different triggering sources, allowing flexible interfacing with existing devices and perfect integration with Tattile devices.

The Axle Counter provides the resulting metadata together with the reconstructed image of the vehicle, giving evidence of the transit to the tolling operators.

Its local storage capability allows operating stand-alone in case connectivity is not available.



▼ Onboard processing

▼ Local storage

▼ Power Over Ethernet

▼ Metadata and image output

**Optional:**

- GPS module
- Speed estimation

AXLE COUNTER	
<b>Software features and Performance</b>	
Lane Detected	1
Max Vehicle Speed	180 km/h - 112 mph
Installation height	6 m (typical) - 19.6 ft (typical)
Counting accuracy	>95% over 3 classes
Capture rate	Up to 50 fps
AES256	Yes
SHA2	Yes
Data buffering and storage	Yes
Compression	JPG
Speed estimation	Optional
<b>Configuration</b>	
Web Server	Installation and configuration with on board Web Server
TCP/IP Server	Configuration and monitoring through TCP/IP protocol (SDK provided)
Date and Hour	Synchronization via NTP protocol or optional internal GPS
Software Update	Upgrading via Web Interface and SDK
<b>Data Transmission</b>	
FTP	FTP Client to FTP Server mode for remote data transmission; Multiple IP servers addressable
TCP/IP	Tattile TCP/IP open protocol; (SDK provided)
Standard protocols	XML; SNMP;
Serial Port	Insulated RS485

**Part Numbers**

Axle Counter System	
F01900	Axle Counter
F01912	External IR Illuminator

AXLE COUNTER	
<b>Op. Mode</b>	
Trigger Ethernet	Image capture and processing triggered by Ethernet command with Tattile TCP/IP open protocol (SDK provided)
Trigger Input	Image capture and processing triggered by digital signal start/stop
<b>System</b>	
Image capture sensor	2 Megapixel grayscale
Illuminator	External illuminator InfraRed @ 850 nm
Lenses	C-Mount. Different focal lenses available
Operating System	Linux Operating System
Digital i/o	2 Inputs – 2 Outputs – 1 Strobe output
Connectors	Waterproof circular connector
IP Protection	Waterproof IP67
Ethernet	GigaBit Ethernet 10/100/1000
Storage	uSD up to 128 GB
GPS	Optional
<b>Technical Data</b>	
Operating & Storage Temperature	From -40° to +60° C - From -40° to +140° F
Operating & Storage Humidity	Up to 95% non condensing
Dimensions	187 x 103,5 x 216 mm - 7.4 x 4.1 x 8.5 in (WxHxL)
Weight	5 kg - 11 lbs
Power supply voltage	24 Vdc, PoE+
Power consumption	15 W (max)

