

## Solution Brief

# Generic Fisheye Object Detector

Use edge AI to detect objects on fisheye cameras turning data into valuable information



ai.bites Generic Fisheye Object Detector application provides an instant solution for detecting objects of certain classes (e.g. persons) on video streams from “fisheye”-optics cameras. The application is tailored to run at the edge either on, or close to the camera turning high-volume data into high-value metadata information that can be sent to any on-premises or cloud application. Because all computer vision is done right at the edge and in real-time, the network load is reduced by 99%+. In case the use-case requires sending an event driven snapshot (e.g. persons detected in or outside a configured area of interest (“Aoi”)) all or non-incident related personal data, such as faces, are automatically blurred to comply with data privacy rules.

With ai.bites Generic Fisheye Object Detector Application customers can determine the appearance of one or multiple object classes in real-time at the edge from IP camera video streams without storing raw video data. The highly densified result metadata is then safely sent through MQTT in JSON format to any cloud or on-premises customer application. Optional snapshots are sent to a configurable destination, as AWS S3. For a list of other supported object classes please contact us.

The solution allows to detect specified and configurable object classes either on the complete frame or within configured Areas-of-Interest (“Aoi”). To ease the Aoi setup, the solution comes with a tooling that allows an easy setup of the Aoi's. The tool can be either run directly from the AI Application or can be integrated via API into custom centralized workflows. All configuration is persisted in the AI Application itself and can be exported and imported to a central configuration repository for configuration management.

The solution is available as ready to deploy software artefacts (AI Application). Depending on the target system it either comes in Docker format or as a binary executable. It is supported on CPU and GPU based systems or as AI Model only for certain camera types like Cisco Meraki. Figure 1 lists the supported deployment methods. Customers purchasing our AI Appliance can transfer-train/learn custom object classes using our semi-automated Training Data Balancing and Annotation Tools within the AI Appliance and run the results against our Ground Truth Tooling.

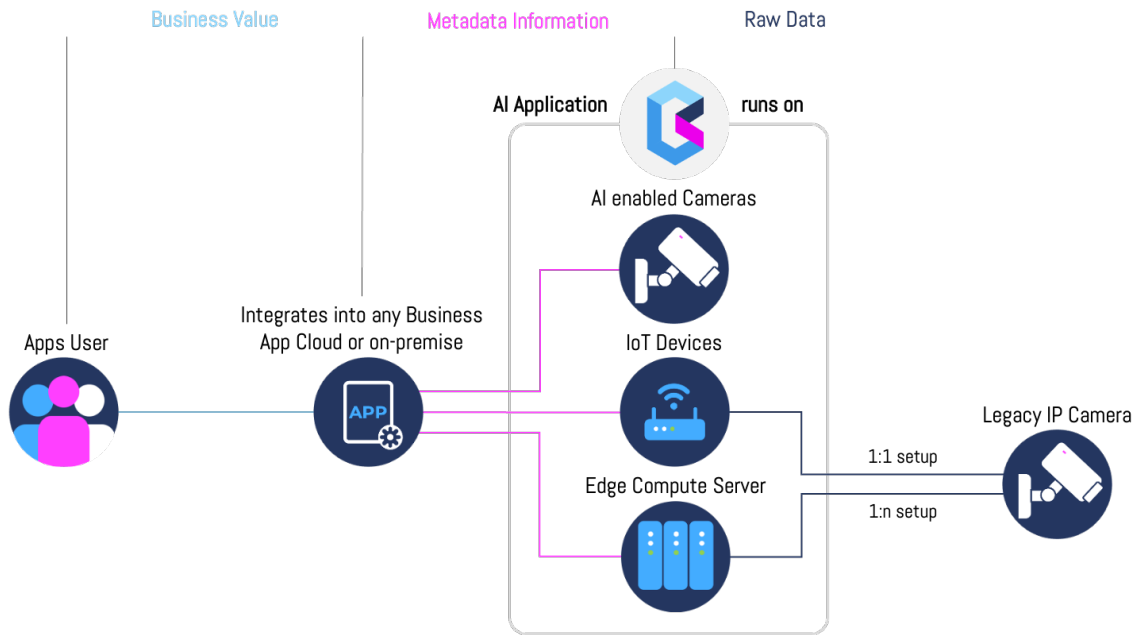


Figure 1 supported deployment methods

The solution is provided Full Managed Service based on a monthly subscription and instance volume tier pricing or included as an enterprise license in the monthly AI Appliance subscription fee. It can be either purchased to be integrated standalone in a new or existing technology stack or as part as a complete solution offering from our Solution Partner Platformity. For trial and quote inquiries, please contact us.

Table 1 below lists tested and verified setups for the usage with ai.bites Generic Fisheye Object Detector.

Partner Type	Partner	Edge Compute Hardware	Legacy Edge Cameras
Solution Partner	<a href="#">Platformity</a> (Data & Edge Platform)	Solution Partner supported edge compute hardware	Solution Partner supported legacy fisheye edge cameras
Technology Partner	<a href="#">Cisco</a>	IoT Devices <ul style="list-style-type: none"> <li>• IR829</li> <li>• IR1101</li> <li>• IR1800</li> <li>• IC3000</li> <li>• IE3400</li> </ul> Edge Compute Server <ul style="list-style-type: none"> <li>• UCS-B</li> <li>• UCS-E</li> <li>• UCS-M</li> <li>• UCS-X</li> </ul>	Cameras <ul style="list-style-type: none"> <li>• Cisco Meraki MV32</li> <li>• Any legacy fisheye IP Camera</li> </ul>
	<a href="#">Cradlepoint</a>	IoT Devices <ul style="list-style-type: none"> <li>• R1900</li> <li>• IBR1700</li> </ul>	Cameras <ul style="list-style-type: none"> <li>• Any legacy fisheye IP Camera</li> </ul>
	<a href="#">Rebotnix</a>	IoT Devices <ul style="list-style-type: none"> <li>• GUSTAV AGX Orin</li> <li>• GUSTAV TX2 NX</li> <li>• GUSTAV Xavier NX</li> <li>• GUSTAV Xavier AGX</li> <li>• GUSTAVi</li> </ul> Edge Compute Server <ul style="list-style-type: none"> <li>• GUSTAV Quadro</li> <li>• GUSTAV Media</li> </ul>	Cameras <ul style="list-style-type: none"> <li>• Any legacy fisheye IP Camera</li> </ul>
Marketplace Partner	<a href="#">Microsoft</a>	IoT Device/Edge Compute Server <ul style="list-style-type: none"> <li>• Edge compute devices from Azure Device Catalog</li> </ul>	Cameras <ul style="list-style-type: none"> <li>• Any legacy fisheye IP Camera</li> </ul>

*Table 1 ai.bites Generic Fisheye Object Detector supported and verified setups (Note: the above list is not exhaustive, but shows tested and verified hardware)*