**CAM6181, 36x Zoom PTZ Dome Network Camera**

**Architectural and Engineering Specification**

1. **General Network Camera Description**

The CAM6181 PTZ outdoor speed dome camera is part of Surveon Premium Network Camera Series. Equipped with the SONY CCD sensor, the CAM6181 provides 720 x 480 (D1) resolution at 30fps, a 360° high-speed pan and tilt base, and a 36x optical zoom lens. The advanced functions include autofocus, 256 arbitrary preset positions, and 16 privacy zones for data protection. Its removable IR-cut filter and WDR allow 24/7 operations even in the low lux condition. The CAM6181 also comes with the built-in fan heater, IP66-rated weatherproof housing for withstanding rain and dust, wide temperature, and IK10 vandalism design. It is the excellent choice for professional surveillance in the demanding outdoor applications.

* 1. **General Camera Requirements**
1. The camera shall utilize a high sensitivity1/4” DI Sony CCD sensor.
2. The camera shall output at a maximum resolution of 720 (H) x 480(V) pixels at a maximum frame rate of 30fps.
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 3.4 – 122.4 mm auto focus lens, F1.6 (wide)-F4.5 (tele).
7. The camera shall have minimum illumination 0.001 Lux@F1.6 (B&W mode) and 0.1 Lux@F1.6 (color mode).
8. The camera shall have DC iris control and support auto mode and fixed iris mode to have a better image illuminant management.
9. The camera’s shutter speed shall be 1/1 – 1/10,000s.
10. The camera shall provide wide angle of view:

Diagonal: 68.6°~2.23°
Horizontal: 57.8°~1.70°
Vertical: 43.7°~1.30°

1. The camera shall provide angle adjustment:
Pan: 360° endless, 5°-400°/S
Tilt: -10°~+190°, 5°-400°/S
2. The camera shall support 180° Horizontal Instant Flip, 256 preset positions and preset position auto scanning.
3. The camera shall support 36x optical zoom, 12x digital zoom, and total 432x zoom.
4. The camera shall have the ability to limit the maximum exposure time to avoid blurry images.
5. The camera shall have dual standard compression support with simultaneous streaming of the H.264 and MJPEG formats.
6. The camera shall support 4 Day & Night switch modes, Auto, Day, Night, and Schedule Mode.
7. The camera shall support configurable frame rates:

30 fps at D1 (720 x 480)
30 fps at QVGA (352 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/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, IEEE 802.1X, DDNS, and NTP network protocols.
4. No unique or proprietary client software shall be required for viewing or controlling the camera.

	1. **Camera Audio Requirements**
5. The camera shall support G.711 and G.726.
6. The camera shall support 3.5mm phone jack and two way audio.
	1. **Camera Video Requirements**
7. 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 and MJPEG compatibility for versatile applications.
8. The camera shall support 64K~10Mbps (manually input supported), fixed quality (CBR), adjustable five different image quality (VBR), controller frame rate and quality.
9. 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.
10. 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).
11. The camera shall have the ability to set up a target reference luminance to dynamically control the ISP functions for shutter, AGC and Iris.
12. 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.
13. The camera shall incorporate necessary algorithms and circuits to detect motion in low-light with clarity.
14. The camera shall allow users to decode different frame rates from a single connection to save bandwidth.
15. The camera shall support motion detection with 3 zones, each with different detecting rules and sensitivities.
16. The camera shall have privacy masking, the ability to select multiple regions of an arbitrary shape to block the video.
17. The camera shall support various event notifications, including snapshot, video clip by FTP, email, record to NAS, record to local storage, and trigger DO.

	1. **Connector Specifications**
18. The camera shall support 4 alarm in & 2 alarm out, and terminal block.
19. The camera shall support external I/O devices to be connected with the camera triggering functionalities.
20. The camera shall support RJ45, 10/100 Base-T Ethernet connector.
	1. **Electrical Specifications**
21. The camera’s power source shall be AC24V; HPoE 30W.
22. The camera’s power source shall support Power over Ethernet (PoE) complying with the IEEE 802.3af standard.
	1. **Mechanical Specifications**
23. The camera shall have installed dimensions (DxH) of Ø192mm x 282mm (Ø7.55” x 11.1”).
24. The camera shall weigh 2320g net, 3550g gross. .
	1. **Environmental Specifications**
25. The camera’s operating ambient temperature is -40˚C ~ 50ºC (-40 °F ~ 122ºF).
26. The camera’s operating humidity is 0%~90%.
	1. **Certifications and Approvals**
27. The camera shall be compliant with LVD, FCC, CE, IK10 and IP66.
	1. **Warranty**
28. Surveon offers a two-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.*