Fike®
VIDEO ANALYTICS CORPORATION

DATA SHEET

Fike Video Analytics IP (FVA-IP) Camera

Description

The FVA-IP camera combines the enhanced resolution and picture clarity of a standard analog/network camera with built-in fire, smoke and motion detection capabilities. The camera's proprietary onboard analytics is used to continuously monitor the video, frame-by-frame, pixel-by-pixel to detect anomalies characteristic of fire, smoke and motion. The camera video processing algorithms include:

Flaming Fires - looks for a specific fire pattern consisting of a bright core of the flame and a flickering corona.

Smoke Plumes - identifies the anomalies that are caused by smoke and analyzes the progression over a period of time to identify a growing smoke plume.

Ambient Smoke - monitors the light diffusion from light sources and bright objects in the video images to detect the pattern consistent with the slow accumulation of smoke.

Intrusion Detection **-** can monitor multiple areas of the video image for the presence of moving objects at different times. This can be used to detect and record wanted or unwanted persons.

The software and user defined settings are stored within the camera in non-volatile memory so that the camera automatically starts functioning once power is applied. Each camera is provided with a web interface for communication and camera configuration. The camera connects to a Local Area Network (LAN) using the Ethernet plug on the rear of the camera and must be given its own IP address (static recommended).

Operation

Unlike traditional spot-type smoke detectors or temperature sensors that rely on the transmission and buildup of smoke or heat to initiate an Alarm, the FVA-IP camera is a volume sensor which observes and identifies the fire condition within the entire observed space of the camera using video image analysis. It does not rely on the transmission of smoke or heat for Alarm activation. This fundamental difference results in faster smoke and fire detection. In the event of a fire or the production of smoke, the camera issues a warning signal through its onboard contact closures and by digitally streamed transmissions over IP to a monitoring PC running the Fike Video Management Software (VMS).

Approvals

- Underwriters Laboratories (UL)
- Factory Mutual (FM)
- CE
- California State Fire Marshal (CSFM)

For exact certification listings, please reference the respective agency web site.

Features and Benefits

- Detection algorithms embedded on camera
- Intelligent edge device
- Benefits of IP network camera security system
- Remote monitoring with Fike Video Management Software (VMS)
- Connect up to 32 cameras per network video recorder (NVR)
- Relay contacts provided on each camera for interface with compatible Fire Alarm Control Panels (FACP)

Ordering Information

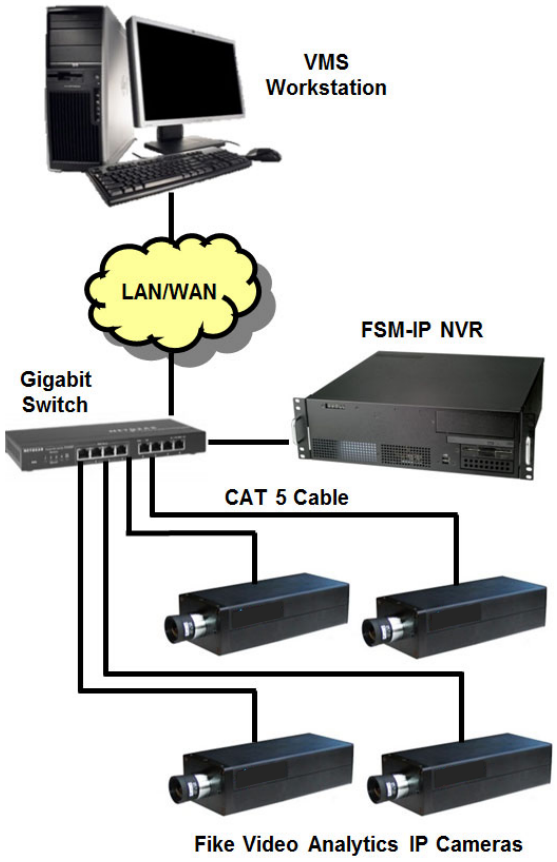
Fike P/N	Description
28-001	Fike Video Analytics IP Camera 2.8mm, 82° Total Field of View Lens
28-024	Fike Video Analytics IP Camera, 8mm, 34° Total Field of View Lens
28-006	Lens-2.8mm, 82° Total Field of View
28-007	Lens 8mm, 34° Total Field of View

Specifications

Processor		Texas Instruments TMS320DM642 Digital Media Processor
Memory		128 MB RAM
Clock		Battery backed up real time clock
Imager		Micron CMOS MT9M11
Video Format		Color NTSC
Video Resolution		640 x 480 (NTSC)
Video Compression		MJPEG
UL Minimum Illumination		1 Foot-candle (10 Lux)
Events Notification Medium		http network based communications, Alarm, Trouble and Auxiliary Dry Contacts
Detector Performance	Flame	1 ft. pan fire at 100 ft. (30.5 m)
	Smoke	Indoor detection verified at 100 ft. (30.5 m)
	Motion	Confirmable motion detection based on zones and schedules
Detection Zones		User defined, including detect/non-detect logic. Each zone may be linked to multiple detection schedules (daily, weekly, monthly, yearly, single occurrence)
Weight		1.7 lbs. (771 g)
Temperature Limits		32-120°F (0-49°C) *Must be installed within an enclosure where not in installed in a temperature controlled environment.*
Humidity		5 to 95% relative humidity, non-condensing
Power		• Power over Ethernet (PoE) • 24 VDC
Power Consumption		< 5 Watts, 0.2 amps at 24 Volts 0.4 amps at 12 Volts
Video Management Software		Spyder*Guard* API available for video management integration
Connectors		• RJ-45 Ethernet Jack • Terminal block for three relay outputs • DC power connection • BNC for coaxial analog output
Lenses		2.8mm and 8mm lenses (fixed Iris, fixed FOV, adjustable focus, CS mount)

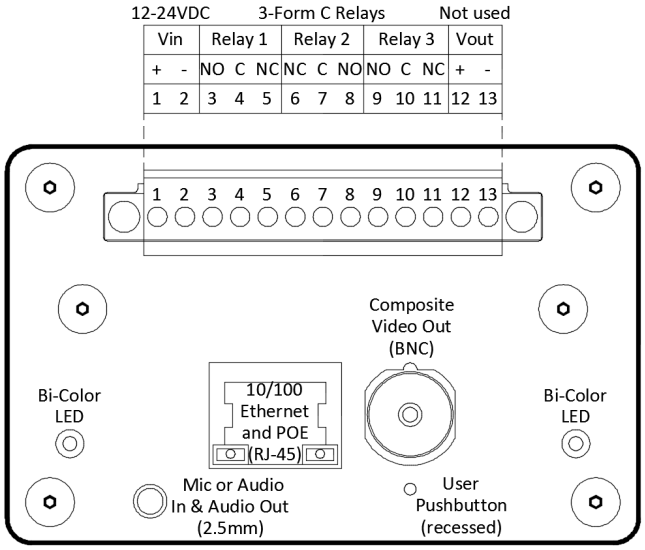
System Architecture

In its basic configuration, the Fike Video Analytics system will consist of at least one FVA-IP camera, FSM-IP network video recorder (NVR), and a Windows based PC running the Fike Video Management Software (VMS) all connected to the same high-speed local area network (LAN). Remote VMS workstations can be located on a different network and will communicate normally as long as the NVR is accessible over a TCP connection.



This document is only intended to be a guideline and is not applicable to all situations. Information is subject to Fike's full disclaimer at http://www.fike.com/disclaimer.

Where Alarm annunciation is required, three Form-C dry contact relays connections are provided on the back of each Fike Video Analytics IP camera. These connections can be tied into an FM Approved Fire Alarm Control Panel (FACP) to signal individual camera activation.



Camera Rear View

Network Requirements

In order for the FVA-IP cameras to communicate with the FSM-IP NVR, they must all share the same high-speed local area network (LAN).

If integrating the Fike Video Analytics components into an existing LAN, consult with your IT representative or system administrator to ensure that adequate capacity is available to handle the camera(s) bandwidth. Contact your Fike Video Analytics distributor for additional information regarding network requirements.

Camera Dimensions