Genetec™

AutoVu SharpZ3

Mobile Automatic License Plate Recognition System

High performance and edge-based mobile ALPR

The AutoVu™ SharpZ3 is a mobile automatic license plate recognition (ALPR) system that goes beyond traditional plate identification. It brings new levels of insight in vehicle analytics, situational awareness, and accuracy.

That's because the SharpZ3 is powered by the latest edge-based processing technology. Designed to combine high-performance and low power consumption, it lets you take full advantage of machine learning capabilities directly at the edge. And with its third optical sensor, the SharpZ3 can precisely position objects and vehicles to understand what's around the license plate, placing reads into context.

Expand your vision with the AutoVu SharpZ3.

Features

Powered by AutoVu MLC machine learning based engine

Built-in vehicle type, color and plate origin recognition analytics

Ultra-low reading latency

3 optical sensors

Modular architecture designed to evolve seamlessly

Optional advanced GPS positioning with dead reckoning

Up to 4 high-definition ALPR cameras on the same base unit

Unified with Genetec Security Center

Get more from your mobile ALPR system

Go beyond conventional mobile ALPR

With the latest deep neural network (DNN) technology built in, the SharpZ3 redefines what mobile ALPR can do. Not only does it deliver higher accuracy and reduce misreads, the SharpZ3 unlocks new insights through its expanded suite of vehicle analytics.

Capture the full picture

With its third optical sensor, the SharpZ3 effortlessly navigates complex urban environments. From flat and non-reflective plates to embossed designs and digital plates, the SharpZ3 can detect more plate designs than traditional units.

Evolve your system with ease

The SharpZ3 is designed with growth in mind. The modular chassis of the SharpZ3 will protect your investment and let you tap into new modules and capabilities over time. This reduces the complication and cost of hardware replacement.

AutoVu SharpZ3 Camera Specifications

ALPR camera sensors
1456(H) x 1088(V) progressive scan @30fps, monochrome, global shutter

ALPR capture range
Up to 63-foot (19-meter) range with retro-reflective license plates

ALPR camera lens options
8mm, 12mm, 16mm, 25mm

Context camera sensor
1456(H) x 1088(V) progressive scan @30fps, color, B&W night mode with 940nm illuminator, global shutter. JPEG still images and MJPEG video streaming

Context camera lens
Based on ALPR lens configuration (4mm, 6mm, 8mm, 12mm)

Illuminators
Pulsed LED illuminator (740nm, 850nm, 940nm, 590nm)

Water-resistance | sealing
IEC 60529 IPx6, IPx7 | IEC 60529 IP6x

Dimensions
2.20 (h) x 5.12 (w) x 4.10 (d) inches (5.6 × 13 × 10.4 cm)
Excludes cabling and mounting bracket

Weight
1.9 lbs (0.86 kg)

Color
Available in black/white

Impact
IEC 62252: IK08

AutoVu SharpZ3 Base Unit Specifications

I/O
Base unit:
2x 10/100/1000 Base-T Ethernet ports (RJ45)
4x digital inputs (triggers), 0~32Vdc, opto-coupled
4x dry-contact outputs (relays): 2x 0.25A solid state relays, 2x 8A electromechanical relays
1x regulated 12V AUX output power, 200mA

Mounting options
Horizontal and vertical

Dimensions
3.6 (h) x 8.6 (w) x 9.3 (d) inches (9.1 × 21.8 × 23.6 cm).
Excludes cabling, cable racks and mounting brackets

Weight
Base unit: 4.4 lbs (2.0 kg)
ALPR module: 2-ports: 4.1 lbs (1.9 kg)
ALPR module: 4-ports: 4.4 lbs (2.0 kg)

Processors
Intel Atom Processor E3950 per 2 ALPR ports
Additional dedicated Intel Myriad™ X machine-learning co-processors

Power
12/24Vdc nominal (9 to 32 Vdc)
Ignition input
Configurable base modules:
- 2x ALPR unit base module
  Typical Power consumption: 50W (incl. SharpZ3 cameras' consumption)
- 4x ALPR unit base module
  Typical Power consumption: 98W (incl. SharpZ3 cameras' consumption)

AutoVu SharpZ3 System Certification (Camera + Base unit)

Vibration
IEC 60068-2-64

Shock resistance
IEC 60068-2-27

Photobiological safety of lamps and lamp systems
IEC 62471-7

Electromagnetic immunity & emissions
FCC part 15 Sub-part B | ICES-003 Issue 4 | CISPR35 / EN55035 | CISPR32 / EN55032 | CISPR25 / EN55025 | EN 50498

CE marking
EMC Directive 2014/30/EU; Automotive EMC Directive 2004/104/EC; RoHS Directive 2011/65/EU (including EU Directive 2015/863)

Temperature
Camera: -40°F to 140°F (-40°C to 60°C) operating; -40°F to 185°F (-40°C to 85°C) storage
Base unit: -40°C to 149°F (-40°C to 65°C) operating*
Certifications: IEC 60068-2-1 Category Ad and Ae | IEC 60068-2-2 Category Be | IEC 60068-2-14 Category Na
Includes hi-temp auto-shutoff protection

* 4-camera module with optional cooling pack. Maximum temperature for 4 camera module without cooling pack: 60°C (140°F)

Optional modules

The base unit for the SharpZ3 cameras allows for up to 3 optional plug-in modules.

PoE module

Function
Connect up to 4 PoE devices

Ports
4x 10/100/1000 Base-T ethernet ports with ix Industrial™ connectors
PoE+ capable - 802.3at Type 2 (30.0W)

Power
3W power consumption for module operation
(60W total power budget for all POE ports & modules combined)

Navigation module

Function
Integrated inertial sensors with automotive dead reckoning
30Hz navigation rate capable
Auto-calibration of inertial sensors

Connectivity
Multi-constellation single-band (L1) GNSS receiver (US-GPS and Galileo enabled by default, GLONASS supported)
Input for wheel ticks signal or external odometry sensor

Power
1.1W

Auxiliary camera

Function
Auxiliary wheel imaging camera unit

Sensor:
2MP sensor with 4.0 mm lens

Power
PoE 802.3af Type 1 (5.8W)

Iluminators:
Built-in IR illumination

Overview context camera

Function
Wide-angle street-view imaging camera unit

Sensor:
2MP sensor with 2.4 mm or 6.0 mm lens

Power
PoE 802.3af Type 1 (5.8W)

Iluminators:
Built-in IR illumination