QCam3

The green one

Integrating the latest **cutting-edge technologies** (deep learning-based algorithms), the QCAM3 ANPR camera delivers **unprecedented number plate recognition** capabilities. Additionally, its outstanding image resolution and a **unique set of functionalities** designated to provide further vehicle characterization makes this product the “best in class” within its category.

The QCAM3 camera can operate on **2 lanes** and is able to differentiate **all types of vehicles** (e.g. cars, trucks, busses, motorcycles, trailers, etc.). It can also detect slow-moving vehicles, such as bicycles or pedestrians, making it an ideal solution for a wide range of traffic monitoring applications.

Moreover, it also integrates an optional **“Make & Model”** recognition feature, as well as a **“vehicle color”** characterization (with color sensor). Both features are invaluable in finding vehicles and closing the current gap in similar product offerings, where additional hardware and software are typically required.

The QCAM3 camera is also able to calculate an **instantaneous speed** estimate for each vehicle travelling within its field of view, providing additional functionality for speed-related monitoring.

The whole QCAM3 camera technology is embedded in a **small footprint** but well-designed housing that discretely blends into urban environments. All details have been carefully thought and engineered to facilitate its installation and deployment: a **miniaturized motorization within the support arm** allows **remote alignment,** removing the burden of relying on an aerial lift truck for final mechanical setup. Additionally, the QCAM3 features a motorized lens for precise focus adjustments, ensuring optimal performance in any environment.

Main Technical Characteristics

- 5 MP single high sensitivity CMOS sensor (BW or Color) with motorized focus & iris
- Processor: NVIDIA Jetson Nano
- Vehicle speed detection up to 180 km/h
- Connectivity: Ethernet, WiFi, 4G, 5G
- GNSS included
- Motorized support arm (tilt & pan)
- VARIFOCAL 12mm 50mm (with color sensor) with P-FOCUS and P-IRIS
- PSU: PoE+, 12V DC 1.5A (15W)
- Weight: 2.2 kg
- IP67 protection & IK7
- CE conformity
- ONVIF Compatibility
- Can detect slow mobility

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Technical Data

OVERALL PERFORMANCE	
Number of Monitored lanes	Up to 2 lanes
Maximum speed of detected objects	Up to 180 km/h
Working distance	Up to 30 m (day & night)
Vehicle detection accuracy	>99 %
Plate recognition accuracy	>99 %
OCR	NVIDIA 128 core-based deep learning
Classification	All vehicle types (incl. cars, trucks, busses, motorcycles, trailers, etc.) & all type soft mobility (incl. pedestrians, bicycles, scooters, helmets, etc.) (optional)
Make & Model recognition	Yes (optional)
Vehicle color recognition	Yes (optional)
ADR recognition	Yes (optional)
Instant Speed detection	Yes (optional)
HARDWARE & CONNECTIVITY	
1 Sony CMOS sensor IMX 567, Preguis Series	5 MP
VARIFOCAL	12 mm to 50 mm (with color sensor)
Fixed Focal	25 mm
P-FOCUS	Yes
P-IRIS	Yes
Infra-red Illuminator	8 Wide angle IR LED with Dome lens 855nm
Storage SSD	256 GB / 512 GB / 1 TB
GNSS	Yes
3G / 4G / 5G	Yes (optional)
Wi-Fi, IEEE 802.11a/b/g/n/ac, 2.4 / 5 GHz	Yes
Ethernet RJ45	Yes
Pan & tilt remote control	Yes, via motorized arm
SOFTWARE & IMAGE PROCESSING	
OS	Ubuntu (Linux for Tegra)
Encryption	AES256
Automatic white balance & backlight attenuation	Yes
Video streaming	RTSP, WebRTC, HLS
Video compression	H264, Motion JPEG, MPEG-4
Image compression	JPEG
Synchronization Time	NTP & GNSS
Communication protocols	HTTP, HTTPS, MQTT, SNMP
External & Internal I/O trigger	Yes (optional)
ONVIF compatibility	Profile S
System integration	M³ Platform, via SDK (available upon request)
MECHANICAL & CONFORMITY	
Dimensions	288 x 143 x 99 mm³ (camera + fixture)
Weight	2.2 kg
Power Supply	PoE+, 12V DC 1.5A (avg 15W)
Solar panel & battery autonomus power supply	Available upon request
CE conformity	Yes
IP /IK rating	IP67, IK7
Operating temperature	-25°C to +60°C
Operating humidity	10% to 95%

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