**Tender text**

F.01U.317.536; FCS-8000-VFD-B;   
AVIOTEC IP starlight 8000

Network camera with integrated video-based fire detection and simultaneous intelligent video analysis. Videos shall be processed and analyzed within the camera itself, with no extra hardware required. The video-based fire detection shall offer a fast detection and high false alarm robustness with best picture quality even at challenging light conditions. The video-resolution shall be up to HD with activated video-based fire detection.

The video-based fire detection shall detect uncovered flames with minimum 1.6% of the picture width. Uncovered uprising smoke shall be detected with minimum 2.3% of the picture width. The detection shall detect test fires TF1 to TF8 according to EN54. For the detection of flames and smoke a minimum illumination level of 7 Lux shall be sufficient.

The video-based fire detection shall be adaptable to applications. The following settings shall be available: detection size, sensitivity and masking.

For adoption to local conditions vario-focal lenses with adjustable focal length can be used.

An object-oriented video analysis for indoor and outdoor applications shall run in parallel to the video-based fire detection within the camera itself. The video analysis shall monitor 8 rules in parallel, like object in field, crossing line, following route, idle object, loitering.

Results of the video-based fire detection and Intelligent Video Analysis have to available as metadata in addition to the video data transmitted for alerting, storage and forensic search.

The camera shall provide a relay output that may be selected for normally opened or normally closed operation.

The camera shall provide the following features:  
- The camera shall have a microSD card slot that uses standard; off-the-shelf microSD (SDHC and SDXC) cards for local storage (up to 1.2 TB)  
- The camera shall transmit two H.264 streams with 30 frames per second.  
- The camera shall allow full camera control and configuration capabilities over the network.  
- The focus shall be set automatically.   
- The camera shall support iSCSI devices to allow video stream to be recorded directly to an iSCSI RAID array.  
- The camera shall support 802.1x authentication using a RADIUS (Remote Authentication Dial In User Service) server.

**Technical Specifications**

| Power | |
| --- | --- |
| Power Supply | 12 VDC  Power-over-Ethernet 48 VDC nominal |
| Current Consumption | 500 mA (12 VDC)  175 mA (PoE 48 VDC) |
| Power Consumption | 9 W |
| PoE | IEEE 802.3af (802.3at Type 1) Class 3 |

| Sensor | |
| --- | --- |
| Type | 1/1.8‑inch CMOS |
| Pixels | 6.1MP |

| Video performance ‑ Dynamic range | |
| --- | --- |
| 1080p mode | 103 dB WDR  (103+16 dB with iAE) |

| Video performance – Sensitivity  (3200K, 89% reflectivity, 30% IRE, F1.2) | |
| --- | --- |
| Color 1080p mode | 0.00825 lx |
| Mono 1080p mode | 0.00275 lx |

| Video streaming | |
| --- | --- |
| Video compression | H.264 (ISO/IEC 14496-10); M- JPEG, JPEG |
| Streaming | Multiple configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth.  Regions of Interest (ROI) |
| Overall IP Delay | Min. 120 ms, Max. 340 ms |
| GOP structure | IP, IBP, IBBP |
| Encoding interval | 1 to 30 fps |
| Encoder regions | Up to 8 areas with encoder quality settings per  area |

| Video resolution | |
| --- | --- |
| 1080p HD | 1920 X 1080 |
| 720p HD | 1280 x 720 |
| Upright 9:16 (cropped) | 400 x 720 |
| D1 4:3 (cropped) | 704 x 480 |
| 480p SD | Encoding: 704 x 480;  Displayed: 854 x 480 |
| 432p SD | 768 x 432 |
| 288p SD | 512 x 288 |
| 240p SD | Encoding: 352 x 240;  Displayed: 432 x 240 |
| 144p SD | 256 x 144 |

| Video functions | |
| --- | --- |
| Day/Night | Color, Monochrome, Auto |
| Adjustable picture settings | Contrast, Saturation, Brightness |
| White Balance | 2500 to 10000K, 4 automatic modes (Standard, SON/SOX, Basic, Dominant color), Manual mode and Hold mode |
| Shutter | Automatic Electronic Shutter (AES)  Fixed selectable  Default shutter |
| Backlight compensation | Off, Auto, intelligentAE (iAE) |
| Noise reduction | intelligent Dynamic Noise Reduction (iDNR) with separate temporal and spatial adjustments |
| Contrast enhancement | On/off |
| Sharpness | Sharpness enhancement level selectable |
| Privacy Masking | Four independent areas, fully programmable |
| Video Motion Analysis | Intelligent Video Analysis (IVA) |
| User modes | 9 modes |
| Other functions | Image flip, Pixel counter, Video watermarking, Display stamping |

| Audio streaming | |
| --- | --- |
| Standard | G.711, 8 kHz sampling rate  L16, 16 kHz sampling rate  AAC-LC, 48 kHz sampling rate  AAC-LC, 80 kHz sampling rate |
| Signal-to-Noise Ratio | >50 dB |
| Audio Streaming | Full-duplex / half duplex |

| Input/output | |
| --- | --- |
| Analog video out | SMB connector, CVBS (PAL/NTSC), 1 Vpp, 75 Ohm (service only) |
| Audio line in | 1 Vrms max, 18 kOhm typical, |
| Audio line out | 0.85 Vrms at 1.5 kOhm typical, |
| Audio connectors | 3.5 mm mono jack |
| Alarm input | 2 inputs |
| Alarm input activation | +5 VDC nominal; +40 VDC max. (DC-coupled with 50 kOhm pull-up resistor to +3.3 VDC)  (< 0.5 V is low; > 1.4 V is high) |
| Alarm output | 1 output |
| Alarm output voltage | 30 VAC or +40 VDC max.  Maximum 0.5 A continuous, 10VA (resistive load only) |
| Ethernet | RJ45 |
| Data port | RS‑232/422/485 |

| Local storage | |
| --- | --- |
| Internal RAM | 10 s pre-alarm recording |
| Memory card slot | Supports SDHC and SDXC microSD cards |
| Recording | Continuous recording, ring recording. alarm/events/schedule recording |

| Network | |
| --- | --- |
| Protocols | IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, NTP (SNTP), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, digest authentication |
| Encryption | TLS 1.0, SSL, DES, 3DES, AES (optional) |
| Ethernet | 10/100 Base-T, auto-sensing, half/full duplex |
| Ethernet connector | RJ45 |
| Connectivity | ONVIF Profile S, Auto-MDIX |

| Software | |
| --- | --- |
| Unit Configuration | Via web browser or Configuration Manager |
| Firmware update | Remotely programmable |
| Software viewer | Web browser, Bosch Video Client, or third party software |

| Optical | |
| --- | --- |
| Lens mount | CS mount (C-mount with adapter ring) |
| Lens connector | Standard 4-pin DC-iris connector |
| Focus control | Motorized back-focus adjustment |
| Iris control | Automatic iris control |

| Mechanical | |
| --- | --- |
| Dimensions (W x H x L) | 78 x 66 x140 mm (3.07 x 2.6 x 5.52 inch) without lens |
| Weight | 855 g (1.88 lb) without lens |
| Color | RAL 9006 Metallic Titanium |
| Tripod Mount | Bottom and top 1/4-inch 20 UNC |

| Environmental | |
| --- | --- |
| Operating Temperature | -20°C to +50°C (-4°F to 122°F) |
| Storage Temperature | -30°C to +70°C (-22°F to +158°F) |
| Operating Humidity | 20% to 93% RH |
| Storage Humidity | up to 98% RH |
| Storage Humidity | up to 98% RH |

**Sales text**

F.01U.317.536; FCS-8000-VFD-B;   
AVIOTEC IP starlight 8000

1080p network camera with integrated video-based fire detection and simultaneous intelligent video analysis.

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**Offer text**

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