



Visiondome-HD Installation/Configuration Manual



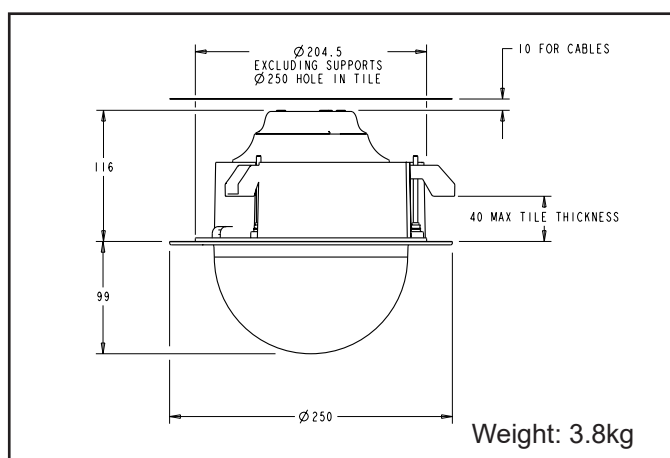
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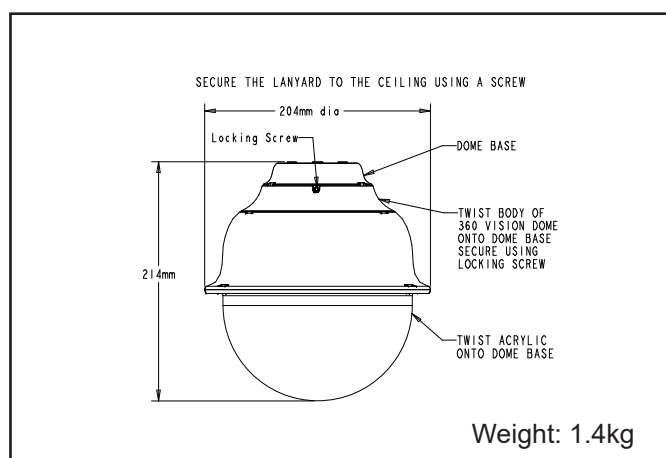
1 Safety and Precautions

1. Please read these notes before attempting to operate the 360 Vision VisionDome-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

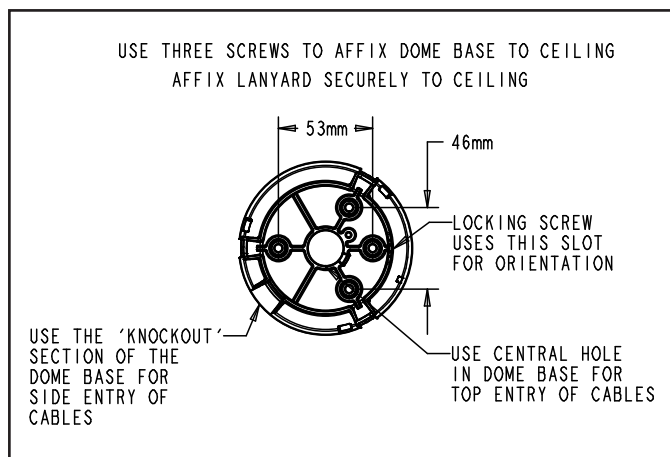


Internal False Ceiling

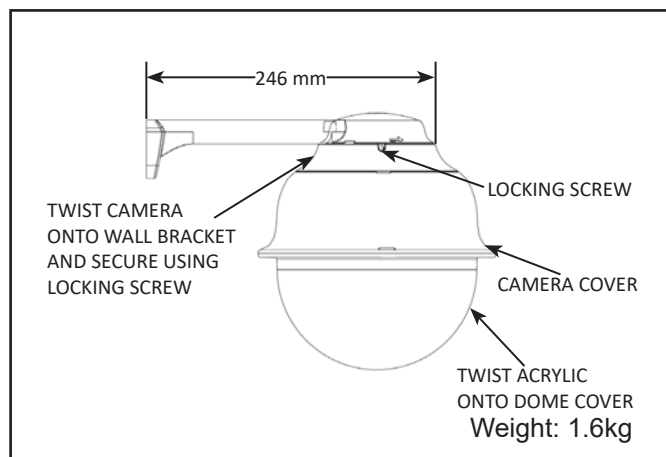


Internal Pendant

3 Bracket Dimensional Drawing



Internal Pole Bracket



Internal Wall Bracket

4 Connections

Suitable power cables

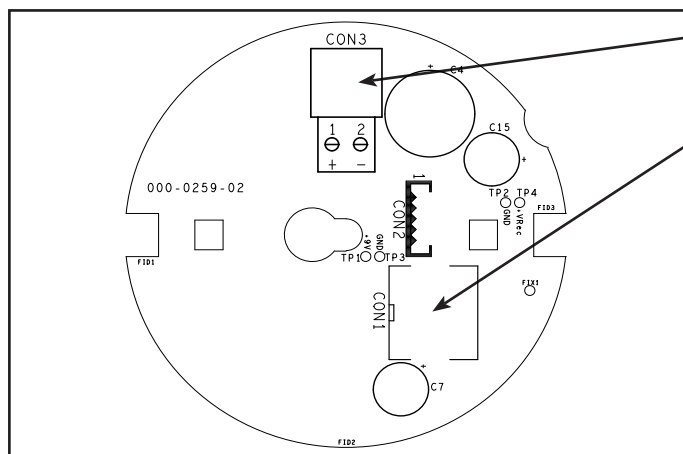
Cable Size	Internal VisionDome-HD (No Heater) Maximum Distances (Using VDI-PSU)
0.75mm ²	75 metres
1.00mm ²	100 metres
1.25mm ²	125 metres
1.50mm ²	150 metres
2.00mm ²	250 metres

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

Internal VisionDome-HD Connections

Use a short bodied RJ45 connector with CAT5e cable for the connection to the VisionDome-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-HD connection board is located at the top of the dome.



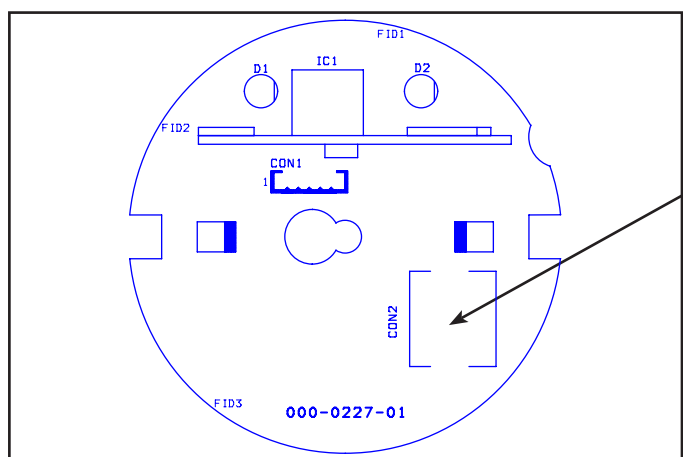
Power Connections

Connect 24Vac/30Vdc to CON3

Ethernet Connections

Connect Ethernet cable to 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.

Visiondome-HD Configuration

5 Locating the Visiondome-HD on your Network

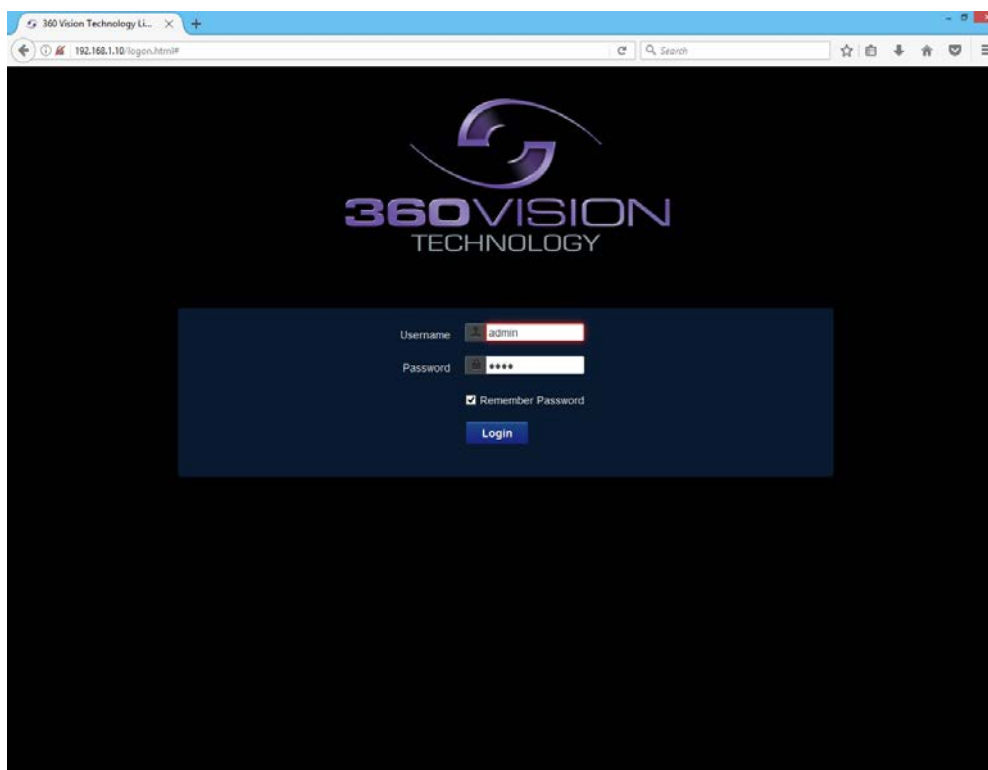
Default IP Address	192.168.1.187
Subnet	255.255.255.0
Gateway	192.168.1.4

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-HD. Note the ports 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	554/8554 TCP
360 SDK	3600 TCP
360 Event	9001 TCP

6 Connecting to the Visiondome HD

Type in the IP address of the Visiondome-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-HD Web Page Login screen

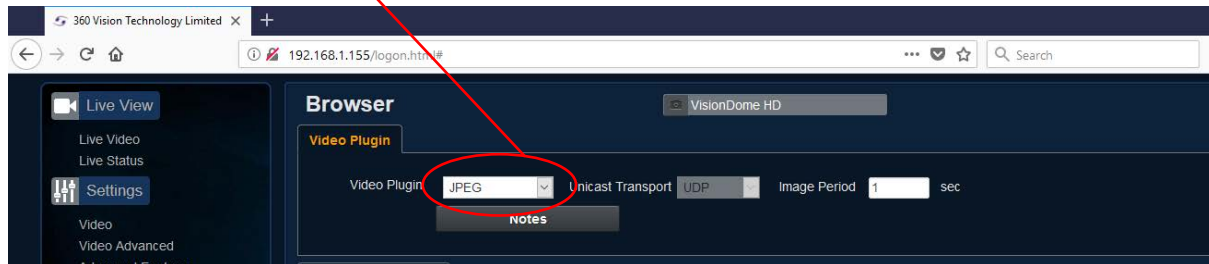
Enter the User Name (default is **admin**)
Enter the Password (default is **9999**)

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

Select Login



The web page will show JPEG images every second (*See Browser - page 25*).

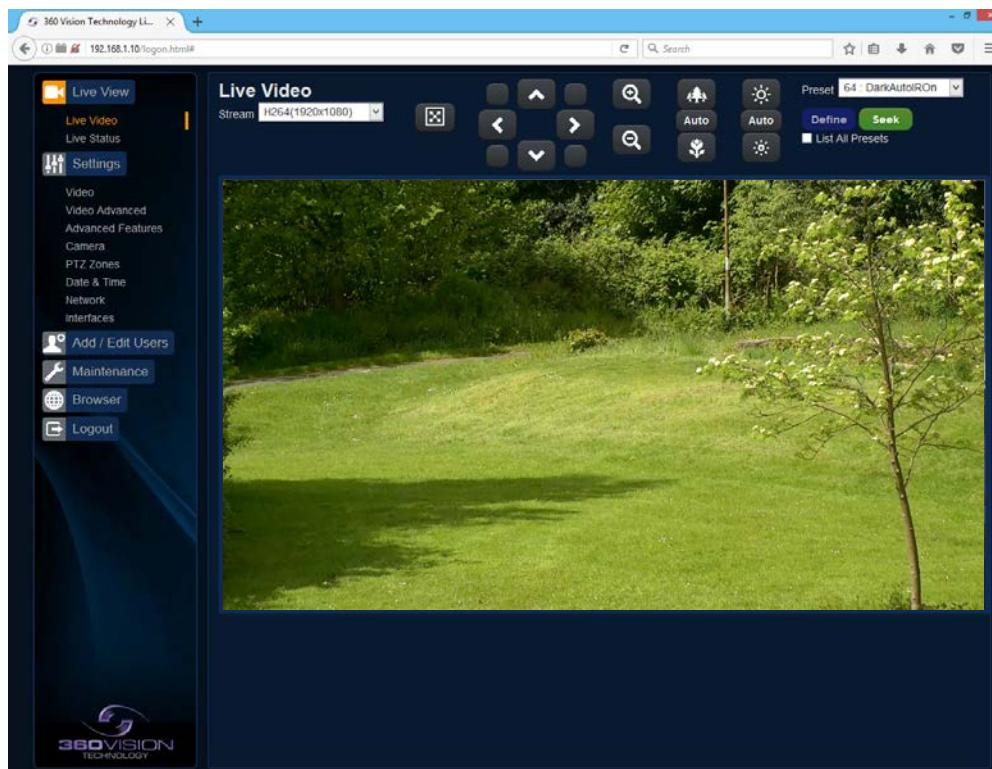


There are six main tabs on the left of the web page/screen.

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

6.1 Live View

6.1.1 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 15)
- Focus Far/Auto/Near - This will operate the manual focus near, far or automatically focus as required.
(See Camera - AF AI when PTZ - page 15)
- Iris Open/Auto/Close - This will operate the manual iris open, close or automatic as required.
(See Camera - AF AI when PTZ - page 15)
- 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 13)
- List all Presets - Use to show all presets or programmed presets in drop down selection box.

6.1.2 Status

Status page shows information relating to the camera status.

The screenshot shows the 'Live Status' page for a VisionDome HD camera. The left sidebar contains navigation links: Live View, Live Status (selected), Settings, Video, Video Advanced, Advanced Features, Camera, PTZ Zones, Date & Time, Network, and Interfaces. Below these are 'Add / Edit Users', 'Maintenance', 'Browser', and 'Logout'. The main content area is titled 'Live Status' and includes a 'Refresh' button and a timer set to 5 seconds. The camera information is as follows:

Camera : 'VisionDome HD' x30 192.168.1.10			
Camera Time	Fri Feb 26 09:27:06 2021	Timezone	Europe/London
NTP Status	DISABLED	Hardware Version	2.0.0.3
Firmware Version	VISIONDOME_2_HD_1_29_11	Tilt Version	1.5.4.2
Fan Version	1.5.4.1		

The 'Video Streams' section shows the following details:

Stream	CODC	Resolution	Frame Rate	Bit Rate	Rate Control	Quality	IP Ratio	RTP Block	I-Frame
Stream 1	H264	1080P	25	4000	CVBR	-	25	DEFAULT	55

The 'Streaming' section shows the following details:

Time	IP Address	Port
Fri Feb 26 09:27:04 2021	192.168.1.250	52373

The 'System' section shows the following details:

Uptime	Storage
1 d 19 h 54 m	0.0 GB used, 14.5 GB free
Network Transmit 4.230 Mb/s	Transmit Total 0 errors, 0 dropped, 1750 MB, 31280015 packets
Network Receive 0.001 Mb/s	Receive Total 0 errors, 0 dropped, 79 MB, 1290531 packets

The 'Current Status' section shows the following details:

Pan Position	Pan Proportion	Pan Moving
142.88 °	-20.62 %	HALTED
Tilt Position	Tilt Proportion	Tilt Moving
90.00 °	+100.00 %	HALTED
Zoom Position	Zoom Proportion	Zoom Moving
x 1.00	0.00 %	HALTED
Focus Mode	Focus Position	Focus Range
AUTO	96.09 m	0.0 m
Iris Mode	Iris Position	Iris Attenuation
AUTO	7	0.0 dB
Current Preset	Night Presets	
-	DISABLED	
Power Saving	Attack Detect	
Off	INACTIVE	

The 'Day : Brightness 12' section shows the following details:

Lights	Sensor Mode	Focus Range	AMBIENT
Off	COLOUR		

The 'Frame Statistics' section shows the following details:

Frame Size	Bytes	Transmission Time	ms
Frame Average	19946	P-Frame Average	8.168
I-Frame Average	88514	I-Frame Average	25.623
Max	164358	I-Frame Max (PU-A)	180.095

Status page, top section.

The screenshot shows the 'Live Status' page for a VisionDome HD camera, continuing from the top section. The left sidebar is identical. The main content area shows the 'Current Status' section, which is identical to the one in the top section. The 'Day : Brightness 12' section is identical. The 'Frame Statistics' section shows the following details:

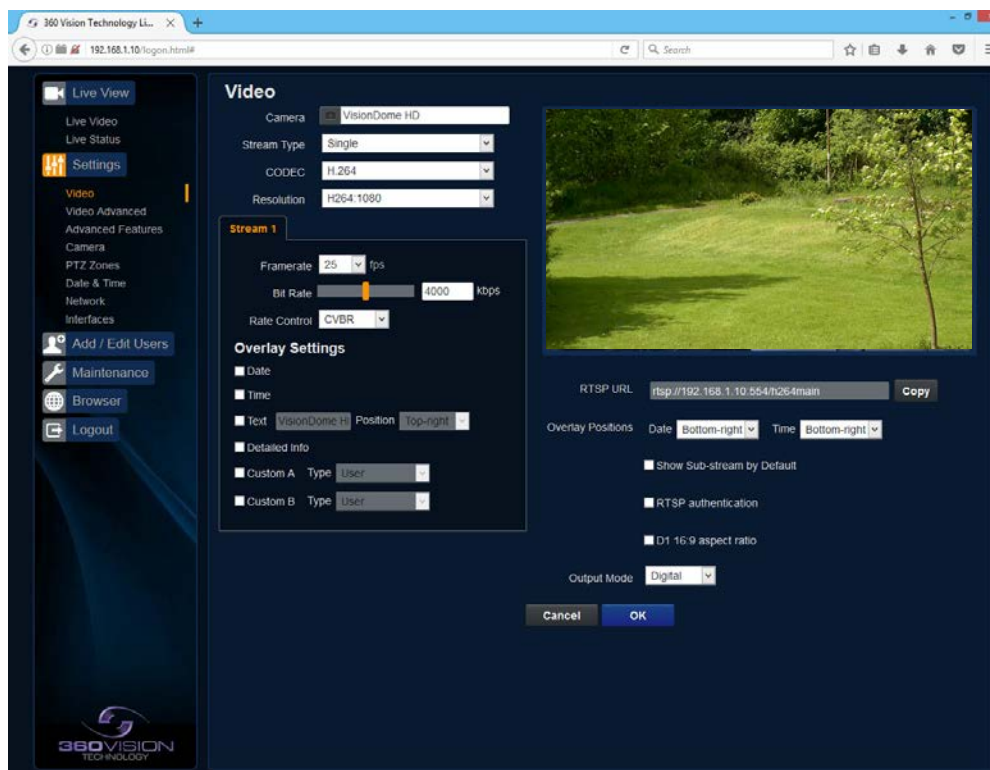
Frame Size	Bytes	Transmission Time	ms
Frame Average	19946	P-Frame Average	8.168
I-Frame Average	88514	I-Frame Average	25.623
Max	164358	I-Frame Max (PU-A)	180.095

Status page, bottom section.

- Save - Used to save the status page information as a HTML file.
- 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
- 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.
- Current Status - Shows the camera function information.
- 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.

6.2 Settings

6.2.1 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 28 for table of options).
- Resolution - Set what resolution the stream will use. (See page 28 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 15).
- 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 19).
- Time - Selecting this option will show the time as text on the video stream.
(See Date/Time - page 19).
- 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 PTZ zones - page 18).
- 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 PTZ zones - page 18).

Text selections available are

- User - For SDK use.
- Zone - Used to show text that has been programmed into the camera setup.
(See PTZ zones - page 18).
- 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 *PTZ zones - page 18*).
- Current Preset - Used to show the stored preset text when the camera is at the preset position.
(See *Advanced Features & PTZ zones - page 13 & page 18*).

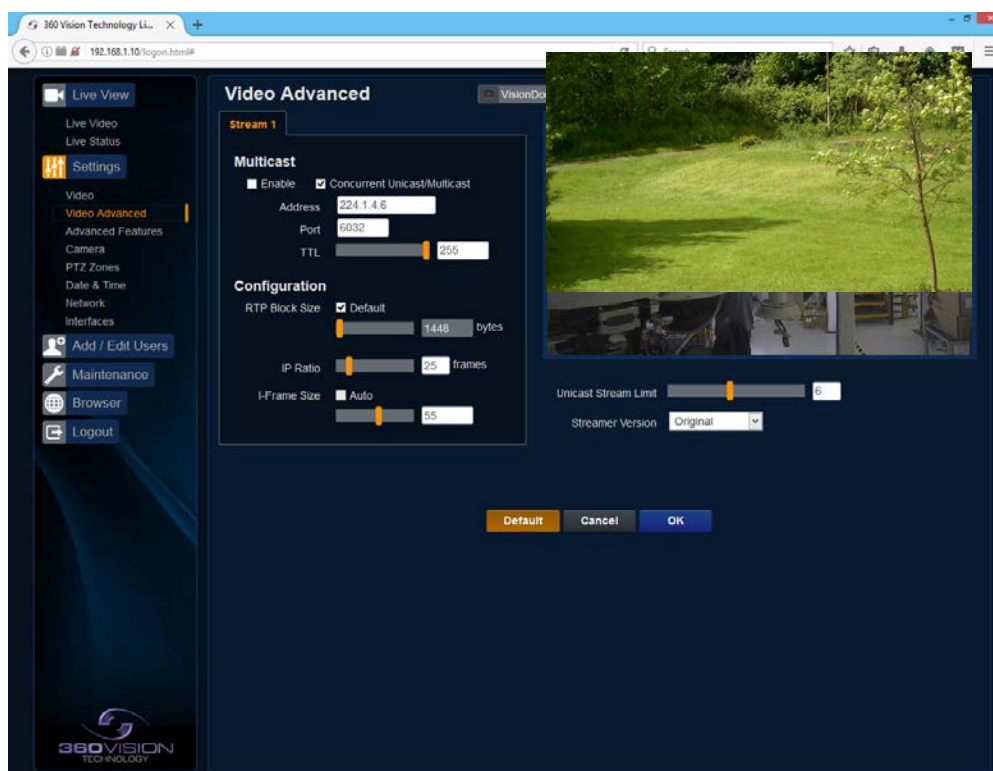
RTSP URL

- 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.
- RTSP authentication - Adds password credentials to the RTSP stream.
- D1 16:9 aspect ratio - Set D1 aspect ratio to 16:9

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

Cancel to abandon the changes to the video settings.

6.2.2 Video Advanced



Multicast - (See *Stream Tables - page 28*).

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

- Multicast Stream 1 - Set IP address and port for stream 1.
- Multicast Stream 2 - Set IP address and port for stream 2.

Concurrent Uni/Multicast - Enable to allow concurrent unicast/multicast streams.

RTSP protocols allow 'multicast' or 'unicast' transmission. In addition to the 'multicast' feature being available on the Visiondome 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 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 HD chooses a 'new UDP address' (Typically an address which is outside the normal range of addresses for the network to which the Visiondome 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 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.

Configuration

Use the below settings to set how the video is sent, adjusting the settings can help to eliminate any 'stutter' or 'pulsing' on the video image.

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

Unicast Stream Limit

- Used to set the unicast stream limit.

Streamer Version

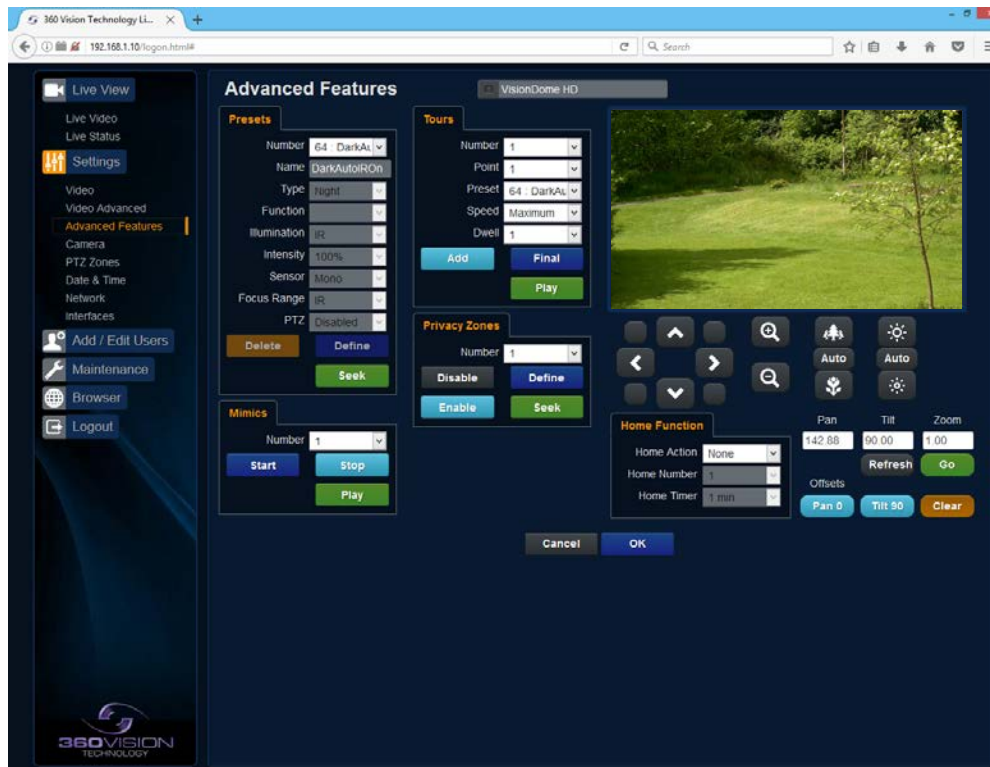
- Option allows the user to set the video streamer version. Options are original and 2016a.

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

Cancel to abandon the changes to the advanced video settings.

Default is used to factory reset the video stream settings.

6.2.3 Advanced Features



The Advanced Features page, offers options to:-

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 10).

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 15).
 - 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.
 - Power - Used to set the pan/tilt motors to use full or part power.
- 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.



Note: This product does not have lamps fitted.

- 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-HD will perform all the actions which were defined when the mimic was programmed. Upto 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-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-HD as a list of tour points. Each tour point consists of a preset number, the dwell time for which the Visiondome-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-HD and to define the required dwell times and speeds of travel that you will require the Visiondome-HD to use when the tour is started.

A maximum of four individual tours of presets can be stored in each Visiondome-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 (goto 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.

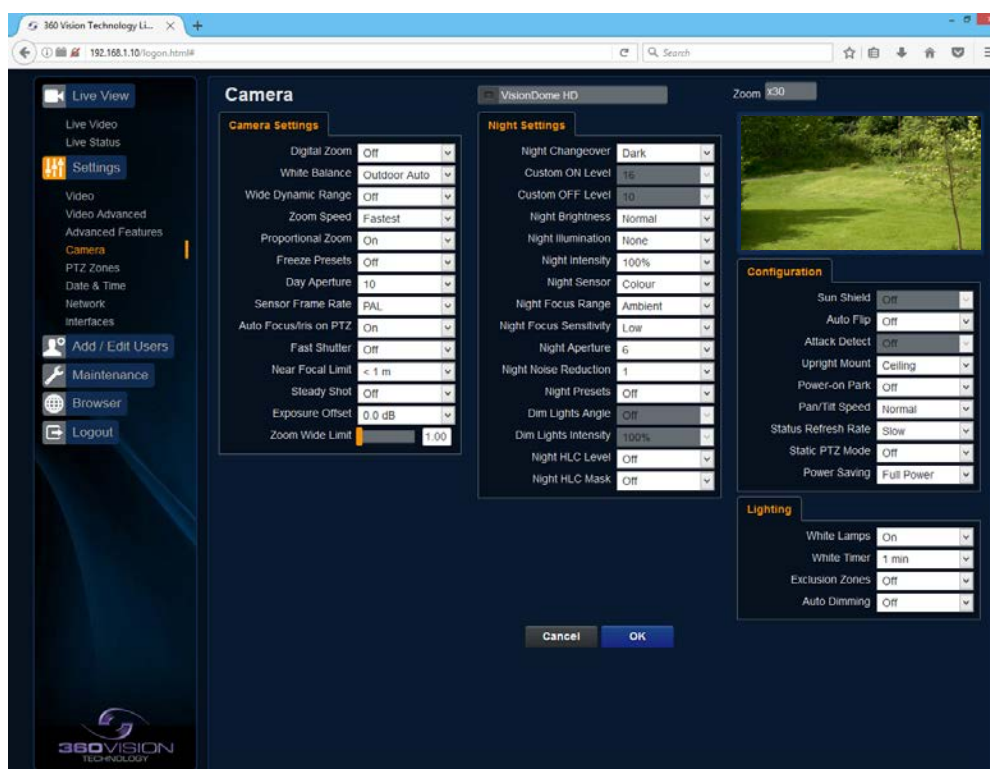
PTZ position co-ordinates can also be added manually, use the go button to send the camera to the coordinates set.

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.

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

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

6.2.4 Camera



- Camera - Cannot be edited, shows label/name given to the camera.
 (See Video - Camera - page 10).

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 29 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.
- Proportional Zoom - Automatically reduces/increases pan/tilt speed depending on zoom ratio. Default is on.
- Freeze Presets - 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.

- Auto Focus/Iris on PTZ - Auto focus/iris will activate when PTZ is used, can be switched off. Default is on.
- Fast Shutter - Select fast shutter if using the Visiondome-HD camera on a ANPR system. Default is off. *(See page 29 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-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.



- Exposure Offset - Used to set the camera exposure setting.
- Zoom Wide Limit - Used to set the camera zoomed out limit *(physical power reset required to apply changes).*

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 13).*
- 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 ceiling.
- 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.
- Static PTZ Mode - Disables all PTZ functions.
- Power Saving - Reduces power to the motors while the unit is static. Full power returns when the unit receives a PTZ command.

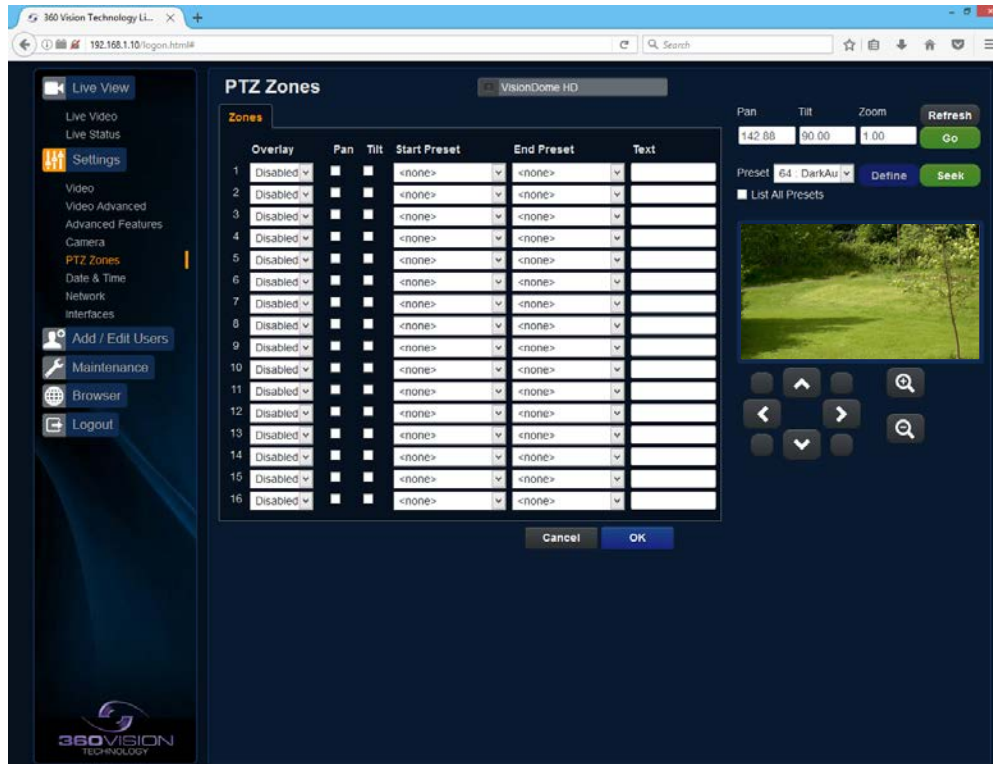
Lighting (Visiondome-HD Feature not available)

- White Lamps - Set if white lights are to be used.
- White Timer - Set white light timer.
- Exclusion Zones- Option to be used if a white light exclusion area is to be used, set area using presets 151 (left) & 152 (right), IR light exclusion area is required, set area using presets 153 (left) & 154 (right) or white & IR light exclusion zone.
- Auto Dimming - When selected the camera will reduce the lamp power, when looking in scenes where there is too much light.

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

Cancel to abandon the changes to the camera settings.

6.2.5 PTZ Zones



The PTZ zones page, offers options to:-

- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 10).

Set Text Overlays using the below options (see also Video - page 10):-

- 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.

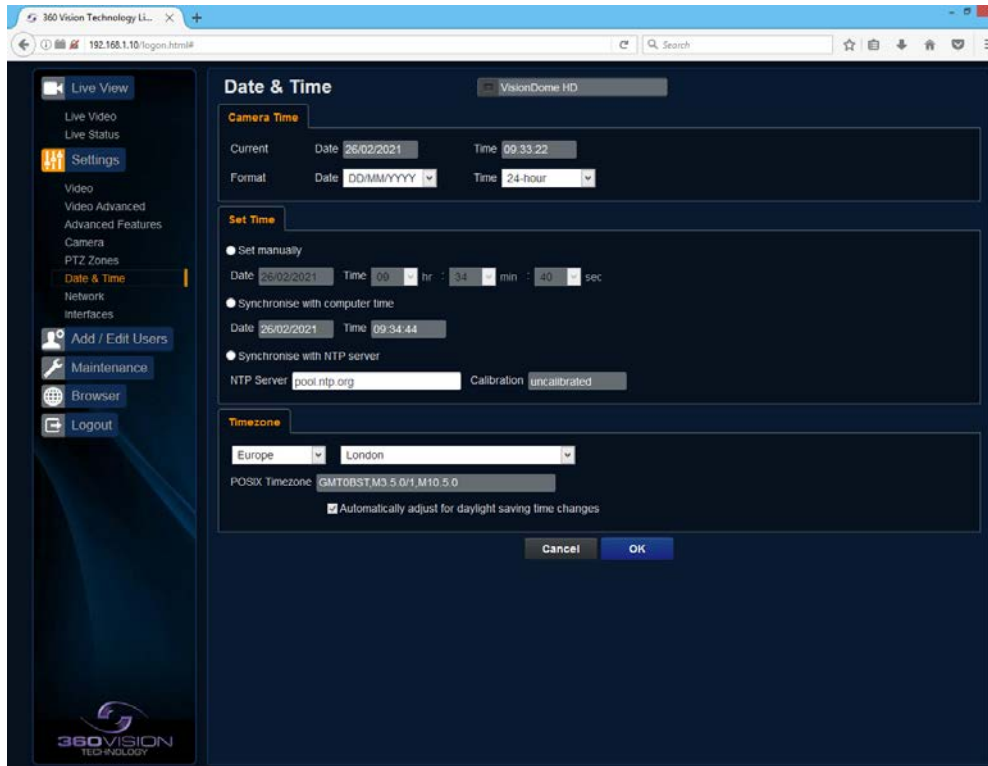
PTZ position co-ordinates are also shown, use the refresh button to refresh the data if the camera has been moved.

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

- 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 13)
- 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-HD.
Cancel to abandon the changes to the PTZ zones settings.

6.2.6 Date/Time



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 10).
- 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:-

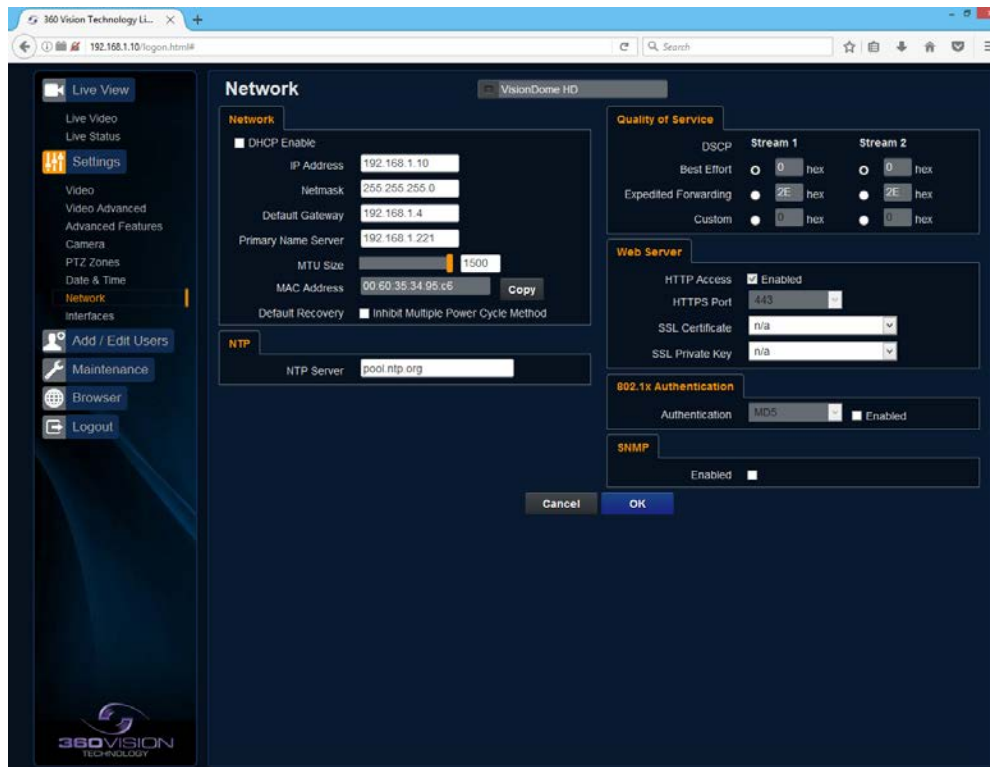
- Set Manually - Input time/date manually.
- Synchronize with Computer Time - Put a tick in the button and then click OK, to apply the local computer date/time to the camera.
- Synchronize with NTP Server - Put a tick in the button and then click OK, to apply the local server date/time to the camera.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

OK to apply the new settings into the Visiondome-HD.
Cancel to abandon the changes to the date/time settings.

6.2.7 Network



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 10).

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.
- MAC Address - Displays the camera MAC address.
- Default Recovery - Disables the Network recovery process
(See Network Settings Recovery - page 26)

NTP

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

Quality of Service

- Best Effort - Will send network packets with no quality of service policies.
- Expedited Forwarding - Will send network packets with an assured bandwidth quality of service policy.
- Custom - Input required Hex figure for quality of service policy
 - Best Effort = 0x00
 - Expedited Forwarding = 0x2E

Web Server

- HTTP access - Enable or disable HTTP access, must be connected using HTTPS.
(See Maintenance - SSL Key/Certificate - page 23)
- HTTPS Port - Set required HTTPS port. Default is 443.
- SSL Certificate - Choose required SSL certificate.
- SSL Private Key - Choose required private key.

802.1x Authentication

- Authentication - Tick to enable 802.1x. Options to choose MD5 or TLS and add username/password.

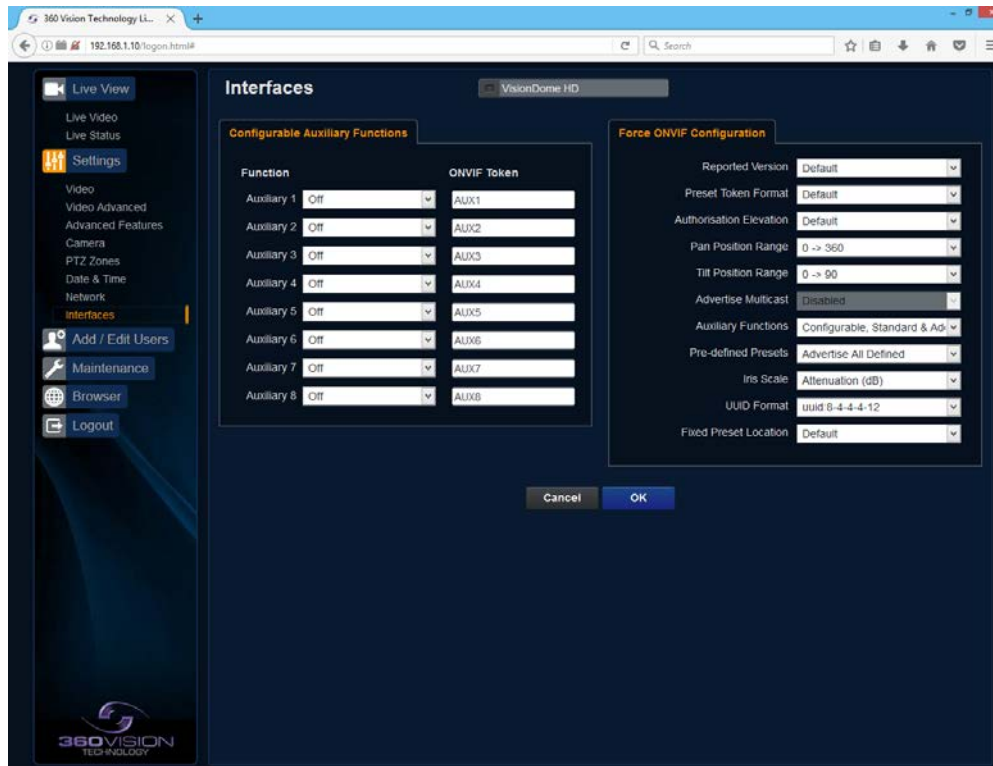
SNMP

- Enabled - Enables Simple Network Management Protocol.

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

Cancel to abandon the changes to the network settings.

6.2.8 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.
- Iris Open - Opens the camera iris.
- Iris Close - Closes the camera iris.
- Iris Auto - Switches on auto iris.
- Iris Manual - Sets camera to manual iris mode.
- Power Low - Sets the motors to use low power.
- Power On - Sets the motors to use full power.

Dark relates to when the camera is in dark mode, see section Camera - Night Changeover - page 15.

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 - Option no longer required. When Multicast is enabled in Advanced Video page, the stream will be advertised.
- 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
- Pre-defined Presets
Advertise All - Show all pre-defined presets, when the VMS requests the presets from the camera.
Advertise Re-definable - Show re-definable pre-defined presets only e.g. Home
Omit - Do not show the pre-defined presets, when the VMS requests the presets from the camera.
- Iris Scale - Used on certain VMS systems, options are position or attenuation (dB).
- UUID Format -
- Fixed Preset Location -

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

6.3 Add/Edit Users

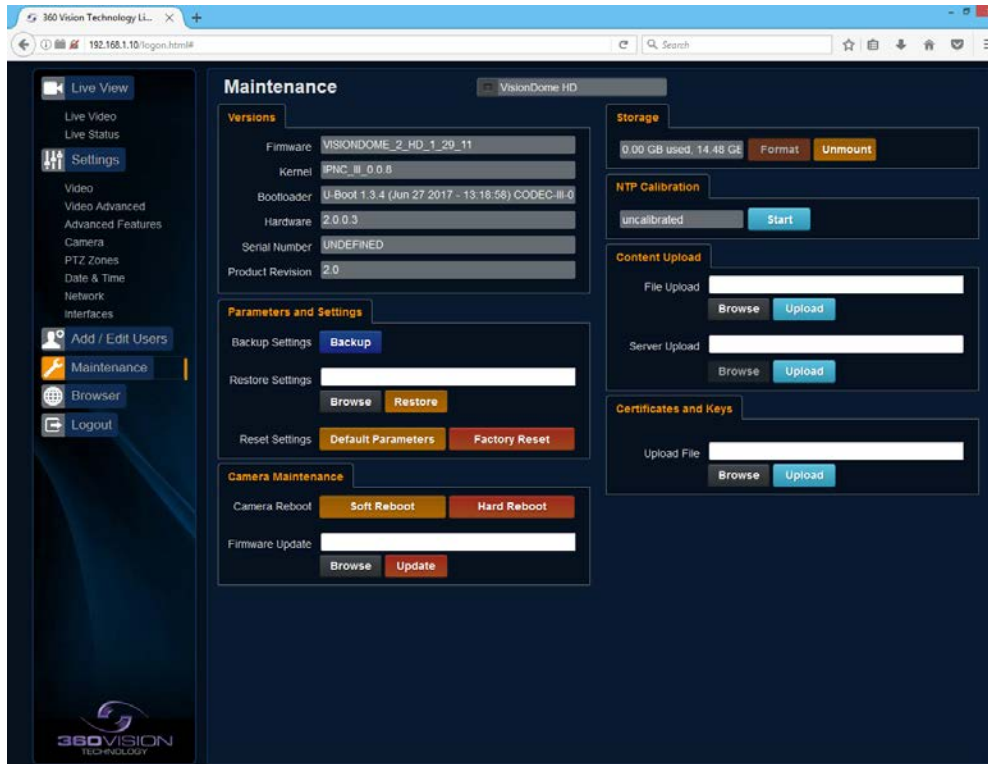
User Name	Authority
admin	Administrator



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-HD admin password if forgotten.

6.4 Maintenance



- Camera - Cannot be edited, shows label/name given to the camera.
(See Video - Camera - page 10).

Version

- Firmware - Current firmware loaded onto the camera.
- Kernel - Current kernel file loaded onto the camera.
- Bootloader - Current Bootloader loaded onto the camera.
- Hardware - Current mainboard software loaded onto the camera.
- Serial Number - Serial number of the product.
- Product Version - Shows which product version the camera is.

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.
- 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 reboot - This will reboot the codec, no settings will be lost.
 - Hard reboot - 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-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.

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. Option available when the device is unmounted.
- 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.

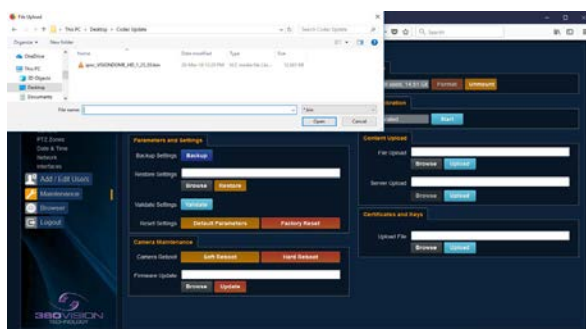
- Start - Click on this option to start the process. Synchronize with NTP Server option must be selected with access to the NTP server. The process takes approximately 20 minutes.

Content Upload

- Content Upload - Upload application software to camera memory.
- Server Upload - Download application files from FTP/HTTP server.

SSL Certificates and Keys

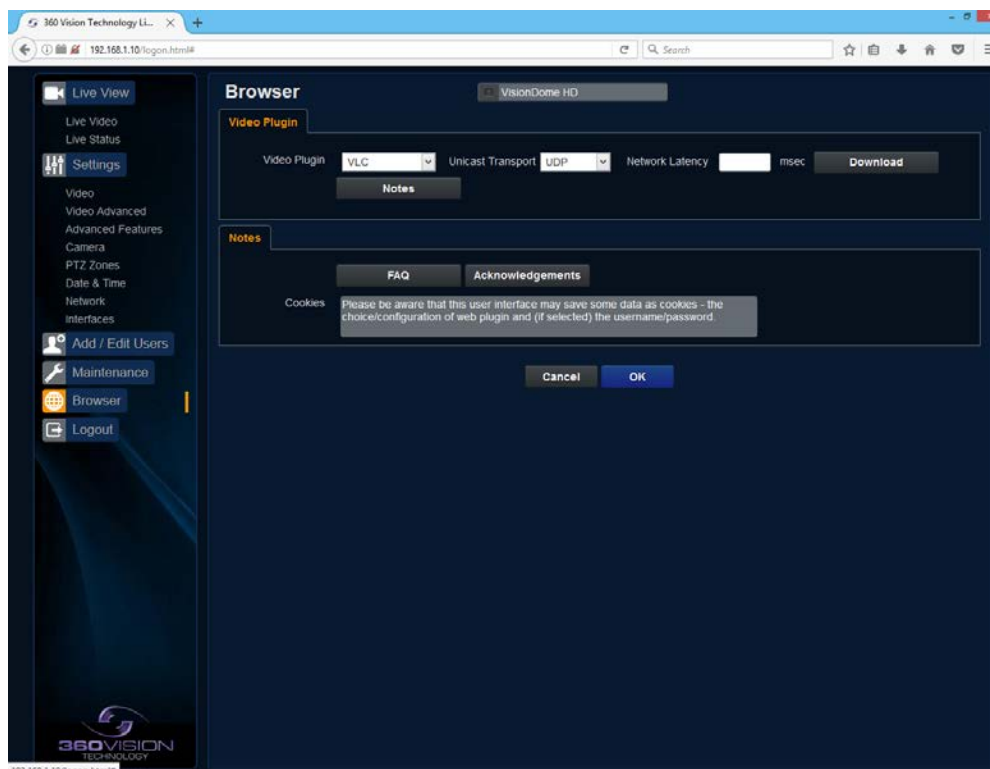
- Upload SSL file - Import SSL file. Supported files .key, .pem and .crt.



Update Screen

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

6.5 Browser



Video Plug-in

- Video Plug-in - Choose video plug-in, choice of VLC, JPEG (every 1 second), IPNC (IE), or none.
- Unicast Transport - Choice of UDP or TCP.
- Network Latency - Adjust Video player latency/buffer.
- Download - Download video plug-in from the camera.

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

Cancel to abandon the changes to the maintenance settings.

7 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-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-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-HD is reconnected to the main network.

Procedure for 'Network Settings Recovery'

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

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

Turn power to the Visiondome-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-HD to initialise. *(See section [Locating the Visiondome-HD on your network - page 5](#)).*

8 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	

9 Important - Care of Painted Surfaces

The powder coating applied to the Visiondome-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-HD is dropped, scrapped etc.), repairs MUST be carried out immediately.

When the Visiondome-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-HD e.g. fit anti-bird spikes.

10 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).

11 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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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
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 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

