



ROUGHNECK™

V910 Series Impact-Resistant IP Camera Domes Powered by PoE

- Indoor/Outdoor IP Camera Dome transmits high quality video across the network for remote viewing and recording
- Powered by ViconNet Version 3 software
- 24 VAC or Power Over Ethernet (PoE) IEEE 802.3af
- Maximum video transmission rate of 30 fps (25 fps PAL) at 720 x 488 pixels (864 x 586 PAL)
- Uses optimized proprietary compression based on MPEG-4 that minimizes data size and maximizes picture quality
- Up to 10 simultaneous viewing/recording streams per camera dome
- MD5 algorithm video authentication ensures data integrity
- Password protection for configuration
- High-resolution color, day/night and WDR day/night models available
- Varifocal autoiris lens
- Alarm input
- Audio input
- Easy installation

The Roughneck™ V910 IP Camera Dome is a powerful IP video source for a complete digital video management system based on ViconNet® software. It is fully compatible with all ViconNet systems and is remotely managed and controlled from ViconNet workstations and Kollektor™ Elite recorders. It can deliver up to 30 fps from the local camera input at a total nominal bandwidth of 1.7 Mbps at Q5 (360 x 244 pixels). Power can be supplied by either 24 VAC or PoE.

Equipped with a 100 Mbps LAN interface, the camera allows direct plug-in to a network switch. Images received from the IP camera and the other external cameras connected to its external inputs can be displayed, recorded or archived like any other ViconNet video component using the ViconNet management platform.

The V910 Camera Dome has 4 levels of video resolution; 4 CIF or D1, 2 CIF, CIF and HCIF with 2 levels of compression. These comprise 8 selectable quality levels. User can select from either Normal (optimized) MPEG-4 or Full (JPEG) compression methods.

The V910 Camera Dome utilizes an MD5 video authentication algorithm which is based on a 128-bit message used to identify data integrity. Viewing authenticated video can be configured from the software. In addition, the IP camera dome supports alarm reporting, macros, audio and alarm configuration through the ViconNet software interface.

The Roughneck V910 IP Series of Impact-Resistant Cameras offers high-security cameras in a compact domed housing. They are available for indoor and outdoor applications. The units are of die-cast aluminum construction and have high-impact polycarbonate plastic domes. These camera packages are designed to withstand the harshest conditions and destructive environments of correctional facilities, warehouses and loading docks. The units include O-ring seals and a heater to allow operation in low temperature and in all weather conditions.

Note: Heater must be powered by 24 VAC.

Tamper-resistant screws make the unit resistant to vandalism. The Roughneck V910 series has an integral camera with an isolated power input. High-resolution color, day/night, or WDR day/night models are available.

The camera mount offers adjustment to any view required. The camera position is adjustable horizontally and vertically. Roughneck's mounting base screws directly to walls and ceilings, reducing installation time and cost. The unit features a standard threaded conduit fitting for cable protection.

The Roughneck series complies with the requirements for an FCC/CE Class A rating.

Vicon Product Facts	FC CE	Model No: Refer to Table 1	Product Code: Refer to Table 1	SEC: 1	SPEC: V137-30	REV: 0208
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Product Specification

ASSOCIATED EQUIPMENT AND ACCESSORIES

ViconNet VN1000V3 Master Workstation Software, Product Code 8797: Software CD for a PC for use with Kollektor Elite and Pro series recorders; registration required for use. Product Specification V113.

ViconNet VN-NVR Master Workstation, Product code varies by model: PC preloaded with VN1000V3 Master Control Software for use with Kollektor Elite, Pro XG and Lite XG series recorders; registration required for use. Product Specification V113.

Kollektor Elite XG Digital Video Recorder, Product Code varies by model: 16-channel networked digital video recorder for use with Kollektor Pro XG and Kollektor Lite XG series recorders and ViconNet VN1000/VN-NVR Workstations. Product Specification V112.

NETSWITCH-24POE Network Switch, Product Code 8495-20: 16-port, 10/100/1000 autosensing network switch with a choice of 24 VAC or PoE power source, stackable. Product Specification V162-20.

NETSWITCH-16 Product Code 8495-00: 16-port network switch, includes 10/100Mbps ports, desktop/wall mount, 120 VAC. Product Specification V161.

NETSWITCH-24 Product Code 8495-10: 24-port network switch, includes 10/100/1000Mbps ports, rack mount, 120 VAC. Product Specification V162.

Uninterruptible Power Supply: 725 VA unit with DB9 (RS-232) and USB ports; 120 VAC input/output. Product Specification V147.

Model V910-PH Pendant Housing, Product Code 8476: Used to allow the V910 Camera Dome to be installed in a pendant configuration. Requires an appropriate mount that can support the weight of the V910 and the V910-PH (approximately 5 lb, 2.3 kg) and adapts to a 1-inch NPT pipe thread. Can be used outdoors.

Table 1: Models, Products Codes and Descriptions

V910A-IP3/ V910A-IP3C	9208-25/9208-26	Indoor/Outdoor; 1/3-in. high-resolution color camera and 3.3-12 mm autoiris varifocal lens; 24 VAC or PoE; isolated power input; heater; ViconNet Version 3/LAN video/data connection. NTSC/PAL.
V910A-DN-IP3/ V910A-DN-IP3C	9209-25/9209-26	Indoor/Outdoor; 1/3-in. high-resolution day/night camera and 3.3-12 mm autoiris varifocal lens; 24 VAC or PoE; isolated power input; heater; ViconNet Version 3/LAN video/data connection. NTSC/PAL.
V910A-WDR-IP3/ V910A-WDR-IP3C	9210-25/9210-26	Indoor/Outdoor; 1/3-in. high-resolution Pixim® wide dynamic range, day/night, color camera and 3.3-12 mm autoiris varifocal lens; 24 VAC or PoE; isolated power input; heater; ViconNet Version 3/LAN video/data connection. NTSC/PAL.

Power Supplies

S24WPS-1	7028-10	Single-channel, indoor/outdoor, 120 VAC input, 24 VAC output, 2 A
S24PS-230	7027-01	Single-channel, indoor, 230 VAC input, 24 VAC output, 2.5 A
V2448-175PS	6410-20	Four-channel, indoor, 120 VAC input, 24/28 VAC output (jumper selectable), 7/6.25 amps (total)
V248-300PS	6422-10	Eight-channel, indoor, 120 VAC input, 24/28 VAC output (jumper selectable), 12.5/10 amps (total)
V248-600PS	8438-00	Eight-channel, indoor, 120 VAC input, 24 VAC output, 25 amps (total)

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NETWORK CONSIDERATIONS

The V910 IP Camera Dome can be connected to any ViconNet network. Existing Kollector Elite Recorders and ViconNet Workstations can be used to live view and record its network-streamed video. A network can be as simple as a single V910 Camera Dome connected to a ViconNet Workstation or can be complex with the addition of several networks interconnected via WAN.

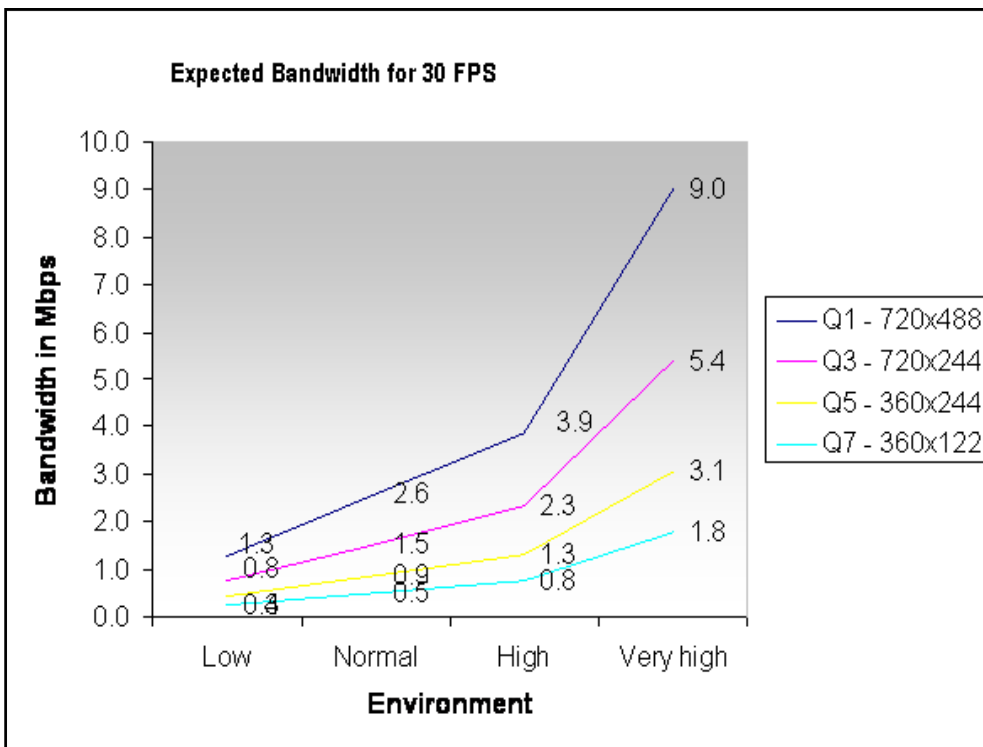
When adding a V910 IP Camera Dome to the ViconNet network, the following items must be considered:

- The number of cameras on a switch with respect to switch capabilities and system bandwidth mapping.
- Bandwidth limitations on ports connected to workstations (using 100 or 1000 Mbps).
- Workstation capabilities such as processing speed and disk write speed.
- Storage size and location types including local Workstation recording, attached SCSI RAID and integrated NAS/SAN devices.

Refer to the network diagrams on the next page for sample configurations.

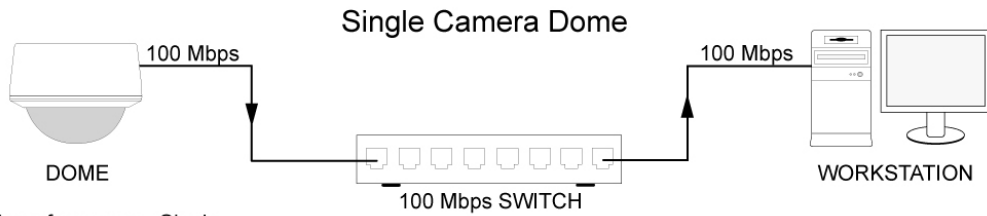
Basic video bandwidth performance can be seen below. This chart shows a V910 at 30 FPS with varied quality settings and video motion environments. 30 FPS is the maximum video frame speed from the V910. Lower frame speeds can be attained down to 1 FPS. Bandwidth calculations can be scaled down from the chart data. For example:

A V910 set at 10 FPS would be expected to have a bandwidth of 0.5 Mbps at Q5 and in a high video motion environment.

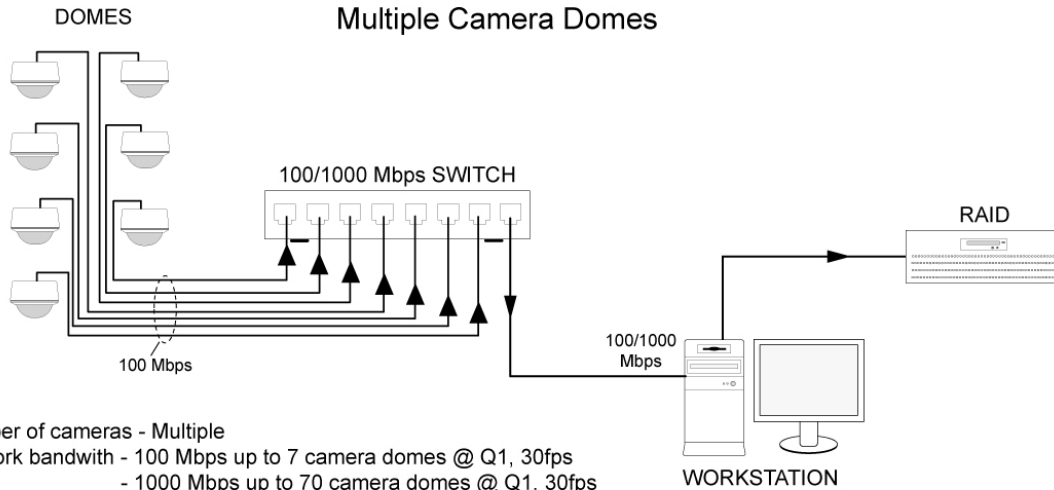


Bandwidth Chart

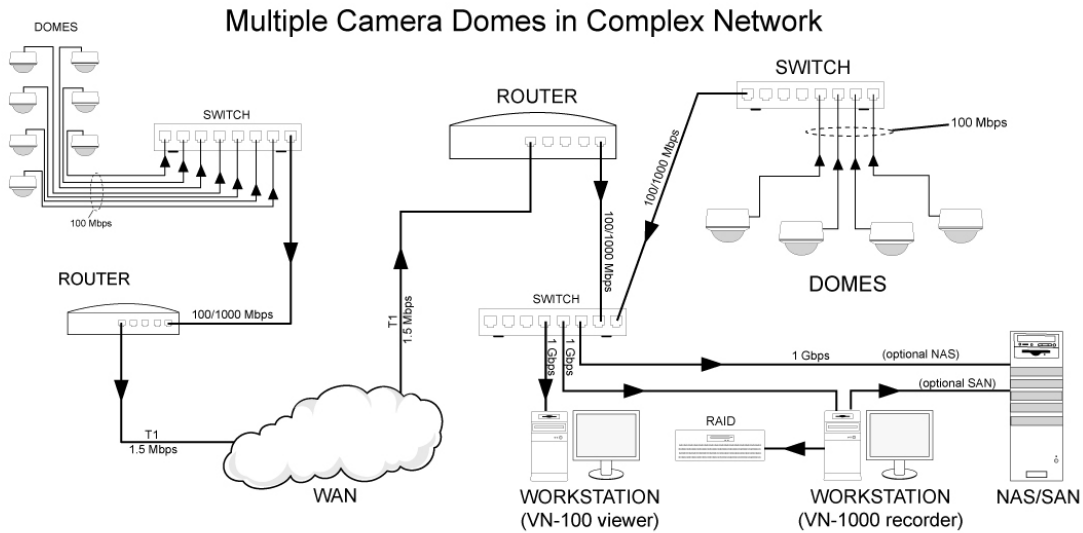
Product Specification



- Number of cameras - Single
- Network bandwidth - 100 Mbps
- Storage method - Local workstation hard drive



- Number of cameras - Multiple
- Network bandwidth - 100 Mbps up to 7 camera domes @ Q1, 30fps
- 1000 Mbps up to 70 camera domes @ Q1, 30fps
- Storage method - Local workstation hard drive or SCSI attached RAID



- Number of cameras - Multiple on multiple sites
- Network bandwidth - Each switch to its limit (as shown above), constrained only by the WAN (T1 @ 1.5 Mbps)
- Storage method - Local workstation hard drive, SCSI attached RAID or NAS/SAN storage
- In the basic configuration, workstation recording capability is approximately 25 cameras

Network Options

Vicon Product Facts		Model No: Refer to Table 1	Product Code: Refer to Table 1	SEC: 1	SPEC: V137-30	REV: 0208
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ELECTRICAL

- Input Voltage:** 24 VAC \pm 20% or PoE, power over standard Ethernet cables IEEE 802.3af. For 24 VAC power, use only UL Listed Class 2 indoor/dry or Class 3 outdoor/wet rated power supply. Note: Heater must be powered by 24 VAC.
- Current:** 0.64 maximum for 24 VAC (including heater).
- Power Consumption:** PoE: 7.5 W;
24 VAC: 14.5 W nominal, 18.5 W maximum (including heater).
- Heat Equivalent:** 0.8 btu/min (0.2 kg-cal/min nominal, 1.05 btu/min (0.27 kg-cal/min) maximum including heater.
Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.
- Connectors:** Power: 2-pin connector.
TCP/IP LAN/PoE: RJ-45.
Alarm: 3-pin screw terminal.
Audio: 2 1/8-in. phono jacks.
- Local Video Output Impedance:** 75 ohms
- Scanning System:** NTSC: 525 lines, 60 fields/sec.
PAL: 625 lines, 50 fields/sec.
- Radio-Frequency Emission Standard:** FCC Class A; CE.
- Maximum Power Cable Distance:** See table below.

Voltage	Wire Gauge ft (m)				
	20	18	16	14	12
24 VAC	300 (91)	469 (143)	750 (228)	1200 (366)	1875 (572)

VICONNET IP

- Communication Hardware:** ViconNet Digital Video Management System.
- Network Interface:** 100 Mbps, TCP/IP Unicast.
- Number of Video Channels:** 1, over LAN connection.
- Video Formats Supported:** NTSC and PAL, model dependant.
- Video Transmission Rate:** 1 channel @30 frames per second (25 fps, PAL), maximum.
- Number of Simultaneous Video Streams:** Maximum of 10 viewing/recording streams per camera dome.
- Video Transmission Resolution:** 480 horizontal TVlines maximum at 720 x 488 pixel pallet (864 x 586 PAL).
- Video Quality:** ViconNet software quality 1-8, selectable on an 8-position bar with 2 compression level settings in resolutions 720 x 488 (863 x 586 PAL), 720 x 244 (863 x 293, PAL), 360 x 244 (432 x 293, PAL), 360 x 122 (432 x 146, PAL).
- Audio:** 1 line-level microphone input; 0 dbm, 32 KHz bandwidth, 600 ohm impedance, 2 V RMS (1 V p-p) output.
- Alarm:** 1 in, NO/NC dry contacts (through V910 inputs).
- Video Bandwidth:** 1.7 Mbps (per video stream), nom.

SOFTWARE OPERATION

- Network Setup:** Standard network protocol type using IP addressing scheme and separate PC application software.
- Site Authorization:** Camera can be set up using remote recorder or workstation GUI. Permissions can be assigned for macro create & edit, alarm setup, Authentication, Reports and System Status. Supports up to 20 Groups and 100 Users.
- Macro Create & Edit:** System macros can be configured to use the camera's video. In addition, within macros, alarms can be sent and remote macros run.

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Alarm Setup: An alarm can be triggered on video motion detection and loss. The alarm can be sent to remote units.

Authentication: The video from the camera dome can be set to view the Authentication status symbol (A) on the displayed video.

Picture Quality and FPS Priority: Camera video can be set up to prioritize recorded picture quality and video FPS. Priority can be assigned to user/macro recording for highest requested video quality or Master user control.

OPERATIONAL

Tilt and Horizontal Adjustment: 3-axis adjustment: pan, tilt and roll.

MECHANICAL

Application: Indoor or Outdoor
Mounting: Wall or ceiling. Pendant option.
Dimensions: Height (H): 5.1 in. (130 mm).
 Total Diameter (D1): 6.1 in. (155 mm).
 Dome Diameter (D2): 4.7 in. (119 mm).

Weight: Approximately 4 lb (1.8 kg).
Construction: Base/Cover: die-cast aluminum.
 Dome: polycarbonate plastic.

Finish: Base/Cover: painted light beige.
 Dome: smoked.

Shipping Dimensions: Height : 9.25 in. (235mm).
Width: 9.25 in.(235mm).
Depth: 10.375 in (264).
Shipping Weight: Approximately 5 lb (2.3 kg).
Shipping Volume: 0.5 ft3 (0.014 m3).

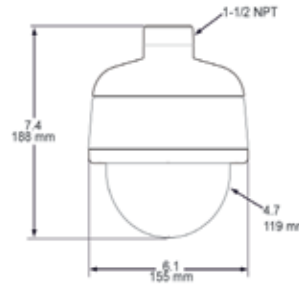
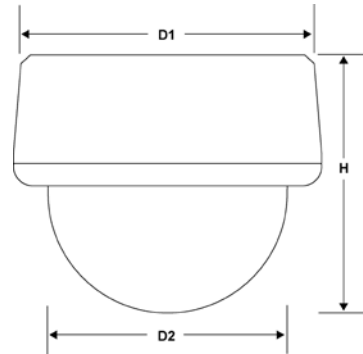
ENVIRONMENTAL

Operating Temperature Range: With Heater: -22 to 140° F (-30 to 60°C).

Operating Humidity Range: Up to 90% relative, noncondensing.

Storage Temperature Range: -40 to 150° F (-40 to 65° C) maximum.

Storage Humidity Range: Up to 90% relative, noncondensing



V910 Dome with V910-PH Pendant Mount

Dimensions

Product Specification

Table 2. Camera/Lens Specifications

Model	V910A-IP3/ V910A-IP3C	V910A-DN-IP3/ V910A-DN-IP3C	V910A-WDR-IP3/ V910A-WDR-IP3C
Camera			
Image Device	1/3-inch CCD 2:1 interlace, NTSC/PAL	1/3-inch CCD 2:1 interlace, NTSC/PAL	1/3-inch Pixim CMOS progressive, NTSC/PAL
Color/Monochrome	Color	Day/Night Color	Day/Night Color
Resolution (TV Lines)	550	550	540
Sensitivity fc (lux)	0.03 (0.3) scene with f/1.2 lens	Day/Color: 0.03 (0.3) Night/BW: 0.004 (0.4) scene with f/1.2 lens	0.008 (0.08) DSS on scene with f/1.2 lens
Synchronization	Internal	Internal	Internal
Electronic Iris (sec)	NTSC: 1/60-1/100,000 PAL: 1/50-1/100,000	NTSC: 1/60-1/100,000 PAL: 1/50-1/100,000	NTSC: 1/60-1/100,000 PAL: 1/50-1/100,000
BLC/WDR	ON/OFF DIP switch selectable	ON/OFF DIP switch selectable	ON/OFF Menu/joystick selectable
AGC	ON/OFF DIP switch selectable	ON/OFF DIP switch selectable	ON/OFF Menu/joystick selectable
Signal-to-Noise Ratio	>48 dB (AGC off)	>48 dB (AGC off)	>48 dB (AGC off)
Lens			
Focal Length (mm)	3.3-12 varifocal with autoiris	3.3-12 varifocal with autoiris	3.3-12 varifocal with autoiris
Field-of-View	Horiz: 83.9°-23.91° Vert: 61.9°-17.93°	Horiz: 83.9°-23.91° Vert: 61.9°-17.93°	Horiz: 83.9°-23.91° Vert: 61.9°-17.93°



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