# QCAM5

The latest addition to the well renowned
iCAR camera range

Integrating the latest **cutting-edge technologies** (deep learning-based algorithms), the QCAM5 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 QCAM5 camera can operate on **1, 2, 3 or 4 lanes** and is able to differentiate **all kind of vehicles** (e.g. cars, trucks, busses, motorcycles, bicycles, trams, etc.), objects and **persons**.

Moreover, it also integrates in option a "**Make & Model**" recognition feature, as well as a "**vehicle color**" characterization. Both features are invaluable in finding vehicles and closing the current gap in similar product offerings, as these features, when available, typically require additional hardware and software.

The QCAM5 camera is also able to calculate an **instantaneous speed** estimate for each vehicle travelling within its field of view.

The whole QCAM5 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.

## MAIN TECHNICAL CHARACTERISTICS

›  5 MP dual high-sensitivity CMOS sensors (B/W & Color)

›  Processor : NVIDIA Jetson TX2 ( Xavier NX available on Q4/2020)

›  Vehicle speed detection from 0 to 300 km/h

›  Connectivity: Ethernet, Wi-Fi, 4G, 4G LTE, 5G

›  GPS included

›  Motorized support arm (tilt & pan)

›  PSU: 24V DC 2.5A (35W only)

›  Weight: 3.8kg

›  IP67 protection & IK10

✓  Ready to use with **MACQ MOBILITY** MANAGER

# TECHNICAL DATA

| | QCAM5 |
|---|---|
| **Overall Performances** | |
| Number of monitored lanes | 1 – 2 – 3 – 4 |
| Maximum speed of detected objects | Up to 300 km/h |
| Working distance | Up to 50 m (day), up to 30 m (night) |
| Vehicle detection accuracy | 99% |
| Plate recognition accuracy | >95% |
| OCR | NVIDIA 256-core-based deep learning |
| Classification | All kind of vehicles (incl. cars, trucks, busses, motorcycles, bicycles, trams, etc.), objects and persons |
| Make & model recognition | Yes (optional) |
| Vehicle color recognition | Yes (optional) |
| ADR recognition | Yes (optional) |
| Instant speed detection | Yes (optional) |
| **Hardware & Connectivity** | |
| 2 Sony CMOS sensors, Pregius Series (ANPR & context camera) | 5 MP |
| Predetermined Focal lengths | 8 mm / 12 mm / 16 mm / 25 mm / 35 mm |
| Frame rate | 25 fps |
| Infra-red Illuminator | 88 wide-angle IR LEDs, 850nm |
| Storage SSD | 256 GB / 512 GB / 1 TB |
| GPS | Yes |
| 3G / 4G / 4G LTE / 5G | Yes (optional) |
| Wi-Fi, IEEE 802.11a/b/g/n/ac, 2.4 / 5 GHz | Yes |
| Ethernet RJ45 | Yes |
| Bluetooth, v4.1, max. 3MB/s | 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 |
| Offset from the furthest lane | Up to 15m |
| Streaming | via RTSP , Color video H264 |
| Compression | PNG or JPEG |
| Time | NTP & GPS synchronization |
| Communication protocol | Web server & TCP/IP |
| Data transmission | JSON, SNMP, UTMC |
| ONVIF COMPATIBILITY | Yes |
| System integration | M³ platform and other systems via SDK ( available upon request) |
| **Mechanical & Conformity** | |
| Dimensions | 190 x 110 x 196 mm³ (camera only) |
| Weight | 3.8 kg |
| Power supply | 24V DC, 2.5A (electrical starting peak), 35 W |
| Autonomous power supply thanks to solar panel & battery | Available upon request |
| CE conformity | Yes |
| IP/IK rating | IP67 , IK10 |
| Operating temperature | -25°C to +70°C |
| Operating humidity | 10% to 95% |