VICON

Quick Guide

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Surveyor® HD Series Network Camera Domes

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Surveyor HD Camera Dome Quick Operation Guide

This manual provides a quick overview for the operation of the Surveyor® HD Series of Camera Domes. Refer to the complete manual, XX214-0X (installation) and XX214-4X (web browser), for complete details on installation, setup and operating details.

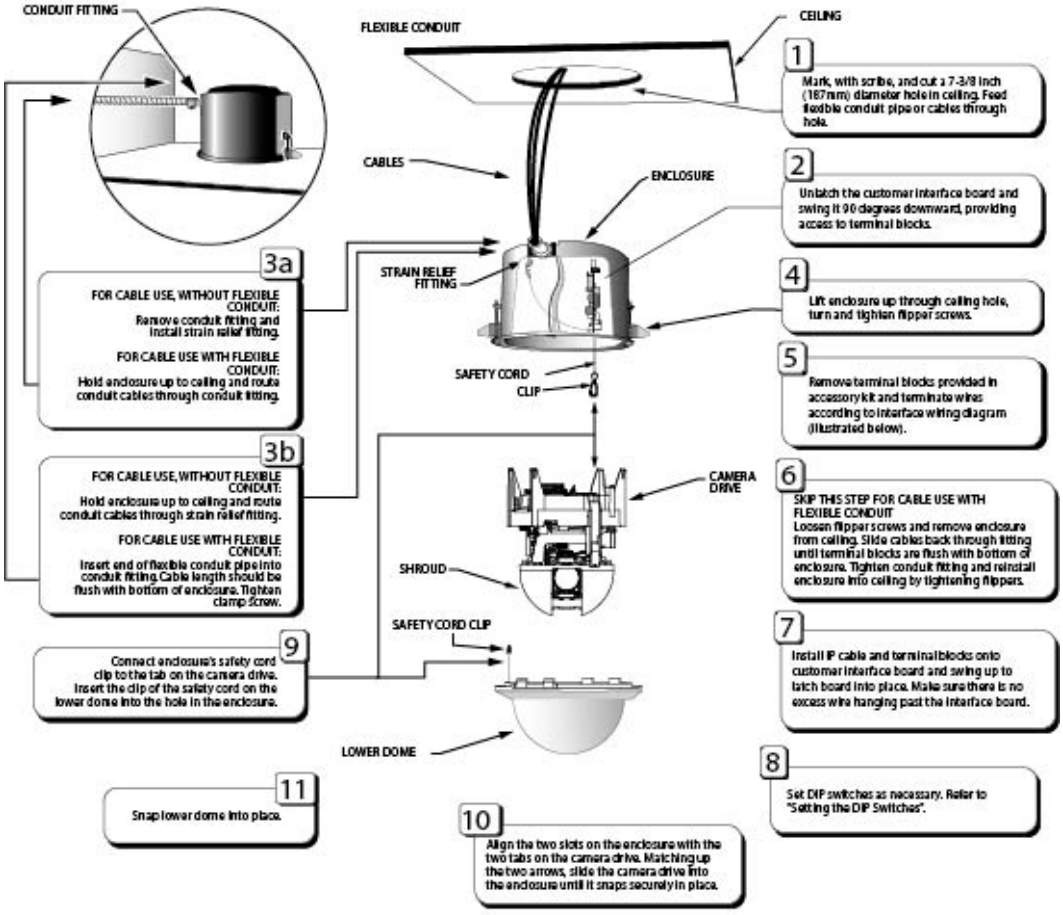
The Surveyor HD is a compact network dome comprised of a camera/lens and pan/tilt drive in an attractive covert enclosure. Surveyor HD is sold in a variety of prepackaged configurations with choices in environment, mounting configuration, and lower dome types.

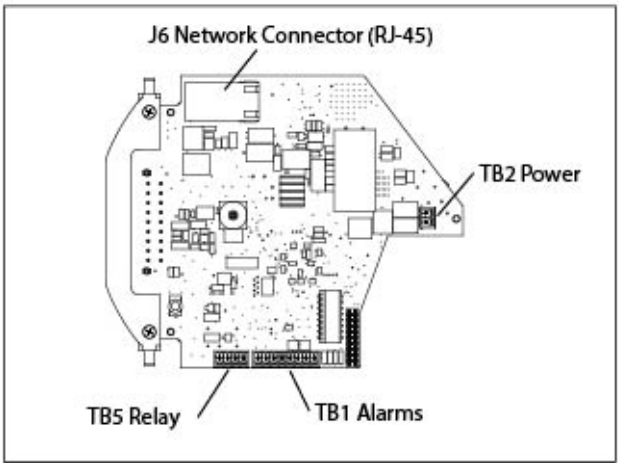
The Surveyor HD supports high-profile H.264 or M-JPEG compression. The dome supports ONVIF open architecture connectivity to enable integration into third party software recording solutions, as well as Vicon's ViconNet.

The Surveyor HD is designed for easy installation and serviceability. The entire drive assembly simply snaps into the housing. When removed, the mechanism retains all programmed functions in its on-board memory. The customer interface board snaps down for easy access and the PCB provides removable terminal blocks for simple wiring connections. Power to the indoor units can be provided by PoE+ (Power over Ethernet Plus); outdoor units require 24 VAC. The Surveyor HD includes a high-definition 1.3 or 2.0 megapixel day/night camera with wide dynamic range (WDR) and digital noise reduction (DNR/FNR).

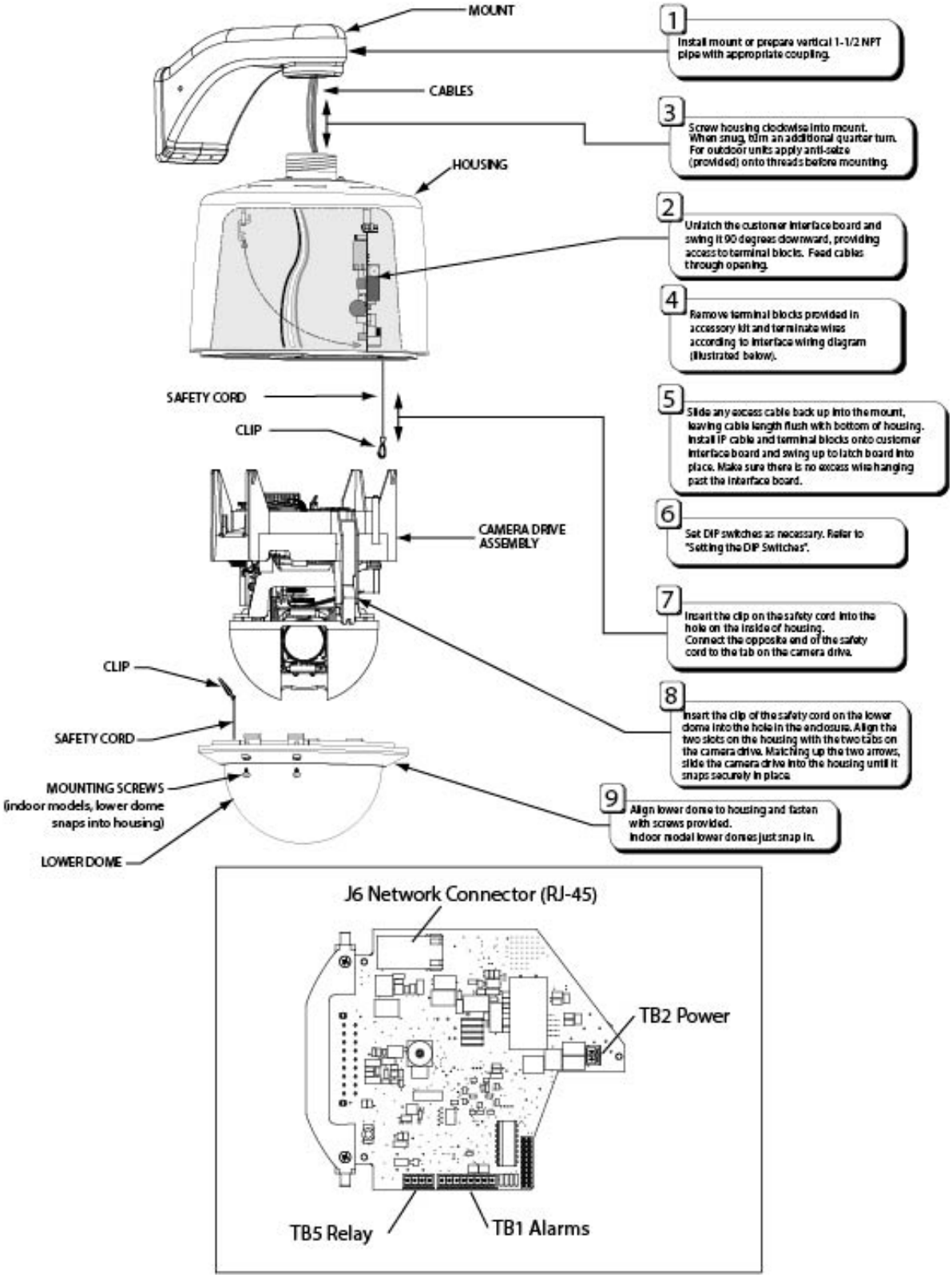
Installation

In-Ceiling

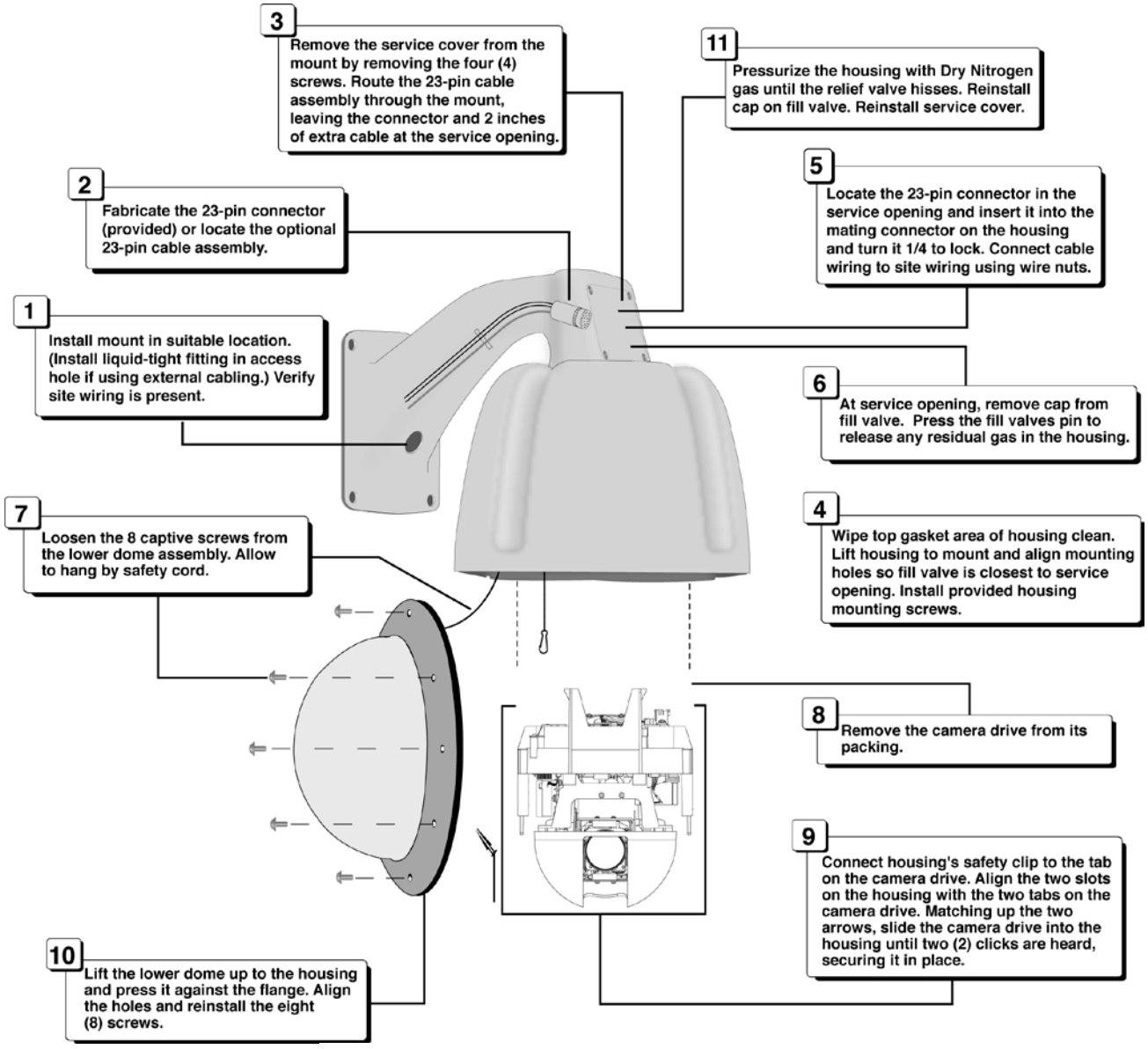


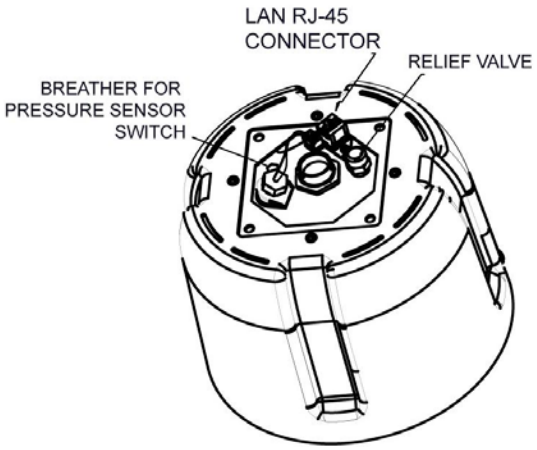


Pendant


MOUNT
CABLES
HOUSING
SAFETY CORD
CLIP
CAMERA DRIVE ASSEMBLY
CLIP
SAFETY CORD
MOUNTING SCREWS (indoor models, lower dome snaps into housing)
LOWER DOME
1 Install mount or prepare vertical 1-1/2 NPT pipe with appropriate coupling.
3 Screw housing clockwise into mount. When snug, trim an additional quarter turn. For outdoor units apply anti-seize (provided) onto threads before mounting.
2 Unlatch the customer interface board and swing it 90 degrees downward, providing access to terminal blocks. Feed cables through opening.
4 Remove terminal blocks provided in accessory kit and terminate wires according to interface wiring diagram (illustrated below).
5 Slide any excess cable back up into the mount, leaving cable length flush with bottom of housing. Install IP cable and terminal blocks onto customer interface board and swing up to latch board into place. Make sure there is no excess wire hanging past the interface board.
6 Set DIP switches as necessary. Refer to "Setting the DIP Switches".
7 Insert the clip on the safety cord into the hole on the inside of housing. Connect the opposite end of the safety cord to the tab on the camera drive.
8 Insert the clip of the safety cord on the lower dome into the hole in the enclosure. Align the two slots on the housing with the two tabs on the camera drive. Matching up the two arrows, slide the camera drive into the housing until it snaps securely in place.
9 Align lower dome to housing and fasten with screws provided. Indoor model lower domes just snap in.
J6 Network Connector (RJ-45)
TB2 Power
TB5 Relay
TB1 Alarms

Pressurized





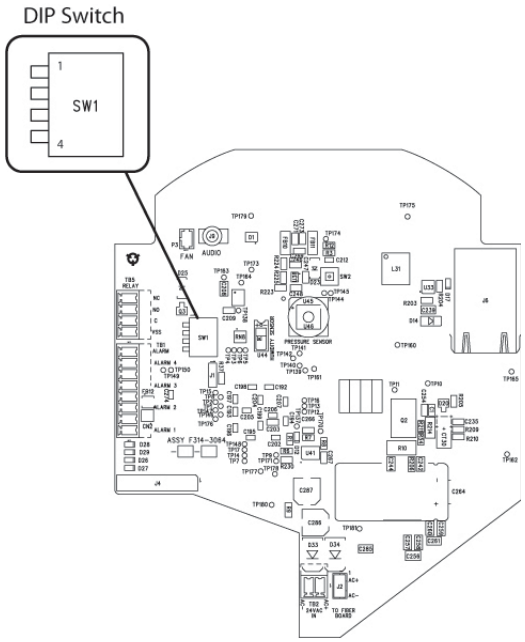
Wiring and Setup

CONNECTOR/PIN NUMBER	CONNECTOR TYPE	CONNECTOR/PIN LABEL	SIGNAL NAME
	TERMINAL BLOCK	**POWER (TB2)**	
TB2-1		AC+	Hot
TB2-2		AC-	Neutral
	TERMINAL BLOCK	**ALARM (TB1)**	
TB1-1		ALARM 1	Alarm I/O 1
TB1-2			Ground
TB1-3		ALARM 2	Alarm I/O 2
TB1-4			Ground
TB1-5		ALARM 3	Alarm I/O 3
TB1-6			Ground
TB1-7		ALARM 4	Alarm I/O 4
TB1-8			Ground
	TERMINAL BLOCK	**COMM/RELAY (TB5)**	
TB5-1		VSS	Ground
TB5-2		C	Relay, common
TB5-3		NO	Relay, normally open
TB5-4		NC	Relay, normally closed
	RJ-45	**LAN (J6)**	
J6-1			Transmit +
J6-2			Transmit -
J6-3			Receive +
J6-4			PoE spare
J6-5			PoE spare
J6-6			Receive -
J6-7			PoE spare
J6-8			PoE spare
	1/8-IN. PHONO	**AUDIO (J9)**	
J9		J9	Audio In

Setting the DIP Switches

There are two DIP switches that must be set on the Surveyor HD. One is on the Communications Interface (CI) board and one on the Main board.

SW1 4-position DIP switch is on the Communication Interface (CI) board. For SW1 all poles should be set to OFF (default).



DIP Switch Location on CI Board

Caution

Changing the positions on the DIP switch on the Main board should only be done by a qualified person. Position 1 is used only if it is necessary to force the unit into default setup if network or system connections are lost. Be sure to reset this switch back to the OFF position before the next power up to avoid a constant return to defaults, resulting in not being able to enter the camera's IP to use the Web Browser. The camera dome is shipped with a default static IP of 1.1.1.2.

The Main board has an 8-position DIP switch SW1. The settings for the positions of this DIP Switch are:

Position 1 - Set Network Address. OFF = Default Position, do not set network defaults. ON = Set k default network address (1.1.1.2); must be reset OFF after reboot and before next power up.

Position 2 – Unused (set to OFF)

Position 3 – For factory use only. OFF is Default.

Position 4 – Unused (set to OFF)

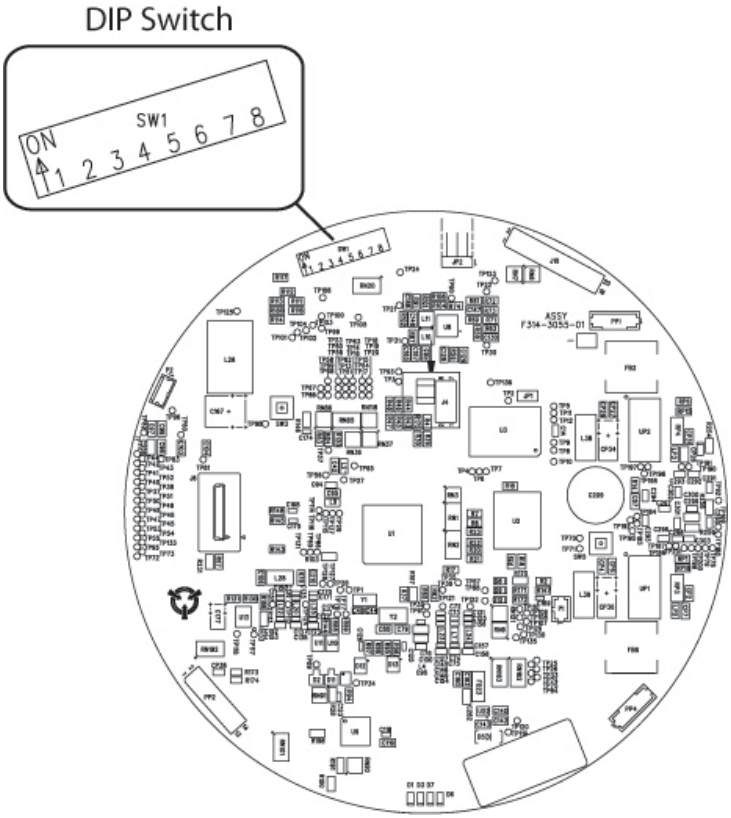
Position 5 – Unused (set to OFF)

Position 6 - Unused (set to OFF)

Position 7 – Set password. OFF = Default Position. ON = Reset to default password (***password***); must be reset to OFF after reboot and before next power up.

Position 8 – System Mode. OFF = Default Position, ViconNet Mode. ON = ONVIF/NTCIP Mode.

The main board is located underneath the housing. It may be necessary to spin the housing mechanism to see the DIP switch, located near the tilt motor along edge of the board.



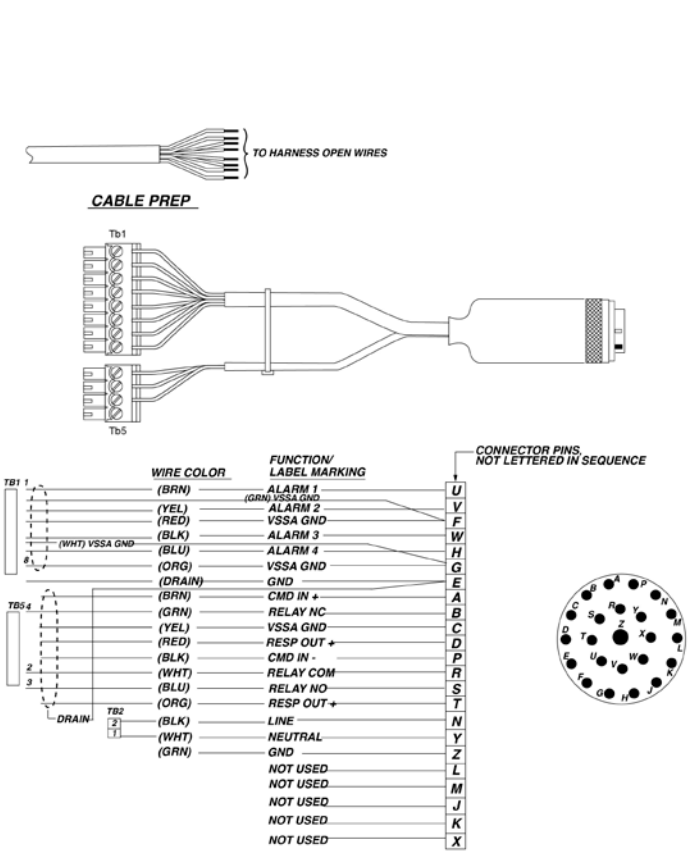
DIP Switch Location on Main Board

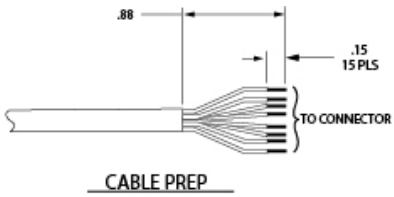
Communication Ports

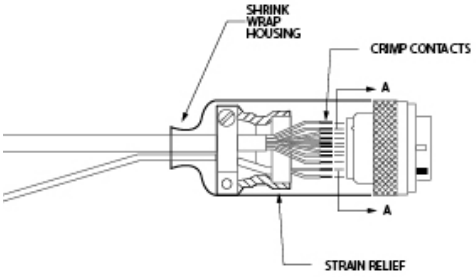
If using NTCIP protocol, communicate to the Surveyor HD using ports 3000/UDP or 3001/TCP.

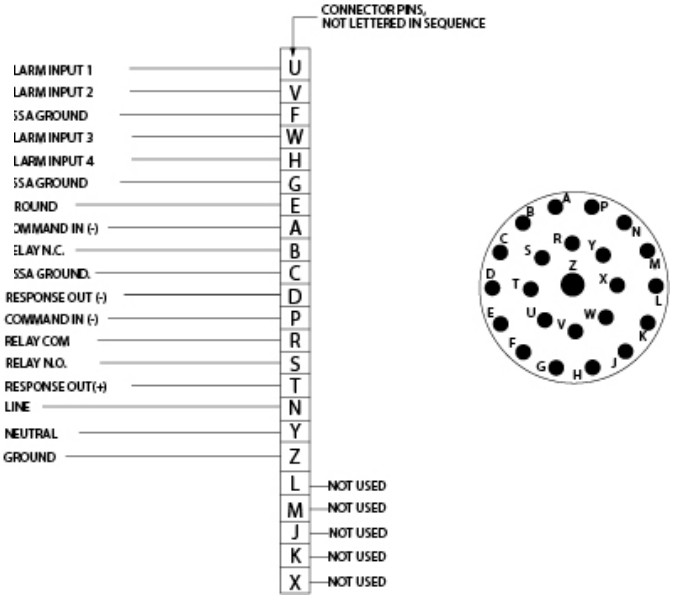
If using ONVIF, use port 8000.

Pressurized Cable Preparation









Using the prefabricated cable

Using the Web Browser Interface

Web Browser Interface

The Web Browser Interface provides a user friendly interface to configure and control various features and functions of the Surveyor™ HD camera dome. The interface allows the configuration of camera dome parameters, viewing live video, using PTZ, setting administrative controls and collecting camera dome reports and status information.

There are six (6) functional areas (pages) on the Web Browser Interface, Camera Login, Live Video, Add/Edit Users, Settings, Maintenance and System Information.

VMS Compatibility

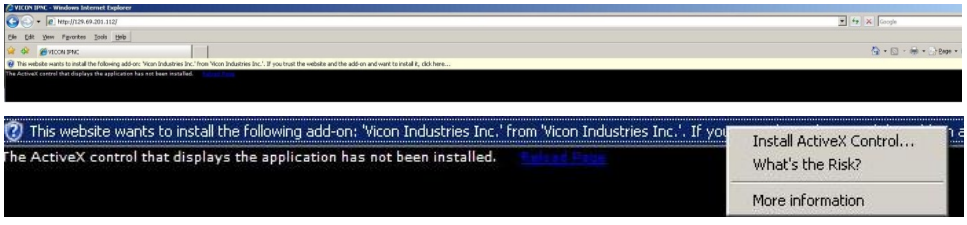
The Surveyor HD Camera Dome is an ONVIF compliant open platform product designed to be used with multiple Video Management Systems (VMS). For initial setup when using the ViconNet VMS, refer to Appendix A in XX214-4X for information on using the “VNSetup” discovery and configuration application.

VMS specific tools may be necessary to use the dome with each system, such as a Discovery Tool. Refer to their documentation.

Access the Camera

Open a browser (i.e., Internet Explorer). Enter the IP address or host name of the camera in the Location/Address field of your browser. The camera dome is shipped with a default IP static of 1.1.1.2; change your PC’s IP to match the Subnet if needed.

You may be asked to load ActiveX software; click to download it at this time.



Login

The initial screen prompts the user to login with a user name and password if at least one user account has been programmed in the camera dome. Upon first use, the default user name is **admin** and the password is **password**. From the dropdown list, select a display language for the Web Browser; currently only English is available.

Click Submit to enter the Surveyor HD browser

After the login process, the ***Live Video*** page displays. Along the left side of the screen there is a Navigation panel with tabs for selection of the other function areas; the tab icon turns blue when it is selected. If there are sub-screens, that word turns orange when selected. Additionally, a vertical blue bar appears to the right of the function when selected. Help and Logout buttons are provided at the top right of the screen.

- There are PTZ controls that become visible when the cursor is just below the bottom edge center of the live video (at the top when in Full Screen mode). Hovering over the icon displays its function. The icon turns blue when it is selected. The functions are Zoom In/Out, Focus Near/Far, Iris Open/Close, AutoPan, Aux 1 and Night Mode (used for manual night mode) control).

- Right click on the live video to display a red bull's eye ( ); this is the pan and tilt control. Drag the bull's eye on the image in desired direction to pan and tilt the camera dome. Right click again to remove the bull's eye.

A user name and password are required to log on to the camera dome. The **Add/Edit** screen allows user accounts to be setup. A maximum number of 10 users can be entered.

The **Settings** area allows for configuration of a variety of controls, including Transmission, Image, Analytics (for future release), Date/Time, Network and Port, Alarms/Relay, Schedule, PTZ and SD Card.

- The ***Transmission*** screen provides settings of two streams of video; configure compression type, resolution, frame rate (fps), rate control (CBR/VBR), bit rate, force I frame and quality (future release).
- The ***Image*** screen provides settings for white balance, image freeze, AGC max limit, shutter speed, iris control, iris average level, iris peak level, and wide dynamic range (WDR); the Advanced screen also provides settings for red and blue gain value, backlight control (BLC) tuning, horizontal and vertical aperture settings, auto night mode and night mode color and lens speed (the advanced screen should only be used by technically knowledgeable users).
- The ***Date/Time*** screen allows programming and review of the date and time component of the camera dome. The date and time can be set manually or to sync with the PC or SNTP server. Date and time format is selected and automatic daylight saving time is available.
- The ***Network and Port*** screen provides settings for Network, SMTP, FTP, RTSP, and SNTP. Consult your IT department as needed.
- The ***Alarms/Relay*** screen allows review and programming of alarms. The Enable Alarms box on the top left of the screen must be checked to enable any alarms. An Ethernet loss alarm is available, as are 4 external alarm inputs. The relay driver is also configured from this screen.
- From the ***Schedule*** screen, a schedule of events for time of day and day of week can be set up.
- From the ***PTZ*** screen, there are tabs to set up *Presets*, *Tours*, *Auto Tours*, *Privacy Masks* (future use), *Sectors*, *Titling*, and *Motor Control*.
- The ***SD Card*** screen (future use) provides the parameters for setting up how data from the dome can be saved to an SD card.
- The ***Maintenance*** screen provides a list of configuration controls. Log capability is for future use. Camera Maintenance provides the ability to upgrade firmware. Use the Backup button to backup the configuration. Firmware and configuration data can be restored using the Restore button. For ViconNet, enter a Nucleus name

and Nucleus IP address. Diagnostic Features can be turned on or off. Manually reboot the camera by clicking the Restart Camera button; click Restore Defaults to return all Maintenance settings, except Network settings, to their default values

- The ***System Information*** screen provides specific details about the camera.

Help

In the top right of each screen is a Help button

.Clicking the Help button opens a dialog box that explains the functions on the current screen.

Logout

To exit the browser for the Surveyor HD Camera Dome, click the Logout button

.in the top right corner. The screen will revert to the Login screen.

Vicon Industries Inc.

For office locations, visit the website:

www.vicon-security.com

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