**CAM3371, Full HD Auto Focus Day & Night Bullet Network Camera**

**Architectural and Engineering Specification**

1. **General Network Camera Description**

Featured with 2 megapixel SONY Exmor sensor inside and weatherproof IP66-rated housing design, CAM3371 bullet camera is the advanced outdoor-ready solution for demanding surveillance. With built-in infrared LEDs and removable IR-cut filter design, CAM3371 allows surveillance to operating 24/7 even in low lux condition. For protection against vandalism, the CAM3371 is also equipped with a wire-in mounting bracket that conceals all cables within avoid cutting by aesthetic intrusion. CAM3371 comes with Power over Ethernet, varifocal lens and mechanical design adapted for flexible adjustment of field of view. It is an ideal solution for outdoor applications, such as parking lots, airports, gas stations, city streets, and ports, the megapixel range will extend your capability to protect the building, the people, and your business.

* 1. **General Camera Requirements**
1. The camera shall utilize a high sensitivity 2-megapixel SONY Exmor CMOS sensor with 1/2.8” optical format and shall have a removable infrared cut-off filter.
2. The camera shall output at a maximum resolution of 1920(H) x 1080(V) pixel at a maximum frame rate of 30 FPS to get the real time video from the sensor.
3. The camera shall support the sensor/ISP WDR (Wide Dynamic Range) for at least 70dB to ensure a true clear image even in a complexity lighting environment.
4. The camera shall have a dynamic range of up to 48db at full resolution.
5. The camera shall have ICR Filter for Day/Night auto switch.
6. The camera shall have 3 - 9 mm auto focus lens, F1.2.
7. The camera shall have minimum illumination 0.005 Lux@F1.2 (B&W mode) and 0.05 Lux@F1.2 (color mode).
8. The camera shall Built-in IR Illuminators, Effective Up to 30 Meters.
9. The camera shall have DC iris control and support auto mode and fixed iris mode.
10. The camera shall support DC iris control to have a better image illuminant management.
11. The camera’s shutter speed shall be 1/30 – 1/50,000s.
12. The camera shall support shutter speed level at x2, x4 (slow shutters at 1@2sec. and 1@4sec) to have a clear image even in an extremely low lux environment.
13. The camera shall provide wide angle of view:

Diagonal at 148.40~43.80

Horizontal: 121.2°~38.1°
Vertical: 62.1°~21.3°

1. The camera shall have the ability to limit the maximum exposure time to avoid blurry images.
2. The camera shall have dual standard compression support with simultaneous streaming of the H.264, MJPEG, MJPEG-4 formats.
3. The camera shall support 4 Day & Night switch modes, Auto, Day, Night, and Schedule Mode.
4. The camera shall support configurable frame rates:

30 fps at 1080P (1920 x 1080)
30 fps at SXGA (1280 x 1024)
30 fps at 720P (1280 x 720)
30 fps at D1 (720 x 480)
30 fps at VGA (640 x 480)
30 fps at QVGA (320 x 240)

1. The camera shall support local storage, microSD / SDHC x 1 (Max. 32G).

	1. **Camera Network Requirement**
2. The camera shall incorporate a built-in web server.
3. The camera shall support IPv4, IPv6, ARP, TCP, UDP, ICMP, SNMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, HTTPS, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP, and ONVIF network protocols.
4. The camera shall be fully conformant with ONVIF industry-standards and pass conformance tests.
5. No unique or proprietary client software shall be required for viewing or controlling the camera.

	1. **Camera Audio Requirements**
6. The camera shall support ADPCM & G.711.
7. The camera shall support 3.5mm phone jack and two way audio.
	1. **Camera Video Requirements**
8. The camera shall be able to be cropped to any resolution divisible by 2, maintain H.264 compression and comply with HDTV standard. It shall be possible to crop the camera to output a variety of lower resolution images.
9. The camera shall support multiple streams simultaneously in different resolutions, frame rates, and image qualities for viewing on different platforms, reducing file sizes and conserving valuable network bandwidth with H.264, MPEG-4 and MJPEG compatibility for versatile applications.
10. The camera shall support 64K~20Mbps (manually input supported), fixed quality (CBR), adjustable five different image quality (VBR), controller frame rate and quality.
11. The camera shall feature automatic exposure, automatic multi-matrix white balance, shutter speed control, 50/60Hz selectable flicker control, programmable brightness, saturation, gamma, sharpness, windowing and decimation, simultaneous delivery of full-field view and zoomed images at video frame rate, instantaneous electronic zoom, pan and tilt, and electronic image rotation.
12. The camera shall support various video controls, such as AGC (Auto Gain Control), AWB (Auto White Balance), AES (Auto Electronic Shutter), and image adjustment (brightness, contrast, saturation, sharpness, chroma back, etc).
13. The camera shall have the ability to set up a target reference luminance to dynamically control the ISP functions for shutter, AGC and Iris.
14. The camera shall support maximum brightness of the overall image to avoid images out of focus due to the depth of field is too short.
15. The camera shall support one push Auto Focus to fix the defocus issue. Auto focus is also supported when Zoom In/Out.
16. The camera shall incorporate necessary algorithms and circuits to detect motion in low-light with clarity.
17. The camera shall support two interchangeable profiles with items including iris, exposure, and shuttle. The two profiles can be switched automatically by day/night to maintain quality image and cover various lighting conditions.
18. The camera shall allow users to decode different frame rates from a single connection to save bandwidth.
19. The camera shall support a configurable lower frame rate and bit rate when no motion detected to reduce the bandwidth for network and storage. And when there is a motion triggered, the camera can switch to the standard frame rate and bit rate within 1 sec.
20. The camera shall support motion detection with 3 zones, each with different detecting rules and sensitivities.
21. The camera shall support tampering detections (blocked, redirected, defocused, or spray-painted), 5 levels of detecting sensitivities.
22. The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.
23. The camera shall support failover recording. When IPCAM and NVR got disconnected, record images to microSD / SDHC. Once connected, send back the recorded images to appointed NVR or FTP Site. Bandwidth of files sending can be set.
24. The camera shall support various event notifications, including snapshot, video clip by FTP, email, record to NAS, record to local storage, and trigger DO.
25. The camera shall support sending snapshots or video clips to iSCSI Storage when an alarm triggered.

	1. **Connector Specifications**
26. The camera shall support 1 alarm in & 1 alarm out, and terminal block.
27. The camera shall support external I/O devices to be connected with the camera triggering functionalities.
28. The camera shall support RJ45, 10/100 Base-T Ethernet connector.
	1. **Electrical Specifications**
29. The camera’s power source shall be 12V DC, 1.5A.
30. The camera’s power source shall support Power over Ethernet (PoE) complying with the IEEE 802.3af standard.
	1. **Mechanical Specifications**
31. The camera shall have installed dimensions (WxHxD) of 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28").
32. The camera shall weigh 1400g (3.09lb).
	1. **Environmental Specifications**
33. The camera’s operating ambient temperature is -40˚C ~ 50ºC (-40 °F ~ 122ºF) and storage temperature is -30˚C ~ 60ºC (-22°F ~ 140ºF).
34. The camera’s operating humidity is 5%~90%.
	1. **Certifications and Approvals**
35. The camera shall be compliant with safety LVD, FCC, GOST, CE and IP66.
	1. **Warranty**
36. Surveon offers a three-year hardware and software warranty service and replacement parts free of charge during the warranty period, depending on requirements to extend the warranty period.

*Surveon reserves the right to change products or specifications without notice.*