TURRET CAM AI

IP SAFETY AND FIRE CAMERA

SAFE Turret Cam AI is a versatile network IP camera combining requirements in the field of fire protection, security, video verification, and surveillance of monitored spaces. Equipped with two sensors and a range of advanced features such as flame and temperature detection, high-resolution video verification, intercom, intelligent visual and acoustic warning, or IR illumination for night vision. The camera can operate completely autonomously, as part of the FireSAFE fire system or as part of the ProSAFE security system.



- Intelligent flame detection up to a distance of 10 m
- Intelligent thermal detection with visible temperature spectrum
- Video surveillance and verification (motion, thermal detection, zone of interest ...)
- High QHD 4MP resolution with 4mm focal length
- Horizontal field of view of up to 90°
- Smart IR illuminator with automatic adjustment
- Live images in wide dynamic range conditions
- Intercom function, integrated microphone and speaker
- Voice warning system
- Advanced alarm functions and input/output port
- Support PoE / 12V DC power supply
- IP66 rated for installation in outdoor environments

Technical specification - TURRET CAM AI

Model designation

SAFE TURRET CAM AI	SAFE TURRET CAM AI EAN code - 0728204234891

Basic Information

Model Designation	SAFE 64220
Design	White

General Properties of the Camera

Classification	Outdoor / indoor IP camera in turret design
Type of Device	Wired
App Compatibility	FireSAFE, ProSAFE
Hardware Compatibility – Hubs	FireSAFE - 50HUB-WRF, 100HUB-WLRF; ProSAFE - Hub 2 Plus LTE SAFE 38300
Temperature Detection	Yes
Flame Detection	Yes
Flame Detection Distance	10 m, flame size 10 × 10 cm
Integrated Microphone	Yes - built-in digital microphone
Integrated Speaker	Yes - built-in speaker
Alarm Signalization	Acoustic and light (selectable settings)
Privacy Masking	Yes (4 areas)
Recording storage	NVR (HDD), FTP, NAS, SFTP
Connection	Ethernet, 100 Mbps
Power Supply	12 V DC (±30%) / PoE
Power Consumption	Base 1.8 W, maximum 3 W
Interoperability	ONVIF, GB/T28181, CGI
Browser Support	IE: IE 9 and later (Edge is not supported); Chrome: 42 and older; Firefox: 42 and older
Users / Guests	Up to 10 users or guests simultaneously (total bandwidth 100 MB)
Capacity	Maximum of 10 users
Security	User name and password authorization, attached MAC address, encrypted HTTPS protocol, IEEE 802.1x, controlled network access
Fault Detection	Network disconnection detection; IP address conflict detection

Audio and video

Video Compresion	H.265, H.264, H.264H, H.264B, MJPEG
Visible Resolution	Main stream: 4M (2688 × 1520), 1080P (1920 × 1080), 1.3M (1280 × 960), 720P (1280 × 720), default: (1920 × 1080); sub stream: D1 (704 × 576), VGA (640 × 480), CIF (352 × 288), default: (704 × 576)
Visible Video Frame Rate	Main stream: 1 fps to 25 fps adjustable, default: 25 fps; sub stream: 1 fps to 25 fps adjustable, default: 25 fps

A Smart Camera Is a Smart Security

SAFE Turret Cam AI is a modern and versatile network IP camera that was designed to meet a wide spectrum of security and fire protection requirements. This camera represents an ideal solution for users looking for a device capable of providing not only surveillance of the monitored area, but also advanced features such as flame detection, temperature measurement, video verification, or intelligent alerting. Thanks to its advanced technologies and features, SAFE Turret Cam AI is suitable for various types of applications, from industrial facilities and warehouses to commercial buildings, offices, or even residential properties.

Two Sensors and Double Protection

One of the key features of this camera is its ability to combine multiple functions into a single device, which makes it exceptionally versatile and efficient for various types of applications. The SAFE Turret Cam AI is designed to meet demanding requirements for modern security technology, thanks to its unique construction and advanced features. This camera is equipped with two sensors – a visible light sensor and a thermal sensor – which enables it to provide not only classical monitoring of the area of interest, but also advanced functions such as flame detection and temperature measurement. In this way, the camera is able to ensure comprehensive surveillance while also contributing to the prevention of dangerous situations, such as fires or other thermal anomalies. Each sensor transmits on a separate channel, so the camera is dual-channel and this must be taken into account when integrating it with an NVR.

More on the web
smart-safe.eu/firesafe/en/produkty/safe-turret-cam-ai

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Technical specification - TURRET CAM AI

Audio and video

Sound Compression	MPEG2-Layer2, G.711a, G.711mu, AAC, PCM, G.722.1, G.726
Image Encoding Format	JPEG
Sound Sampling	8 kHz, 16 kHz

Thermal Chip Characteristics

Thermal Sensor	Uncooled VOx (vanadium oxide) detector
Effective Pixels	120 (W) × 90 (H)
Pixel Pitch	17 µm
Spectral Range	8 µm to 14 µm
Sensor Sensitivity	NETD < 60 mK (f/1.0, 300 K)
Focal Length	1.2 mm
Angle of View	Horizontal: 90°, vertical: 67.5°
Thermal Focus Control	Fixed focal point
Minimum Focusing Distance	0.5 m
Aperture	F1.1
Temperature Detection Distance	10 m (recommended distance)
Thermal Noise Reduction	3D NR
Image Flipping	Normal, corridor mode, image mirroring
Colour Palette	12 adjustable pseudocolours
Temperature Detection Range	-10 °C to +200 °C
Temperature Measuring Unit	Adjustable (°C and °F)
Temperature Detection Accuracy	Max. ±5 °C, ±5%
Temperature Detection Modes	Real-time spot temperature measurement; three rules simultaneously: points, lines, polygons; temperature alarm; cold and hot spot alarm

Optical Chip Properties

Optical Sensor	1/2.7" CMOS
Resolution	Up to 2688 × 1520 px @ 25 FPS
Optical Properties of the Sensor	4 Mpx
Focal Length	4 mm
Objective Type	Fix
Visible Focus Control	Fixed focal point
Image Flipping	Normal (0°), corridor mode (90°/270°), mirror image (180°)
Exposure Compensation	Yes
Angle of View	H: 85°, V: 44°, D: 99°
Minimum Focusing Distance	1 m

Optical Sensor for Close Monitoring

It is used to capture standard images in high resolution, which enables detailed monitoring of the monitored area. This sensor provides live footage, which is ideal for routine overview monitoring purposes, such as tracking the movement of people, animals, vehicles, or other objects in real time. Thanks to high resolution, it is possible to easily identify various types of details that may be key, for example when investigating certain types of incidents. The visible sensor is therefore essential for everyday surveillance of areas of interest, whether it is public spaces, industrial facilities, or private properties.

Thermal Sensor for Monitoring Temperature Anomalies

The second sensor, thermal, brings a completely new dimension to monitoring. This sensor is capable of detecting temperature differences in the monitored space, which is key to identifying potential risks such as overheating equipment, batteries, heat leaks, or even incipient fires. Thermal imaging enables monitoring of temperature anomalies that would otherwise go unnoticed by the human eye or through a standard visible light sensor. This feature is particularly useful wherever photovoltaic battery storage is located, where electric vehicles, e-bikes, e-scooters, batteries, or similar devices are stored, parked, or charged. In short, anywhere early detection of temperature changes can prevent serious property damage or endanger human lives.

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Optical Chip Properties

Aperture	F1.6
Scanning System	Progressive
Lowest Light Level	Colour: 0.0052 lx, B/W: 0.0028 lx, 0 lx (active IR)
Visible AGC	Automatic or manual
Visible Noise Reduction	2D NR, 3D NR
S/N Ratio	≥ 55 dB
White Balance	Automatic, indoor, outdoor, tracking, manual, natural, street lighting
Electronic Shutter Speed	1/3 s-1/100000 s (manual/automatic)
BLC Function	Yes
WDR Function	Yes - DWDR
HLC Function	Yes
Day/Night Modes	Automatic (ICR); colour and black & white
Type of Illuminator	Adaptive infrared illumination (1 IR LED)
Illumination Control	Automatic/manual
Distance of Illumination	Up to a distance of 15 m

Ports

Network Port	1x RJ-45 PoE 10M/100M Ethernet port
Alarm Input	1x input channel: 5 mA, 3 V to 5 V DC
Alarm Output	1x Output channel: 300 mA, 12 V DC
Alarm linkage	Switch activation - output / e-mail / snapshots

Environment

Operating Temperature	-10 °C to +55 °C
Operating Humidity	Up to 95% relative humidity without condensation
Storage Conditions	Temperature: -20 °C to +70 °C; humidity: 5% to 95% relative humidity without condensation

General

Dimensions	ø109.9 mm × 90.1 mm
Degree of Coverage	IP66
Weight	350 g
Package Dimensions	157 × 157 × 138 mm
Package Weight	500 g
Weight of the carton	11.4 kg
Carton Dimensions	809 × 335 × 311 mm
Quantity per carton	20
Compliance	CE; ČSN EN 50291-1:2018; ČSN EN 50291-1:2018/AC:2021
Warranty	36 months

Intelligent Flame Detection for Locating Incipient Fires

SAFE Turret Cam AI is a modern IP camera that offers, among other things, advanced flame detection and tracking functions, capable of detecting flames up to a distance of 10 m with a flame size of 10 x 10 cm. This means it is able to reliably detect even relatively small flames at a considerable distance. The camera is thus an ideal tool for monitoring and fire prevention in various types of environments where flame detection and its movement can be crucial, especially in situations where it is necessary to quickly locate a fire and respond promptly to emerging dangers. Examples include garages, homes, warehouses, technical rooms, or other risk areas where there is a potential fire hazard.

It Can Manage Even Where Others Fail

The SAFE Turret Cam AI thermal sensor is one of the most modern and efficient tools used today in the field of monitoring and security. Its capabilities are particularly useful in situations where visibility is significantly reduced, such as at night, in dense fog, rain, or other adverse weather conditions. Unlike standard surveillance IP cameras, which are dependent on lighting conditions or where the human eye fails, the thermal sensor comes as an invaluable assistant. Thanks to its technology, which is based on the detection of thermal radiation, this sensor is able to reliably identify objects that emit heat, even in complete darkness or in situations with no visibility.

More on the web
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