XTRALIS VIS-IR™
FAILSAFE BI-SPECTRAL THERMOGRAPHY DETECTOR

Description



The Failsafe Thermography Detector (FTD) is a bi-spectral (IR & Visual) smart edge device that has been specifically designed for early warning heat-detection. It can directly communicate with Fire Alarm Control Panel (FACP) for Pre-Alarm, Alarm and Fault conditions. The thermography detectors provide fire detection solutions where traditional smoke/fire detectors cannot cope with high smoke and dust conditions as part of normal operating conditions. Their applications target the critical infrastructures and challenging environments such as: waste recycling, tunnels, machine and process supervision, power stations, etc.

Operation

Every object above 0° Kelvin (-273 °C or -459 °F) emits infrared energy, invisible to the human eye. Long wavelength IR microbolometers can detect this energy and feed as electrical signals to the processing unit. The measured IR/heat is visualized in artificial colors on screen. The heat intensity across surfaces and objects is measured and displayed on pixel level. This allows to exactly pinpoint the location of a developing heat source.

The system allows to set various alarm levels in several regions of interest (ROI) allowing to signal both pre-alarms and alarms through on-board relays. Thermal imaging technology is contactless and non-invasive. The detector continuously supervises for various fault conditions and signals these via an onboard failsafe relay. The FTD range detectors connect very fast and are user-friendly to any industry standard FACP in the same way traditional smoke/fire detectors do. The bi-spectral camera allows visual camera as needed by switching from IR mode to Visual mode.

Configuration

For an accurate detection, FTD range allows several regions of interest to be set with different detection levels to suit a wide range of environments. The system allows for alarm delays and security temperature per ROI.

Next to the relay outputs, the detectors feature Ethernet out for rich data to powerful management software.

They also offer an SD card slot for local storage of alarm snapshots and/or video clips.

Features

- Bi-spectral – IR & visual
- On-board pre- alarm, alarm and fail-safe fault relay outputs
- Sensor resolution 384 x 288 pixels
- Minimum area size detected 3x3 pixels
- Detection temperature range -5°C to 450°C
- Fixed temperature and Rate of Rise Pre-Alarms and Alarms
- 3 different lenses/FOV
- 2 inputs (Reset and Air Purge Fault)
- Tri-color front LED for status signaling
- Remote LED output
- Simple and user-friendly connection
- IP66
- Operation on 24 VDC
- Pluggable connection and terminals

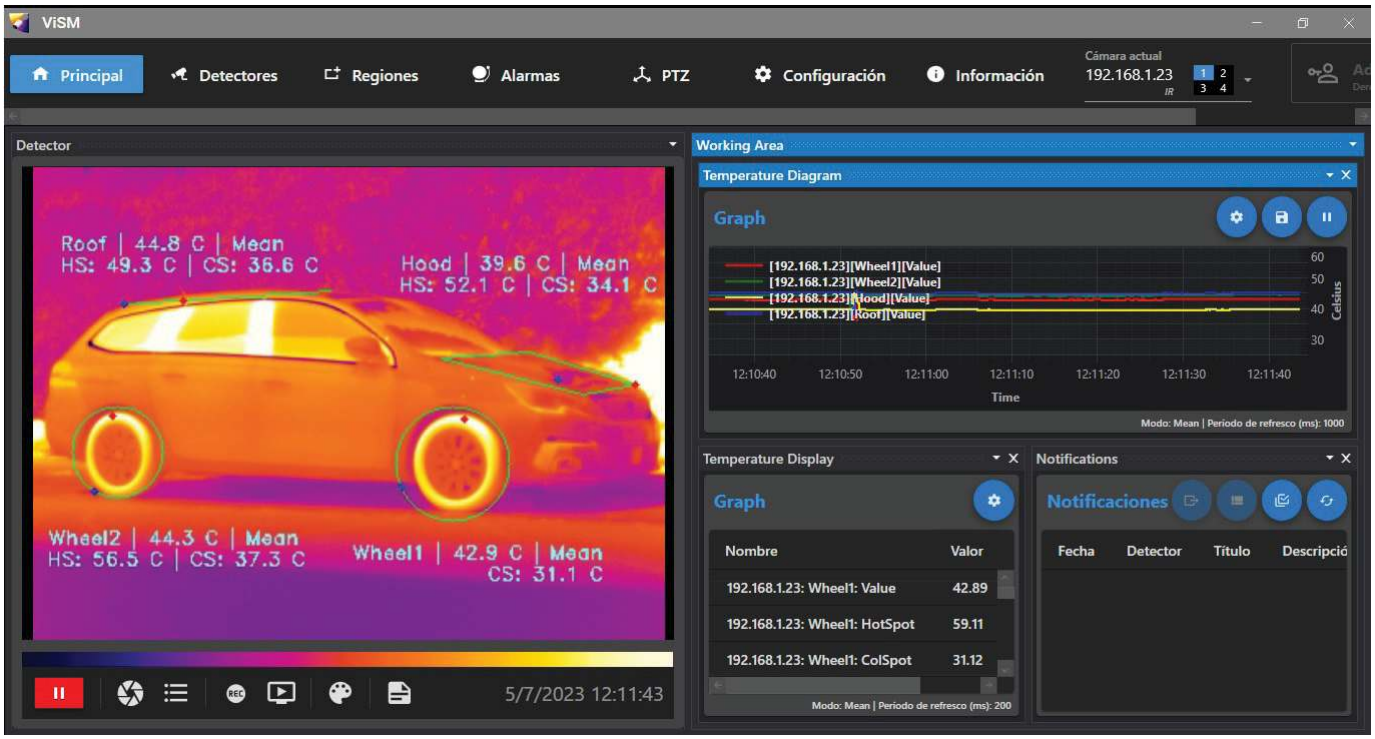
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ViSM (VIS-IR Software Management)

Xtralis ViSM can be used to configure and monitor an installation (up to 8 FTD) in real time. It is easy-to-use and has been designed to provide operator complete control. The software allows to set the detection ROI, different detection area settings (spot, line, polygons, etc.), pre-alarm and alarm levels, color scheme selection, logging and communication. While the detectors fully operate on their own, very useful diagnostic data can be collected from the detectors for further analysis.

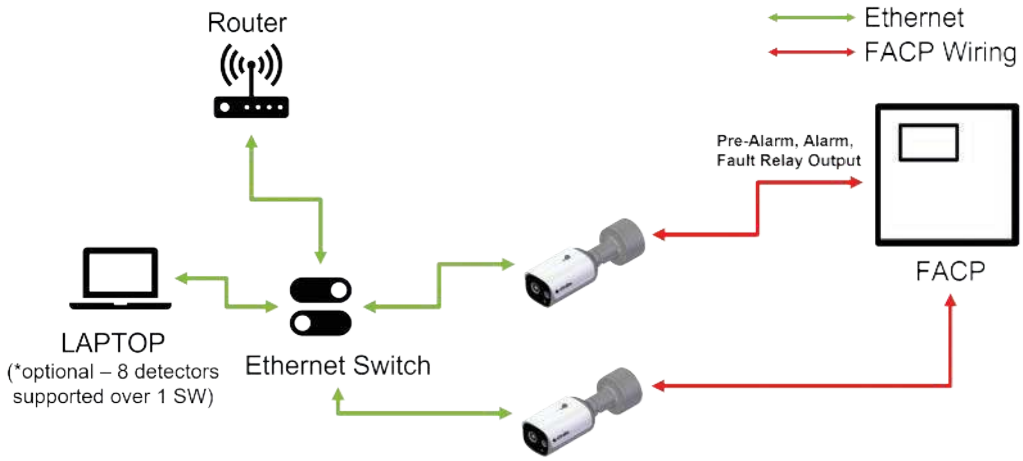
On screen both the thermal and video image are displayed with the target temperatures. Graphic representations of the temperature time diagram and event notifications are displayed.

The historic alarm and fault log can be consulted as well replaying the recorded snapshots and video of the alarms.

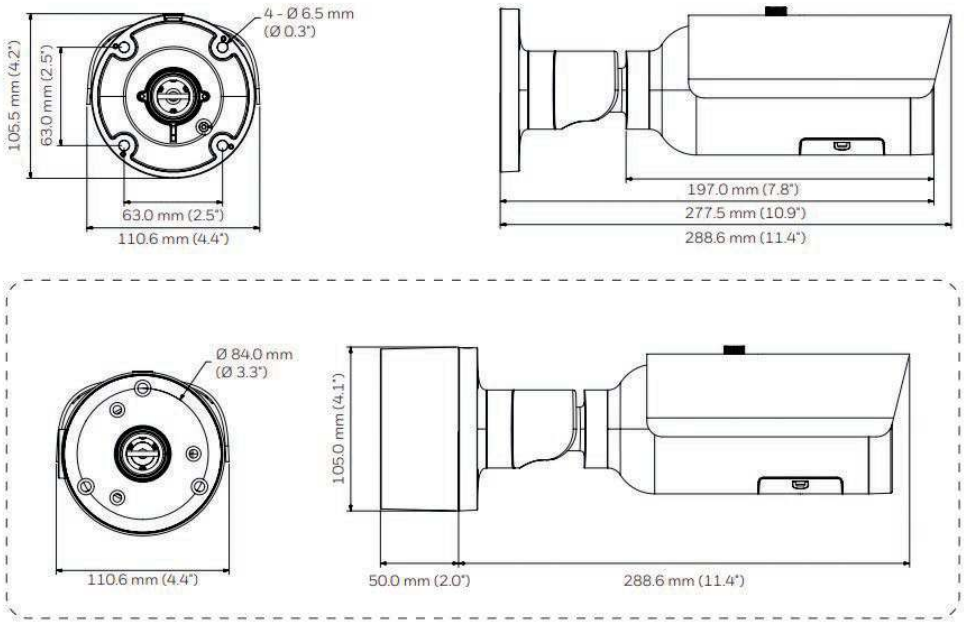


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Basic System Configuration



Dimensions



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TEHNICAL SPECIFICATIONS

Specifications

IR Camera	**Resolution:** 384x288 **Accuracy:** +/-2°C up to 100°C, +/-2% (100°C to 450°C) **Detection Temperature Range:** -5°C to 450°C **NETD:** <50 mK **Pixel Pitch:** 17 µm **Frame Rate:** 30 fps **F Number:** F# 1.2 **FOV & Lenses:** 22°x16°/17mm, 42x31°/8,9mm, 88°x65° /4,3mm
Visual Camera	**Hardware Resolution:** 2592x1944 1920X1080 (H.264) **Image Sensor:** 1/4" color CMOS QSXGA (5 megapixel) **Light Sensitivity in Lux:** 0.1 Lux
Microprocessor	IMX8M Plus
Signaling	**Output Relays:** 1 x Pre-Alarm, 1 x Alarm, 1 x Fault (Failsafe) **LEDs:** Front status LED, Remote LED output **Inputs:** 1 x Remote Reset, 1 x External Fault for Air Blade Failure (for future use)
Video Compression	H.264
Settings	**Regions of Interest:** 4 **Detection Area Settings:** Point, line, rectangle, circle, polygon **Temperature alarms/ROI**: Minimum/ maximum/ average temperature/ Rate of Rise (°/minute - freely programmable) **Detection:** • Hotspot & cold spot • Pre-alarm, alarm • Alarm delays **Color Palettes:** Iron (yellow=hot, blue=cold), Iron hi (yellow=hot, dark red=cold), Rainbow, Gray (black=cold), Gray (white=cold), Alarm red, Alarm blue, Alarm green, etc.
Analytics	Vehicle Discrimination, Camera Covered Fault
Supply Voltage	**Supply Voltage:** 24 VDC nominal **Power:** 24W **Power over Ethernet**: IEE 802.3at / 802.3af Type 2
Environmental	**IP Rating:** IP66 **Operating Temperature:** -30°C to 60°C (-22°F to 140 °F) **Relative Humidity:** < 90% non-condensing **Weight:** 1.75 kg
Communication	**Micro SD Card Slot:** Up to 256 GB (not included) **Ethernet to Computer Management Software**
Security	Signed firmware, digest authentication, password protection, secure boot, TLS encryption

Approvals	• EMC EN61000-6-1 (2017) • EMC EN61000-6-3 (2007) / A1 (2001) /AC (2012) • EMC EN 50130-4 (2011) / A1 (2014) • UNE-EN 62368-1:2014 + AC1:2015 + AC2:2015 • EN 62368-1:2014+AC:2015+AC:2017 +A11:2017 • IEC 62368-1:2014+COR1:2015+COR2015 • POSE000_18 • FCC Rules and Regulations CFR 47, Part 15

Ordering Information

Ordering Code	Description
FTD-2216-S	Failsafe Bi-Spectral Thermography Detector FOV 22°x16°, Shutter
FTD-4231-S	Failsafe Bi-Spectral Thermography Detector FOV 42°x31°, Shutter
FTD-8865-S	Failsafe Bi-Spectral Thermography Detector FOV 88°x65°, Shutter
FTD-BB	Black Body for Maintenance Purposes

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