



Visiondome-VR-HD Installation/Configuration Manual



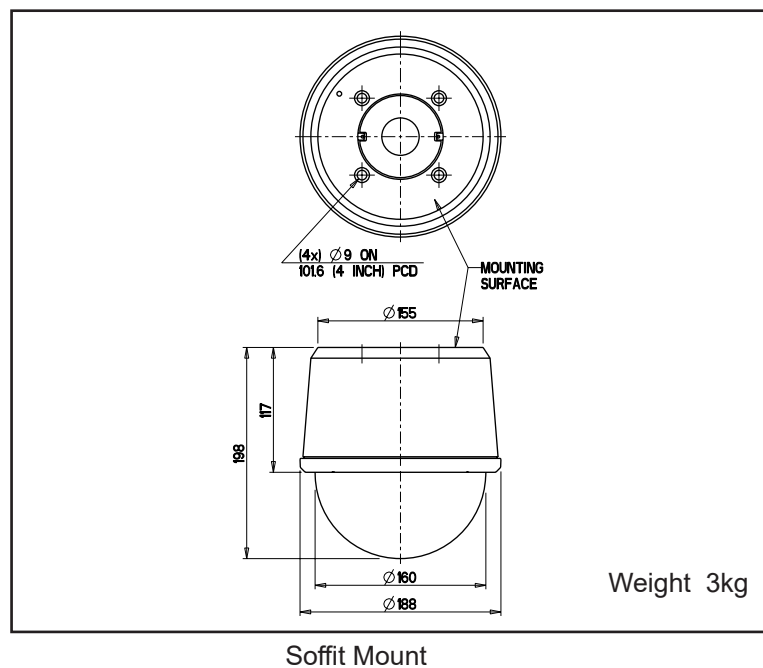
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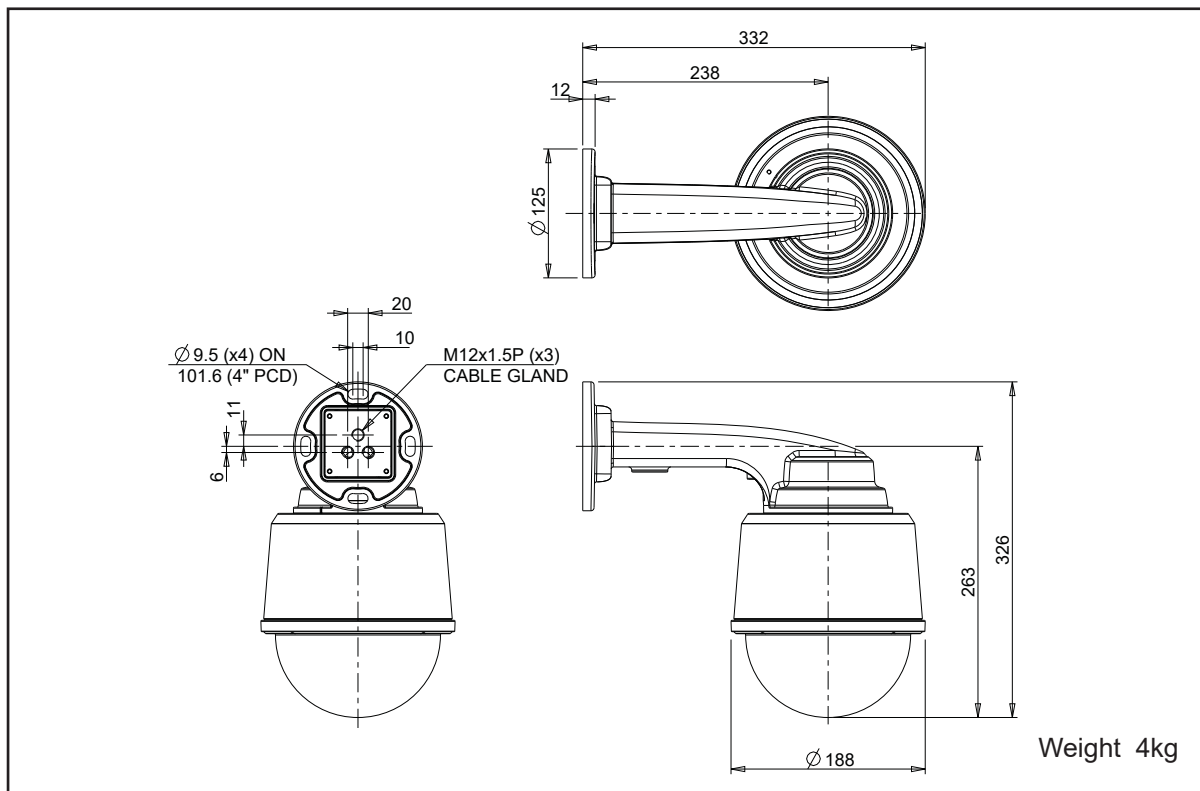
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1 Safety and Precautions

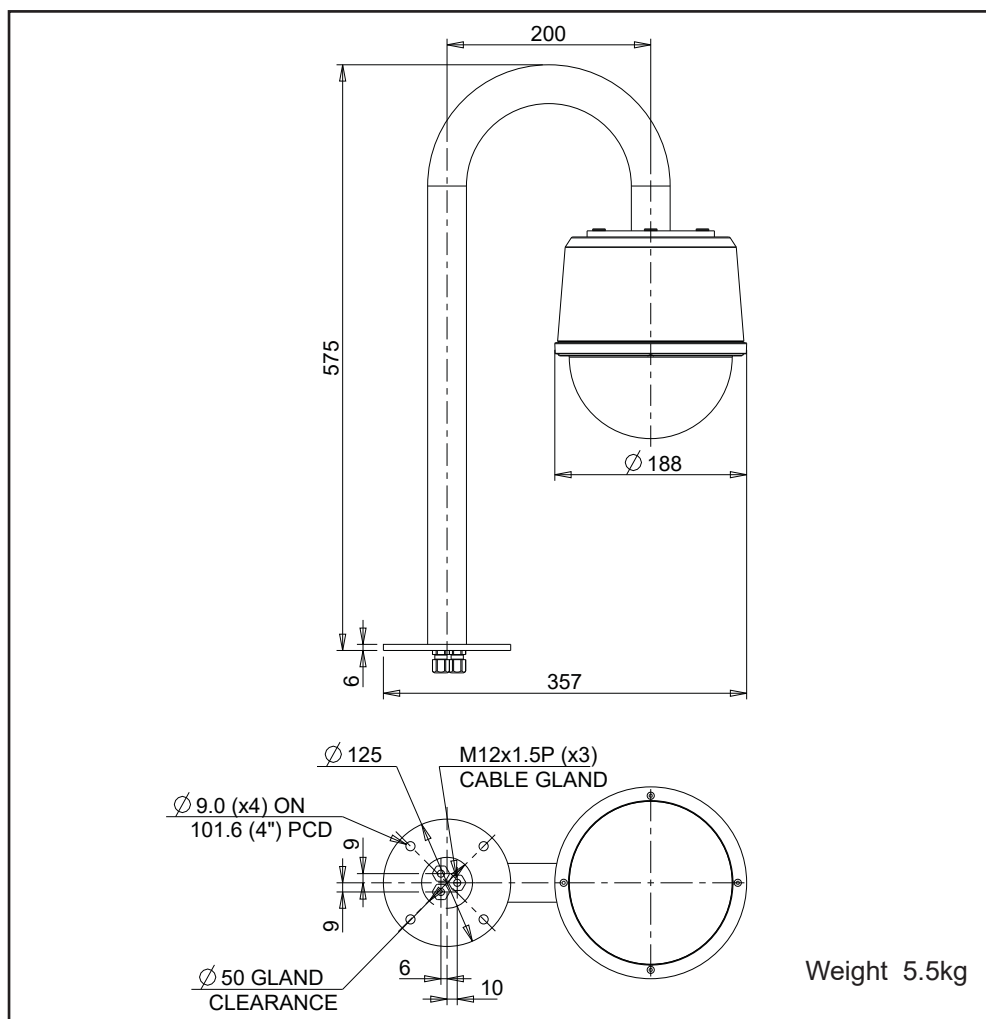
1. Please read these notes before attempting to operate the 360 Vision VisionDome-VR-HD, and keep for future reference.
2. All servicing and repairs must be handled by 360 Vision Technology.
3. Avoid pointing the camera directly towards a bright light source (sunlight), or expose the camera to intensive light situations as this may damage the camera pick-up device.
4. Installation should be carried out by suitably qualified personnel, in accordance with local codes of practice and regulations.
5. 360 Vision Technology Limited accept no liability for any damage caused by incorrect or improper installation.

2 Housing Dimensional Drawing





Wall Mount



Swan Neck Mount

3 Connections

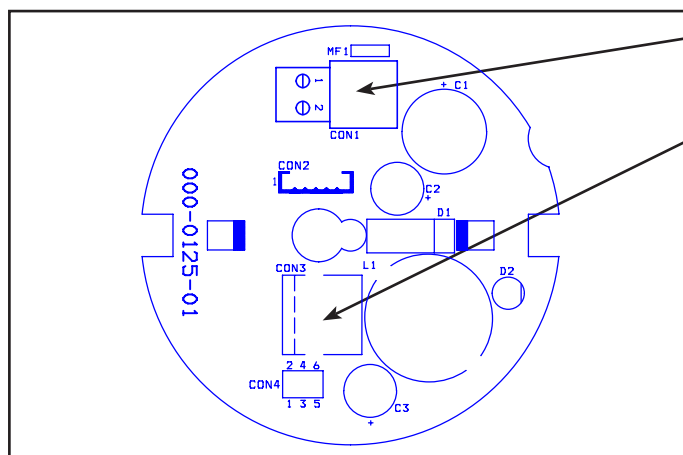
Cable Size	VisionDome VR HD Maximum Distances (Using BHD-PSU)
0.75mm ²	55 metres
1.00mm ²	70 metres
1.25mm ²	90 metres
1.50mm ²	110 metres
2.00mm ²	145 metres

To ensure optimum Visiondome-VR-HD performance these parameters must be adhered to. Failure to do so will invalidate the warranty.

Visiondome-VR-HD Connections

Use a short bodied RJ45 connector with CAT5e cable for the connection to the Visiondome-VR-HD PCB 000-0125-01. Do not use RJ45 connectors with connector hoods or CAT6 cable, as these are too bulky to fit properly.

The VisionDome-VR-HD connection board is located at the top of the dome.



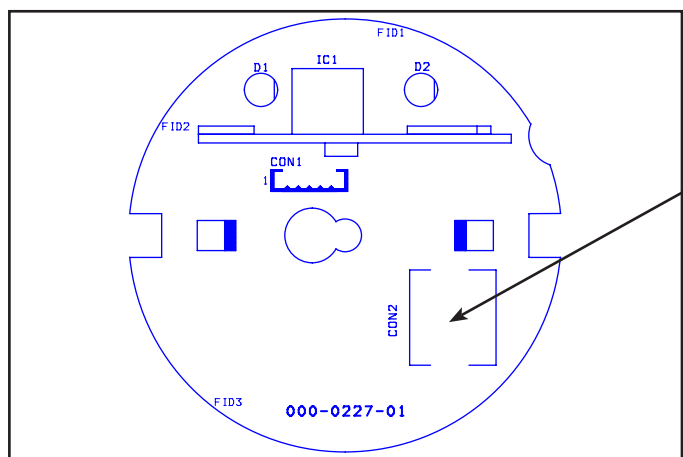
Power Connections

Connect 24Vac/30vdc to CON1

Ethernet Connections

Connect Ethernet cable to VR HD Dome connection board using a short bodied (13mm) RJ45 connector. Use colours defined in 568B standard.

RJ45	CAT5, CAT5e, CAT6 Cable	Signal
Pin 1	White with Orange Band	Tx+
Pin 2	Orange	Tx-
Pin 3	White with Green Band	Rx+
Pin 4	Blue	
Pin 5	White with Blue Band	
Pin 6	Green	Rx-
Pin 7	White with Brown Band	
Pin 8	Brown	



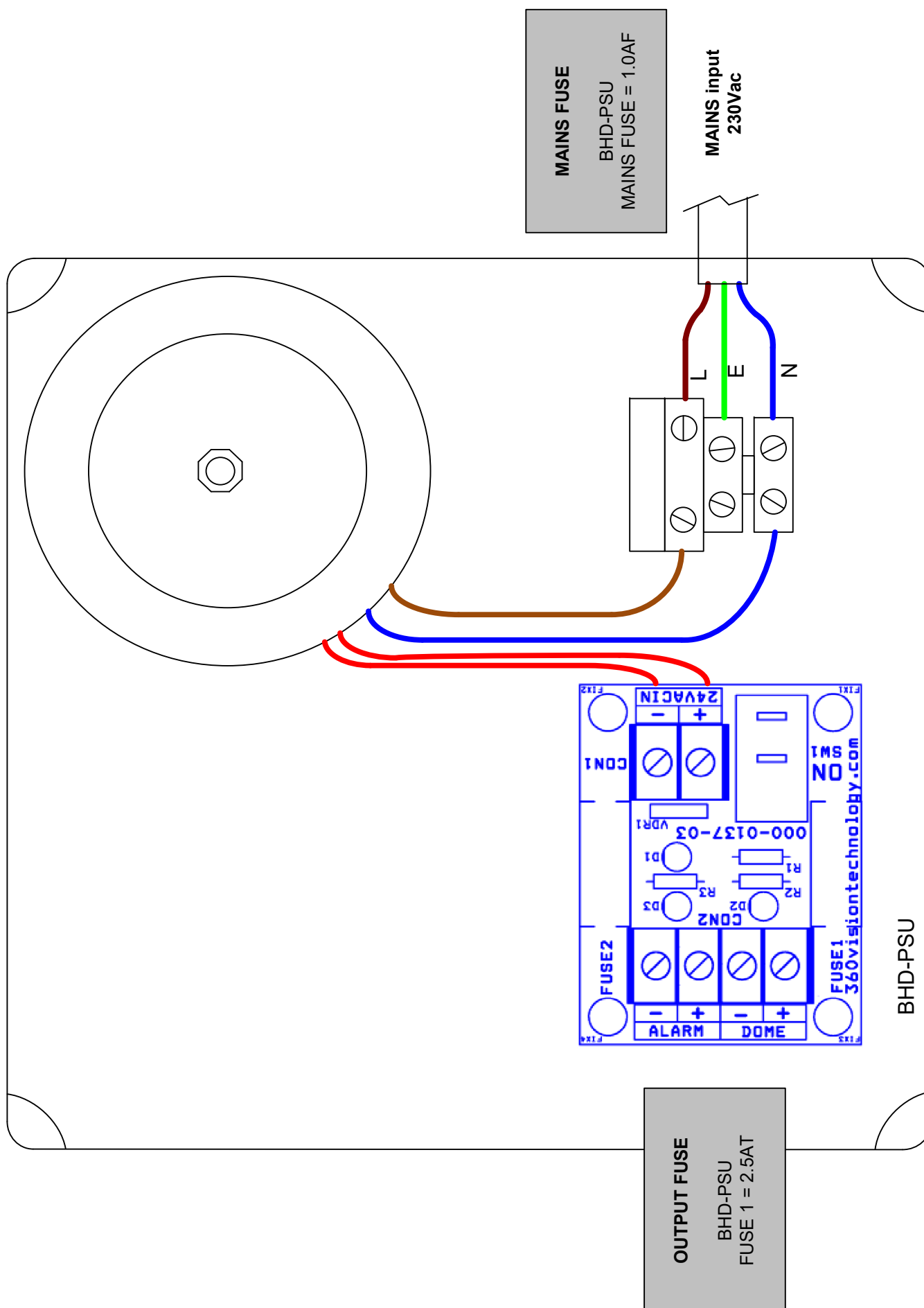
POE+ Ethernet Connections

Connect Ethernet cable to HD Dome connection board. Use colours defined in 568B standard.

POE+ must support type 2.

Wall and Swan Neck mount options are supplied with 7m power and Ethernet cable. These are fitted using cables glands.

Cable entry holes must be sealed, failure to do so will cause water damage and invalidate the warranty.



Visiondome-VR-HD Configuration

4 Locating the Visiondome-VR-HD on your Network

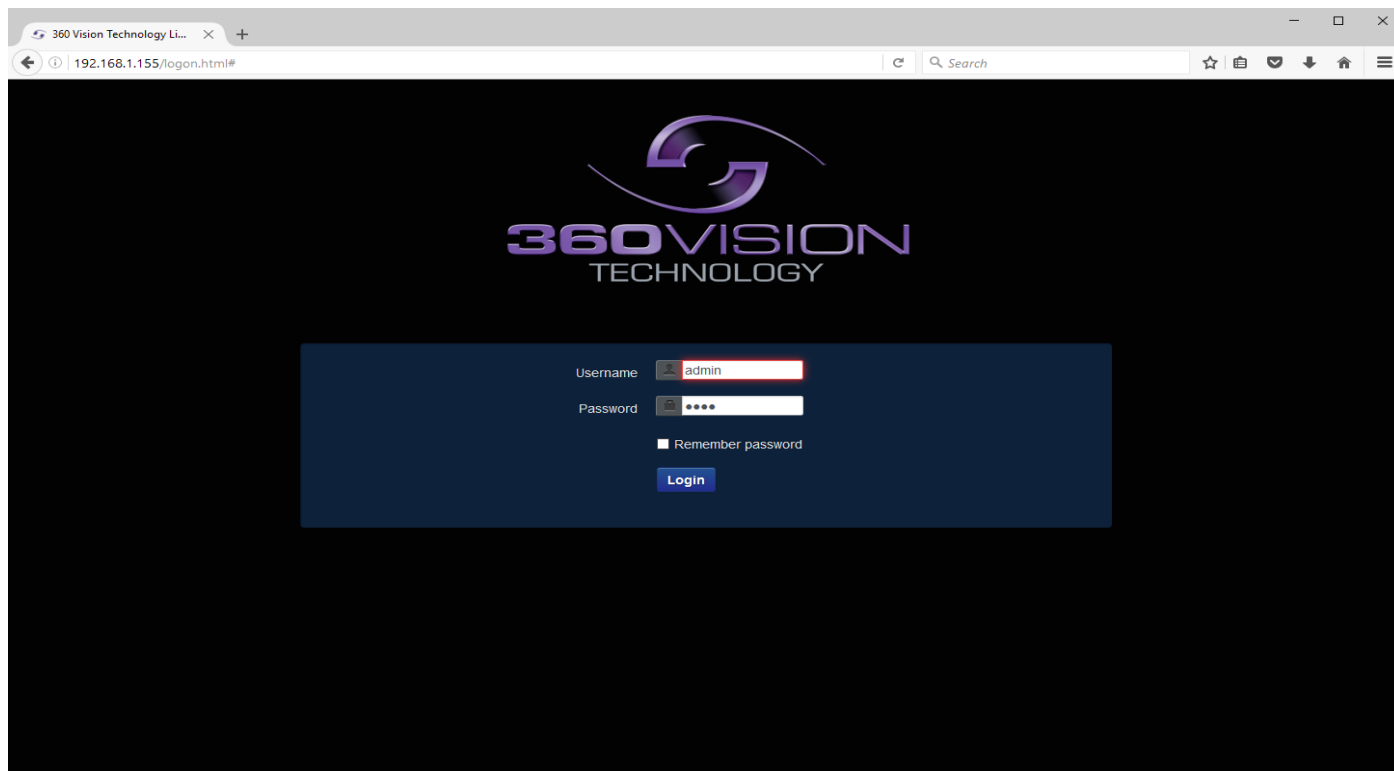
Default IP Address	192.168.1.187
Subnet	255.255.255.0
Gateway	192.168.1.4

Using the DVR management software, 'ONVIF Device Manager' or 360 Vision Discovery Tool (which can be found on the CD supplied or from 360 Vision Technology web site/technical support) to find the IP address of the Visiondome-VR-HD. Note the ports used by the Visiondome-VR-HD are:-

Protocol	Port
ONVIF/HTTP	80 TCP
RTP Stream 1	6970 TCP/UDP
RTCP Stream 1	6971 TCP/UDP
RTP Stream 2	6972 TCP/UDP
RTCP Stream 2	6973 TCP/UDP
RTSP	554 TCP
360 SDK	3600 TCP
360 Event	9001 TCP

5 Connecting to the Visiondome-VR-HD

Type in the IP address of the Visiondome-VR-HD into the address bar of Internet browser and install the plug-ins as required. The web page of the camera will then appear.



Visiondome-VR-HD Web Page Login screen

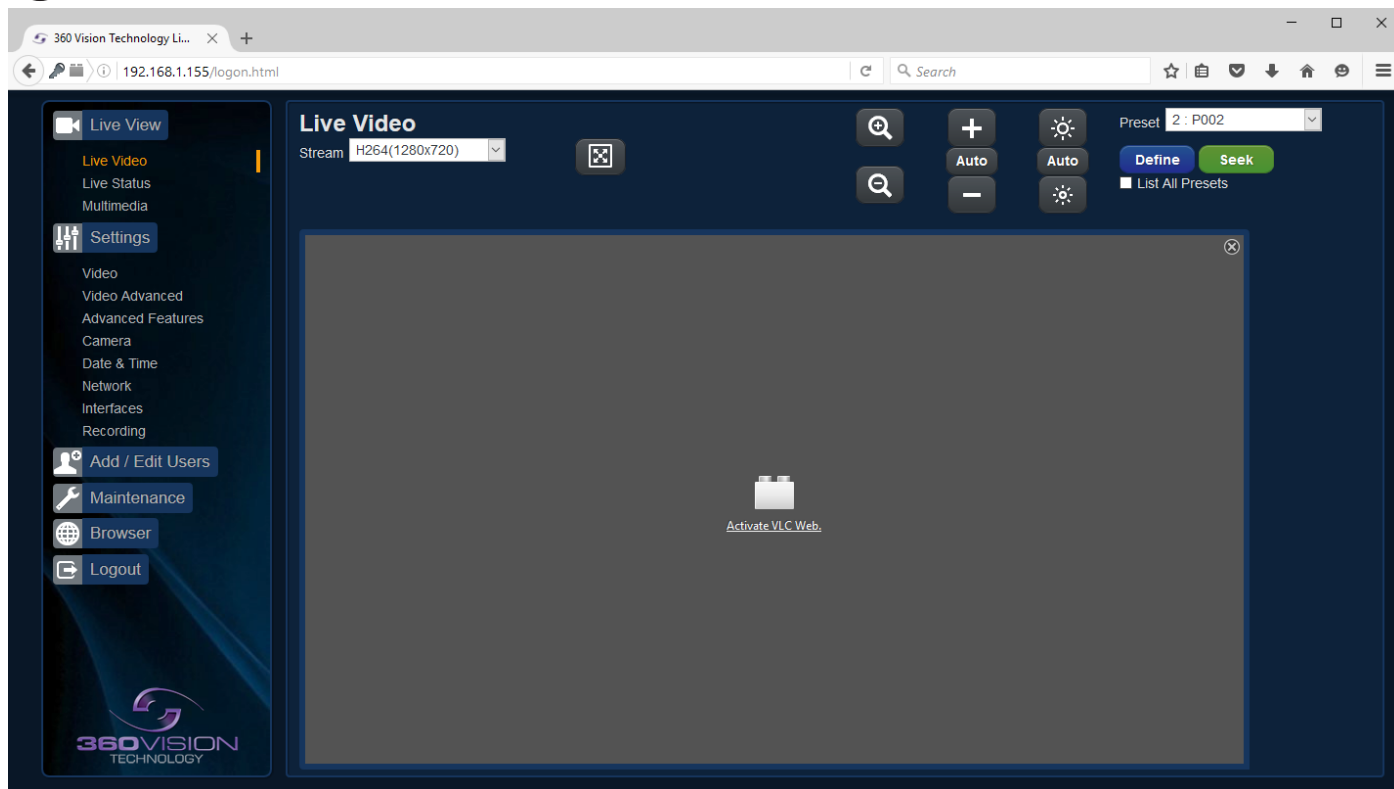
Enter the User Name (default is **admin**)
Enter the Password (default is **9999**)

If you select the box 'Remember Password' it could compromise the security of the Visiondome-VR-HD camera.

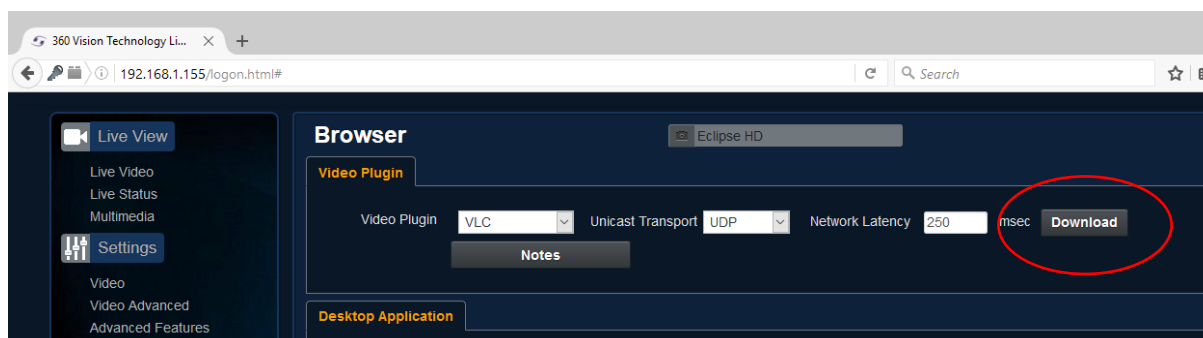
Select Submit



The camera web page uses VLC as the video player.

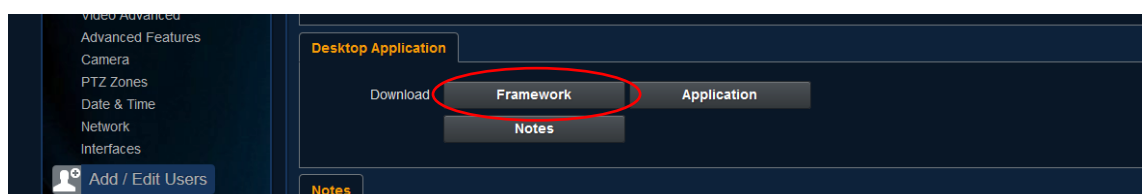


VLC video plug-in file can be downloaded from the camera if it is not installed on the connecting PC/laptop
(See Browser - page 29)



Firefox no longer supports the VLC plug-in. The web page will show JPEG images every second
(See Browser - page 29).

For live video please use the 360 HD Discovery/Config Tool, this can be downloaded from the camera web page.

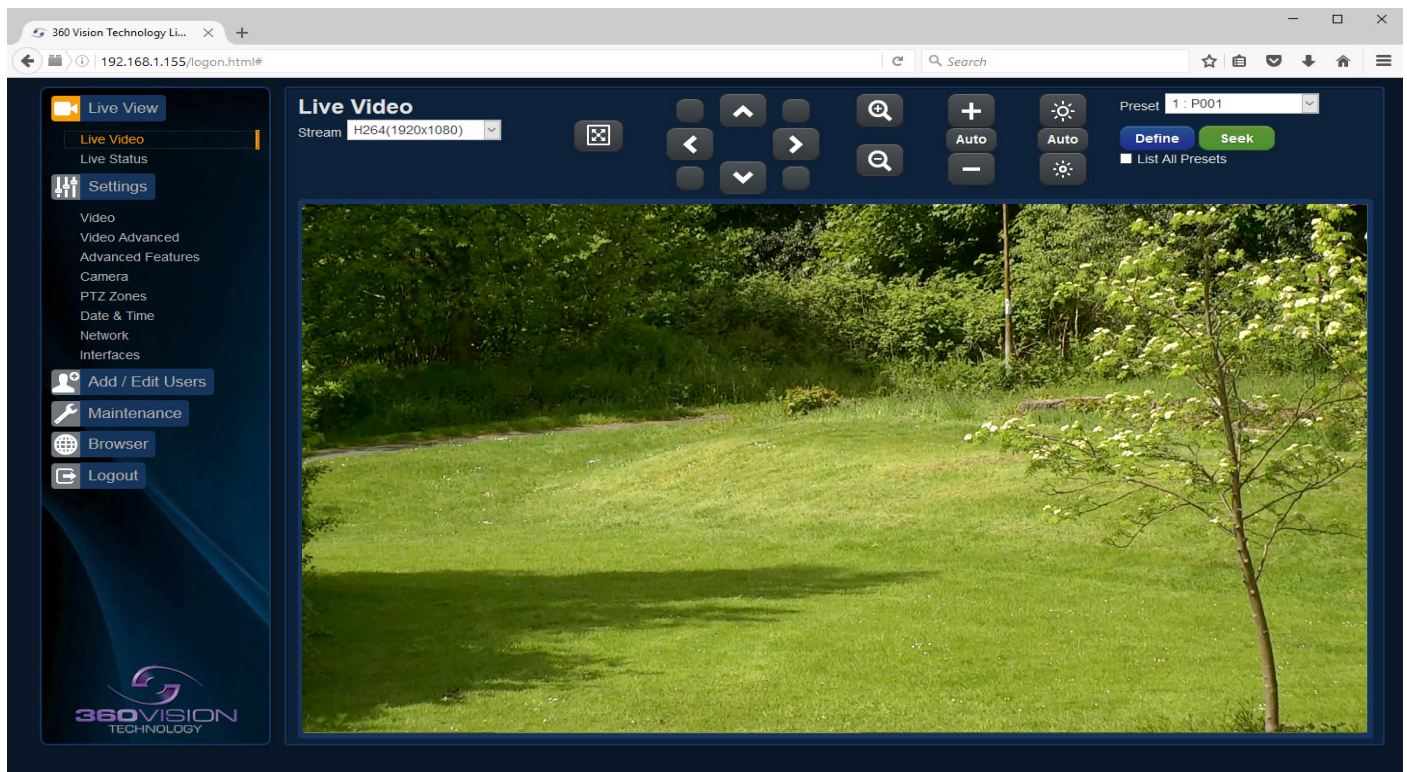


There are six main tabs on the left of the web page/screen.

- 1 Live View
- 2 Settings
- 3 Add/Edit Users
- 4 Maintenance
- 5 Browser
- 6 Logout

5.1 Live View

5.1.1 Live Video



The Live Video page offers options to:-

- Stream - Choose required stream from drop down selection.
- 1x Display - Use to show selected stream as full screen.
- Pan/Tilt - Use the up down left and right buttons to move the camera to the desired position.
- Zoom In/Out - This will operate the optical and digital zoom (if digital zoom is enabled).
(See Camera - Digital Zoom - page 17)
- Focus +/-Auto - This will operate the manual focus near, far or automatically focus as required.
(See Camera - AF AI when PTZ - page 17)
- Iris +/-Auto - This will operate the manual iris open, close or automatic as required.
(See Camera - AF AI when PTZ - page 17)
- Preset Seek/Define - This will allow admin and operator user levels to seek or define presets (Viewer user level can only seek presets). (See Advanced Features - Presets - page 15)
- List all Presets - Use to show all presets or programmed presets in drop down selection box.

5.1.2 Status

Status page shows information relating to the camera status.

The screenshot shows the 'Live Status' page for 'VisionDome HD'. The left sidebar contains navigation links: Live View, Live Video, Live Status (selected), Settings, Add / Edit Users, Maintenance, Browser, and Logout. The main content area is divided into several sections:

- Refresh:** Manual (selected), 5 sec, 10 sec, 30 sec, 1 min, 5 min.
- Camera : 'VisionDome HD'**

Camera Time	Sun Jan 1 18:21:26 2012	Timezone	Europe/London
IP Address	192.168.1.155	Firmware Version	VISIONDOME_HD_1_21_06
Zoom Range	x 30.0	Hardware Version	1_08_20
NTP	DISABLED		
- Current Status**

Pan Position	328.59 °	Pan Proportion	+82.55 %	Pan Moving	HALTED
Tilt Position	77.90 °	Tilt Proportion	-13.44 %	Tilt Moving	HALTED
Zoom Position	x 1.00	Zoom Proportion	0.00 %	Zoom Moving	HALTED
Current Preset	0	Night Mode	FALSE	Night Presets	ENABLED
Focus Mode	AUTO				
Iris Mode	AUTO				
Sensor Mode	COLOUR	Focus Range	AMBIENT		
White Lights	OFF	IR Lights	OFF		
Wiper	OFF	Washer	OFF		
Power Use	ACTIVE	Attack Detect	INACTIVE		
- Video Streams**

	Stream 1	Stream 2
CODEC	H264	-
Resolution	1080P	-
Frame Rate	25	-
Bit Rate (kbps)	4000	-
Rate Control	CVBR	-

Status page, top section.

The screenshot shows the 'Live Status' page for 'VisionDome HD', continuing from the top section. The left sidebar is identical. The main content area includes:

- Refresh:** Manual (selected), 5 sec, 10 sec, 30 sec, 1 min, 5 min.
- White Lights** OFF
- Wiper** OFF
- Power Use** ACTIVE
- IR Lights** OFF
- Washer** OFF
- Attack Detect** INACTIVE
- Video Streams** (Same as top section)
- Streaming**

Time	IP Address	Port
- System**

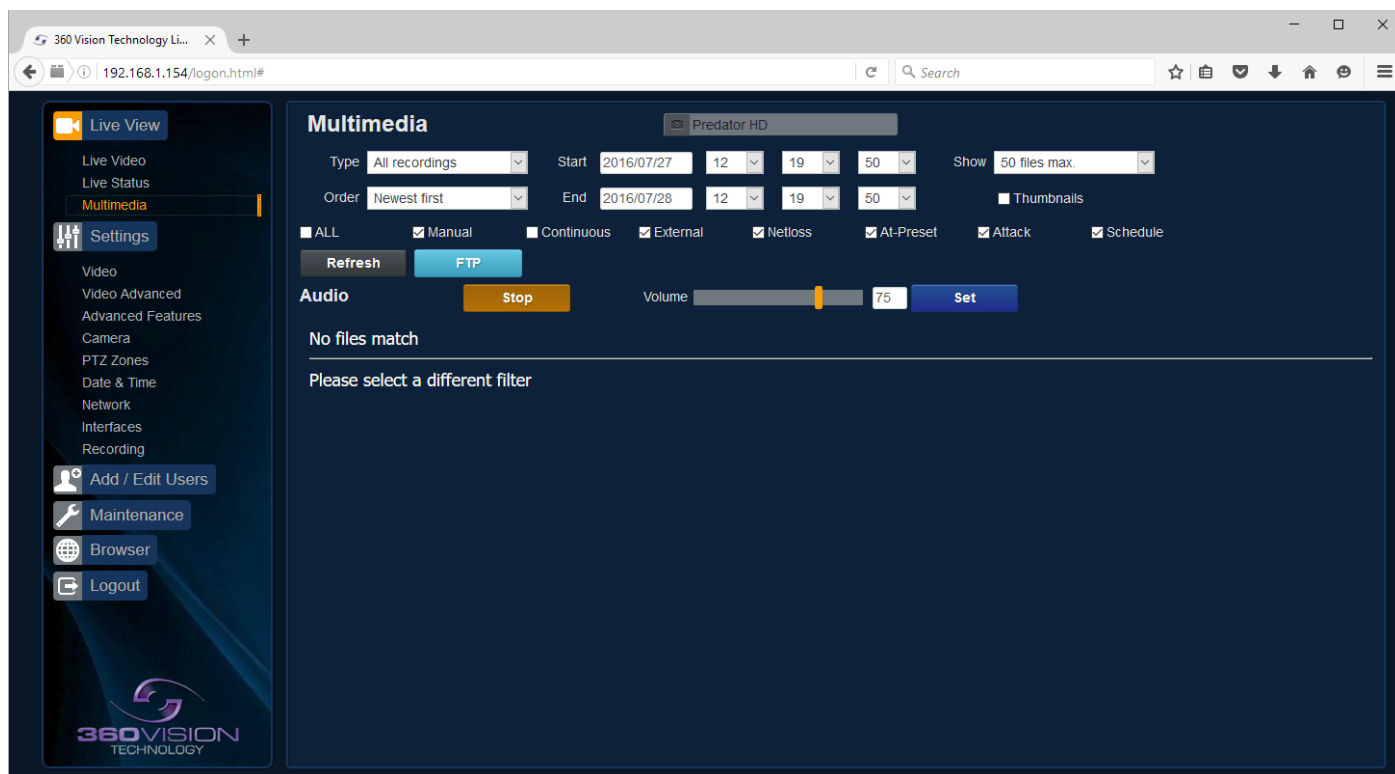
Uptime	0 d 1 h 32 m	Storage	0 MB used, 3715 MB free
Network Transmit	4.215 Mb/s	Transmit Total	0 errors, 0 dropped, 821 MB, 576959 packets
Network Receive	0.041 Mb/s	Receive Total	0 errors, 0 dropped, 11 MB, 86217 packets
- Frame Statistics**

Frame Size	Bytes	Transmission Time	ms
Frame Average	20005	P-Frame Average	4.353
I-Frame Average	115531	I-Frame Average	43.046
Max	117448	I-Frame Max (FU-A)	68.624

Status page, bottom section.

- Refresh - Select an automatic page refresh option.
- Camera - Shows information relating to the camera time & date settings, the version of codec and mainboard software loaded
- Current Status - Shows the camera function information, i.e. PTZ positions, wiper and lamp activity etc.
- Video Streams - Shows the current video streams configuration.
- Streaming - Shows the IP address on the PC that is receiving the video streams.
- System - Shows how long the camera has been powered, how much bandwidth it is using etc.
- Frame Statistics - Gives information about the video stream, how big the frames are, how big the I frames are, how long it is taking to transmit the frames.
- Recording - (Only available on Multimedia Edge Recording Visiondome) - Gives information about the current file being recorded.
- Audio Output - Feature not available.

5.1.3 Multimedia

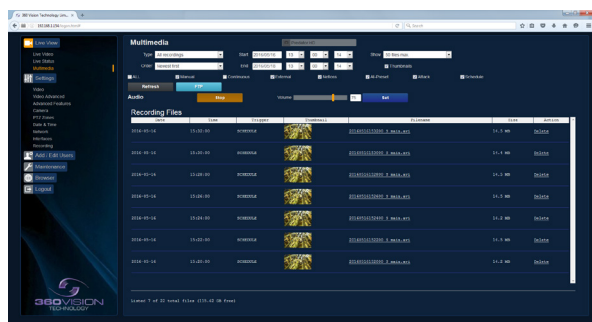


Only available on Multimedia Edge Recording Visiondome

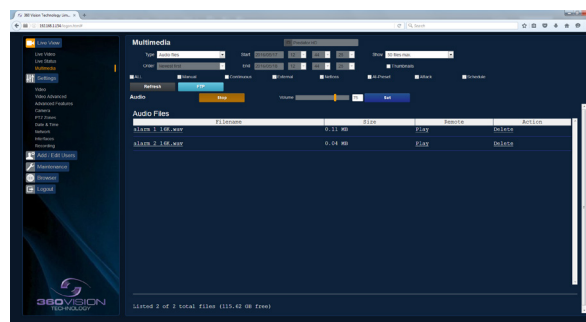
Multimedia web page offers access to files loaded onto the storage device. This includes recordings which can be filtered to show specific requirements.

- Type - Select which type of file you are interested in, choices are all recordings, video recordings, image recordings and audio files.
- Show - Choose how many files that will displayed on the page.
- Order - Choose what order the files are displayed in, choices are newest or oldest first.
- Filter - Choose what recording trigger is to be used for the filter.
- Refresh - Used to apply any filter changes.
- FTP - Click to send all files in the table to the FTP server (*See Network - page 22*).
- Audio Stop - Stop remote playing of the current audio file. Feature not available.
- Audio Volume - Used to adjust the volume of the current audio file being played remotely. Feature not available.

Selecting the audio file name will play the audio through the connected PC audio application. Feature not available..



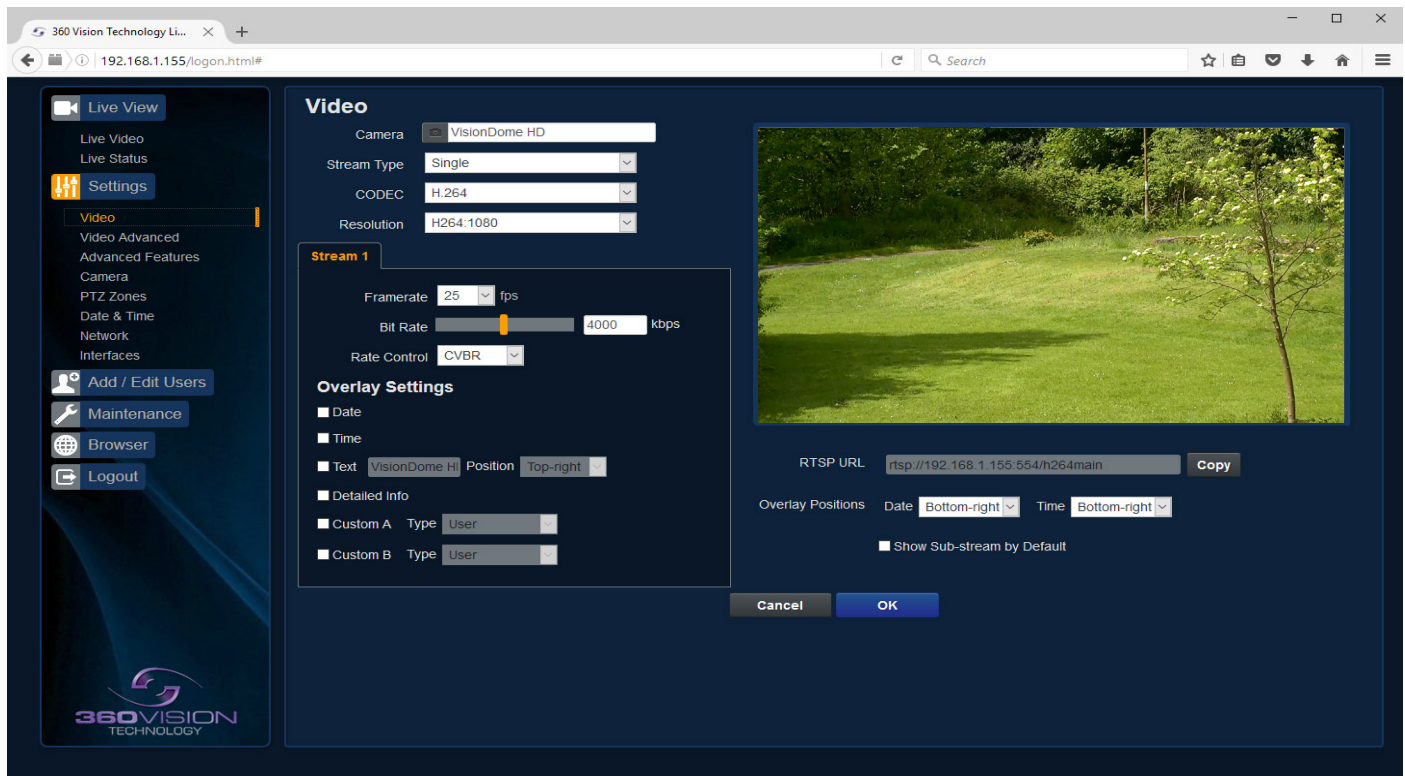
Multimedia Screen with thumbnails



Multimedia Screen showing audio files

5.2 Settings

5.2.1 Video



The Video page, offers options to setup:-

- Camera - Add or edit the camera name.
- Stream Type - Choice of single or dual video streams.
- Codec - Choose which compression format, the stream will use.
(See page 32 for table of options).
- Resolution - Set what resolution the stream will use. (See page 32 for table of options).

Stream Tabs, offer options to:-

- Framerate - Configure how many frames per second (fps) the stream uses.
(Also see Camera - Sensor Frame Rate - page 17).
- Bit Rate - Set the bit rate that the stream will use. Type in figure in Kbps. (E.g. 4000Kbps is 4Mbps)
- Rate Control - Configure the rate control of the stream, choices are VBR (Variable), CBR (Constant) and CVBR (Constrained Variable, limited to 8Mbps).

Overlay options

- Date - Selecting this option will show the date as text on the video stream.
(See Date/Time - page 21).
- Time - Selecting this option will show the time as text on the video stream.
(See Date/Time - page 21).
- Text - Selecting this option will show the selected text on the video stream. Positions available are top left or right of the image.
- Detailed Info - This will show the information about the stream on the video.
- Custom A - Used to enable the option to display text when the camera is operated. See options for text selections below. Text will be shown on top line of video.
(See Advanced Features/PTZ zones - page 20).
- Custom B - Used to enable the option to display text when the camera is operated. See options for text selections below. Text will be shown on second from top line of the video.
(See Advanced Features/PTZ zones - page 20).

Text selections available are

- User - For SDK use.
- Zone - Used to show text that has been programmed into the camera setup.
(See Advanced Features/PTZ zones - page 20).
- PTZ Status - Shows camera PTZ co-ordinates.
- Camera Status - Shows the current state of the camera, what focus, iris and sensor mode the camera is in.

- Pan Compass - Used to display compass readings when the camera is operated.
(See *Advanced Features/PTZ zones* - page 20).
- Current Preset - Used to show the stored preset text when the camera is at the preset position.
(See *Advanced Features & PTZ zones* - page 20).

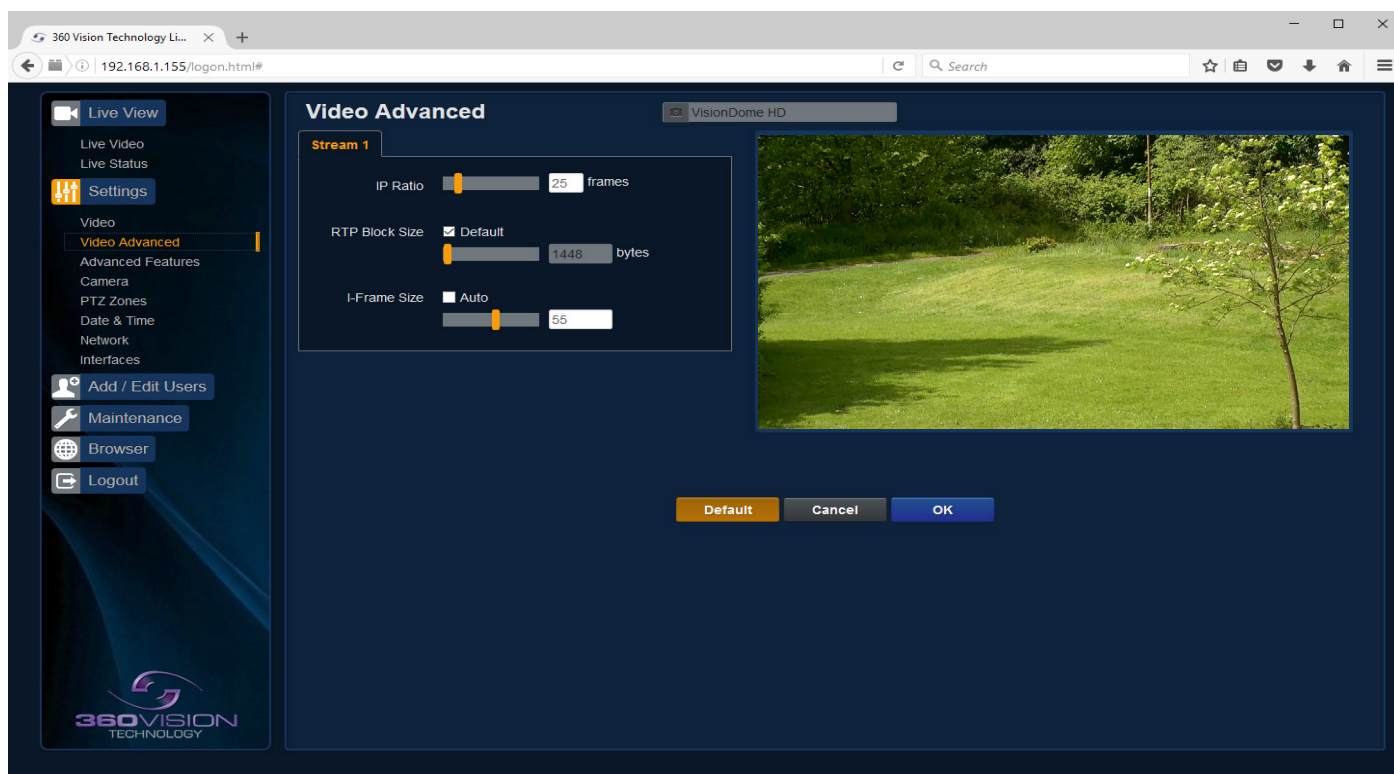
RTSP URL

- Copy - Use this option to copy the RTSP URL
- Date Position - Choose date text to bottom right or left of the image.
- Time Position - Choose time text to bottom right or left of the image.
- Show Sub-stream - Shows second sub-stream if enabled.

OK to program the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the video settings.

5.2.2 Video Advanced



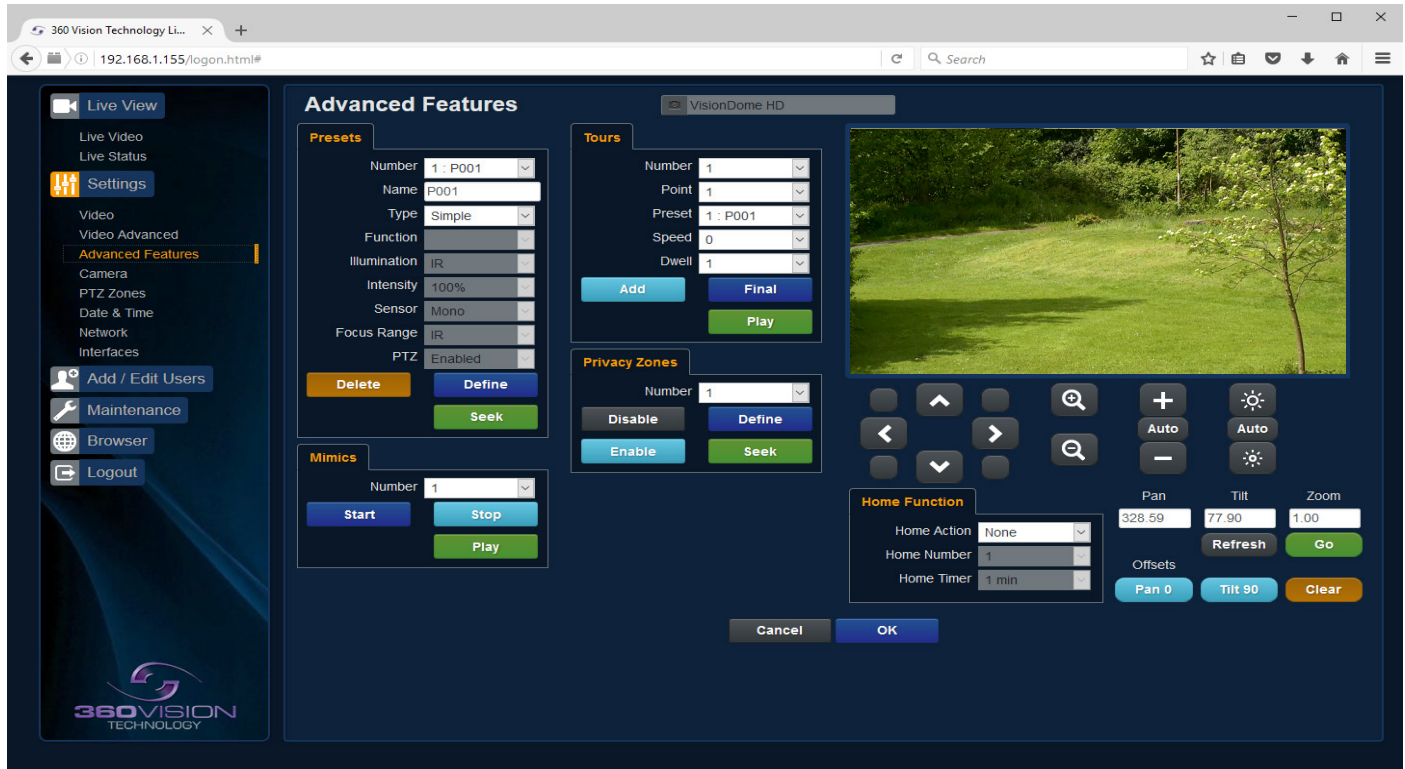
	Stream 1	
IP Ratio/GOP value (type in a number)	25 (default)	E.g. 1 'i-frame' every 25th image.
RTP Block Size	1448 (default)	Range 1440 to 65500
I Frame Size	55 (default)	Range 0 to 99 (average frame size x value/10 = i frame size)

OK to program the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the advanced video settings.

Default is used to factory reset the video stream settings.

5.2.3 Advanced Features



The Advanced Features page, offers options to:-

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).

A 'Preset' is a stored view. When a preset is defined, it will store the pan, tilt, zoom, focus and iris positions. Use the up, down left and right buttons to move the camera to the desired position and then use the zoom buttons to set the image as required.

Presets

Set Preset using the following options:-

- Number - Choose from a list of presets using the drop down box.
- Name - Edit the preset name to suit/help identify the position.
- Type - Options available are:-
 - Night - Allows different options to be used for the preset that include lamps
(See also Camera - Night Presets - page 17).
 - Simple - For setting a simple PTZ preset, no lamp options.
 - Re-Map - Choose which function/preset you want to re-map to the new preset number above.
 - Tour - Set the preset to start or stop a preset tour.
 - Mimic - Set the preset to start or stop a mimic tour.
 - User - Used on systems supporting 360 SDK.
 - Auxiliary - Can be used to recall an auxiliary command.
 - Audio - Can be used to play a sound. **Only available on Multimedia Edge Recording Visiondome. Feature not available.**
- Function - Function option will change to suit the above type.
- Illumination - Choice of illumination for preset with night presets function enabled. Options are IR, White Light and off.
- Intensity - Set lamp intensity for the preset using the illumination chosen above.
- Sensor - Presets have the choice of being either colour or mono, when the scene is dark.
- Focus Range - Sets how the camera will focus when in mono. Options are ambient or IR. The Focus Range setting will set the camera focus, (when in mono) to suit the light source in the scene.
If this is set incorrectly the image may not be in focus, when in mono at night.
- PTZ - Camera can be set to pan, tilt and zoom or not. This can be used to operate the sensor function.
- Audio - Choose audio file to be used. **Only available on Multimedia Edge Recording Visiondome. Feature not available.**

- Seek - Use this to test the preset.
- Define - Use this to set/define the preset.
- Delete - Use this to delete/remove the preset.

Mimics

When a mimic tour is started, the Visiondome-VR-HD will perform all the actions which were defined when the mimic was programmed. Up to four mimic tours can be defined.

- Play - Starts the selected mimic tour.
- Start - Use this to start programming a mimic tour. Move the camera, seek presets and/or use the lens to define the actions to be saved for the mimic.
- Stop - Use to end the programming of the mimic tour into the Visiondome-VR-HD.

The mimic and preset tours will repeat continuously until manually interrupted either by an alarm or user intervention.

Tours

A tour of presets is stored in the Visiondome-VR-HD as a list of tour points. Each tour point consists of a preset number, the dwell time for which the Visiondome-VR-HD will pause and the speed parameter that will be used to seek the preset. Each of the four tours of presets can contain between 2 and 90 points.

When programming a tour of presets it is necessary to first store all the required presets into the Visiondome-VR-HD and to define the required dwell times and speeds of travel that you will require the Visiondome-VR-HD to use when the tour is started.

A maximum of four individual tours of presets can be stored in each Visiondome-VR-HD. Each tour can have between 2 and 90 points, each point can be a preset in the range 1 to 360. Different points can use any preset number, including repeats of ones that have been used before. The speed that the camera will travel at to reach the preset can be in the range 1°/sec (slowest) to 100°/sec (fastest). To seek the preset at maximum speed, set speed to 0. The delay (dwell) at each point is defined in seconds, range 1 to 100.

- Play - Starts the selected preset tour.
- Add - Use to add a new point to the tour.
- Final - Use to indicate that this point is the last point in the tour.

Privacy Zones

A privacy zone can be used to obscure a scene with in an image e.g. private residence.

Use the drop down box to select the privacy zone preset 1 to 24. Move the camera so that the scene to be obscured is in the centre of the image. Use zoom to set the size of the privacy zone.

- Define - Defines the image as a privacy zone preset.
- Seek - Seeks the selected privacy zone preset.
- Enable - Sets the selected privacy zone preset as a privacy zone.
- Disable - Disables the privacy zone of the selected privacy zone preset.

Up to eight privacy zones can be viewed at the same time. The privacy zone feature is not available when the camera is within 20° of the camera pointing vertically up or down.

Home Function

The camera will perform an action (go to preset, start preset or mimic tour), after a period of inactivity.

- Home Action - This sends the camera to a preset, tour or mimic.
- Home Number - This sets the preset, tour or mimic the camera will go to/start.
- Home Timer - This sets the time for the period of inactivity.

PTZ buttons can be used to move the camera so that simple preset positions can be programmed or recalled.

PTZ position co-ordinates are also shown, use the refresh button to refresh the data if the camera has been moved.

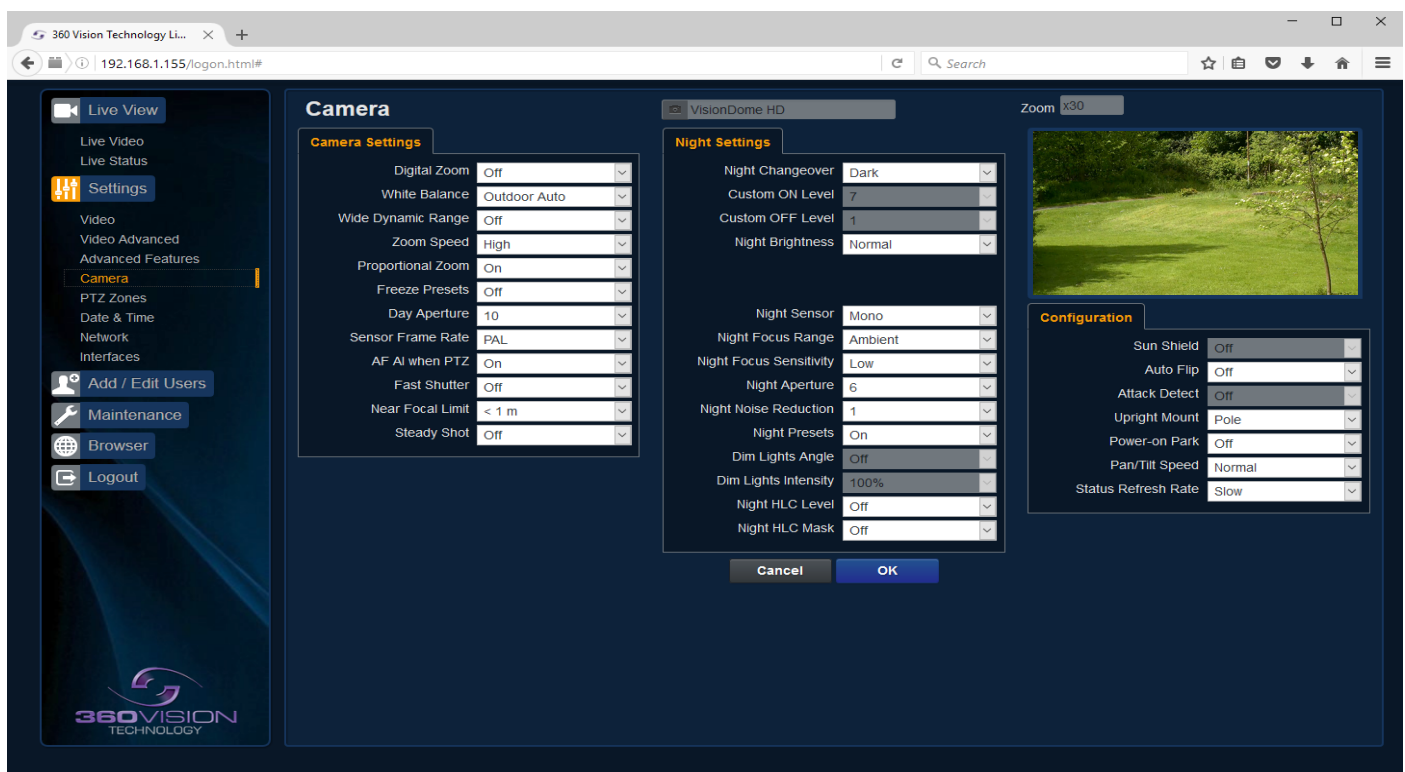
PTZ position co-ordinates can also be added manually, use the go button to send the camera to the coordinates set.

Use the pan preset offset to set the camera to 0°, this would be used to set the camera to North if using the pan compass option. *(See Video - page 13).*

Use the clear button to reset the pan or tilt offset settings.

OK to program the new settings into the Visiondome-VR-HD.
Cancel to abandon the changes to the advanced feature settings.

5.2.4 Camera



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).

The Camera page, offers options to:-

Camera Settings

- Digital Zoom - Enable digital zoom. Default is off.
- White Balance - Select White Balance settings to suit camera location.
(See page 33 for table of options).
- Wide Dynamic range - Enable WDR. Options available are ON, Auto and Off. Default is off.
- Zoom speed - Select zoom speed of the lens. Options are slow, medium, high and highest. Default is high.
- Proportional Zoom - Automatically reduces/increases pan/tilt speed depending on zoom ratio. Default is on.
- Freeze Preset - This option freezes the image, when moving between presets. This can help reduce the bandwidth. Default is off.
- Day Aperture - Can be used to increase the picture detail. Default is 10.
- Sensor Frame Rate - Can be used to set the camera to suit 25fps or 30fps. Unit must be rebooted for settings to apply. Default is PAL.

- AF/AI when PTZ - Auto focus/iris will activate when PTZ is used, can be switched off. Default is on.
- Fast Shutter - Select fast shutter is using the Visiondome-VR-HD camera on a ANPR system. Default is off. *(See page 33 for table of options).*
- Near Focal Limit - Can be used to set the near focal limit. This will help in scenes where the camera is focusing on objects near to the camera, causing the camera to be out of focus on distant objects. Default is 4m.
- Steady Shot - Can be used to reduce camera shake from the picture.

Steady Shot – The viewed picture is made from a window which shows part of the full picture from the camera sensor. This means that part of the picture is wasted. The viewed part of the picture is moved automatically to use some of the wasted part so that the observed picture is stable and has compensated for the vibrations and minor movements of the Visiondome-VR-HD. The maximum amount of picture stability is achieved for all zoom settings. The part of the picture that is wasted reduces the resolution of the viewed picture when the camera is set to 1080P and steady shot is selected. When the camera is set to 720P it is usual for no resolution to be lost when steady shot is selected.

Stable Zoom – In this mode, when the picture is zoomed fully out (wide angle) the steady shot feature has no effect. As the picture is zoomed out the effect of the vibrations is naturally minimized. As the picture zooms in, the part of the picture that is viewed is a window within the whole (unzoomed) picture. The unused part of the picture is used to allow the viewed part of the picture to be moved automatically to compensate for the vibrations. In this mode, the viewed picture has full resolution for all of the zoom range, but the camera does not compensate for the vibrations when the picture zoom is at or near to the fully zoomed out setting.

Extended Zoom – This option doesn't produce a steady picture, instead of which, a window within the whole picture is viewed i.e. the scaling of the picture is altered slightly which gives the advantage that the normal 30x zoom has been extended to 36x zoom. This is effectively a digital zoom and as such, when 1080P is used, the resolution of the picture has been slightly reduced. When the camera is set to 720P it is usual for full resolution to be achieved for the full range of zoom settings.

Night Settings

- Night Changeover - Night Changeover settings can be changed to suit the site requirements. Options are dark, medium, light and custom. Default is dark. *This sets when the camera goes into 'dark mode'.*
- Custom On Level - Range is 7 to 25. A lower value will set the level on when the scene is brighter, a higher value will set the level on when the scene is darker. Default is 7.
- Custom Off Level - Range is 1 to 20. A lower value will set the level off when the scene is brighter, a higher value will set the level off when the scene is darker. Default is 1.
- Night Brightness - This controls the exposure compensation, by artificially brightening the image. Options are normal and auto. Default is normal.
- Night Sensor - Can be set to colour or mono. Default is mono.
- Night Focus Range - Sets how the camera will focus (when in mono) to suit the light source in the scene. If this is set incorrectly the image may not be in focus.
- Night Focus Sensitivity - This can be set to normal or low. When it is set to low the method used to focus the camera is suited to low light conditions. Default is low.
- Night Aperture - Can be used to increase the picture detail. Default is 3.
- Night Noise Reduction - Used to reduce noise with scenes of low illumination. NR must be set to suit the environment. Default is 1.
- Night Presets - This can be used to set the presets to different settings if required. Default is on. *(See Advanced Features - page 15).*
- Dim Lights Angle - Feature not available.
- Dim Lights Intensity - Feature not available.
- Night HLC Level - Set a value to help mask high intensity light sources, options are low, medium and high.
- Night HLC Mask - Sets a mask for the light source, options are 1 (white) to 15 (grey).

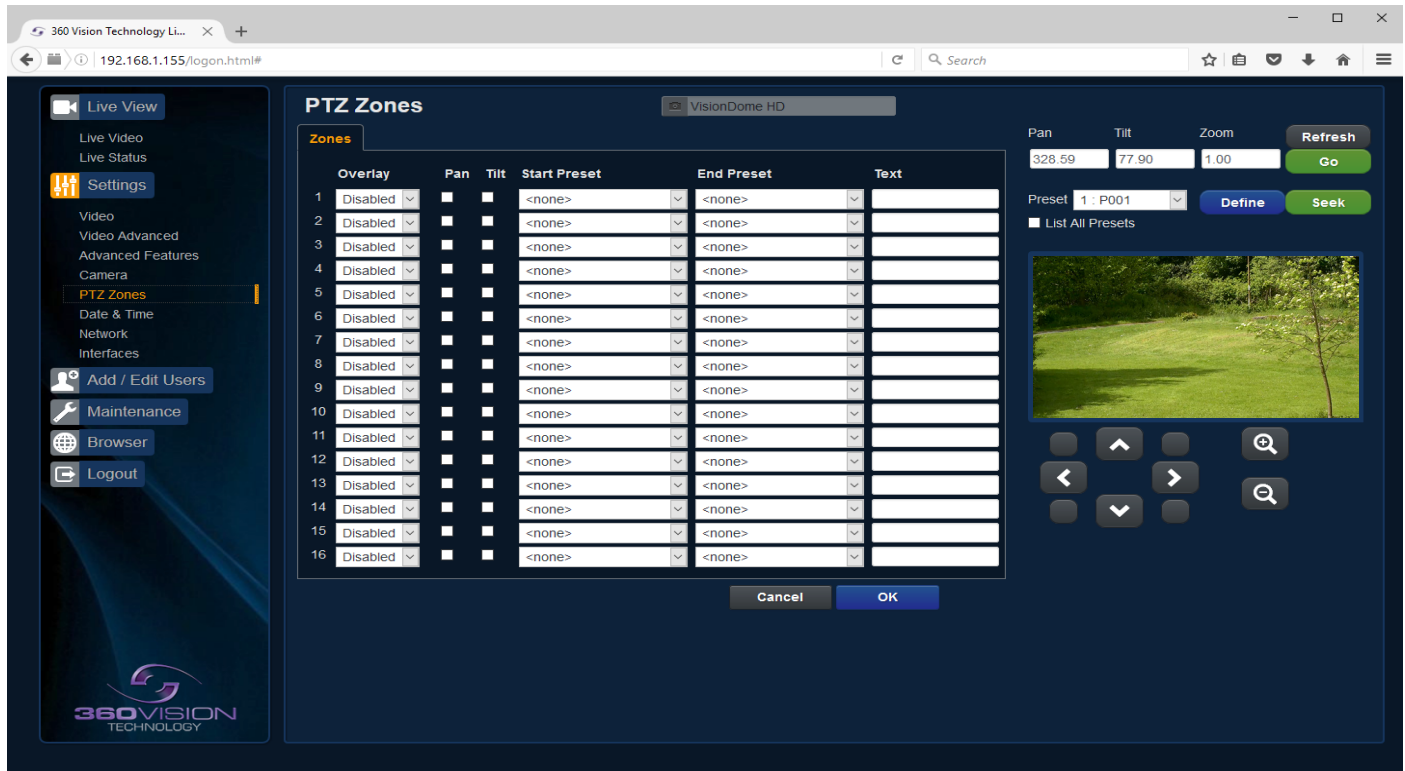
Configuration

- Sun Shield - Feature not available.
- Auto Flip - Use this option to set how the camera behaves when full tilt down is reached.
 - Tilt - Requires a second tilt down command, when at full tilt down to spin camera 180°.
 - Limit - Automatically spins the camera 180° when full tilt down is reached.
- Attack Detect - Feature not available.
- Upright Mount - Can be used to flip the image, so the camera can be used on a pole or a ceiling. Default is pole.
- Power on Park - When the camera powers up, it will go to a preset position. Preset 150. Default is off.
- Pan/Tilt Speed - Can be used to set the pan/tilt speed. Options are Normal, 20%, 40%, 60%, 80% Slower, 20%, 40%, 60% or 80% Faster. Default is normal.
- Status Refresh Rate - Can be used to help speed up telemetry control of the camera, by slowing down the refresh rate.

OK to program the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the camera settings.

5.2.5 PTZ Zones



The PTZ zones page, offers options to:-

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).

Set Text Overlays using the below options (see also Video - page 13):-

- 1-16 - Set up to 16 text overlays.
- Pan - Used to set pan axis as the trigger for the text overlay to be displayed.
- Tilt - Used to set the tilt axis as the trigger for the text overlay to be displayed.
- Start Preset - Set start preset for text overlay.
- End Preset - Set end preset for text overlay
- Text - Input required text for sector zone overlay.

PTZ buttons can be used to move the camera so that simple preset positions can be programmed or recalled.

PTZ position co-ordinates are also shown, use the refresh button to refresh the data if the camera has been moved.

PTZ position co-ordinates can also be added manually, use the go button to send the camera to the coordinates set.

Use the pan preset offset to set the camera to 0°, this would be used to set the camera to North if using the pan compass option. (See Video - page 13).

Use the clear button to reset the pan or tilt offset settings.

- Preset Seek/Define - This will allow admin and operator user levels to seek or define presets (Viewer user level can only seek presets). (See Advanced Features - Presets - page 15)
- List all Presets - Use to show all presets or programmed presets in drop down selection box.

OK to apply the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the PTZ zones settings.

5.2.6 Date/Time

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).
- Camera Time - Cannot be edited, shows the current date and time of the camera.
- Date Format - Select from the drop down the date format.
- Time Format - Choose 24hr or 12hr time display.

Set Time

The Date/Time page, offers options to:-

- Set Manually - Input time/date manually.
- Synchronize with Computer Time - Put a tick in the button and then click OK, to apply the local computer date/time to the camera.
- Synchronize with NTP Server - Put a tick in the button and then click OK, to apply the local server date/time to the camera.
- NTP Server - Input the address of the time server required, default is pool.ntp.org.

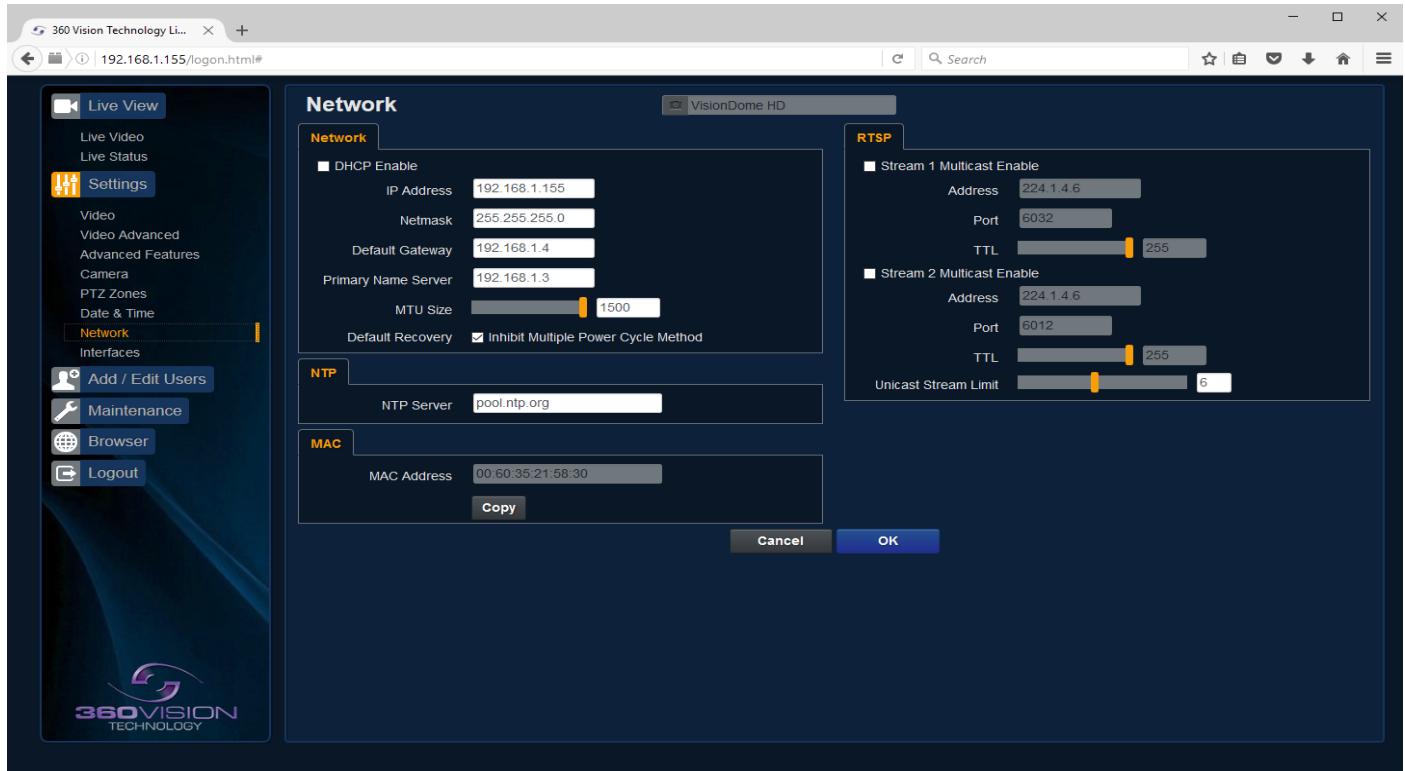
Time Zone

- Time Zone - Select time zone to suit the location of the camera/system.

OK to apply the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the date/time settings.

5.2.7 Network



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).

Network

The Network tab, offers options to:-

- DHCP Enable - Allows the camera to be set using a dynamic IP address.
- IP Address - Input a static IP address, if DHCP is not used.
- Netmask - Input the Network Subnet Mask.
- Default Gateway - Input the Network Gateway.
- Primary Name Server - Input the Domain name server, if required.
- MTU Size - Option to change the MTU size, default is 1500 bytes.
- Inhibit Multiple Power Cycle Method - Disables the Network recovery process
(See Network Settings Recovery - page 30)

NTP

- NTP Server - Input the address of the time server required, default is pool.ntp.org.

MAC

- MAC Address - Displays the camera MAC address.

RTSP - (See Stream Tables - page 32).

Tick the box to enable 'multicast'. If the box is not ticked then 'unicast' is selected.

- Multicast Stream 1 - Set IP address, port and TTL for stream 1.
- Multicast Stream 2 - Set IP address, port and TTL for stream 2.
(See Video - Stream Type - page 13).

RTSP protocols allow 'multicast' or 'unicast' transmission. In addition to the 'multicast' feature being available on the Visiondome-VR-HD, the 'multicast' feature must also be available on the receiving device.

Unicast

If lots of receivers (users) want to receive video streams from the Visiondome-VR-HD, each receiver will have a separate video stream. This would increase the network bandwidth used. E.g. five users would require five video streams, that typically will require five times the bandwidth.

Multicast

If the receivers of the video streams are suitable for using 'multicast' and the video streams will all have the same format, then it may be possible to use 'multicast'. In this mode, the CODEC in the Visiondome-VR-HD chooses a 'new UDP address' (Typically an address which is outside the normal range of addresses for the network to which the Visiondome-VR-HD is connected) and sends a video stream to the 'new UDP address'. Multiple receivers can then access this single video stream. Consequently the bandwidth that is required by the Visiondome-VR-HD is typically reduced to the single video stream.

When using 'multicast' all intermediate network-switches and routers must be set to allow the stream from the 'new UDP address' to be routed correctly.

FTP (FTP server is used to transfer video recordings from the camera).

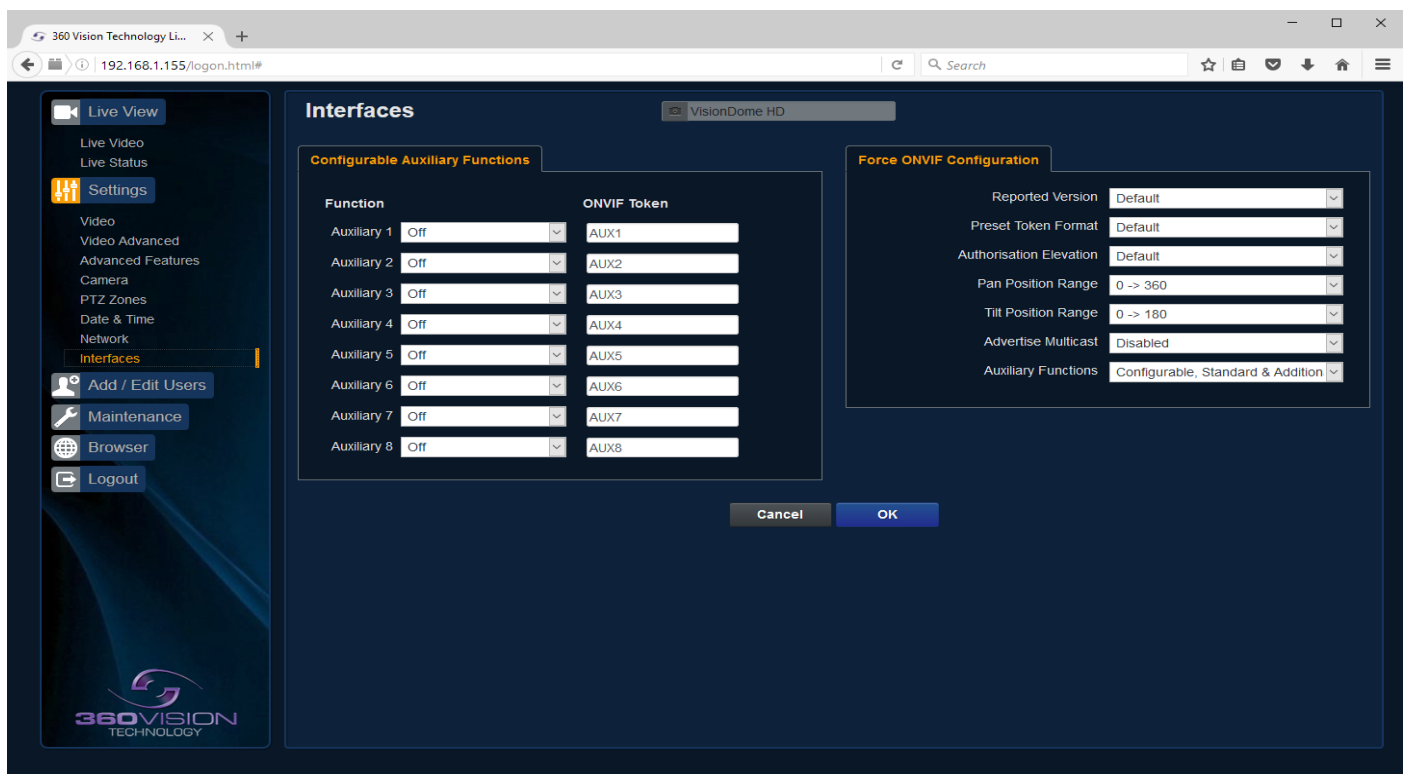
Only available on Multimedia Edge Recording Visiondome

- FTP Server - Input FTP server IP address, domain name.
- Port - Set port to be used for FTP access, default is 21.
- User Name - FTP server username.
- Password - FTP server password.
- File Upload Path - Set folder name for the file transfer on FTP server.

OK to apply the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the network settings.

5.2.8 Interfaces



Auxiliary Functions

Allows the camera to be configured to use ONVIF Auxiliary commands.

Features available are:-

- Dark Sensor Mono - Sets the camera to a mono image, when dark.
- Dark Sensor Colour - Sets the camera to a colour image, when dark.
- Dark Focus Ambient - Sets the camera focus (when in mono), to suit the scene when ambient light is present.
- Dark Focus IR - Sets the camera focus (when in mono) to suit the scene when IR light is present.
- De-Fog On - Switches camera De-Fog feature on.
- De-Fog Off - Switches camera De-Fog feature off.
- Force Night Settings - Used to set camera to night/dark settings.
- Force Day Settings - Used to force camera to day/light settings.
- Disable Forced Settings - Switch off forced settings, camera to use settings as per light level.

- Force Mono Settings - Force camera into mono, no lamps, ambient focus range.
- Force HLC On - Switch on HLC option.
- Force HLC Off - Switch off HLC option.

Dark relates to when the camera is in dark mode, see section Camera - Night Changeover - page 17.

Force ONVIF Version Configuration

- Reported Version - Can be used to change the ONVIF version reported by the camera to the VMS, options are:- Default - ONVIF 2.40, V2.02, V2.20 & V2.40. Ok setting and then re-boot camera from web page to apply.
- Preset Token Format - Default (Used on certain VMS servers. Uses mix of text and 'P' zero-pad number as preset tokens). Number only (Used on certain VMS servers. Uses numbers as preset tokens). 'P' zero-pad number (Used on certain VMS servers. Uses P001 to P360 as preset tokens).
- Authorisation Elevation - Used on Vicon VMS, allows the anonymous user to set as admin, viewer or operator.
- Pan/Tilt position Range - Used on VMS systems that use specific pan and tilt operation, used to set the angular position to suit the VMS ONVIF position.
- Advertise Multicast - Switch on to advertise the camera supports multicast via ONVIF. Camera does not support multicast and unicast on the same video stream.
- Auxiliary Functions - Used to set how the VMS will see the ONVIF Auxiliary Token.
 - Configurable - Aux 1 - 8, configurable via web page
 - Standard - Standard ONVIF
 - Additional - Additional control commands using the ONVIF Standard

OK to apply the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the network settings.

5.2.9 Recording

The screenshot displays the 'Recording' configuration page in the Visiondome VR HD web interface. The page is titled 'Recording' and shows settings for 'Stream 1' and 'Snapshot'. The 'Stream 1' section includes fields for Name (main), Split Files (4096 MB), and Duration (60 min). There are 'Start' and 'Stop' buttons. Below this is a table for recording events:

Event	Duration	Action	No.	FTP
<input type="checkbox"/> Continuous	Unlimited	None	No.	<none>
<input type="checkbox"/> External Alarm	Unlimited	None	No.	<none>
<input type="checkbox"/> Network Loss	Unlimited	None	No.	<none>
<input type="checkbox"/> At-Preset	Unlimited	None	No.	<none>
<input type="checkbox"/> Attack Detect	Unlimited	None	No.	<none>
<input type="checkbox"/> Schedule	Unlimited	None	No.	<none>

Below the table is a 'Schedule' section with a timeline view for the week of Monday to Sunday, showing recording times from 0.00 to 24.00. The 'Lifetime' section shows 'Schedule expires after 52 weeks' and 'Run infinite times'.

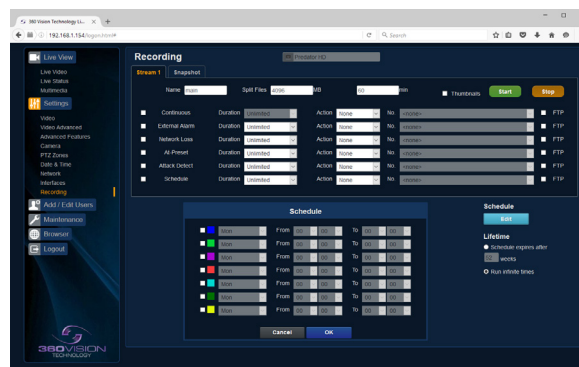
Only available on Multimedia Edge Recording Visiondome

The role of the recording function is to store video streams as files on a storage device built into the camera. The recording function can auto-detect the necessary parameters from each configured stream, such as video compression, resolution, frame rate and bitrate. The size of the video created will depend on the video compression and bitrate used.

Different options can be used to start a recording per stream, these are manual, continuous, external alarm, network loss, attack detect and schedule. Each recording can be configured with different options including recording duration.

The recorded file name will be displayed as YYYYMMDDhhmmss-x-name.avi (x indicates the recording trigger d is manual demand, a is attack detect, s is schedule).

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).
- Stream 1, 2 or snapshot - Choose option to configure.
- Name - Type in name of the file name to be used.
- Split files - Set size of recording by file size or time period.
- Thumbnail - If enabled before the recording, thumbnails can then be used as a filter in the multimedia page (See Multimedia - page 12).
- Start/Stop - Demand a manual recording, use the start and stop to set.
- Continuous - Enable continuous recording.
- External Alarm - Trigger recording from an external string.
- Network Loss - Trigger recording from a network connection loss to the camera.
- At Preset - Start recording when the camera gets to a specific preset, tour or mimic.
- Attack Detect - Start recording if the camera is attacked
- Schedule Edit - Setup a recording schedule (See Multimedia - page 12).
- Lifetime - Recording schedule will stop after this period.



Schedule Screen

OK to apply the new settings into the Visiondome-VR-HD.
Cancel to abandon the changes to the recording settings.

5.3 Add/Edit Users

360 Vision Technology Ltd.

192.168.1.155/login.html#

Search

Add / Edit Users

Username:

Password:

Confirm Password:

Authority: ☐ Admin ☐ Operator ☒ Viewer

User Name	Authority
admin	Administrator

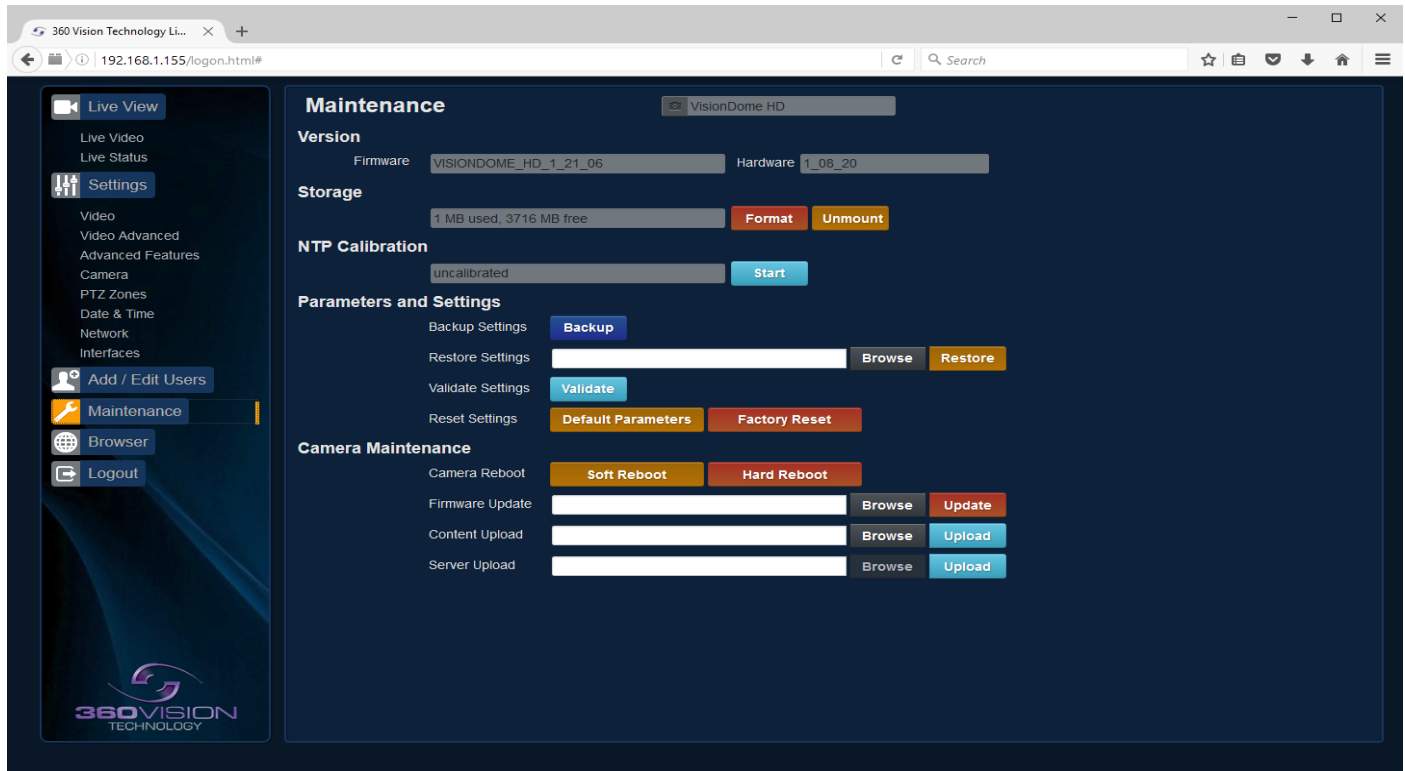
360VISION TECHNOLOGY

The Add/Edit Users page, allows the admin user to create both operator and viewer level login details. The admin user login password, can also be changed here. The web page admin password is also the ONVIF admin password. Care must be taken, when changing the admin password.



There is no way of recovering the Visiondome-VR-HD admin password if forgotten.

5.4 Maintenance



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 13).

Version

- Firmware - Current firmware loaded onto the camera.
- Hardware - Current mainboard software loaded onto the camera.

Storage

- Used and free space on the memory device. Used for the firmware update process.
- Format - You can use this option to format the storage device. Please stay on the web page while it is doing this. Once formatted the unmount button will show as mount. Use this to mount the device so that it can be used by the camera.
- Unmount - Select this option to unmount the storage, once confirmed. The web page will report back that the process is successful.

NTP Calibration

Used to calibrate the codec clock to a NTP server so that the codec time is more accurate.

- Start - Click on this option to start the process. Synchronize with NTP Server option must be selected with access to the NTP server. The process takes approx 20 minutes.

Parameters and Settings

- Backup Settings - Save - Used to save the camera settings.
The file is displayed as Visiondome_HD_YYYYMMDD_HHMM.DAT clicking on this file will download the file to the PC download folder.
- Restore Settings - Browse to the required DAT file and then click restore. The camera will then apply the settings and reboot the camera.
PLEASE note:- All saved camera settings including passwords will be uploaded to the camera.
- Validate Settings - Used to validate the uploaded settings, after the camera reboot process.
- Reset Settings
 - Default Parameters - Reset codec parameters i.e. video stream settings.
 - Factory reset - This will reboot the camera and all the settings, except IP address will be lost.

Camera Maintenance

- Camera reboot
 - Soft reset - This will reboot the codec, no settings will be lost.
 - Hard reset - This will reboot the camera, no settings will be lost.
- Firmware Update - Browse to codec file and then click on update. The camera codec will then be updated. The Visiondome-VR-HD camera will re-boot once the update has been performed.

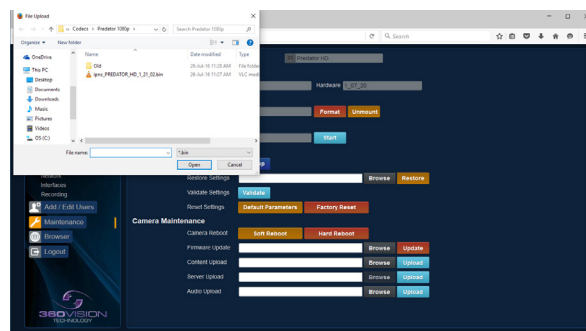
DO NOT interfere with this process as it may stop the camera from working.

Contact 360 Vision Technical Support for the link to the codec update files.

- Content Upload - Upload application software to camera memory. Contact 360 Vision Support for files.
- Server Upload - Download application files from FTP/HTTP server.

Only available on Multimedia Edge Recording Visiondome

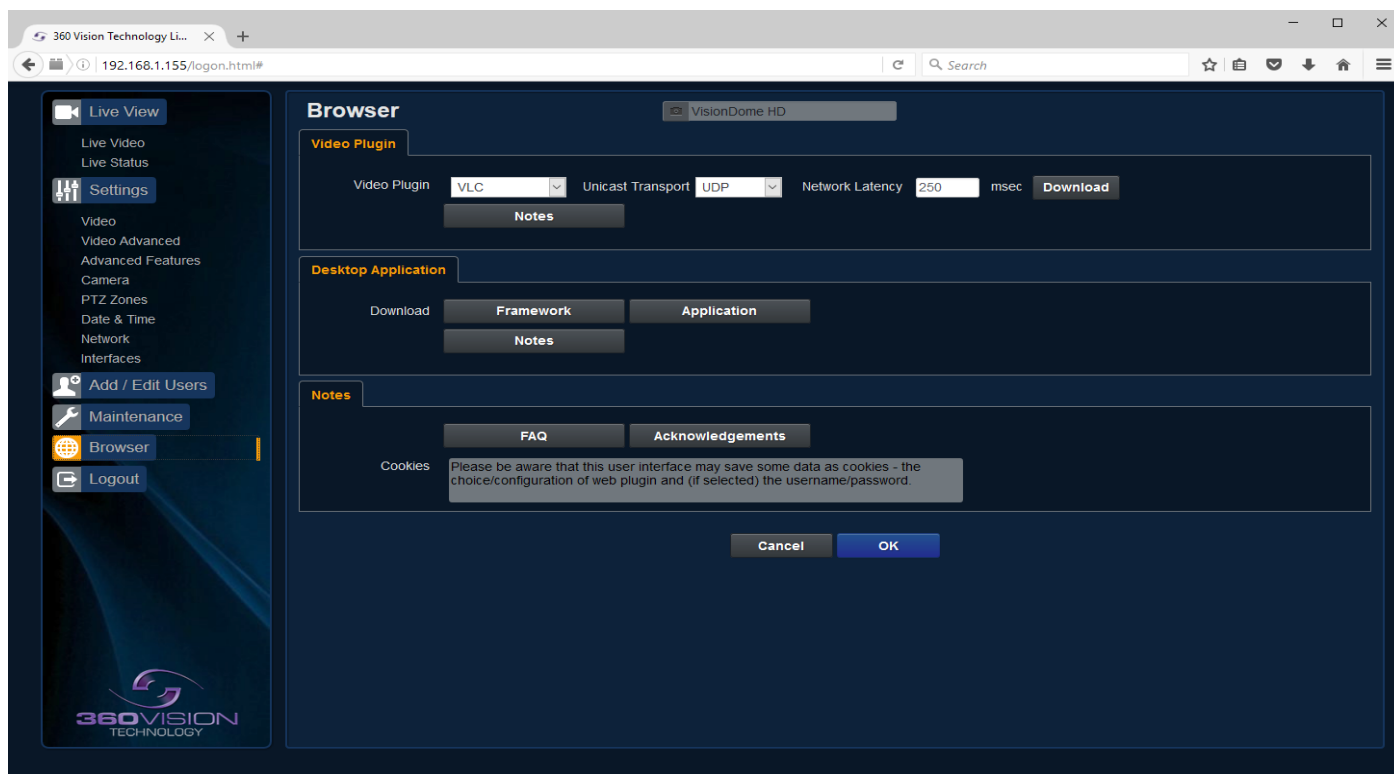
- Audio Upload - Browse to the audio file and then click upload. The file will then be available for playback through the camera audio system. Only .WAV files are supported. Feature not available.



Update Screen

OK to apply the new settings into the Visiondome-VR-HD.
Cancel to abandon the changes to the maintenance settings.

5.5 Browser



Video Plug-in

- Video Plug-in - Choose video plug-in, choice of VLC, JPEG (every 5 seconds), or none.
- Unicast Transport - Choice of UDP or TCP.
- Network Latency - Adjust Video player latency/buffer.
- Download - Download video plug-in from the camera.

Desktop Application

- Framework - Download framework to run desktop application.
- Application - Download software for the standalone application.
- Notes - Notes on how to install the desktop application.

OK to apply the new settings into the Visiondome-VR-HD.

Cancel to abandon the changes to the browser settings.

6 Network Settings Recovery

When network settings are changed, the IP address, Net Mask and Gateway are validated before they are saved. However if the settings are such that the Visiondome-VR-HD has settings which mean that it cannot be seen on the user's network, it may become necessary to use the 'Network Settings Recovery' feature as described below.

The 'Network Settings Recovery' IP address may conflict with an IP address that is already defined on the network, it may be necessary to disconnect the Visiondome-VR-HD from the network and control it locally using a network connection to a laptop so that the IP address can be set to a suitable setting before the Visiondome-VR-HD is reconnected to the main network.

Procedure for 'Network Settings Recovery'

If necessary disconnect the Visiondome-VR-HD from the main network.

Turn power to the Visiondome-VR-HD OFF for 3 seconds.

Turn power to the Visiondome-VR-HD ON for 4 seconds.

Repeat the above five times.

On the final power ON, leave the power switched on for at least 5 minutes to allow the Visiondome-VR-HD to initialise. *(See section [Locating the Visiondome-VR-HD on your network - page 7](#)).*

7 Special Presets

Night Sensor (when it is dark)	Seek 67 (Mono)		Seek 68 (Colour)
Night Focus Range (when it is dark)	Seek 69 (Ambient)		Seek 70 (IR)
De-Fog	Seek 87 (On)		Seek 88 (Off)
Power on Park	Define/Seek 150	Program/Recall Power on Park preset position.	
Home	Define 360	Defines Home Position	

8 Important - Care of Painted Surfaces

The powder coating applied to the Visiondome-VR-HD external housing is recognised as being in the forefront for quality and finish. However, in order to preserve the aesthetic finish it is recommended that the coating is regularly cleaned.

Regular cleaning on a maximum three month interval, using warm and mild detergent must be undertaken. Abrasive cleaners including strong solvent must NOT be used at any time.

In areas where the coating may come in contact with concentrated atmospheric pollutants [marine, chemical and especially bird droppings] it would be prudent to clean more frequently e.g. monthly.

Full documentation of the cleaning schedule MUST be maintained to ensure that a warranty claim can be considered.

If damage occurs to the coating (e.g. the Visiondome-VR-HD is dropped, scrapped etc.), repairs MUST be carried out immediately.

When the Visiondome-VR-HD is installed in areas where there is a high risk of damage from birds or their droppings, additional precautions and measures should be used to keep the birds away from the Visiondome-VR-HD e.g. fit anti-bird spikes.

9 Storage and Handling

Visiondomes should be handled with care and must not be dropped. When Visiondomes are inside the transit packaging which is used for despatch from the factory, they should not be stacked to a height of more than three Visiondomes.

When Visiondomes are being stored before installation they should be kept in the transit packaging and located in a dry indoor environment preferably between 1°C and 35°C which is dry and dust free. Humidity should such that water vapour is non-condensing. Visiondomes can be allowed to be outside this range for short periods of time (24 hours maximum) for transport (e.g. in aircraft or vans) but must never be allowed to be outside the normal operating temperature range of -40°C to +60°C even during storage.

Before installation the Visiondome should be clean and dry. (If necessary it should be cleaned and dried taking care that the glass is not scratched).

10 Warranty

This information and/or any technical information – whether received verbally or writing – is given in good faith but without warranty and this also applies where proprietary rights of third parties are involved. The information provided does not release you from your obligation to check its validity and to test the products suitability for the intended purpose(s) and use(s). The application, use and installation of the products either in isolation or in conjunction with other products used, provided and installed by you on the basis of the technical advice issued are beyond our control and therefore remain entirely your own responsibility.

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11 PSU Enclosure

Material	PC/ABS
Dimensions (BHD-PSU enclosure)	180 x180 x100mm

12 1080p Stream Resolutions & RTSP Links

	Resolution		Resolution
H.264 (<i>rtsp://ipaddress/h264main</i>)	720p (1280 x 720)	MPEG4 (<i>rtsp://ipaddress/mpeg4main</i>)	720p (1280 x 720)
	D1 (720 x 576)		D1 (720 x 576)
	SXVGA (1280 x 960)		SXVGA (1280 x 960)
	1080p (1920 x 1080)		1080p (1920 x 1080)
	Resolution		Resolution
MJPEG (<i>rtsp://ipaddress/mjpeg</i>)	1080p (1920 x 1080)		
	Resolution		
H.264 (<i>rtsp://ipaddress/h264main</i>) & MJPEG (<i>rtsp://ipaddress/mjpeg</i>)	720p (1280 x 720)	VGA (640 x 480)	
	D1 (720 x 576)	D1 (720 x 576)	
	720p (1280 x 720)	720p (1280 x 720)	
	1080p (1920 x 1080)	QVGA (432 x 240)	
	1080p (1920 x 1080)	D1 (720 x 576)	
	Resolution		
MPEG4 (<i>rtsp://ipaddress/mpeg4main</i>) & MJPEG (<i>rtsp://ipaddress/mjpeg</i>)	720p (1280 x 720)	VGA (640 x 480)	
	D1 (720 x 576)	D1 (720 x 576)	
	720p (1280 x 720)	720p (1280 x 720)	
	1080p (1920 x 1080)	QVGA (432 x 240)	
	1080p (1920 x 1080)	D1 (720 x 576)	
	Resolution		
Dual H.264 (<i>rtsp://ipaddress/h264main</i>) (<i>rtsp://ipaddress/h264sub</i>)	720p (1280 x 720)	QVGA (432 x 240)	
	D1 (720 x 576)	D1 (720 x 576)	
	D1 (720 x 576)	QVGA (432 x 240)	
	1080p (1920 x 1080)	QVGA (432 x 240)	
	1080p (1920 x 1080)	D1 (720 x 576)	
	Resolution		
Dual MPEG4 (<i>rtsp://ipaddress/mpeg4main</i>) (<i>rtsp://ipaddress/mpeg4sub</i>)	720p (1280 x 720)	QVGA (432 x 240)	
	D1 (720 x 576)	D1 (720 x 576)	
	D1 (720 x 576)	QVGA (432 x 240)	
	1080p (1920 x 1080)	QVGA (432 x 240)	
	1080p (1920 x 1080)	D1 (720 x 576)	
	Resolution		
H.264(<i>rtsp://ipaddress/h264main</i>) & MPEG4(<i>rtsp://ipaddress/mpeg4sub</i>)	D1 (720 x 576)	D1 (720 x 576)	
	1080p (1920 x 1080)	D1 (720 x 576)	

13 720p Stream Resolutions & RTSP Links

	Resolution			Resolution	
H.264 (rtsp://ipaddress/h264main)	720p (1280 x 720)		MPEG4 (rtsp://ipaddress/mpeg4main)	720p (1280 x 720)	
	D1 (720 x 576)			D1 (720 x 576)	
				Resolution	
	MJPEG (rtsp://ipaddress/mjpeg)			720p (1280 x 720)	
				Resolution	
H.264 (rtsp://ipaddress/h264main) & MJPEG (rtsp://ipaddress/mjpeg)	720p (1280 x 720)	VGA (640 x 480)			
	D1 (720 x 576)	D1 (720 x 576)			
	720p (1280 x 720)	720p (1280 x 720)			
	720p (1280 x 720)	D1 (720 x 576)			
				Resolution	
MPEG4 (rtsp://ipaddress/mpeg4main) & MJPEG (rtsp://ipaddress/mjpeg)	720p (1280 x 720)	VGA (640 x 480)			
	D1 (720 x 576)	D1 (720 x 576)			
	720p (1280 x 720)	720p (1280 x 720)			
	720p (1280 x 720)	D1 (720 x 576)			
				Resolution	
Dual H.264 (rtsp://ipaddress/h264main) (rtsp://ipaddress/h264sub)	720p (1280 x 720)	QVGA (432 x 240)			
	D1 (720 x 576)	D1 (720 x 576)			
	D1 (720 x 576)	QVGA (432 x 240)			
	720p (1280 x 720)	D1 (720 x 576)			
				Resolution	
Dual MPEG4 (rtsp://ipaddress/mpeg4main) (rtsp://ipaddress/mpeg4sub)	720p (1280 x 720)	QVGA (432 x 240)			
	D1 (720 x 576)	D1 (720 x 576)			
	D1 (720 x 576)	QVGA (432 x 240)			
	720p (1280 x 720)	D1 (720 x 576)			
				Resolution	
H.264(rtsp://ipaddress/h264main) & MPEG4(rtsp://ipaddress/mpeg4sub)	D1 (720 x 576)	D1 (720 x 576)			

14 White Balance and Fast Shutter options

White Balance Options
Auto
Outdoor
Indoor
Auto Tracing
Indoor A, B & C
Sodium
Sodium Auto A & B

Fast Shutter Options
1/1000
1/1250
1/1750
1/2500
1/6000
1/10000

