

Avoid accidents with AI-powered person detection

2D camera for mobile machines

- Reliable person detection at a range of up to 30 metres
- Robust functionality even in bright sunlight or twilight
- Built-in dashcam function with 5 GB of recording storage
- Customisable program logic
- OEM-specific programming and AI models can be implemented



IP6K9K

AI TECHNOLOGY

PERSON DETECTION

ifm – close to you!

Enhanced safety with AI-powered person detection

With mobile machines that are difficult to manoeuvre, reliable person detection is essential to preventing accidents involving people. The AI-based 2D camera enables effective area and rear-area monitoring and alerts drivers at an early stage as soon as a person enters the working or danger zone. It is specifically designed to prioritise the detection of persons.

The robust die-cast aluminium housing and outstanding resistance to vibration and shock ensure that the camera operates reliably even under extreme conditions. It is suitable for use on machinery such as forklift trucks, excavators, wheel loaders, road rollers and refuse collection vehicles and has a detection range of up to 30 metres.

Powerful AI processing right inside the camera

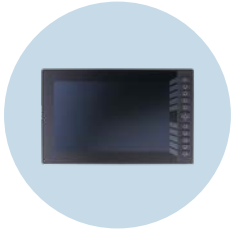
All signal and image processing takes place directly inside the camera so no external processing unit is required. For processing of the AI-based algorithms, it features a powerful processor with an integrated Neural Processing Unit. This ensures that people can be detected even in challenging situations, such as when they are lying on the ground, wearing dark clothing, or in difficult lighting conditions. If the front lens is dirty to the extent that safety is compromised, this is also detected and reported.

Parameter setting, updates and future AI enhancements can be carried out easily via the ifm Vision Assistant or the integrated web server. A customer-specific programming is also possible. In addition, relevant events can be recorded and saved using the dashcam function.

Description	Order no.
Digital Ethernet camera with AI person detection	**O2M500**

Technical data		
Resolution	[Pixel]	1920 x 1440 (3 MP)
FOV horizontal x vertical	[°]	148 x 118
Sensor type		CMOS (HDR)
Image repetition frequency	[Hz]	30
Simultaneous video streams		2
Maximum latency	[ms]	60
Operating voltage	[V DC]	12/24
Power consumption	[W]	< 6
Ambient temperature	[°C]	-40...85
Interface		1x CAN (CANopen, SAE J1939) 1x Fast Ethernet (TCP, UDP, RTP, RTSP, H.264, H.265, MJPEG)
Connection		Jumper cable 0.6 m with M12 connection for Ethernet (D-coded), M12 connection for CAN and power supply
Approval		E1, type approval according to the UN ECE R10 regulation
Protection rating		IP6K7, IP6K9K

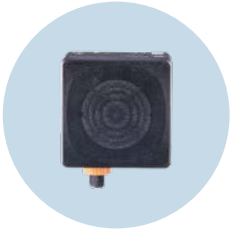
BEST FRIENDS



ecomatDisplay
Dialogue module with integrated controller



I/O module for camera
For integration into systems without a CAN bus



Radar distance sensor
Reliable detection of distance and speed

For further technical details, please visit: www.o2m-ai.ifm

We reserve the right to make technical alterations without prior notice. · 11.2026
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