

# SmartCAM

INTELLIGENT ALL-IN-ONE CAMERA  
WITH BUILT-IN ANPR SOFTWARE & SDK



OCR RESULTS:



- NUMBER PLATE: ARH 001
- VEHICLE TYPE: MERCEDES BENZ
- NATIONALITY: EU-HUNGARY
- SPEED: 158 MPH / 254 KMH
- BLACKLIST: --- NO ---
- COLOR: BLUE METAL
- OWNER: ZSOLT VANYI

OCR RESULTS:



- NUMBER PLATE: 066 437
- VEHICLE TYPE: VOLVO V40
- NATIONALITY: USA-IOWA
- SPEED: 62 MPH / 100 KMH
- BLACKLIST: --- NO ---
- COLOR: WHITE
- OWNER: COLMANN JOHN

## SMART TRAFFIC CAMERA WITH ONBOARD ANPR

This cost-effective third generation ANPR camera combines high quality imaging with onboard plate recognition. In some models of the SmartCAM family the dual sensor dual lens design serves as an Overview camera, in others it functions to further enhance number plate recognition accuracy.

Thanks to the 5 pre-installed fully functional plate recognition engines, this camera effectively covers all known plate types. SmartCAM recognizes plates very fast, partly because of parallel multi-core operation, partly due to an integrated vehicle detection algorithm that preselects the relevant images for the ANPR module. Perfect imaging is assisted by built-in smart illumination that also has a synchronized flash mode for recognizing reflective and non-reflective number plates simultaneously. It is a true stand-alone traffic solution. SmartCAM's advanced technology is protected by a sturdy IK10 & IP67 industrial grade housing.

|   |  |  |
|---|--|--|
| <br>TOLL<br>COLLECTION | <br>JOURNEY TIME<br>MEASUREMENT       | <br>TRAFFIC<br>MONITORING |
| <br>ACCESS<br>CONTROL  | <br>TRAFFIC<br>SECURITY<br>MONITORING | <br>BORDER<br>CONTROL     |

### MAIN BENEFITS

- SmartCAM is a standalone traffic solution: ANPR running inside the camera
- Pre-installed recognition engine to cover license plates worldwide
- Powerful processor and image preselection that guarantee fast operation
- Direct export of ANPR results to database
- Wide range of models from cost-efficient version to cutting-edge technology
- Modular design for optional radar and illumination add-ons
- Trouble-free remote access

TOWARD THE FUTURE IN SAFETY – SINCE 1991

## SPECIFICATIONS

## SMARTCAM

- 2+4 core processor • on-board ANPR • reads reflective/non-reflective plates • overview lens • advanced vision lens
- video-based vehicle detection trigger • average (point-to-point) speed measurement

| Production Code                          | <b>SMARTCAM HDx</b>        | <b>SMARTCAM HDx DUAL</b> | <b>SMARTCAM HDx DUAL PLUS</b>                        | <b>SMARTCAM FHD DUAL PLUS</b> |
|--|----------------------------|--------------------------|--|-------------------------------|
|  | SmartCAM-03-6450           | SmartCAM-03-6452         | SmartCAM-03-6552 (850nm)<br>SmartCAM-03-655A (760nm) | SmartCAM-03-4562              |
| <b>DISTANCE RANGE</b>                    |                            |                          |  |                               |
| Optimal ANPR range at ambient light      | 4 m – 20 m / 13 ft – 65 ft |                          |  | 10 m – 20 m / 33 ft – 65 ft   |
| Maximum ANPR range at optimal conditions | 50 m / 164 ft              |                          |  |                               |

| <b>IMAGING</b>                       |   |  |  |  |
|--------------------------------------|---|--|--|--|
| Resolution (H × V pixels): framerate | 1440 × 1080: 30 FPS<br>1280 × 720: 60 FPS   | Main sensor: 1440 × 1080: 30 FPS<br>1280 × 720: 60 FPS<br>Second sensor: 1920 × 1080: 30 FPS |  | Sensor1: 2048 × 1536: 20 FPS<br>1920 × 1080: 30 FPS<br>Sensor2: 1280 × 960: 54 FPS |
| Function of the second sensor        | –   | Overview   |  | Advanced Vision  |
| Day mode / night mode                | Light sensor configurable auto-switching day/night mode, automatic brightness control |  |  |  |
| High Dynamic Range mode (HDR)        | –   | Included (Sensor2)   |  | –  |
| Lens                                 | 11x, automatic, motorized lens  | Main lens 11x, automatic, motorized lens   |  | Main lens: 3,3x, automatic, motorized lens   |

| <b>ILLUMINATION</b> |                                  |                             |                   |  |
|---------------------|----------------------------------|-----------------------------|-------------------|--|
| Wavelength          | 850 nm (infrared)                | 760 nm or 850 nm (Infrared) | 850 nm (Infrared) |  |
| Illumination modes  | Synchronized flash or continuous |                             |                   |  |

| <b>PROCESSING &amp; I/O</b> |  |                                 |  |  |
|-----------------------------|--|---------------------------------|--|--|
| CPU for ANPR                | ARM Quad Core 4 × 1GHz                             | Intel Atom Quad Core 4 × 1.9GHz |  |  |
| Communication protocols     | ARP, ICMP, TCP/IP, DHCP, NTP, FTP, HTTP, SMTP, RTP |                                 |  |  |
| 4G / GPS                    | optional   |                                 |  |  |

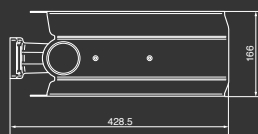
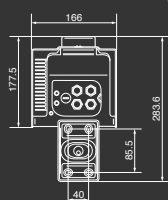
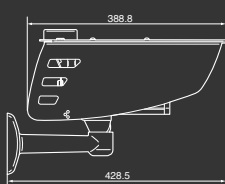
| <b>ELECTRICAL DATA</b>    |   |  |  |  |
|---------------------------|---|--|--|--|
| Power requirement         | 24-28 V AC  |  |  |  |
| Power consumption typical | 11 W  |  |  |  |
| Connectivity              | Binder M12 circular: Ethernet (8 pin), Power (4 pin), User (8 pin), User (12 pin) |  |  |  |

| <b>ON-BOARD INTELLIGENCE</b>   |  |  |  |  |
|--|--|--|--|--|
| CARMEN® ANPR   | Included   |  |  |  |
| Video Analytics (Vehicle Detection, Motion Detection, Private Zones) | Included   |  |  |  |
| Trigger sources  | GPIO/ UART/ Software trigger (controlled via HTTP request) |  |  |  |

| <b>MECHANICAL DATA</b>                               |  |  |  |  |
|--|--|--|--|--|
| Operating temperature                                | -40 °C – 70 °C / -40 °F – 158 °F                     |  |  |  |
| IP & IK rating                                       | IP67 & IK10  |  |  |  |
| Dimensions (without bracket) length × width × height | 390 mm × 167 mm × 155 mm (15.4" × 6.6" × 6.1")       |  |  |  |
| Weight (without bracket)                             | 4.6 kg / 10.1 lbs                                    |  |  |  |
| In the box   | Camera with data cable, power cable, bracket, shield |  |  |  |

| <b>RADAR (OPTIONAL)</b> |               |  |  |  |
|-------------------------|---------------|--|--|--|
| Measurement Principle   | Doppler-Radar |  |  |  |
| Measurement Frequency   | 24.165 GHz    |  |  |  |

| <b>OPTIONAL ACCESSORIES</b>   |  |  |  |  |
|---|--|--|--|--|
| IO cables, FreewayCAM RAD-AR Trigger, FreewayCAM IR-LIGHT 3, Junction box |  |  |  |  |
| *internal temperature / ambient temperature: max. 55 °C (131 °F)          |  |  |  |  |



ADDRESS: ALKOTAS UTCA 41, H-1123 BUDAPEST, HUNGARY, EU  
 PHONE: +36 1 201 9650 • FAX: +36 1 201 9651  
 WWW.ARH.HU • EMAIL: SENDINFO@ARH.HU

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