eyeFOUR
Modular Platform Camera
REDUCED INFRASTRUCTURE
As an Edge-Intelligence camera, the evaluation and processing of the video analysis takes place directly in the camera. This reduces the amount of data and thus the infrastructure requirements.

MODULAR AND FLEXIBLE
The performance of the camera can be extended modularly. Various function modules, such as an Intel® Movidius™, can be connected to the camera via USB.

PLATFORM
eyeFOUR offers powerful image pre-processing and a platform for third-party algorithms. Both in software and hardware, the camera offers customization options to deliver optimal results for the application.

DIGITAL SIGNATURE
The eyeFOUR’s digital signature enables a clear assignment between stored data records and the respective camera. The cryptographic procedures used ensure tamper-proof data transfer.

SEAMLESS DOCUMENTATION
The built-in battery-buffered clock guarantees chronologically correct and time-accurate event storage even without a network connection.

CONNECTED SYSTEMS
Integration has never been so easy - because it is already prepared. Every eyeWatch camera can easily be connected to other deister electronic systems via plug & play.
eyeFOUR’s concept is to serve as a platform for innovative solutions that address real-world challenges in applications such as parking management, transportation, access control and more.

The camera can be modularly adapted to the specific requirements - both in terms of hardware and software. The aim of eyeFOUR is to offer a powerful platform that can be optimally configured for the application to reduce false alarms and produce the best results.

The eyeFOUR has a modular design and features two interchangeable image sensors for day, night, wide angle and tele. The eyeFOUR also features integrated high-performance IR LEDs, a flash memory and a USB interface for optional feature modules.

The appropriate algorithm can be integrated into the camera via an SDK - even from third-party suppliers, as the eyeFOUR is an open platform. The camera provides an already optimized video stream and the algorithm can then process it further. Thus, different algorithms can be tested and the optimal one can be used on the spot.

The eyeFOUR is a so-called Edge-Intelligence camera. It does not need a central server, complex infrastructure or downstream video processing. Everything happens in the camera. Settings can be made conveniently via the web interface, which is hosted on the camera itself. If external algorithms are loaded onto the camera, they can also host their own web applications on the camera.

- Image processing and data storage directly in the camera
- Open SDK for third-party algorithms
- Embedded Linux OS
- 2 interchangeable image sensors and optics
- Powerful embedded platform with FPGA for real-time data processing
- Integrated high-power IR LEDs
- Integratable into the entire deister solution portfolio

One Camera, all the Possibilities

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## GENERAL

<table>
<thead>
<tr>
<th>Dimension</th>
<th>124 x 224 x 100 - 150 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2.0 kg</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP65</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20…+55°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40…+70°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>5…95% relative humidity, non-condensing</td>
</tr>
<tr>
<td>Integrierter memory</td>
<td>16 GB</td>
</tr>
<tr>
<td>IR LED</td>
<td>high efficiency up to 5 watts</td>
</tr>
<tr>
<td>Mounting</td>
<td>Mast and wall mounting</td>
</tr>
<tr>
<td>Power requirement</td>
<td>24 VDC or POE+</td>
</tr>
<tr>
<td>Power consumption</td>
<td>10 watts</td>
</tr>
</tbody>
</table>

## HARDWARE

- Powerful embedded platform
- FPGA for real-time data processing
- Integration of application-specific image sensors and optics
- Image processing and data storage directly in the camera
- Efficient customer adaptations through modular design
- Digital switching outputs
- Connected System Integration into the deister product portfolio via deBus (e.g. RFID reader)

## SOFTWARE

- Easy to use user interface with all important information at a glance
- Secure remote access via Web GUI
- Event logging in internal memory
- Application-oriented software platform
- Embedded Linux OS
- SDK/API supports easy adaptation of existing application programs for use on the eyeFOUR camera
- One platform, multiple applications: ANPR/ALPR, Object Detection, Face Recognition, ...

## CAMERA

<table>
<thead>
<tr>
<th>Lenses</th>
<th>M12, application dependent focal length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image sensors</td>
<td>Application-dependent selection, integration of different sensors in one camera module possible</td>
</tr>
</tbody>
</table>

## VIDEO ENCODING

<table>
<thead>
<tr>
<th>Compression</th>
<th>H.264 and MJPEG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>up to Full HD</td>
</tr>
</tbody>
</table>
Access Control

eyeFOUR automatically captures the license plate in real time, compares or adds it to a predefined list, and then takes appropriate action such as opening a gate or generating an alarm. The integrated high-power IR LEDs with a range of up to 10 m enable operation even in very low ambient light conditions.

Traffic Monitoring

To ensure that only authorised vehicles move in the monitored areas, warnings can also be issued on the basis of license plate recognition when a vehicle on the watch list passes by. In addition to the license plate, vehicle type and color can be recognized to make identification even more reliable.

Toll Control

Ensure fluid traffic at toll booths and roads. The fast and reliable identification of the license plate enables good traffic flow and reliably records the vehicles for accurate billing.

People Identification

Outdoor scenarios require efficient camera algorithms for the reliable identification of people due to their richness of detail. Especially in safety-relevant environments, the identification of people is a basic prerequisite to ensure comprehensive protection and security.
The eyewatch cameras can be seamlessly integrated into the entire deister electronic „Connected Systems“ portfolio. From access control, smart storage and electronic key cabinets to RFID vehicle identification, everything can be managed centrally with one software package. The entire system is automated with powerful workflows. One example would be fleet management. It can be defined that all drivers not only need an access permit, but must also properly remove and return the vehicle keys from the electronic key cabinets so that the camera opens the barrier at the entrance and exit. Comprehensive reports, in which all events from all systems can be presented together in chronological order, provide a seamless overview of all processes and procedures in the system. Even short video streams can be included in the report.

### ConnectedSystems
The Benchmark in Terms of Integration

eyewatch develops and produces intelligent IP video systems based on the Edge Intelligence concept. The platform concept and the decentralized intelligence of our camera system are always at the center of attention. As a startup, we belong to the deister group of companies, whereby a seamless integration with the existing deister solution portfolio extensively expands the application possibilities of our cameras.

For more than 40 years, deister electronic has been an internationally modern and sustainably managed family-owned company with headquarters in Barsinghausen.

We develop secure automation solutions that enable our customers to automate processes, reduce operating costs and increase security levels.

**eyewatch**
A deister electronic GmbH Company

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