



FireCatcher[®] CAMERA



Video smoke and flame detection for critical environments

Protect your facility with a camera that warns you of smoke and flames

As a safety professional, you want to protect your business facility or infrastructure as much as possible. By using an intelligent FireCatcher Camera, you can enhance your fire safety with visual recognition of fire outbreaks in the earliest stage. The FireCatcher Camera detects smoke or flames and integrates seamlessly with your fire alarm control panel and video surveillance system to generate an early warning. Visual verification in the camera image allows you to assess the danger and react fast. A FireCatcher Camera is your best guarantee to be ahead of the fire and to prevent worse from happening.

- ☒ Flame detection
- ☒ Smoke detection
- ☒ Fire Alarm Control Panel connection
- ☒ Advanced fine-tuning
- ☒ Configurable detection zones
- ☒ Burnt-in metadata overlay
- ☒ Tampering & image quality control
- ☒ Activity monitoring

FireCatcher[®]

CAMERA

Fast smoke and flame detection

The FireCatcher Camera has Araani's advanced analytics software inside that continuously monitors the image for signs of smoke or flames. This will detect fire at the source without the need for direct contact with heat or smoke, allowing fast detection.

Reliable detection

The FireCatcher Camera is CNPP and BOSEC-certified as primary fire detector. Image monitoring algorithms are continuously verifying the quality, contrast, brightness and continuity of the video stream. Movement detection and tampering detection are further validating the video integrity.

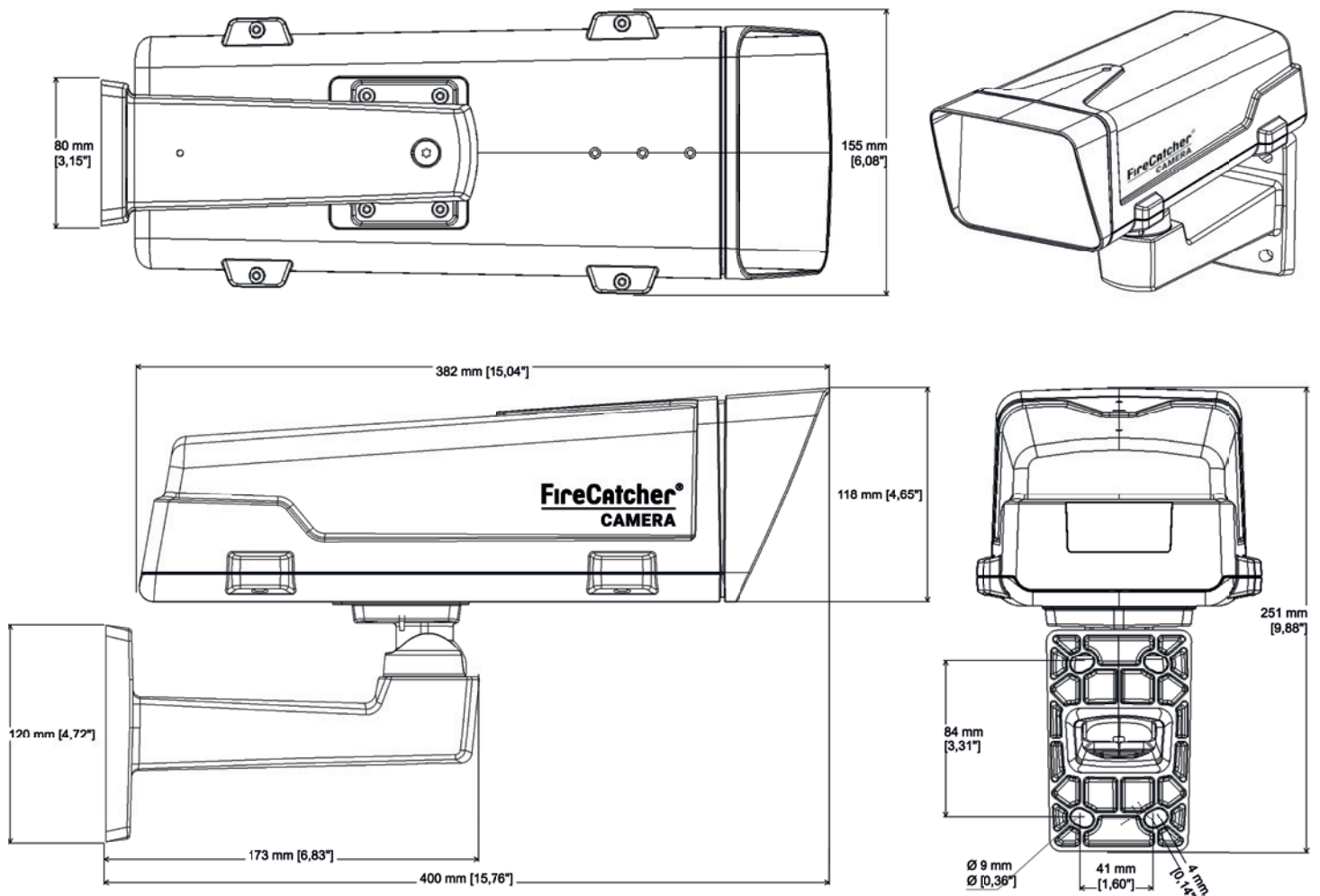
Visual verification

The streaming video of the FireCatcher Camera allows to verify and analyse any emergency situation immediately without the need to be on-site or entering the danger area.

Easy installation and integration

The FireCatcher Camera is built on a high-quality field-proven Axis camera which is easy to install and integrates seamlessly with a variety of video management systems. The integrated relays outputs allow to connect to standard fire alarm control panels.

Mechanical drawings



Technical specification

Functional	
Detection	<ul style="list-style-type: none"> SMOKE: detect smoke clouds and dispersed smoke FLAME: detect flames
Event types	<ul style="list-style-type: none"> SMOKE ALARM = smoke detected FLAME ALARM = flame detected FIRE ALARM = smoke and/or flame detected FAULT SIGNAL = problem with contrast, tampering, image quality or streaming issue. Detection not guaranteed OPERATIONAL SIGNAL = normal condition SUPERVISORY SIGNAL = smoke detection temporarily suspended based on activity monitoring or external trigger RECALIBRATING = learning background
Tampering & image quality control	<ul style="list-style-type: none"> Blocked / blurred image Lens dirty Camera out of focus Camera moved (field of view changed)
Stream monitoring	Malfunction or loss of input stream will result in fault signal.
Activity monitoring	Option to suspend smoke detection as long as there is movement in the scene. Will activate SUPERVISORY SIGNAL.
Configuration	Advanced configuration and fine-tuning through web-based interface
I/O	
Outputs	<ul style="list-style-type: none"> 4 x differential relay contacts 30VDC / 2A - 60W max, resistive load only
Output 1	Normal open, configurable Fire – Smoke – Flame, default = Fire
Output 2	Normal open, configurable Fire – Smoke – Flame - Supervisory, default = not configured
Output 3	Normal closed; Fault
Output 4	Normal open, configurable Fire – Smoke – Flame - Supervisory, default = not configured
Latching	Configurable OFF / ON (1 - 120 sec)
Connector	Screw terminals 0,25 - 1,5 mm ² solid or flex
Optical	
Image sensor	1/2,8" progressive scan RGB CMOS
Resolution	1920 x 1080 (HDTV)
Lens	<ul style="list-style-type: none"> i-CS varifocal 2,8 - 8,5 mm Horizontal field of view 107° - 42° Remote focus and zoom
Min. illumination	1 lux
Max. illumination	120.000 lux
Light ratio	Brightest/darkest = max. 1000:1
Video	
Compression	<ul style="list-style-type: none"> H.265 (MPEG-H Part 2/HEVC) () H.264, (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG
Resolution	1920 x 1080 (HDTV)
Environmental	
Operating temperature	<ul style="list-style-type: none"> BOSEC: -40 °C to 70 °C CNPP: -25 °C to 70 °C (EN 60068-2-1, EN 60068-2-2)
Storage temperature	-40 °C to 65 °C (-40 °F to 149 °F)
Operating humidity	10–100% RH (condensing) (EN 60068-2-78)
Storage humidity	5-95% RH (non-condensing)

System	
CPU/GPU	ARTPEC-7
Memory	1 GB RAM, 512 MB Flash
Network	
Ethernet	10/100/1000 Base-T, auto-sensing, half/full duplex Do not connect to PoE capable switch!
Electrical	
Power supply	12–29 V DC
Consumption	typical 6,2 W at 20°C; max. 17,6 W
Power connector	2-wire push-in connector 0,25 - 1,5 mm ² solid or flex
Conduit entry	Through wall mount feed 2 entries with cable gasket, 4-9 mm [0,16 - 0,35 in]: <ul style="list-style-type: none"> 1 x power + I/O (4 to 8 wire + shield) 1 x Ethernet (8 wire + shield)
Mechanical	
Dimensions	400 x 155 x 251 mm (15,04 x 6,08 x 9,88 in)
Weight	2,725 kg (6 lb)
Material	Impact-resistant polymer enclosure with aluminium base
Colour	White NCS S 1002-B
Ingress protection	IP66
Impact protection	IK10 housing
Included accessories	<ul style="list-style-type: none"> Wall mount bracket Weather shield RJ45 protector sleeve Spare cable gasket Tools: Torx® T20 screwdriver; T30 screw bit IK10 tool All mating connectors
Certifications & approvals	
EMC	IEC 62599-2, EN 50130-4/A1:2014, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN61000-4-6
Fire safety	CNPP – SPECIFICATION TECHNIQUE – ST LPMES – DEC.18.005B – 20/07/2022 FIRE – Type: Smoke and/or flame detection.IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IS13252 BOSEC: BOSEC Mark Rules, NTN 177-C:2018, NTN 177-L:2019 - Video Smoke Detectors – Part L: Additional requirements to ISO/TS 7240-29, ISO/TS 7240-29:2017 –Type A – Smoke Detector, Type B – Flame Detector
Environment	<ul style="list-style-type: none"> IEC/EN 60529 IP66, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 62262
ONVIF	ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S and ONVIF® Profile T, specification at onvif.org
Sustainability	<ul style="list-style-type: none"> PVC free RoHS WEEE
Other	
Warranty	FireCatcher Camera comes with a 5-year service contract, including: <ul style="list-style-type: none"> Camera warranty. Software maintenance releases. Software updates.

Detection sizes

The minimum size of a flame or smoke cloud to be detected is defined as a percentage of the total field of view.

Minimum detection size	
Smoke	2% of field of view
Flame	0,01% of field of view

Ambient smoke is detected as a contiguous surface at any location in the field of view, even when the fire source is not visible. Smoke detection is independent of direction of movement or colour.

The minimum dimensions of a flame or smoke cloud depend on the distance to the camera and the zoom setting of the camera. The tables below provide a theoretical estimate of minimum sizes in ideal circumstances (open space, proper illumination, no occlusion by objects, no air draft). Consider your local environment and/or consult with your installer for a more detailed evaluation.

Min. smoke width (at aspect ratio 3:1)	Viewing angle		
	45°	60°	90°
Distance to fire = 15 m	0,7 m	1,0 m	1,4 m
Distance to fire = 25 m	1,2 m	1,6 m	2,4 m
Distance to fire = 35 m	1,7 m	2,3 m	3,3 m

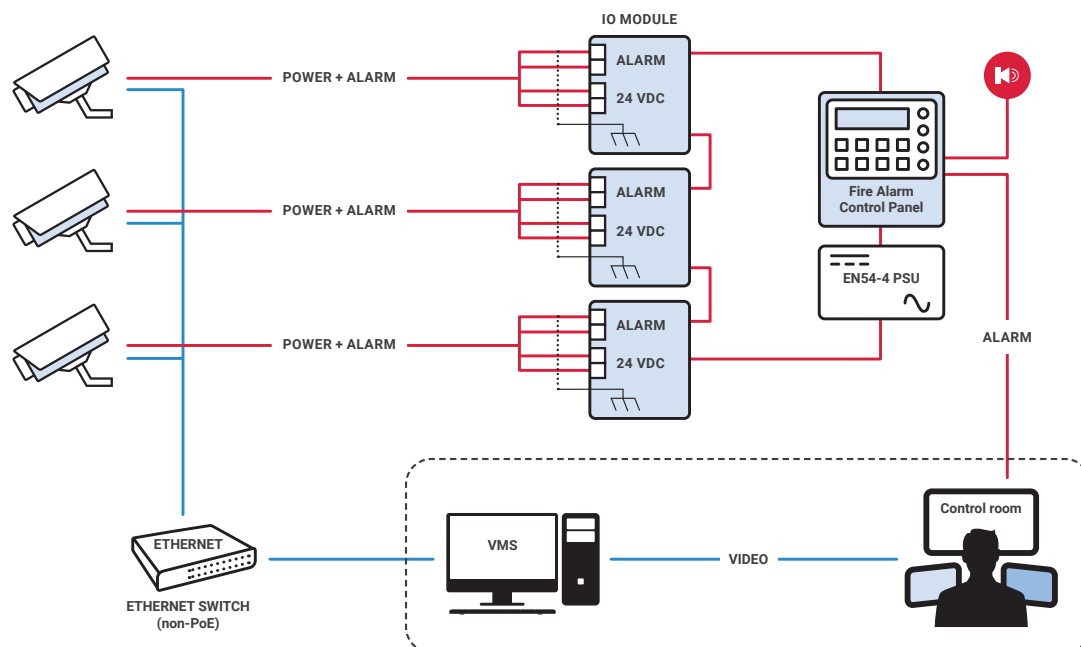
Min. flame size (at aspect ratio 1:1)	Viewing angle		
	45°	60°	90°
Distance to fire = 15 m	9 cm	12 cm	18 cm
Distance to fire = 25 m	15 cm	21 cm	30 cm
Distance to fire = 35 m	21 cm	29 cm	42 cm

Outputs

Output 1, 2 and 4 are configurable. States below are corresponding to default settings in which fire alarm is assigned to output 1 and fault signal is assigned to output 3. If the connecting equipment allows for additional signals, output 2 and 4 can be used to differentiate between flame and smoke or for a supervisory signal output.

Situation	OUT1	OUT2	OUT3	OUT4
Operational	OPEN	OPEN	CLOSED	OPEN
Smoke detected	CLOSED	OPEN	CLOSED	OPEN
Flame detected	CLOSED	OPEN	CLOSED	OPEN
Fault	OPEN	OPEN	OPEN	OPEN
Software malfunction	OPEN	OPEN	OPEN	OPEN
Hardware malfunction	OPEN	OPEN	OPEN	OPEN

Connection diagram



Contact

Araani NV - Belgium | Luipaardstraat 12 | 8500 Kortrijk, Belgium | tel: +32 (0) 56 49 93 94

Araani NV - France | 135, Avenue Roger Salengro | 59100 Roubaix, France | tel: +33 (0) 6 50 30 42 35

Araani NV - MEA | One JLT, Floor 6, suite 208 | JLT, Dubai, UAE | tel: +971 56 979 5142

Araani NV - North Africa | 3, Pl de Navarre Imm San Francisco | Niv 2 - Num 9 | 90000 Tanger, Morocco

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