

SURVEYOR HD PTZ NETWORK DOME SERIES



Outdoor/Impact-Resistant Version



Pressurized Version

Shown with mount for illustration purposes only; mount sold separately

System Overview

Vicon has enhanced the proven high-performance design of the Surveyor series of dome cameras with high definition (HD) video. The camera's superb HDTV quality video, low light capabilities and durability deliver a superior pan, tilt and zoom solution to customers. The new design conforms to the ONVIF (Profile S Open Network Video Interface Forum) specification, providing interoperability between network video products from different manufacturers. The camera can deliver custom resolutions up to 1080P (1920 x 1080).

The Surveyor HD supports high-profile H.264 and M-JPEG compression as well as multi-stream format capabilities to deliver bandwidth efficient high quality video. The 20x (1080p) cameras can read a license plate 900 ft away and the 30x (720p) cameras from 800 ft away. Electronic Image Stabilization compensates for vibration or movement of the camera, automatically minimizing blur.

The Surveyor HD can be programmed directly through the ViconNet Video Management Systems interface as well as a standard Web Browser. The advanced scheduling capabilities allow users to automate camera positioning based on schedules and alarm inputs. Programmable privacy masks are used to conceal user-defined areas. Limits to the pan and tilt of the unit can also prevent operators from viewing restricted areas. Titles can be programmed in the unit to provide the operator with additional graphical information when controlling the camera (examples: sector titles and compass headings).



- HD 1080p or 720p resolution at 30 images per second
- Optical zoom: 20x (1080p)/30x (720p)
- WDR day/night camera; low light capability
- Electronic Image Stabilization (EIS) in 720p version
- Dual encoding generates simultaneous H.264 or M-JPEG video streams
- ONVIF Profile S interface provides interoperability with open platform solutions
- High-speed 360° continuous pan
- Advanced titling features
- Scheduling of tours and presets

Construction and Installation

Vicon has a variety of hardware available to install the Surveyor HD in almost any environment. A pendant configuration is available, with a standard, pressurized, or high-impact housing. The pressurized and impact resistant versions of the lower dome are constructed of impact-resistant, polycarbonate; the impact-resistant version lower domes are secured by tamperproof screws.

The standard and high-impact units are IP66 rated; the pressurized version of the camera provides IP67 protection. These units have built-in heater/blower units that ensure operation in a temperature range of -40° to 132° F (-40° to 55° C) and require 24 VAC.

Network Video Transmission

Compression:	H.264, M-JPEG.
Video Streams:	8 concurrent sessions maximum.
Video Output (Resolution):	Stream 1: 720p: 1280 x 720 @ 30 fps. 1080p: 1920 x 1080 or 1280 x 720 @ 30 fps Stream 2 (both versions): 640 x 368 @ 30 fps
Programming Interface:	ONVIF Profile S, NTCIP or Vicon API.
Protocols:	IP, HTTP, RTSP/RTP, DNS client, FTP, SMTP, PPPoE, TCP/IP, DHCP, UDP, Multicast, NTP, DDNS, IGMP, ARP, SOAP, WSDL, WS-Discovery.

Electrical

Input Voltage:	18-30 VAC. Will operate within spec on voltages up to 32 VAC. For voltages between 30-32 VAC, use a Class 3 indoor/dry or outdoor/wet power supply.
Current:	2.2 A maximum.
Maximum Operating Distances:	Refer to Table.
Power Consumption: (includes heater)	70 W maximum.
Fuse:	Two resettable 1.35 A, 72 V.
Certifications:	UL; CE; FCC Class A.

Camera and Optics

Feature	720p (1 MP) versions	1080p (2 MP) versions
Image Device:	1/3-in. CCD progressive scan	1/2.8-in. CMOS progressive scan
Zoom:	30x optical	20x optical
Picture Elements:	1348 (H) x 746 (V), 1.02M total pixels	1952 (H) x 1236 (V), 2.4M total pixels
Sensitivity:	Color: 0.3 lux; 1/30s, IRcf On. B&W: 0.003 lux, 1/4s, IRcf Off. @ 30 IRE, f/1.4.	Color: 0.25 lux; 1/30s, IRcf On. B&W: 0.006 lux, 1/8s, IRcf Off. @ 30 IRE, f/1.6.
Synchronization:	Internal	
Gain Control:	Automatic/Manual	
Backlight Compensation:	On/Off, selectable	
Iris Control:	Automatic/Manual	
Wide Dynamic Range:	On/Off, selectable	
Video Focus:	Automatic/Manual (near-far)	
Electronic Image Stabilization (EIS)	On/Off, selectable	N/A
White Balance:	Automatic/Manual; Red/Blue gain adjustable	
Shutter Speed:	Automatic/Manual: 1/4 - 1/30,000 sec	Automatic/Manual: 1/8 - 1/30,000 sec
Focal Length:	4.4 - 132 mm	4.7 - 94 mm
Aperture:	f/1.4 (wide) - f/4.6 (tele)	f/1.6 (wide) - f/3.5 (tele)
Angle of View:	Horizontal: 62.9° (wide), 2.2° (tele)	Horizontal: 59.6° (wide), 3.2° (tele)

Maximum Power Cable Distances

Wire Size (AWG) Annealed Copper Wire	Distance ft (m)	
	Indoor	Outdoor
	24 VAC	24 VAC
20	192 (57)	87 (27)
18	307 (93.6)	140 (43)
16	489 (149)	222 (68)
14	775 (236)	352 (107)
12	1235 (376)	561 (171)

Data Sheet Number: V214-04-01
Dated: 12/2014

Vicon Data Sheet Part Number: 8009-7214-04-01
Specifications subject to change without notice.

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Operational

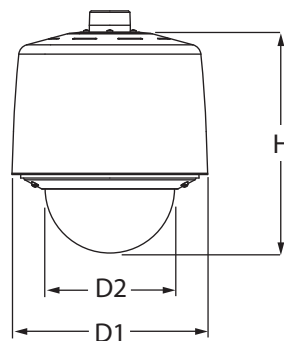
Drive Type:	Electrical motorized pan and tilt with electronic control.
Pan View:	360° continuous.
Tilt View:	-2 to 92°.
Pan Speed:	400°/sec, max.
Tilt Speed:	150°/sec, max.
Optical Zoom/Focus Speed:	1.8 sec, tele to wide.
Preset Capability:	79 individually programmable.
Preset Solving Speed:	1 second nominal.
Preset Accuracy (Pan and Tilt):	0.1° maximum.
Tour Capabilities:	8 tours available. 32 programmable events per tour. Events may be preset positions with speed control, alarm acknowledge, dwell time control, relay control, call autotours, tour repeat or another tour, save/recall camera status.
Autotour Capabilities:	2 autotours available with 256 pan, tilt and zoom functions per autotour. Programming is done in real time with joystick and push buttons.
Sectoring:	16 maximum, programmable for size and titling. Sectors have the capability to be blanked out.
Alarm Capabilities:	4 alarm inputs, individually programmable. Functional state enable/disable. Report state (report on/off). Active state (high/low). Mode (manual, momentary or automatic) with programmable dwell time control. Set and reset action (preset solve, relay on/off, tour, autotour). Alarm titling.
Alarm Output:	1 relay, momentary or latching.
Control Display:	Web browser.
Privacy Masks:	80 total; 64 rectangular, 16 irregular shape. 10 individual simultaneously on-screen. Programmable, zoom-scalable.
Scheduling:	Real-time clock allows scheduling of up to 32 events, including presets, relays, alarms, tours or autotours.
Multi-Language Menu:	English (Spanish, French, Italian and German - future release).
Screen Titling Capabilities:	Programmable On/Off for camera, time/date, preset, sector, lens, aux and alarms. Pressurized version only: pressure, humidity, and temperature. Compass/azimuth, 8 compass headings (N, NE, E, SE, S, SW, W, NW). 20 characters maximum; selectable position. Two text sizes for top 2 lines. Fade capability (except camera, time/date and alarm).

Environmental

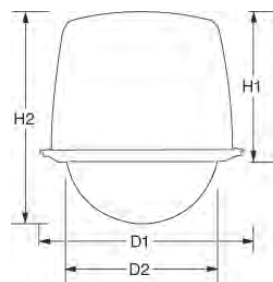
Operating Temperature Range:	-40 to 132° F (-40 to 55° C).
Operating Humidity Range:	100% relative, non-condensing.
Storage Temperature Range:	-40 to 150° F (-40 to 65° C).
Storage Humidity Range:	0 to 90% relative, non-condensing.
Rain/Wind:	Heavy rain up to 4 in./hr at winds up to 90 mph, when mounted on standard Vicon wall mount.

Outdoor/High-Impact Pendant

- Die-cast aluminum enclosure, molded plastic sunshield
- Clear acrylic/vandal-proof polycarbonate dome
- Standard 1-1/2 inch male NPT fitting or metric equivalent
- Unit Diameter (D1): 9.0 inches (228 mm)
- Lower Dome Diameter (D2): 5.9 inches (150 mm)
- Height (H): 10.3 inches (262 mm)
- Weight: 7.7 lb. (3.5 kg)
- Compliance: IP66, NEMA 4X; NEMA TS2-2003 V02.06;
Impact-Resistant version only: IK10++ (50 joules) tested in
accordance with EN 6008-2-75 Eh Pendulum Hammer Test

**Pressurized**

- Die-cast aluminum enclosure; molded plastic sunshield
- Clear polycarbonate dome
- Standard 1-1/2 inch male NPT fitting or metric equivalent
- Unit Diameter (D1): 9.5 inches (241 mm)
- Lower Dome Diameter (D2): 6.0 inches (152 mm)
- Height (H2): 10.2 inches (259 mm); (H1): 7.3 in. (185 mm)
- Weight: 12.0 lb. (5.4 kg)
- Compliance: IP67; NEMA TS2-2003 V02.06;
IK10++ (50 joules) tested in accordance with
EN 6008-2-75 Eh Pendulum Hammer Test



Surveyor HD Models

Resolution	Optics	Outdoor Environment		
		Outdoor Dome	High-Impact Dome	Pressurized Dome
720p (1 MP)	30X	SN130W	SN130M	SN130P
1080p (2 MP)	20x	SN220W-L	SN220M-L	SN220P-L

Accessories

Mounts

Mounts			Mounts		
Description	Model Number		Description	Model Number	
 Indoor or outdoor wall mount	SVFT-UWM		 Wall mount for pressurized dome	SVFT-PR-WMA	
 Indoor or outdoor ceiling mount	SVFT-UCM		 Pipe adapter for pressurized dome	SVFT-PR-P	
 Indoor or outdoor short wall mount	SVFT-WM		 In-ceiling mounting kit	SVFT-IC-KT	
 Outdoor parapet mount	SVFT-UPM-1		 Ceiling panel for added support	SVFT-UCP	
 Outdoor roof mount	SVFT-URM-1		 Soffit mount for outdoor and impact-resistant dome	SVFT-SOF	

Power Supplies

Description	Model Number
24 VAC output, 120 VAC input, single-channel	S24WPS-1
24 VAC output, 230 VAC input, single-channel	S24PS-230
24/28 VAC output 120/230 VAC input, single-channel	S28WPS-1/ S28WPS-230
24/28 VAC output 120 VAC input, four-channel	V2448-175PS
24/28 VAC output 120 VAC input, eight-channel	V248-300PS
28 VAC output 120 VAC input, sixteen-channel	V2416-600PS