360VISION TECHNOLOGY
technology that protects

Predator Installation / Configuration Manual

Table of Contents

1 Safety and Precautions

Photo-biological safety

Lighting options:

SIR110, SIR140WL, SIR160, 250SWL

The lighting options listed above fulfil the requirements for photo-biological safety according to IEC/EN 62471 (risk group1).

Avoid prolonged eye exposure, do not stare at operating lamp.

Lighting options:

SIR200, SIR275, SIR250WL, SIR400, SIR550S, 400SWL, SIR100W200N

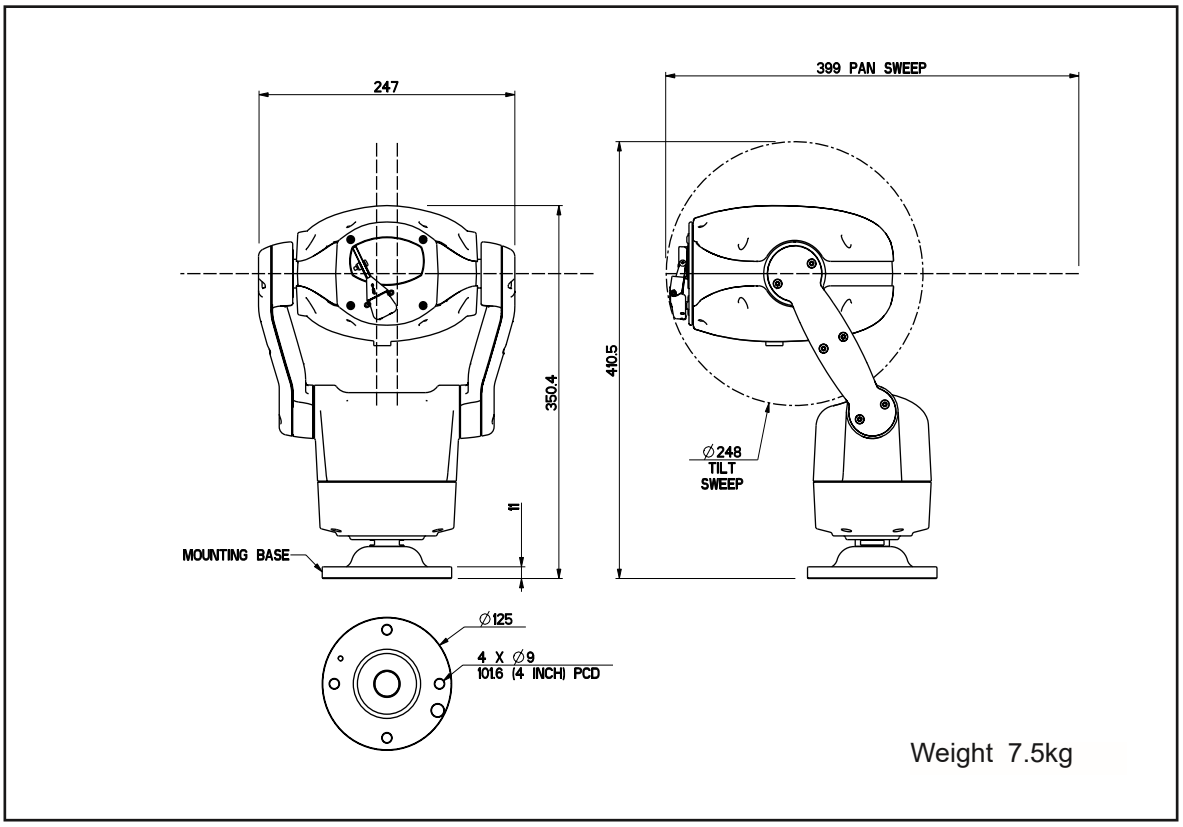
The lighting options listed above fulfil the requirements for photo-biological safety according to IEC/EN 62471 (risk group2).

Avoid prolonged eye exposure, do not stare at operating lamp.

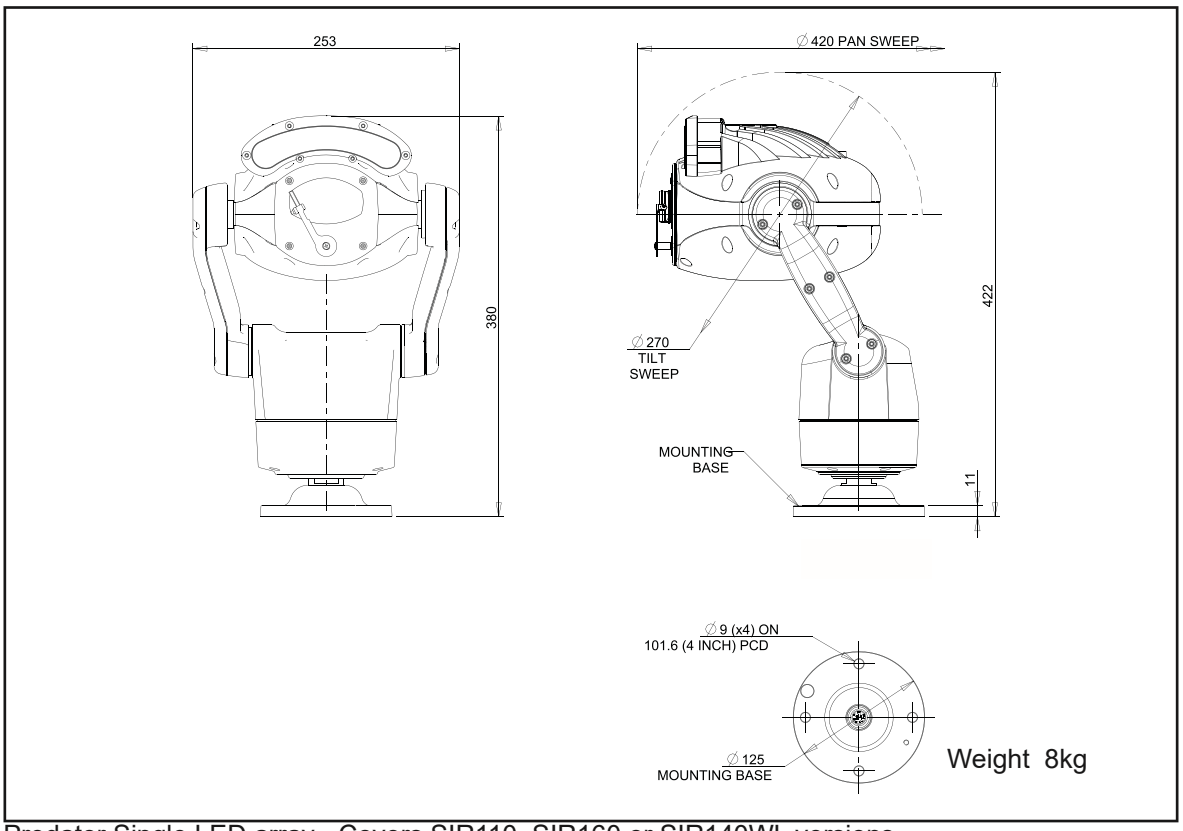
Safety and Precautions

1. Please read these notes before attempting to operate the 360 Vision Predator, and keep for future reference.
2. DO NOT disassemble or remove covers. This will break the water seals and invalidate the warranty.
3. All servicing and repairs must be handled by 360 Vision Technology.
4. Avoid pointing the camera direct towards a bright light source (sunlight), or expose the camera to intensive light situation as this may damage the camera pick-up device.
5. Installation should be carried out by suitably qualified personnel, in accordance with the local codes of practice and regulations.
6. 360 Vision Technology Limited accept no liability for any damage caused by incorrect or improper installation.
7. To prevent risk of injury caused by the Predator hybrid or mounting options becoming detached, fit a suitable safety chain or lanyard.
8. Use only 360 Vision Predator Hybrid power supplies. These have suitable terminals for all the wires in the Invictus composite cable.
9. Please handle the Predator Hybrid with care, as improper handling may cause damage within this unit.

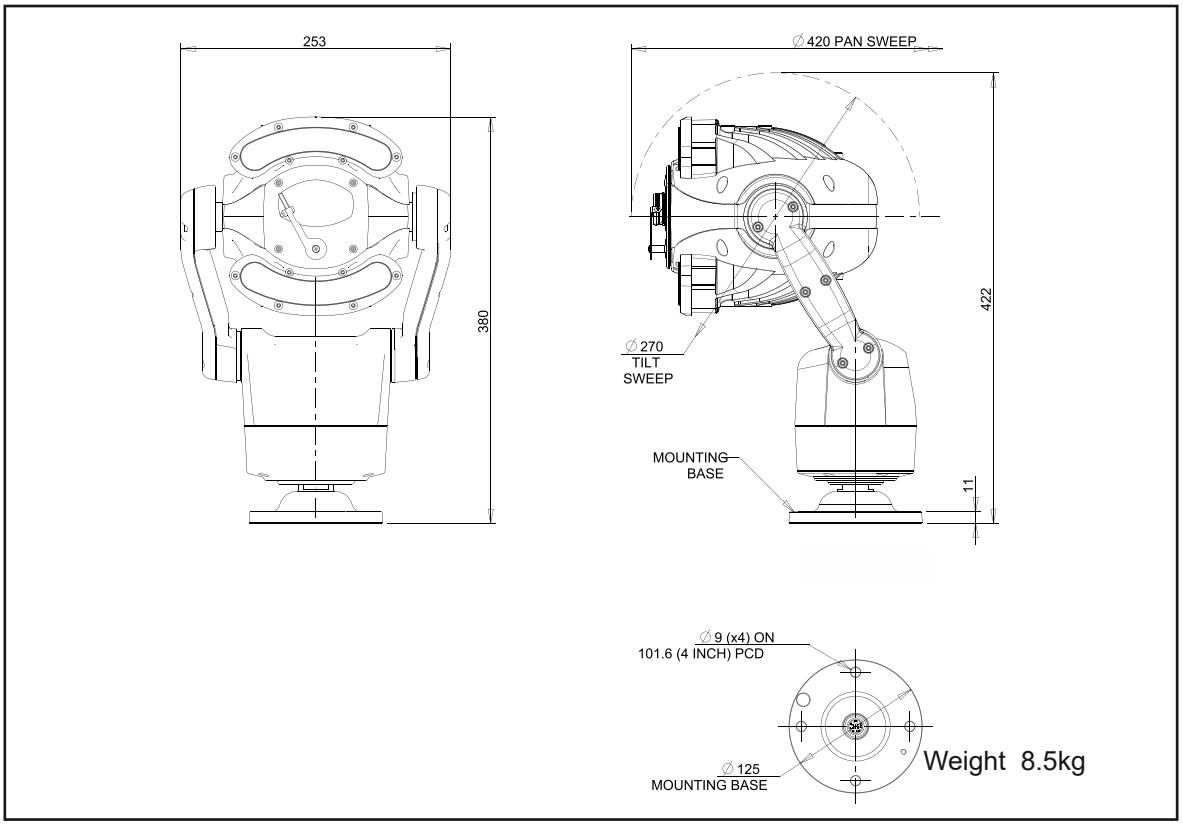
2 Housing Dimensional Drawing



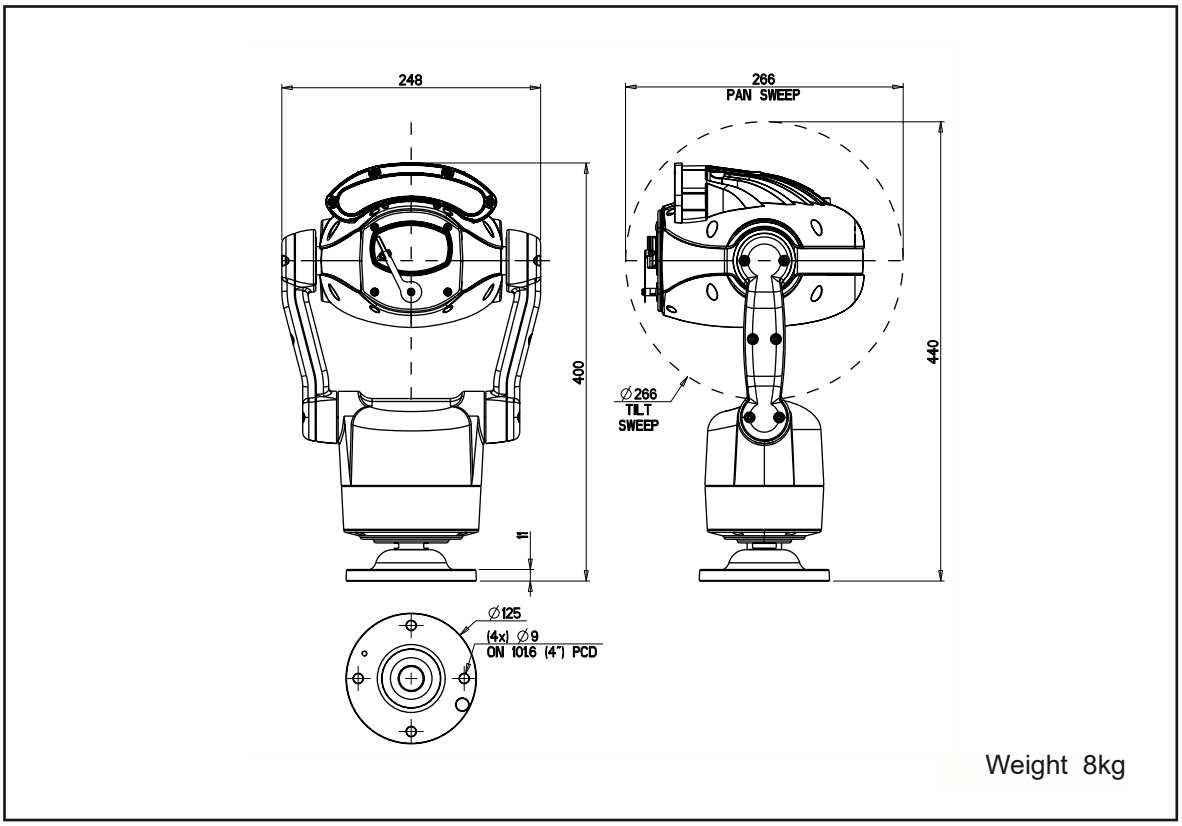
Predator No LED's



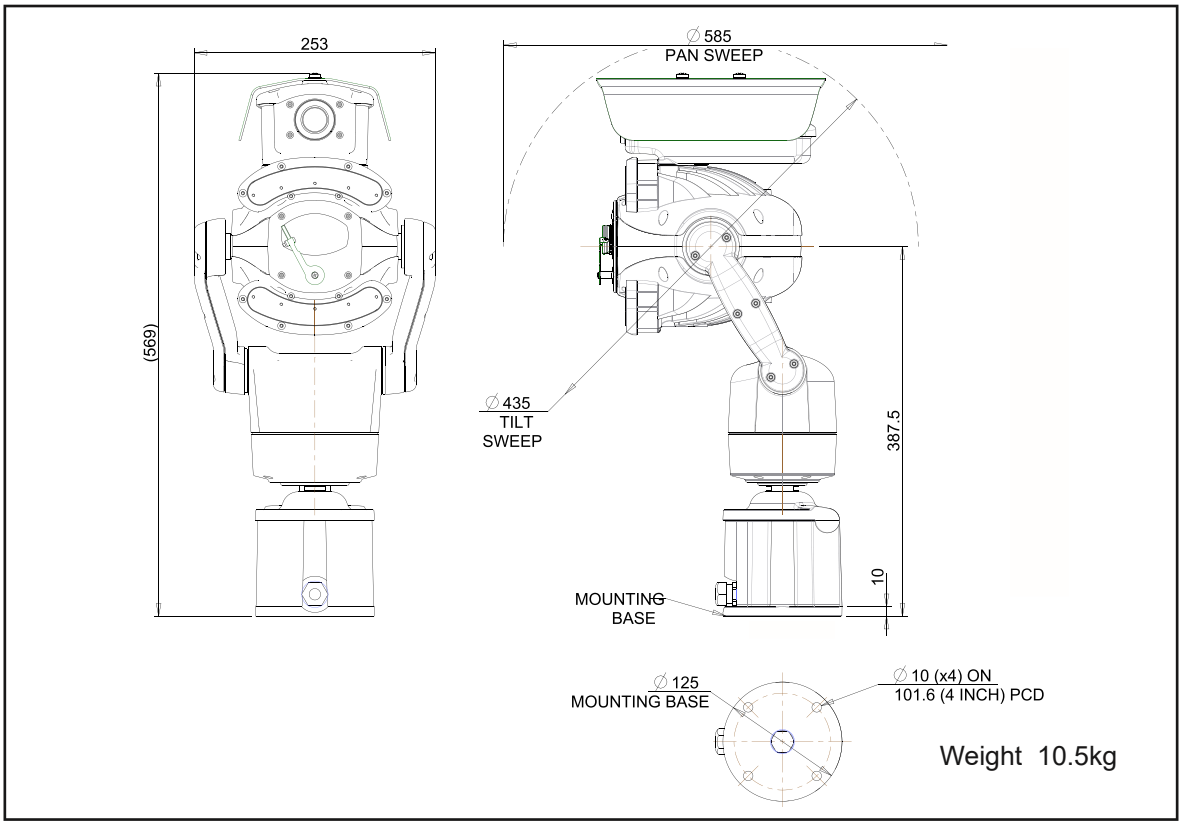
Predator Single LED array - Covers SIR110, SIR160 or SIR140WL versions.



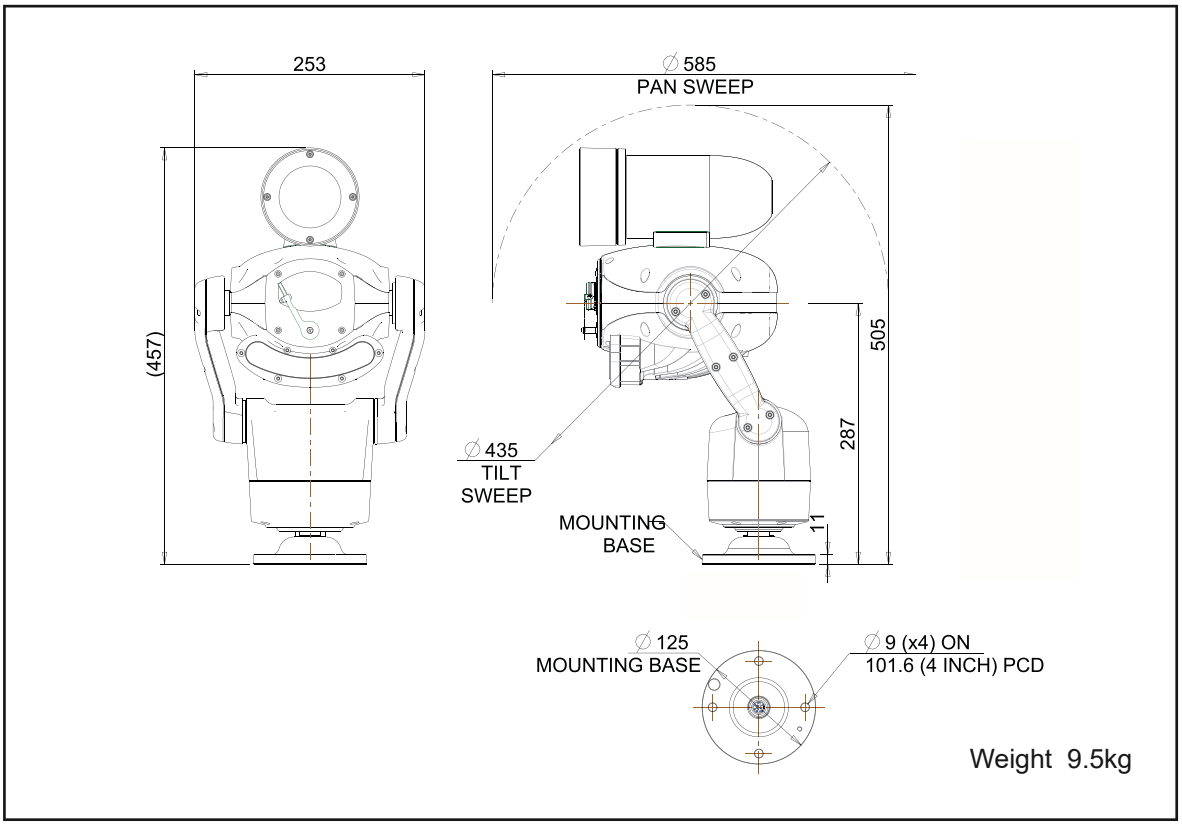
Predator Dual LED array - Covers SIR250SW, 250SWL or IR275 versions.



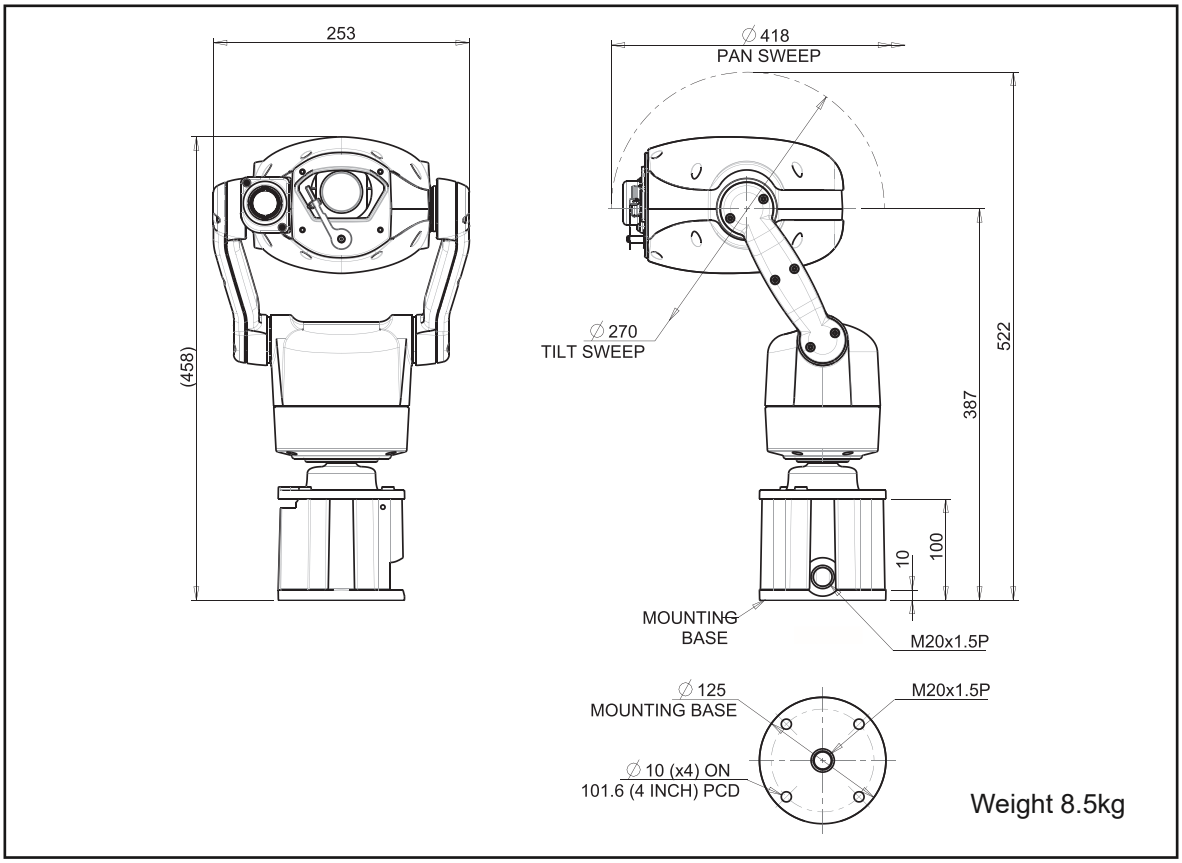
Predator Single LED array (Straight Arm version) - Covers SIR110, SIR160 or SIR140WL versions.



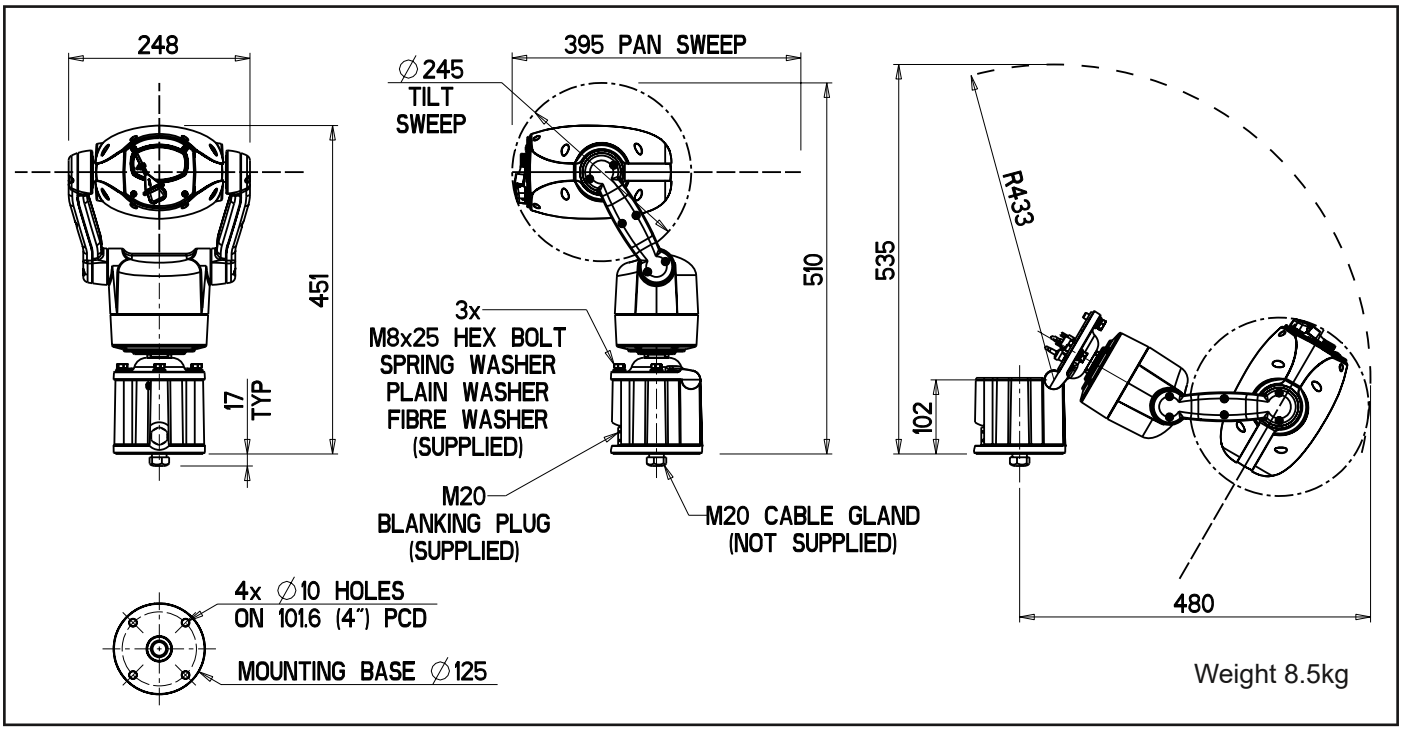
Dual View Dimentions & Predator Thermal (up to 35mm lens) with LED array and built in thermal encoder



Predator Thermal (35 -100mm lens) with LED array

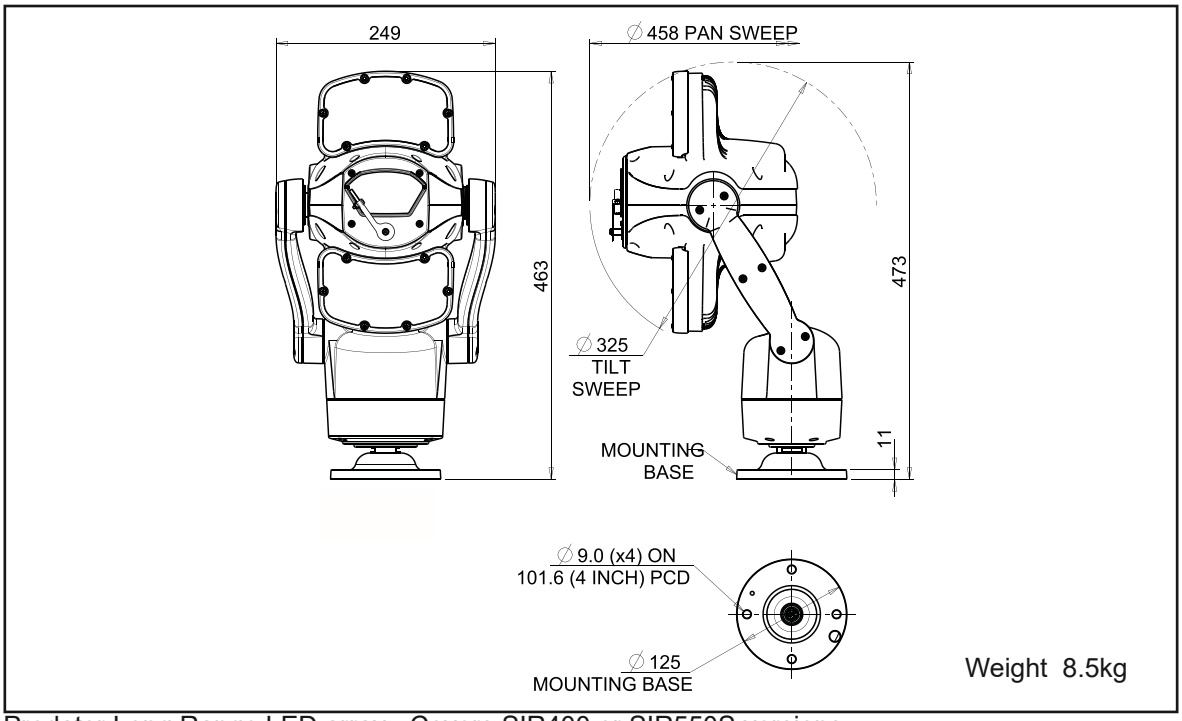


Predator Thermal (Side mounted)



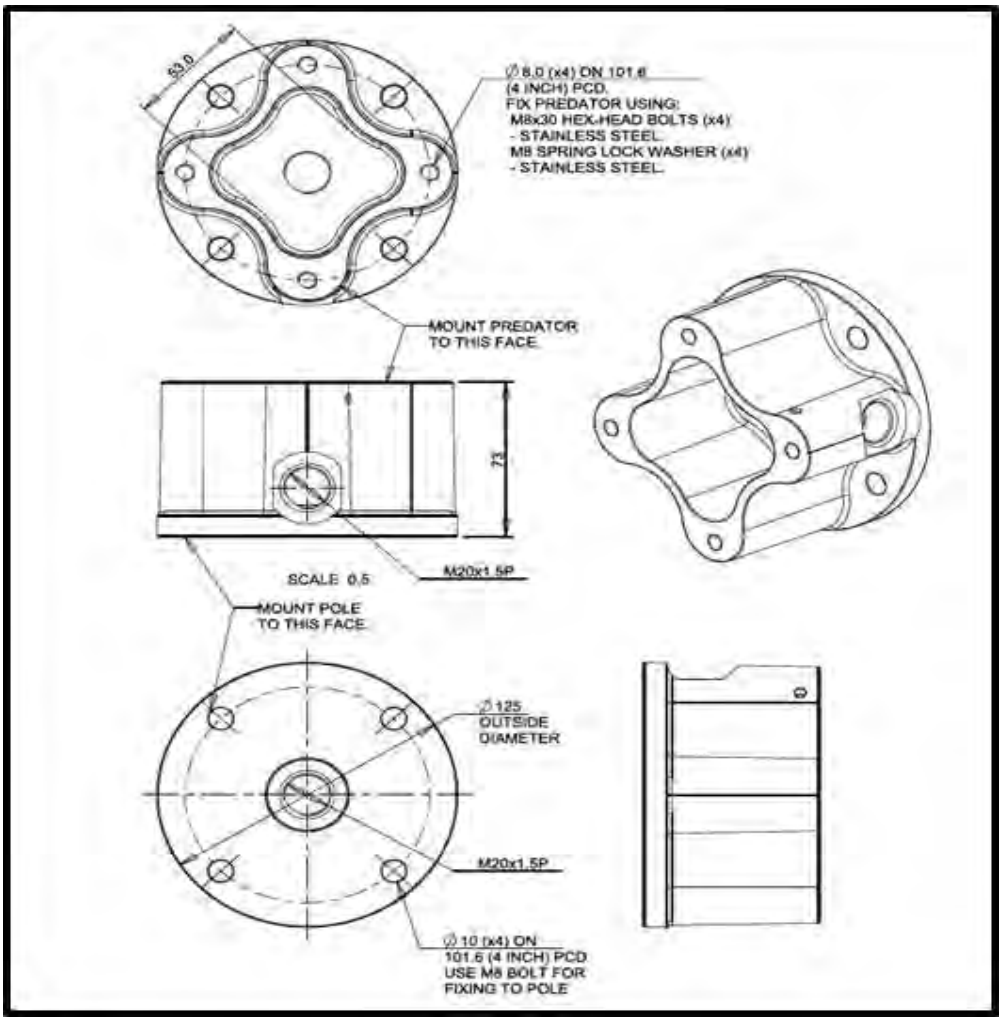
HMA Predator No Lamps (shown)

All versions of the Predator can be built to order with the integral HMA (Hinged Mount Adapter). The HMA is fitted during manufacture and is NOT available as an option for the installer to add to an existing Predator.



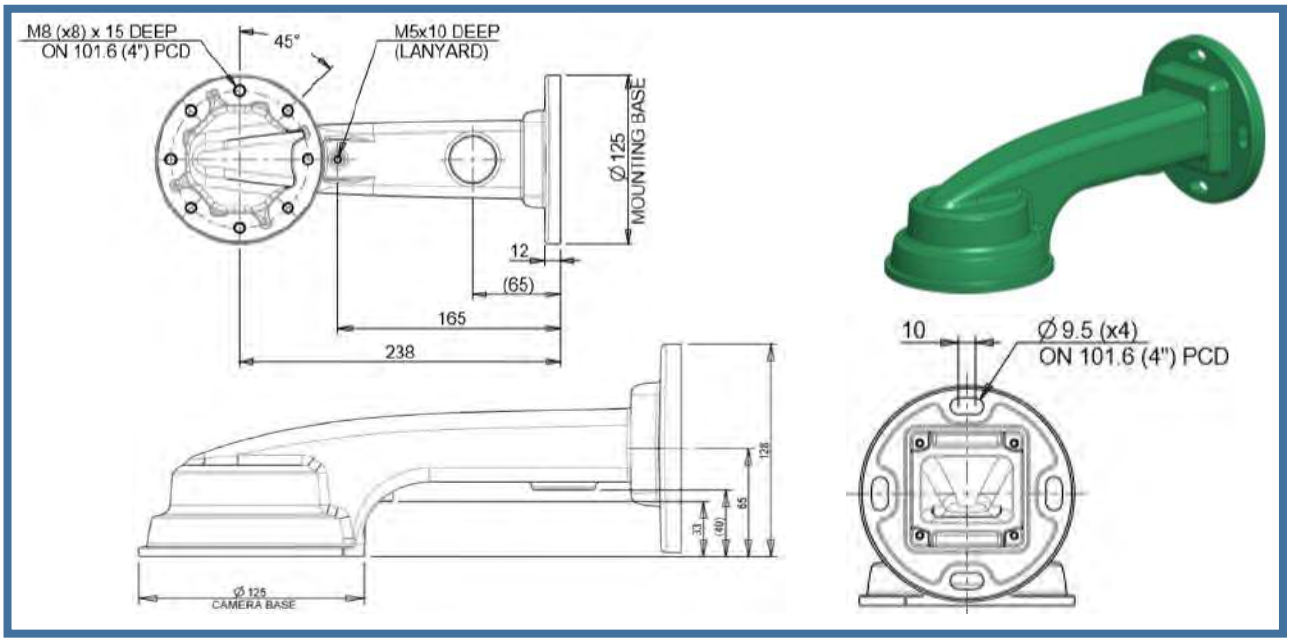
Predator Long Range LED array - Covers SIR400 or SIR550S versions.

2 Brackets & Dimensional Drawings

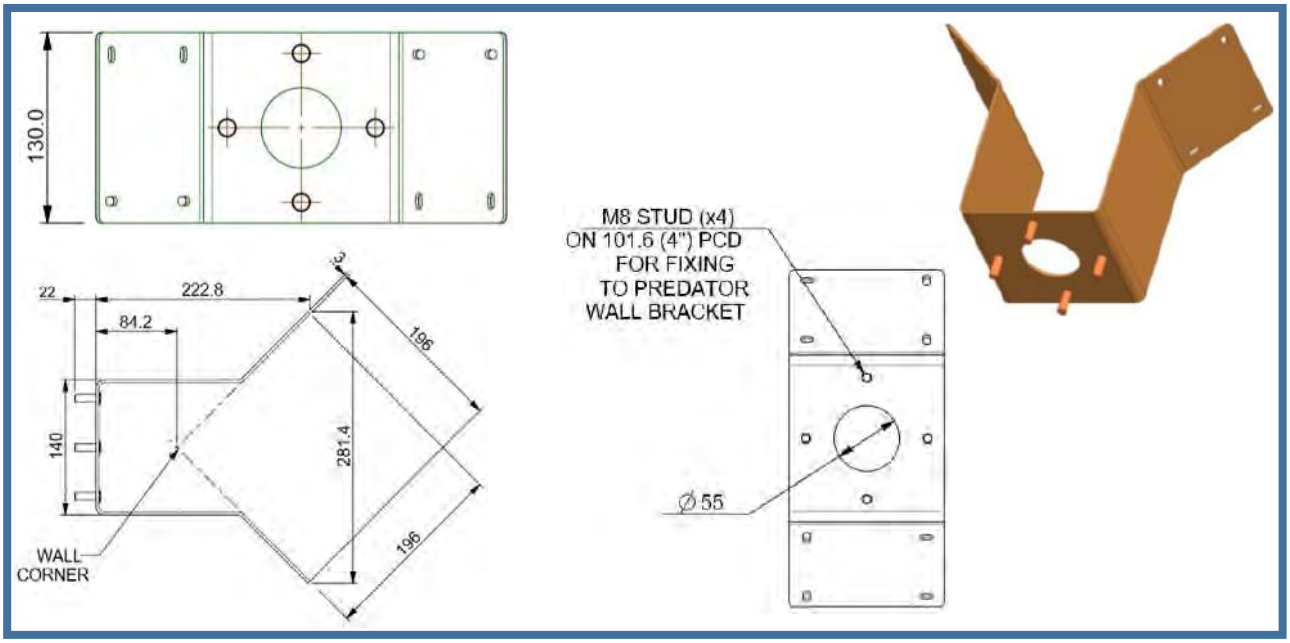


PMA Bracket

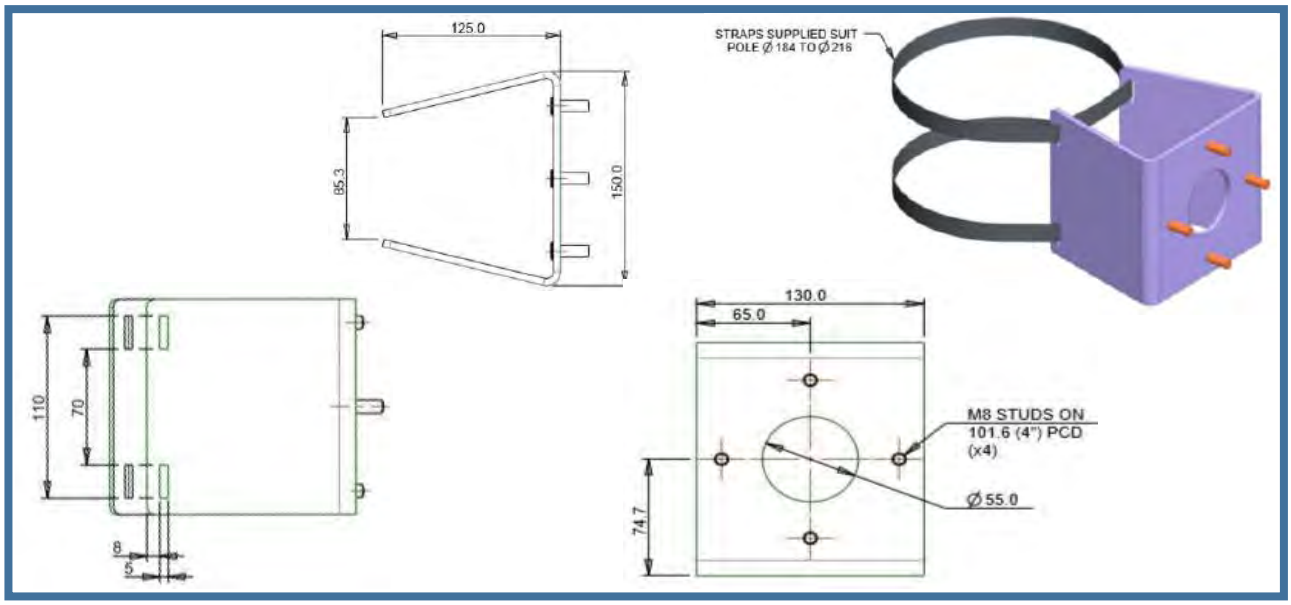
Wall Bracket



Corner Bracket

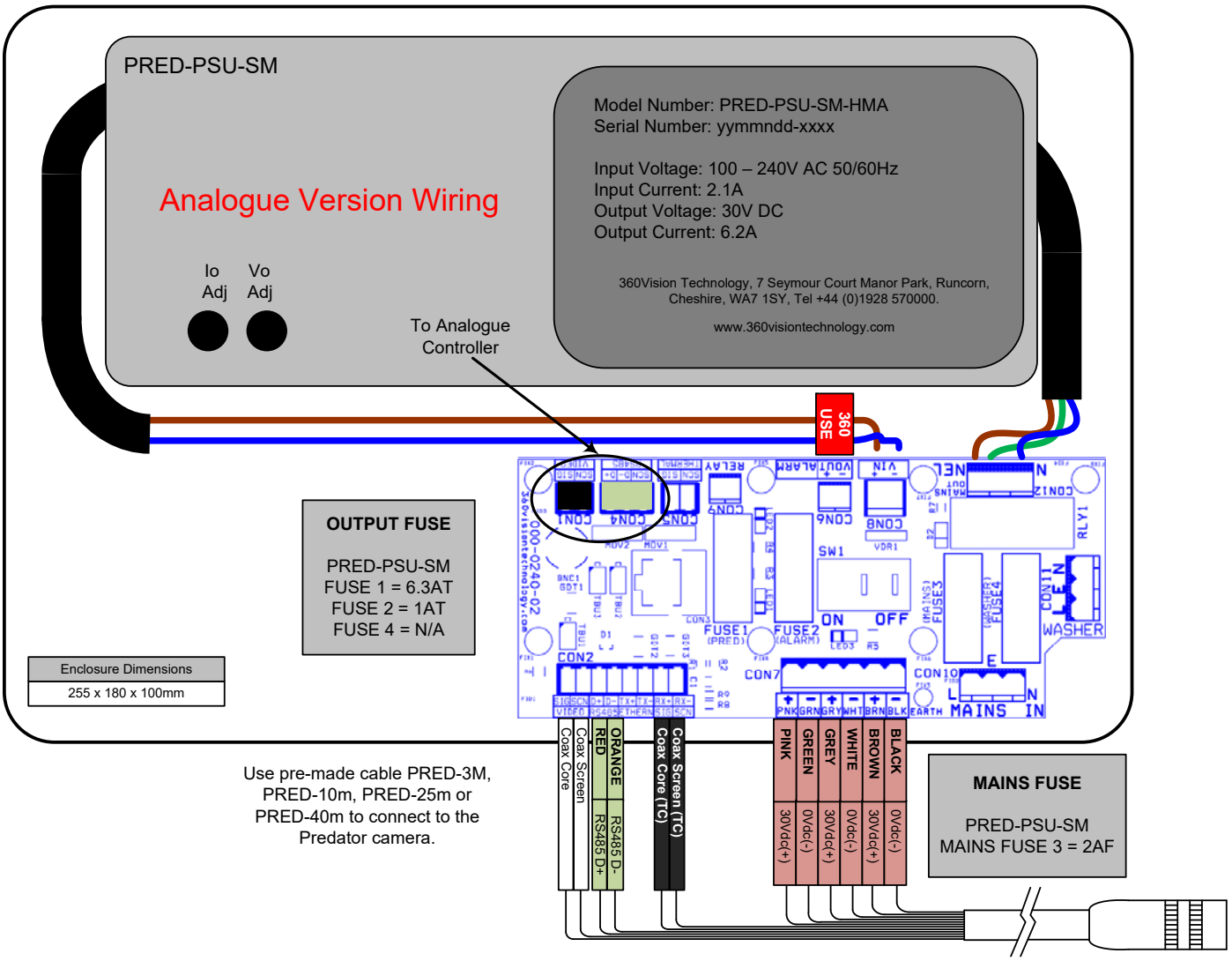


PMB Bracket



3 Connections

PRED-PSU-SM Safety and Installation Sheet



This PSU is compatible with the following products: ANALOGUE PREDATOR NON-HMA

SAFETY: Isolate mains supply while installing.

FIXING: Securely fix the PSU with suitable fixings.

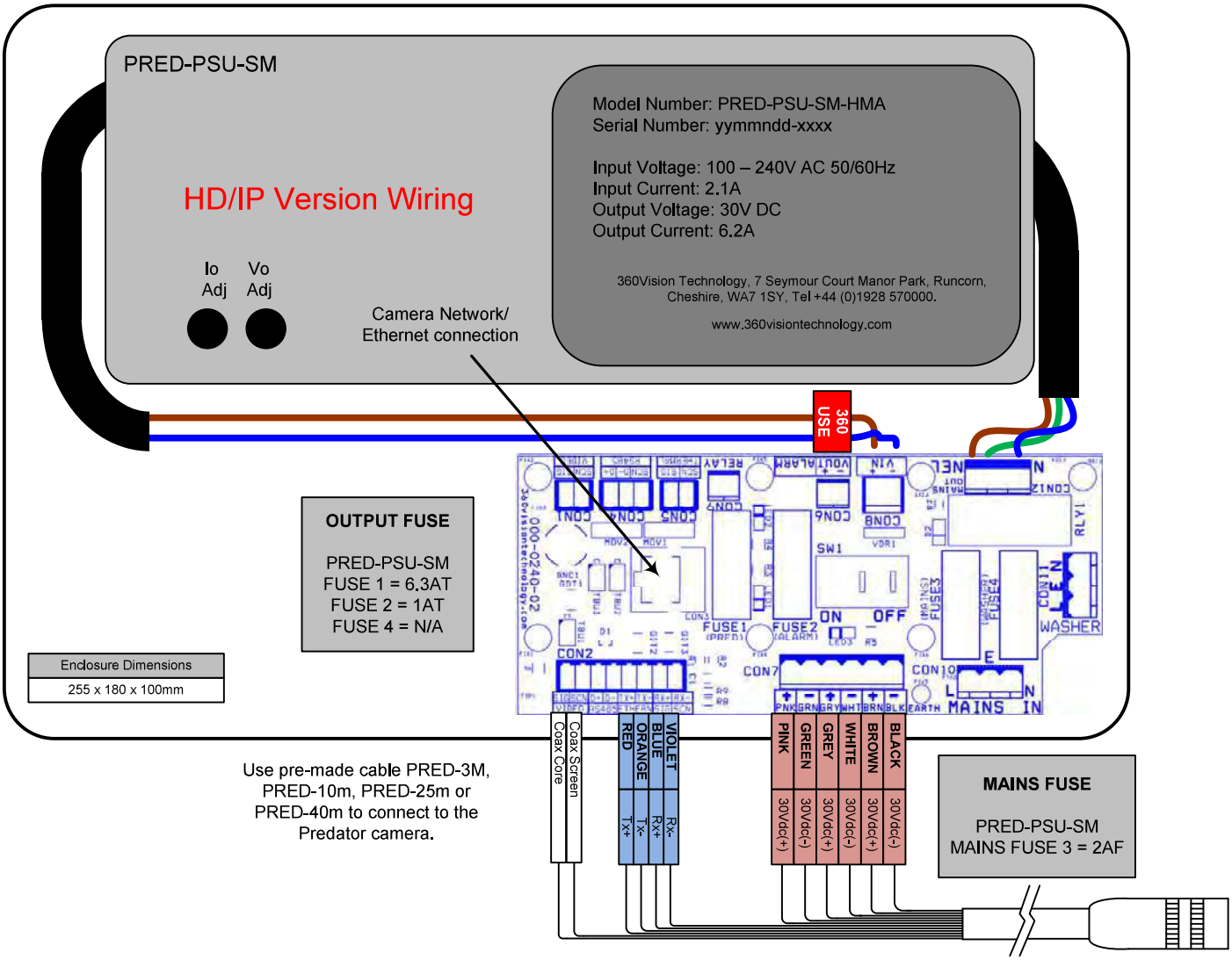
GLANDS: Face downwards, unused glands must be sealed.

ELECTRICAL CONNECTIONS: Connecting the mains power.

MAINS INPUT 100-240Vac
L=LIVE (BROWN) 100-240Vac 50/60Hz
E=EARTH (GREEN/YELLOW)
N=NEUTRAL (BLUE)

SAFETY: ENSURE MAINS INPUT AND EARTH CONNECTIONS ARE SECURELY CONNECTED AND STRAIN RELIEVED.

FUSE PROTECTION: Mains input fuse 2AF.



This PSU is compatible with the following products: HD/IP

PREDATOR NON-HMA

SAFETY: Isolate mains supply while installing.

FIXING: Securely fix the PSU with suitable fixings.

GLANDS: Face downwards, unused glands must be sealed.

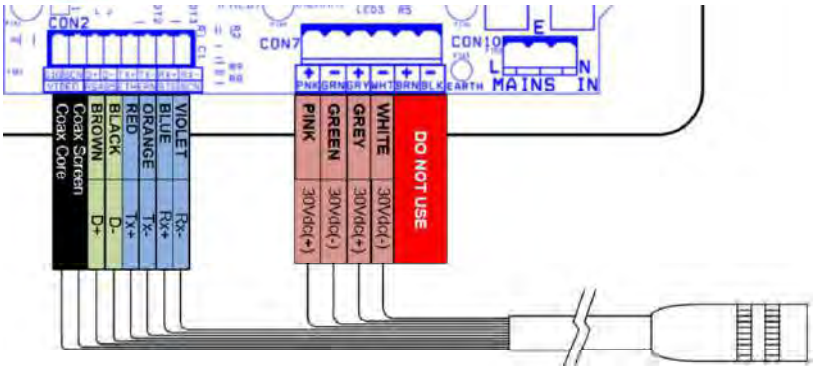
ELECTRICAL CONNECTIONS: Connecting the mains power.

MAINS INPUT 100-240Vac
L=LIVE (BROWN) 100-240Vac 50/60Hz
E=EARTH (GREEN/YELLOW)
N=NEUTRAL (BLUE)

SAFETY: ENSURE MAINS INPUT AND EARTH CONNECTIONS ARE SECURELY CONNECTED AND STRAIN RELIEVED.

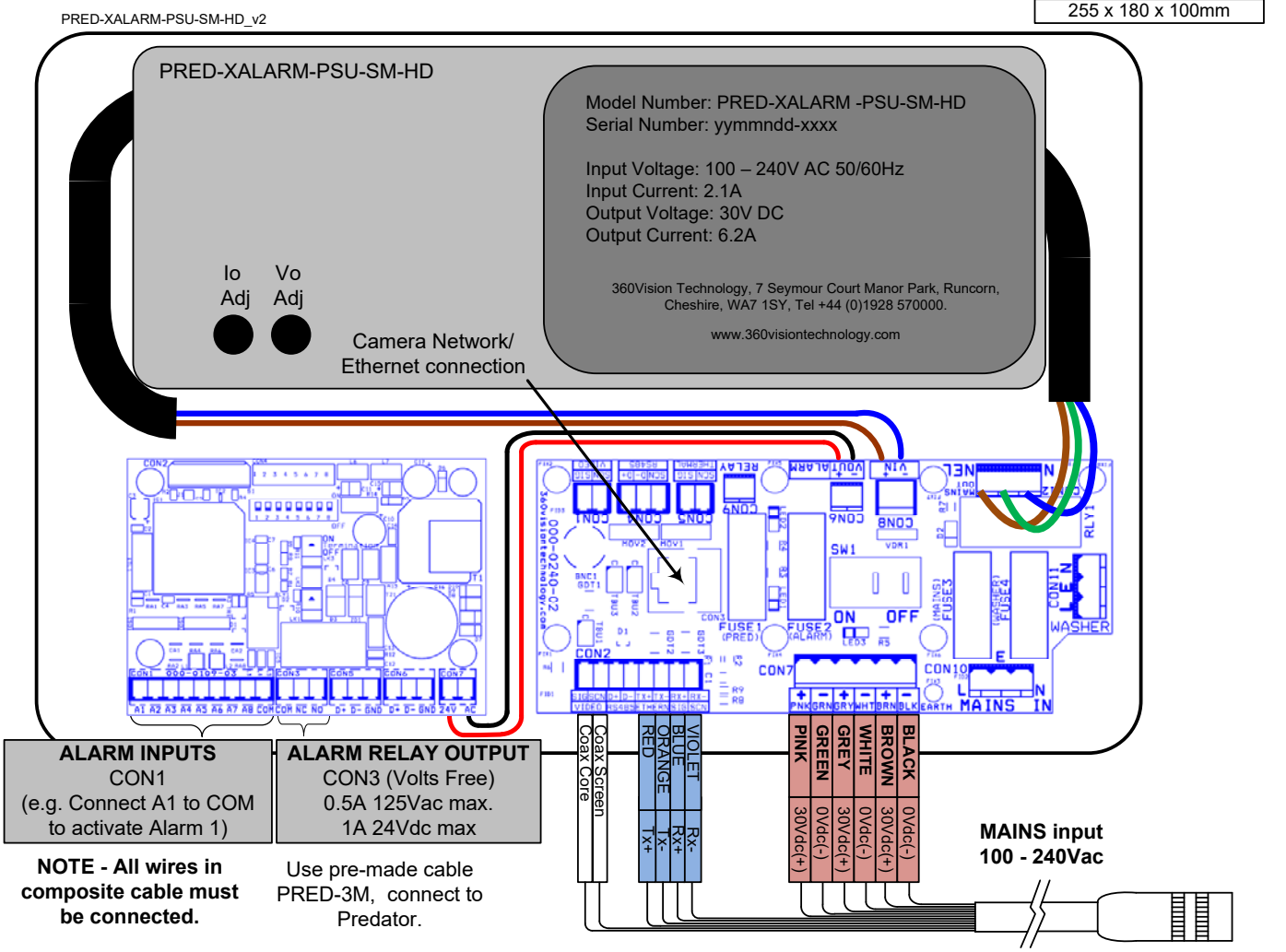
FUSE PROTECTION: Mains input fuse 2AF.

SEE BELOW PRED-HYB-PSU-SM



PRED-XALARM-PSU-SM-HD Safety and Installation Sheet

Enclosure Dimensions
255 x 180 x 100mm



This PSU is compatible with the following products: HD/IP PREDATOR WITH ALARMS

SAFETY: Isolate mains supply while installing.

FIXING: Securely fix the PSU with suitable fixings.

GLANDS: Face downwards, unused glands must be sealed.

ELECTRICAL CONNECTIONS: Connecting the mains power.

MAINS INPUT 100-240Vac
L=LIVE (BROWN) 100-240Vac 50/60Hz
E=EARTH (GREEN/YELLOW)
N=NEUTRAL (BLUE)

SAFETY: ENSURE MAINS INPUT AND EARTH CONNECTIONS ARE SECURELY CONNECTED AND STRAIN RELIEVED.

FUSE PROTECTION: Mains input fuse 2AF.

360Vision Technology, 7 Seymour Court Manor Park, Runcorn, Cheshire, WA7 1SY, Tel +44 (0)1928 570000.
www.360visiontechnology.com

4 Standalone Alarm card

The PRED-XALARM-PSU has eight normally open/closed (Dil switch S1, switch 8 on) alarm inputs on connector CON1 on the alarm PCB, When using normally closed contacts, all unused alarm inputs must be connected to the alarm in common CON1. Connect switches or volts free relay outputs from PIRs or other equipment to CON1 connector is activated. There is also an alarm relay which can be used to activate alarm s on other equipment (DVR etc.) The Alarm relay contacts (Common - 'C'. Normally Open - 'NO' are Normally Close - 'NC') use connector CON3 on the alarm PCB.

When an alarm is activated, the ALARM PCB will activate the alarm relay output and will send commands to set the Predator to activate 'alarm mode'. The Predator will save the current status (pan, tilts, lens, tour and mimic) then it will seek the preset which corresponds with the active alarm number

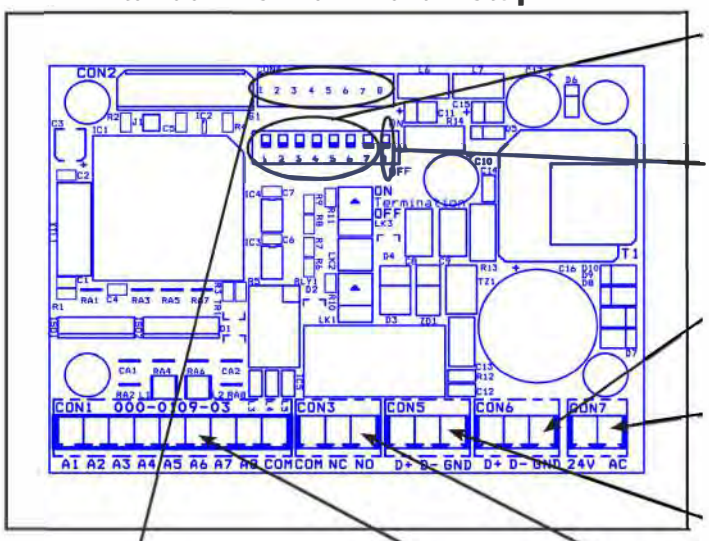
Alarm Number	Preset Number	Alarm Number	Preset Number
1	1	5	5
2	2	6	6
3	3	7	7
4	4	8	8

The alarm will remain active while the alarm input is active. After the alarm input becomes inactive, a 10 second alarm timer will start. The timer extends the alarm activity until the alarm timer expired. If the alarm input becomes active again before the timer has expired, the timer resets and will restarts again when the alarm input comes inactive and a further preset seek command is sent to the Predator.

If an alarm is active and a further alarm becomes active, the latest alarm will interrupt the previous alarm. (I.e. the latest alarm as highest priority) The Predator will seek the preset that corresponds with the new alarm. When contact become inactive, the Predator will seek the preset that corresponds with the previous highest priority alarm that is still active. When all alarms inputs are inactive the alarm timer starts. After the timer expires, the Alarm PCB sends a commands to the Predator to end the 'alarm mode' and the Predator will return to the status position and action that has been saved when first alarm became active (Fit a link on the alarm card COM4 position 7 to disable the automatic return to the pre-alarm status when all alarms and the alarm time have expired)

When an alarm is active and the Predator has automatically selected the appropriate preset, it is possible to send further commands (Manual control) to the Predator which will override the preset which had previously been automatically selected. Each time an automatic preset seek occurs as described in the previous paragraph; the manual control will be interrupted.

4.1 Standalone Alarmcard Setup



Address (1-7) (Range 1 to 128)
Use Dilswitch to set address same as camera.
(See Page 15)

Alarm Input setting
Use Dilswich pole 8 to set if alarms are N/O or N/C. All unused N/C contacts to be connected to alarm common. (See Page 15)

RS485 In Connections/LK3 termination
Connect RS485 from controller to CON6

Power Connections
Connect Power 30Vdc to CON7

RS485 Out Connections/LK1 termination
Connect RS485 to camera to CON5

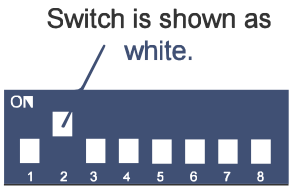
Relay Output
Use CON3 for relay output.

Alarm Inputs
Use CON1 for volt free alarm inputs

Protocol/Alarm settings
Use CON4 to set protocol and camera alarm behavior (see page 16)

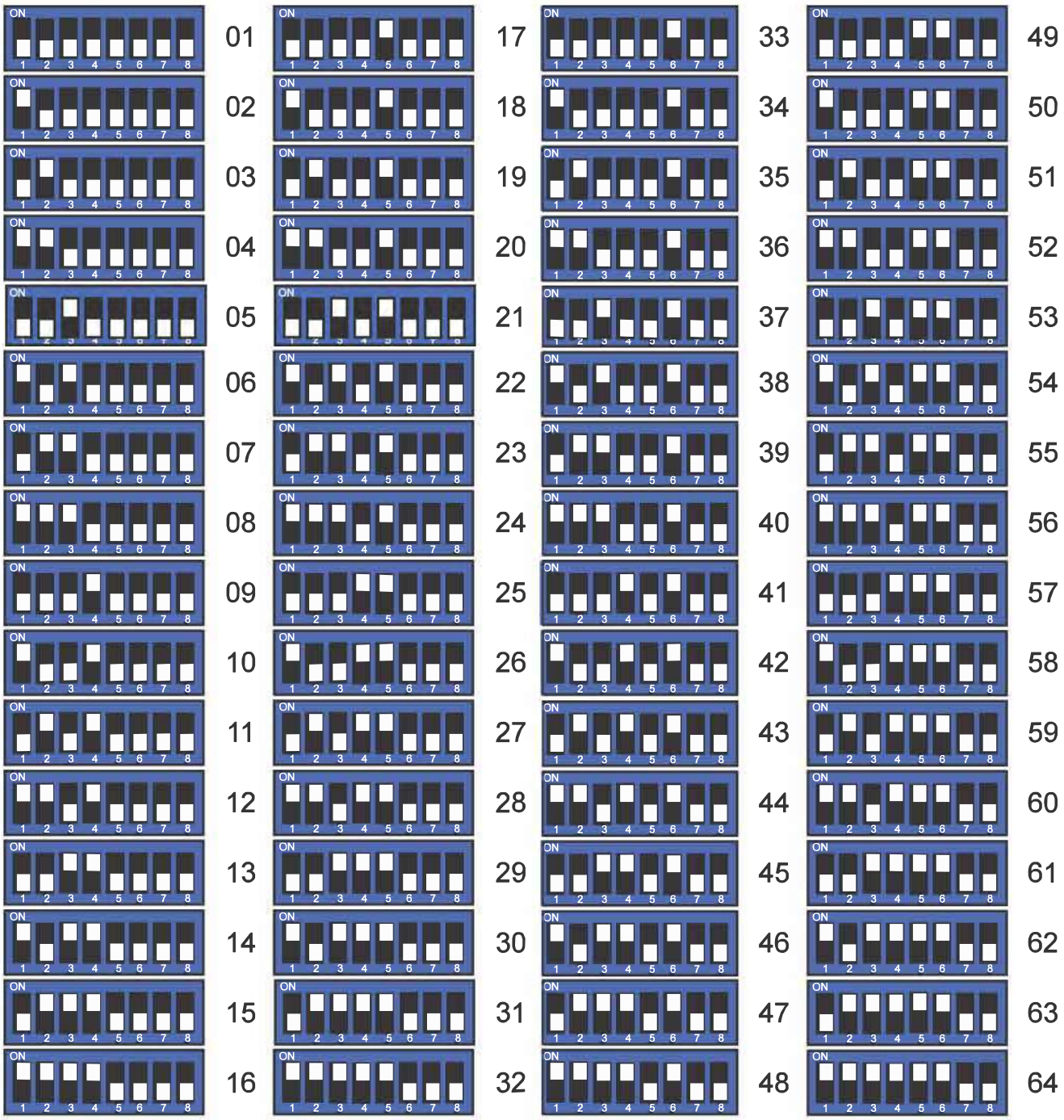
Dil Switch Settings	1-7
Address 1 to 128 range	See below

Dil Switch Settings	8
Normally Open Contacts	Off
Normally Closed Contacts (Un-used inputs must be connected to common)	On



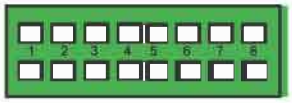
Example shows switch settings for camera address 3

RS485 Address Settings



CON4 Settings

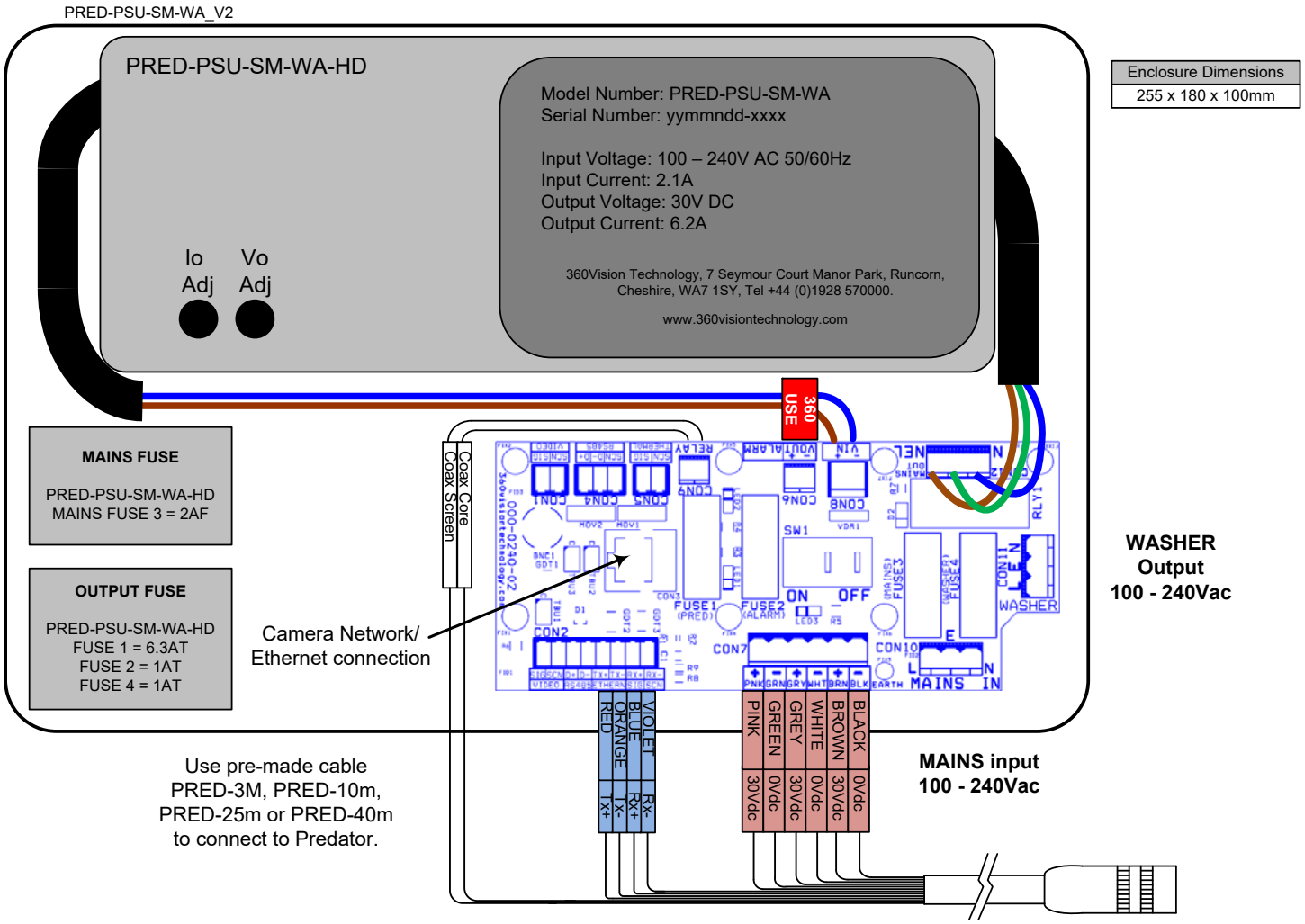
CON4



Protocol Settings	3	4	5	6
360 Vision	Off	Off	Off	Off
Pelco D 9600 baud	On	Off	Off	Off
Pelco D 4800 baud	Off	On	Off	Off
Pelco D 2400 baud	On	On	Off	Off
Pelco P 9600 baud	Off	Off	On	Off
Pelco P 4800 baud	On	Off	On	Off
Pelco P 2400 baud	Off	On	On	Off

Alarm Settings	7	8
Normal Operation	Off	Off
No Pre-alarm, No White Light	On	Off
Forced White Light	Off	On
No Pre-alarm, White Light Timer	On	On

PRED-PSU-SM-WA Safety and Installation Sheet



This PSU is compatible with the following products: HD/IP PREDATOR NON-HMA WITH WASHER

SAFETY: Isolate mains supply while installing.

FIXING: Securely fix the PSU with suitable fixings.

GLANDS: Face downwards, unused glands must be sealed.

ELECTRICAL CONNECTIONS: Connecting the mains power.

MAINS INPUT 100-240Vac
L=LIVE (BROWN) 100-240Vac 50/60Hz
E=EARTH (GREEN/YELLOW)
N=NEUTRAL (BLUE)

SAFETY: ENSURE MAINS INPUT AND EARTH CONNECTIONS ARE SECURELY CONNECTED AND STRAIN RELIEVED.

FUSE PROTECTION: Mains input fuse 2AF.

360Vision Technology, 7 Seymour Court Manor Park, Runcorn, Cheshire, WA7 1SY, Tel +44 (0)1928 570000.
www.360visiontechnology.com

5 Predator Washer/Nozzle Bracket

Nozzle bracket.
The Predator washer bracket kit includes the bracket, nozzle M8 plain metal washer, M8 lock washer and four cable ties.

Nozzle Adjustment
The nozzle is set to produce a vertical water jet. The direction of the jet can be adjusted by rotating the nozzle body in the bracket, or by using the screw-driver slot.

Fixing Bracket to Predator
Choose one of the four M8 Predator fixing bolt positions to be used to mount the nozzle bracket so that it does not obscure an important view. E.g. directly above the horizontal bar of a wall bracket would be suitable.

Fit an M8 flat metal washer between the Predator base and the nozzle bracket so that the base of the bracket is not crooked. Fit an M8 lock washer under the head of the bolt to reduce the risk of the bolt becoming loose and the bracket moving. Ensure that the curved end of the bracket fixing plate is directed towards the Predator pan shaft so that the vertical part of the bracket is the maximum distance from the rotating body.

Tube Connection
Suitable tube (not supplied) for connection to the nozzle is PVC with internal diameter 3mm and outside diameter 6mm PVC.
The end of the tube is pushed over the ridged tube at the rear of the nozzle. Fit a cable tie around the joint between the PVC tube and the rear of the nozzle to ensure that the tube cannot become detached.

The PVC tube should weave through the two slots in the bracket to provide strain relief. Cable ties can be used to secure the tube so that it is clear of the Predator's rotating body. Take care that the cable ties do not cause excessive restriction of the tube.

6 Connections to Predator with HMA

When the HMA (Hinged Mount Adapter) is fitted to the Predator, the Predator composite cable is not used. Connection between the power supply and the Predator use conventional cables as detailed below.

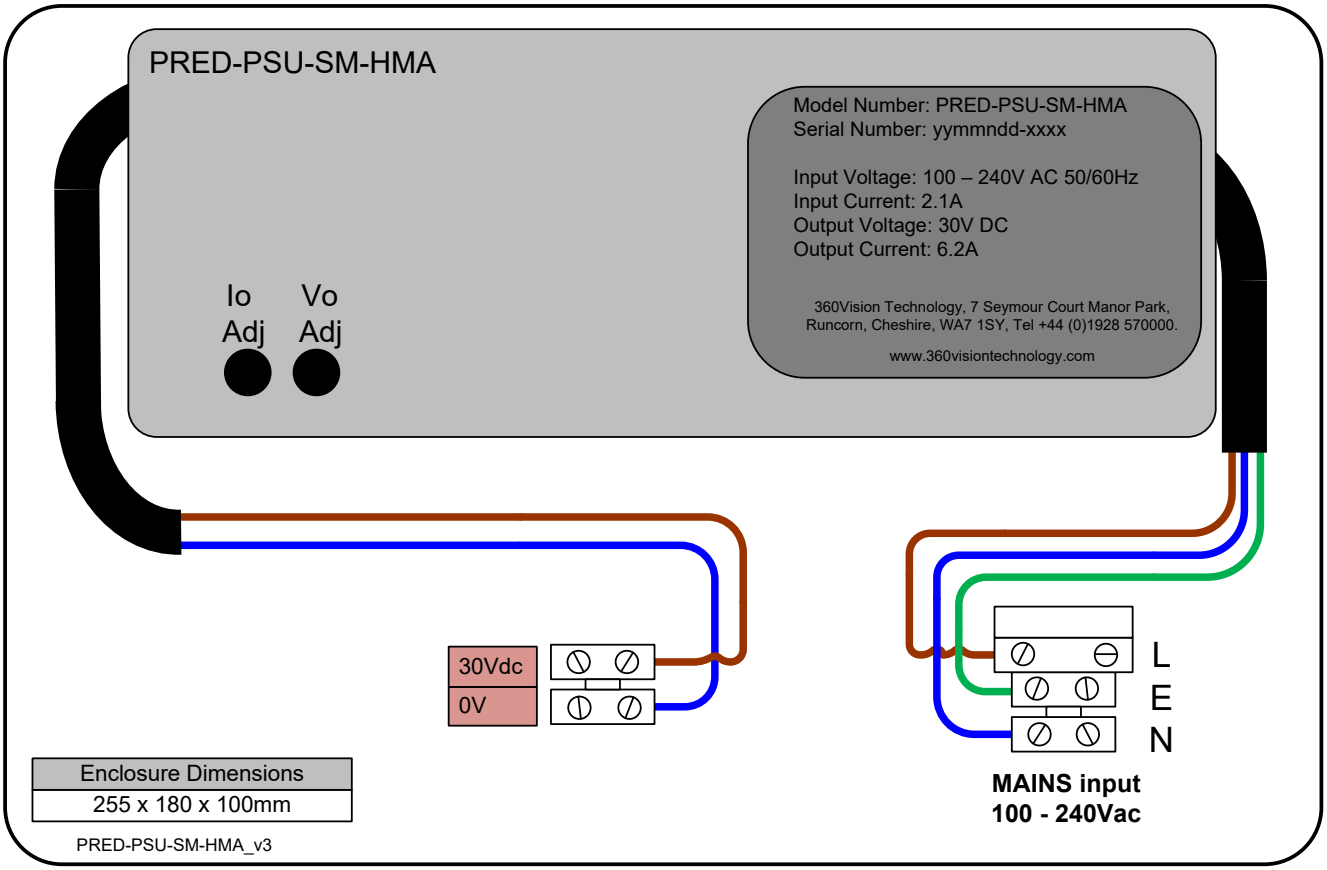
36Vdc Power connections between Predator PSU and Predator that is fitted with HMA.

Cable Size	IRWL
0.75 mm^2	58.5
1 mm^2	78
1.25 mm^2	97.5
1.5 mm^2	117
2.5 mm^2	195
3 mm^2	234
4 mm^2	312

Camera current draw table.

	NO Lamps	IR	IR/WL	Dual View
Power Up	0,65	0,65	0.65	0.95
Idle (No Lamps)	0.59	0.59	0.59	0.89
PTZ /Wiper (No Lamps)	0.65	0.65	0.65	0.95
Idle (IR Lamos)	NIA	1.9	1.92	2.22
PTZ/Wiper (IR Lamps)	N/A	1.9	1.92	2.22
Idle (White Lamps)	N/A	N/A	1.67	1.97
PTZ/Wiper (White Lamps)	N/A	N/A	1.73	2.03
Voltaae at PSU	36vdc	36vdc	36vdc	36Vdc
Voltaae at Camera (PTZ /IR/ Fast tour)	28.1	28.1	28.1	28.1
CurrenWoltaae test at cable lenath 1.5 mm^2	40M	40M	40M	40M

PRED-PSU-SM-HMA Safety and Installation Sheet



This PSU is compatible with the following products: PREDATOR HMA

MAINS FUSE

PRED-PSU-SM-HMA
MAINS FUSE = 2AF

SAFETY: Isolate mains supply while installing.

FIXING: Securely fix the PSU with suitable fixings.

GLANDS: Face downwards, unused glands must be sealed.

ELECTRICAL CONNECTIONS: Connecting the mains power.

MAINS INPUT 100-240Vac
L=LIVE (BROWN) 100-240Vac 50/60Hz
E=EARTH (GREEN/YELLOW)
N=NEUTRAL (BLUE)

SAFETY: ENSURE MAINS INPUT AND EARTH CONNECTIONS ARE SECURELY CONNECTED AND STRAIN RELIEVED.

FUSE PROTECTION: Mains input fuse 2AF.

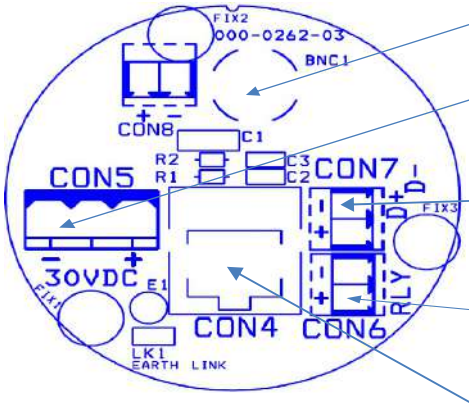
Ethernet connections between Predator PSU and Predator that is fitted with HMA.

The Ethernet connection uses standard CAT5e or CAT5 cables fitted with RJ45 connectors

RJ45	CAT5, Ca15e, CAT6 Cable	Signal
Pin 1	White with Orange Band	**Tx+**
Pin2	Orange	Tx-
Pin 3	White with Green Band	**Rx+**
Pin4	Blue	
Pin 5	White with Blue Band	
Pin6	Green	Rx-
Pin 7	White with Brown Band	
Pin 8	Brown	

Gain access to connectors in the HMA

- Ensure that the fixed part of the HMA is securely bolted to the top of the pole.
- The hinged part of the HMA (Hinged Mount Adapter) is fastened to the fixed part using three M8X2S long hex head bolts. Use a spanner (13mm) to remove the three bolts. Each bolt is fitted with a split spring lock washer (which prevents the split washer from damaging the fiber washer) and a fiber washer (which prevents the paint on the hinged part from being damaged unnecessarily.
- Open the hinge taking care that the gasket is not damaged and support the weight of the Predator. Gently open the HMA until the lanyard is able to take the weight. If the lanyard appears to support the weight of the Predator, there is no need to continue to support the Predator. The connection circuit board (PCB-000-0262-xx) Can now be seen.

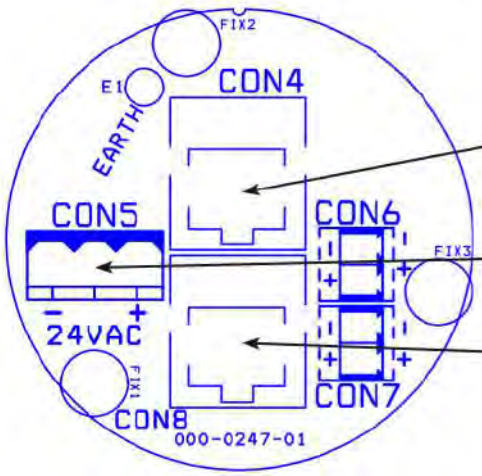


Analogue Camera output
Use BNC for analogue video output

Power Connection
Connect Power to CONS (22-28VAC - 22-36VDC)
RS485 Connection
Use CON7 to connect the RS48S twisted pair data.

Washer Connection
(If feature is present) Use CON6 to connect washer signal to Predator washer PSU (PCB-000-0240-xx) CON9

Ethernet Connections
Connect Ethernet cable to HD HMA Predator connection board using a RJ45 connector (CON4)



Note
Camera has two separate Ethernet connections and two separate IP addresses. (Default is 192.168.1.187 and .188)

Ethernet Connection Predator (192.168.1.187)
Connect Ethernet cable to HMA Predator Dual View connection board using a RJ45 connector (CON4).

Power Connections
Connect 24Vac/30Vdc to CON5.

Ethernet Connection Affiniti (192.168.1.188)
Connect Ethernet cable to HMA Predator Dual View connection board using a RJ45 connector (CON8).

Please make sure there is adequate spare cable (20cm) for when the camera is resting on the lanyard, failure to do this could damage the connector circuit board.

Predator Analogue Installation / Configuration section

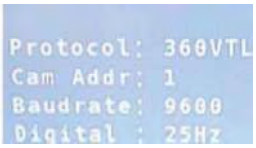
7 Basic Twisted Pair / RS485 Data Wiring

The Predator camera is capable of being controlled by Twisted Pair Telemetry.
The Predator camera cannot be wired in a Daisy Chain configuration as the RS485 twisted pair circuit is terminated end of line.

Star Wired
RS485 twisted pair cable is wired to each camera in a "star" from one point. A suitable RS485 star driver/ data distribution product must be used. All cameras in this wiring configuration must have the RS485 (end of line) termination on.

8 Predator Protocol / Address setup.

All Predator cameras are supplied set to 360 Vision protocol, camera twisted pair address 1. When the Predator is switched on, an OSD (On Screen Display) is shown on the image from the camera for approx 20 seconds



PRED_HY_x.x.x.x This is the software version loaded on the camera

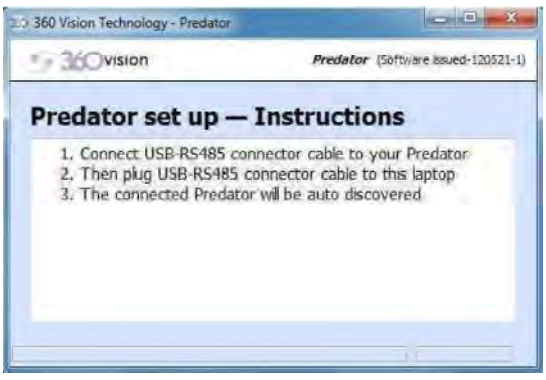
Protocol: Protocol being used for telemetry (e.g 360 Vision Technology Ltd)
Cam Addr: Camera RS485 ID (e.g. Cam 1)
Baudrate: RS485 baurd rate of the communications (e.g. 9600)
Digital: This shows video frequency (e.g. 25HZ PAL, 30HZ NTSC)

To change the above settings in the camera, 360 Invictus utility software, a USB/RS485 cable (PRED-USB-485) and a laptop are required.
The Invictus utility and PRED-USB-485 cable drivers can be found on the CD (shipped with the camera) www.360visiontechnology.com/downloads/web site or via 360 Vision Technology technical support.

Install the software (Predator-issued-120521-1-installer.exe) on the laptop being used. Connect the RS485 end of the cable fitted with a 3 way connector to the Invictus RS485. Run the utility on the laptop and then connect the USB end of the cable in to the laptop. The utility will then search for new comms ports and then will look for the camera across all baud rates used.

Predator Camera Supported RS485 Protocols:

360 Vision
Pelco D and P baud rates 9600 / 4800 / 2400
Forward Vision



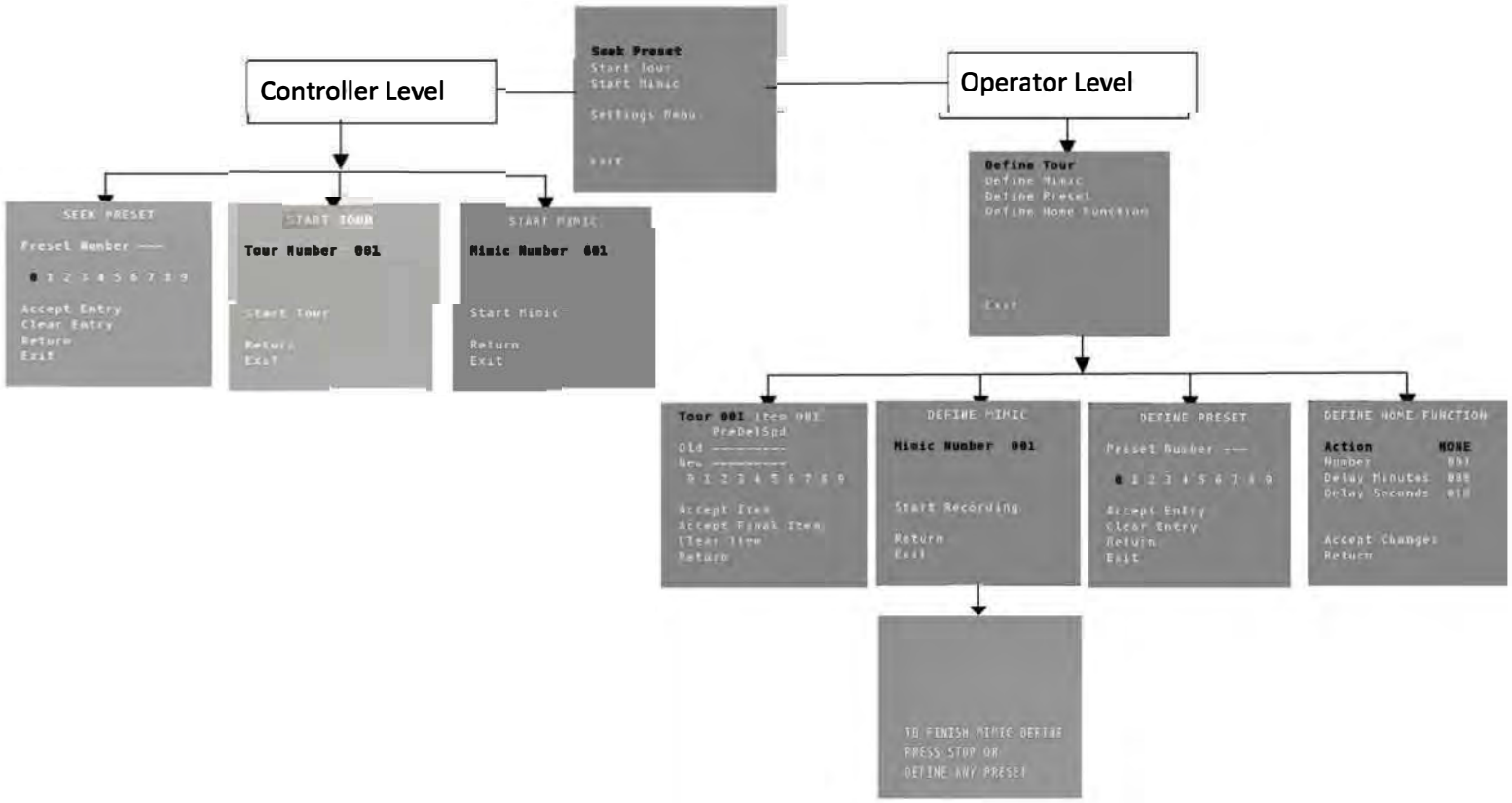
• Coax cable length: Longer than 300m or shorter than 300m

This is to lift the video signal over long cable distance.

• RS485 Address: Used on RS485 systems only

NOTE: Predator HYBRID does not support coax telemetry.

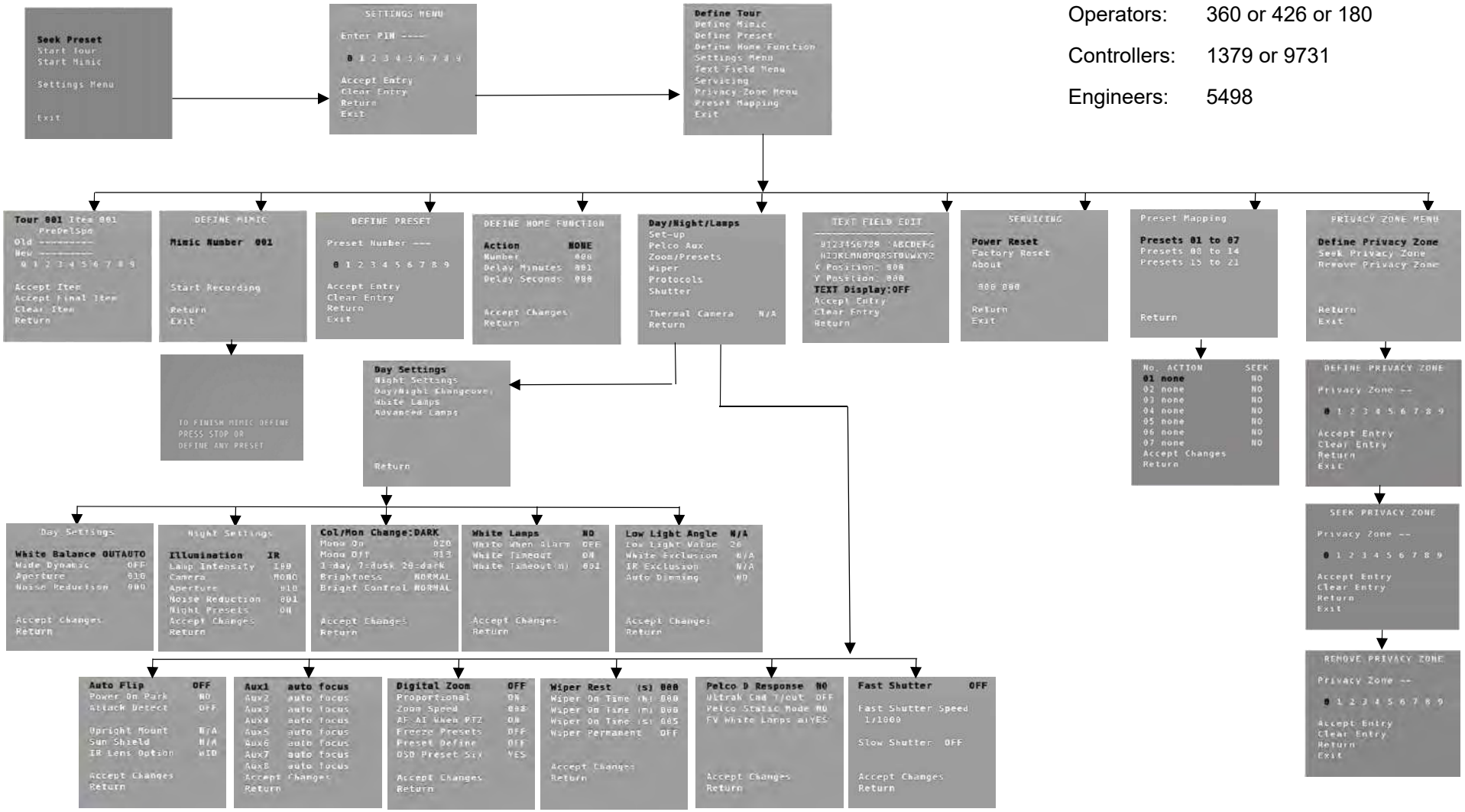
9 Predator OSD



Predator OSD (On screen display) is accessed by defining / programming preset 6 & 95.

- Use the joystick up, down, left, right, to navigate the menu.
- Use the joystick zoom in to highlight / select an option.
- Use joystick left and right to increment/decrement numbers

Engineer Level



10 Pin Numbers

Operators: 360 or 426 or 180

Controllers: 1379 or 9731

Engineers: 5498

11 OSD Operation/Navigation

Dome menu

- Seek Preset
- Start Tour
- Start Mimic
- Dome Settings Menu

Define Tour

A tour of presets is stored in the Predator as a list of tour points. Each tour point consists of a preset number, the dwell time for which the Predator 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 Predator and to define the required dwell times and speeds of travel that you will require the Predator to use when the tour is started.

A maximum of four individual tours of presets can be stored in each Predator. Each tour can have between 2 and 90 points, each point can be a preset in the range 1 to 300. 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.

This page will open on Tour 1, use the joystick left and right to change to another tour. To add item 1, use the joystick to tilt down. This will highlight the number line so that the tour can be programmed. Use the joystick to navigate along the number line and zoom in to select the number. This will add the number in to the NEW tour. Add in the figures for the item/point in the tour using the sequence labeled above (PREDELSPD. PRE is preset position, DEL is delay in seconds and SPD is speed at °/second). This is how the camera will be programmed to move to a preset for a period of time at a set speed. All nine figures must be added into the item. Figures must be added in three i.e. preset 21 will be added as 021.

Example of an item/point

021005100 = Move to preset 21 for 5 seconds at 100°/sec

Highlight ACCEPT ITEM and zoom in, this will add the item/point into the tour. The OLD item/point will be shown on the screen. If these settings are acceptable, highlight the ACCEPT ITEM option and zoom in. There is no need to add in these points again. Keep adding points until the tour is complete. On the final item/point of the tour highlight and zoom in on ACCEPT FINAL ITEM. This will complete the tour programming.

Define Mimic (*Before going into the OSD screen to program a Mimic tour it is recommended to move the camera in to the start position, any movement or delay will be recorded once the recording has started.)*

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

Highlight and zoom in on START RECORDING, this will allow a mimic tour to be programmed into the camera. The mimic tour can then be used to playback any manual movement, preset seek or delay. Program a preset to end the mimic tour program.

Define Preset

Before going into the OSD screen to program a preset, the camera must be in the position required. Once in the OSD you cannot manually move the camera.

Define Home Function

The camera will perform an ACTION (Go to preset, start preset or mimic tour), after a period of inactivity. Use the NUMBER option to set which preset or tour to start, and the DELAY MINUTES/SECONDS to input the inactivity time period.

Settings Menu Set-Up

- Auto Flip - Use this option to set how the camera behaves when full tilt down is reached. Semi - Requires a second tilt down command when at full tilt down to spin camera 180°. Full - Automatically spins the camera 180°
  - Power on Park - When the camera powers up, it will go to a pre-set position. Pre-set 150. Default is off.
- Attack Detect - Camera will re-initialize camera motors so that the camera looks back to the original position, if the camera is physicals forced/moved. Default is off.
- Upright Mount - Can be used to flip the image, so the camera can be used on a pole or a ceiling. Default is pole.
- Sun Shield - Select if a sun shield is present or not.
- IR Lens option -WID option will use the smaller wider area of illumination for the IR and the NAR will use the bigger IR but will be a more centralized area of illumination.

*S*ettings Menu *P*elco-*A*ux

- AUX- Used when using Pelco protocol auxiliary commands. Associate a function of the camera to a Pelco Aux command. Options of auto focus, digital zoom, auto iris, ir, wiper, washer, osd, backlight, white light, auto icr, fast shutter, ir-mono, mono, park 150, low power, spare 1.

Settings Menu Zoom/Pre sets

- Digital Zoom - Use this option to enable or disable digital zoom.
- Proportional - Automatically reduces/increases pan/tilt speed depending on zoom ratio
- Zoom Speed - The range of speed 5 to 8 and 8 being the fast zoom to slow down the zoom change to 5.
- AF AI When PTZ - Auto focus/iris will activate when PTZ is used, can be switched off. Default is on.
- Freeze Pre-sets - This option freezes the image, when moving between pre sets
- Define Pre-set - Option to enable/disable the setting of pre-sets. Default is on
- OSD Pre-set **Six-** Go into OSD using pre-set 95 and you can switch off OSD access using pre-set 6

Settings Menu Wiper

- Wiper Rest - Input a rest time for the wiper
- Wiper on Time (h) - Input a time period for the wiper operation
- Wiper on Time (m) - Input a time period for the wiper operation
- Wiper on Time (s) - Input a time period for the wiper operation
- Wiper Permanent - Enable or disable the permanent wiper time period.

Settings Menu Protocols

- Pelco D Response - Used on systems using Pelco D protocol where a response from the camera is required.
  Do not use if the system doesn't require a response as it will have an effect on the telemetry control of the cameras
- Pelco Static Mode - Disables PTZ control
- FV White Lights - Used when using Forward Vision protocol, can be used to select what lamps are controlled from the lamp command

Settings Menu Shutter

- Fast Shutter - Option to enable fast shutter and set speed of the shutter.
- Slow Shutter - Option to alter the slow shutter speed. Altering this figure will have an effect on the low light capabilities of the camera.

Settings Menu Day/Night/Lamps

Day settings

- White Balance - Change the camera white balance settings to suit the area.
- Wide Dynamic - Enable WDR. Options available are ON, Auto and off. Default is off.
- Aperture - Can be used to increase the picture detail. Default is 10.
- Noise Reduction - Used to reduce noise. NR must be set to suit the environment. Default is off.

Night settings

- Illumination - When the camera goes into dark mode, what illumination is required. Options are none, IR and White Light. Please note illumination type will only work if the camera has this option fitted to the camera. Default is none.
- Lamp Intensity - Choose lamp intensity, options 100%, 80%, 60%, 40% and 20%. Default is 100%.
- Camera - Choose when the camera goes into dark mode, what the image will be. Options are mono or colour. Default is Colour.
- Aperture – Can be used to increase the picture detail from 0 to 15.
- Noise Reduction - Used to reduce noise with scenes of low illumination. NR must be set to suit the environment. Default is 1.
- Night Pre-sets -This can be used to set the pre-sets to different settings if required. Default is off.

Day/Night Changeover

- Mono On - 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.
- Mono Off - 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.
- Brightness – Can be used to artificially brighten an image options are Bright, Normal, and Medium.
- Bright Control - Options are normal or automatic activation

White Lamps

- White Lamps - Set if white lights are to be used.
- White When Alarm - Set if white lights are to be used if an alarm is triggered. This feature works with 360 Standalone alarm card or 360 Vision Matrix only.
- White Timeout - Use if a white light time is required. Default is on.
- White Timeout (M) - Set white light timer, for automatic switch off.

Advanced Lamps

- Low light angle -
- Low light Value-
- IR Exclusion -
- Auto Dimming - When selected the camera will reduce the lamp power, when looking in scenes where there is too much light.

Text Field Menu

Navigate along alpha-numeric characters and use zoom in to select. Choose text position by inputting x and y co-ordinates. Set text display to on if required.

Servicing

- Power Reset- This will reboot the camera, no settings will be lost.
- Factory Reset - This will reboot the camera and all the settings will be lost.
- Predator Software Version - This shows the software version of the camera

Privacy Zone Menu

Can be used to obscure a scene within an image e.g. private residence. Move the camera to the position required for the privacy zone before going into the camera OSD. You cannot manually move the camera once in the OSB. Use the zoom to set the size of the privacy zone. Privacy zone will cover the whole scene viewed when set.

- Define Privacy Zone- Used to set a privacy zone. Seek
- Privacy Zone- Used to seek a privacy zone. Remove
- Privacy Zone - Used to remove a privacy zone.

Preset Mapping

Use this option to re-map a function to a preset.

Options are:-

- none
- auto focus
- auto iris
- wiper
- white light
- fast shutter
- WDR
- ambient
- 20 % lamp intensity
- 40 % lamp intensity
- 60 % lamp intensity
- 80 % lamp intensity
- 100% lamp intensity
- video switch
- white day
- ir-mono
- mono
- normal night
- washer on
- washer off
- low power on
- low power off

Predator HD

Installation &

Configuration

Predator Configuration

12 Locating the predator on your network.

Default IP Address	192.168.1.187
Subnet	255.255.255.0
Gateway	

Dual View camera:

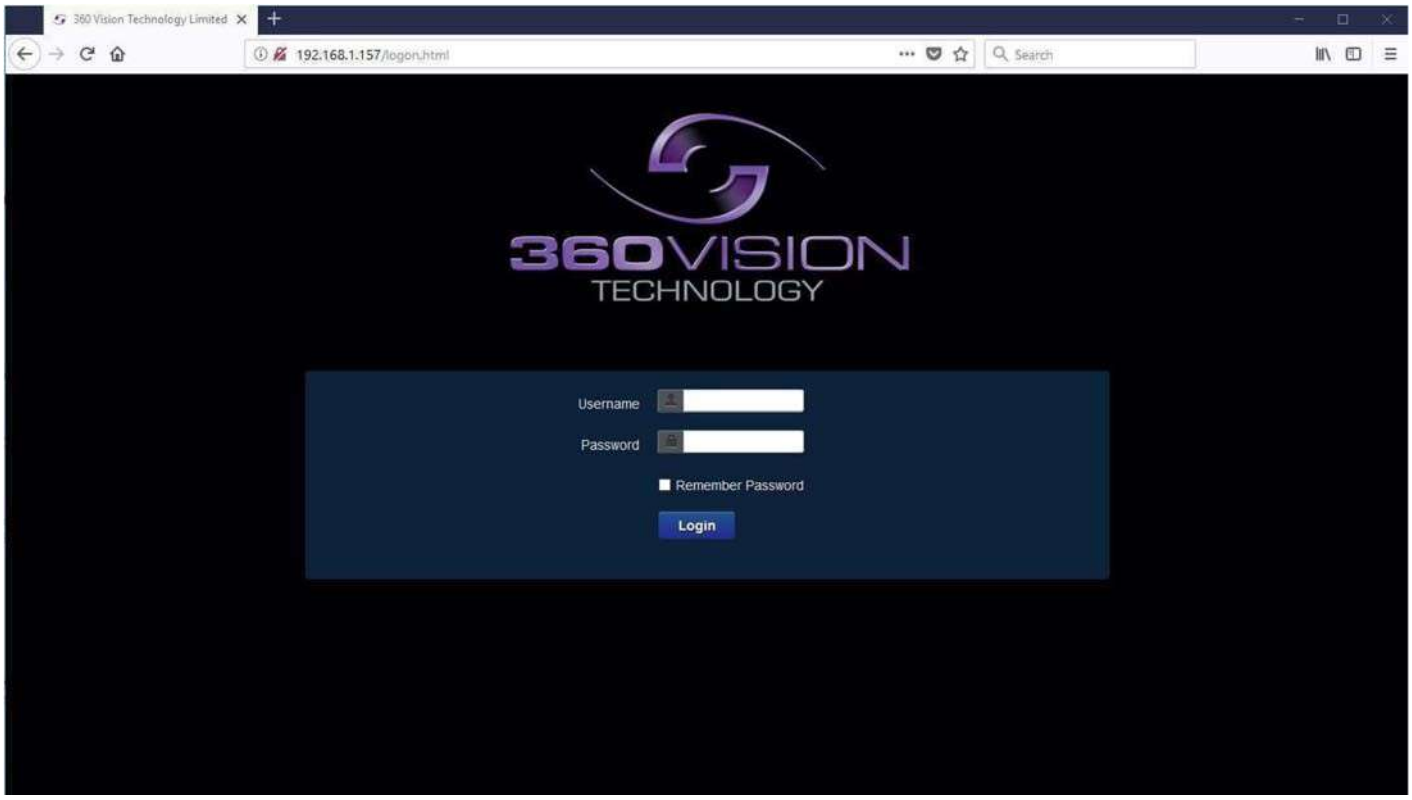
Default IP Address	192.168.1.188
Subnet	255.255.255.0
Gateway	

Using the DVR management software, 'ONVIF Device manager' or 360 Vision discovery Tool (which can be found on the CD supplied, from 360 Vision Technology web site or technical support) to find the IP address of the Predator. Note the ports used by the Predator 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

13 Connecting to the predator Hybrid.

Type in the IP address of the Predator into the address bar of Mozilla Firefox. The web page of the camera will appear.



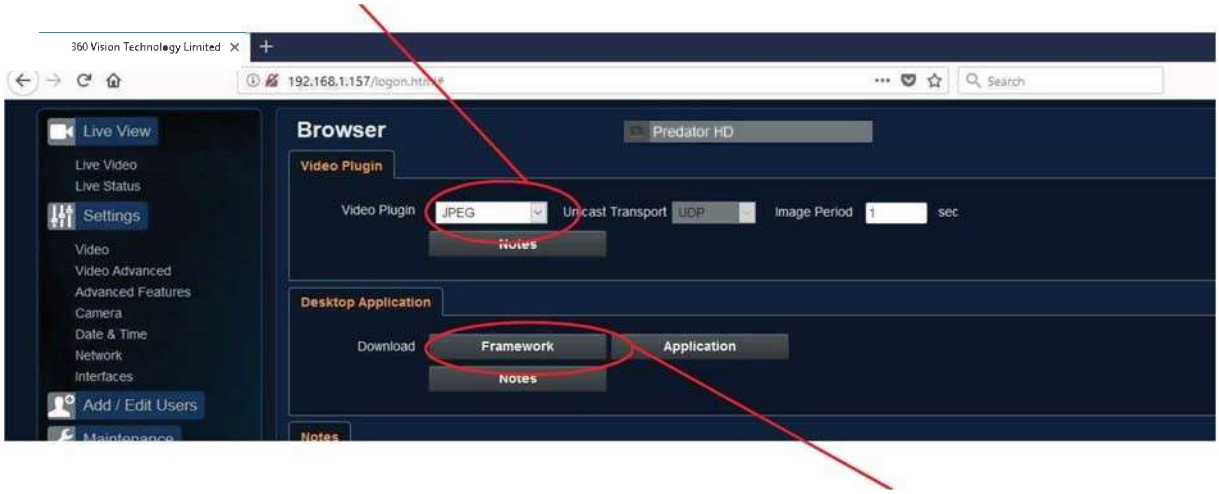
Predator Web Page Login screen

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 Predator camera select login.

Camera Select Login

The web page will show JPEG images every second **(See Browser - page 50)**



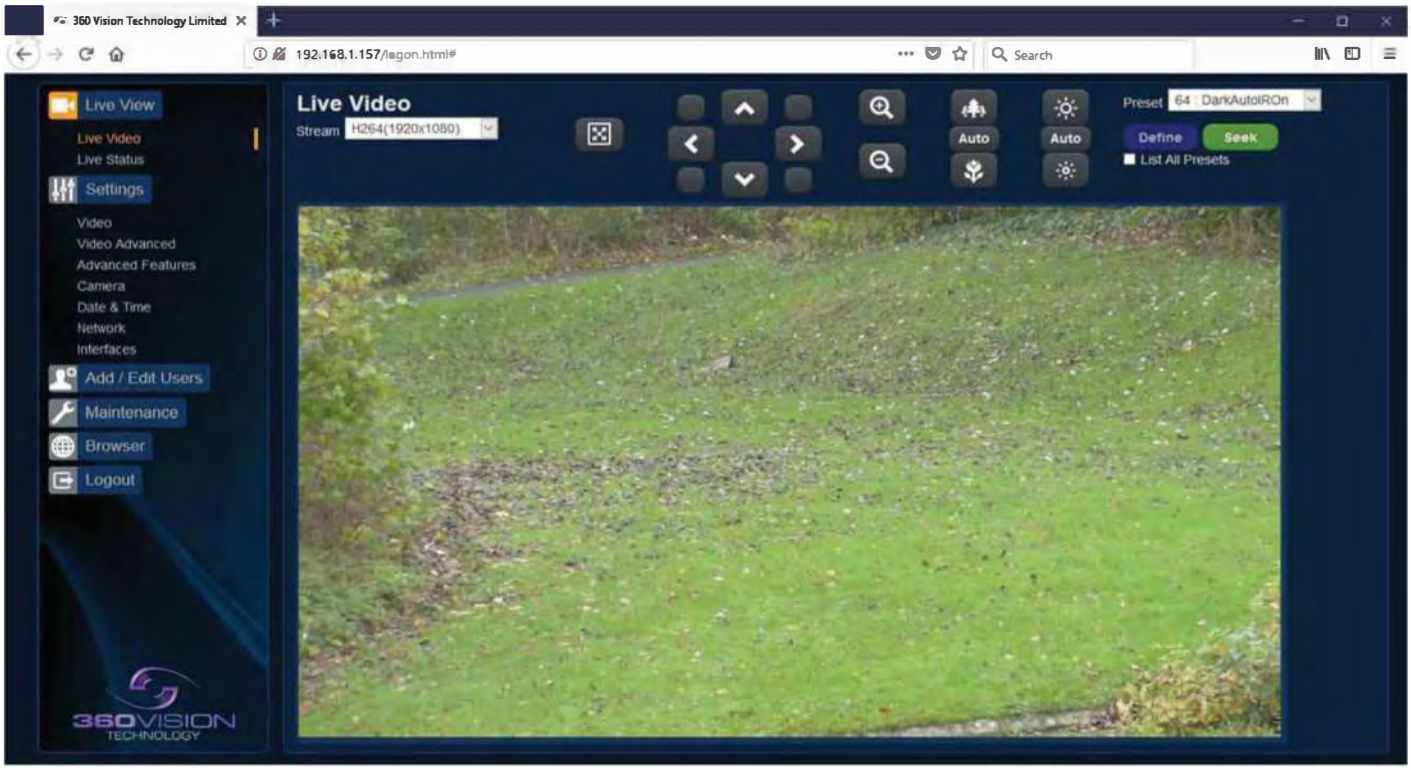
For live video please use the 360 HD Discovery/Config tool, this can be downloaded from the camera web page

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

15 Live View

Live Video



The Live Video page offers options to:-

- Stream - Choose required stream from drop down selection.
- 1 X 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 41)
- Focus Far/Auto/Near - This will operate the manual focus near, far, or automatically (See camera - AF AI when PTZ - page 41)
- Iris Open/Auto/Close - This will operate the manual iris open. close or automatic as required (See camera - AF AI when PTZ - page 41)
- 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 39)
- List all presets - Use to show all presets o programmed presets in drop down selection box.

16 Status

Status page shows information relating to the camera status

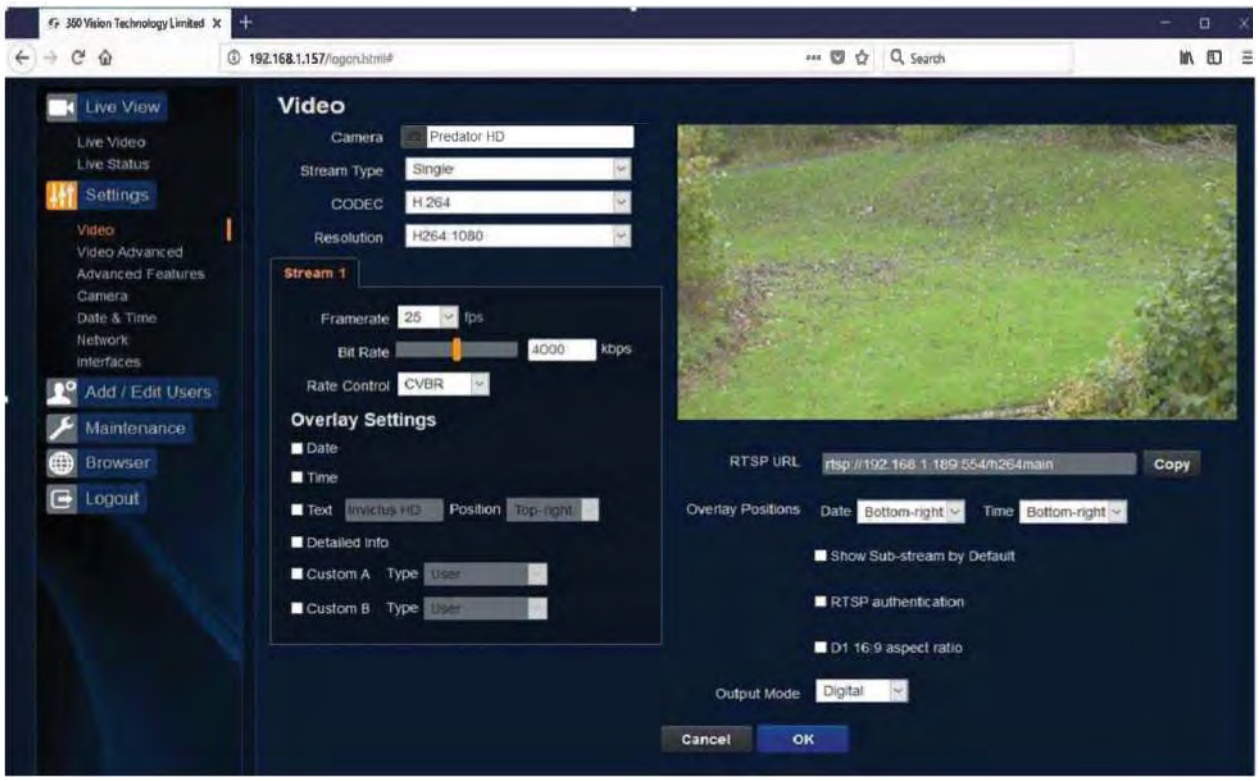
Status page, top section.

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
- Video Streams- Shows the current video streams configuration.
- Streaming - Shows the IP address of the PC that is receiving the video streams.
- Current Status - Shows the camera function information, i.e. PTZ positions, wiper and lamp activity 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.

17 Settings

18 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 53 table of options)
- Resolution - Set what resolution the stream will use. (See page 53 table of options)

Stream Tabs, offer options to:-

- Framerate – Configure how many fra mes per second (fps) the stream uses. (Also see section – Camera – Sensor Frame Rate – page 41)
- Bit Rate – set the bit rate that the stream will use. Type in figure in K bps. (E.g. 4000Kbps is 4Mbps)
- Rate control – Configure the rate control of the stream, choices are VBR (Variable) , CBR (Constant), and CVBR (Constant Variable, limited to 8Mbps).

Overlay Options

- Date - Selecting this option will show the data as text on the video stream. (See section - Date/Time – Page 43)
- Time selecting - this option will show the time as text on the video stream. (See section - Date/Time – Page 43)
- Text - Selecting this option will show the selected text on the video stream. Position available are top left or right of the image.
- Detailed info - This will show the information about the stream on the video

- Custom A - Current Preset - Used to show the stored preset text when the camera is at the preset position. Text will be shown on top line of video.
- Custom B - Current Preset - Used to show the stored preset text when the camera is at the preset position. Text will be shown on second from top line of the video.

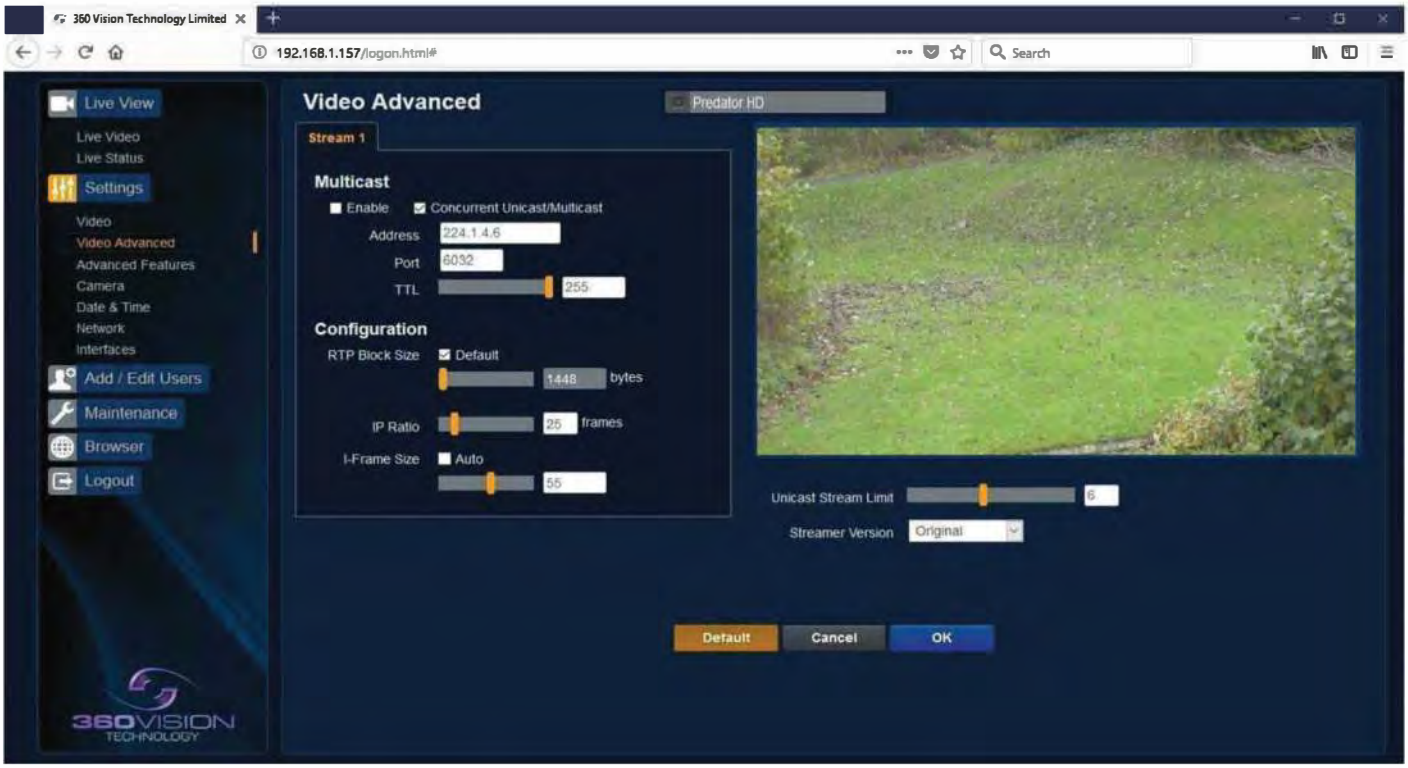
RTSP URL
- Copy - Use this option to copy the RTSP URL

Overlay Options
- 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 - Choose to enable or disable authentication on the RTSP stream D1 16:9
- aspect ratio - Choose to output a 16:9 aspect ratio or the default which is 4:3

Choice of analogue or digital/IP video output.
Camera will perform an automatic reboot when this option is changed.

OK to program the new settings into the Predator.
Cancel to abandon the changes to the video settings.

19 Video Advanced



Multicast
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.

(See Video - Stream Type page 36).

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

RTSP protocols allow 'multicast' or 'unicast' transmission. In addition to the multi cast feature being available on the Predator, the 'multicast' feature must also be available on the receiving device.

Unicast
If lots of receivers (users) want to receive video streams from the Predator, 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 Predator chooses a 'new UDP address' (Typically an address which is outside the normal range of addresses for the network to which the Predator 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 Predator 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.

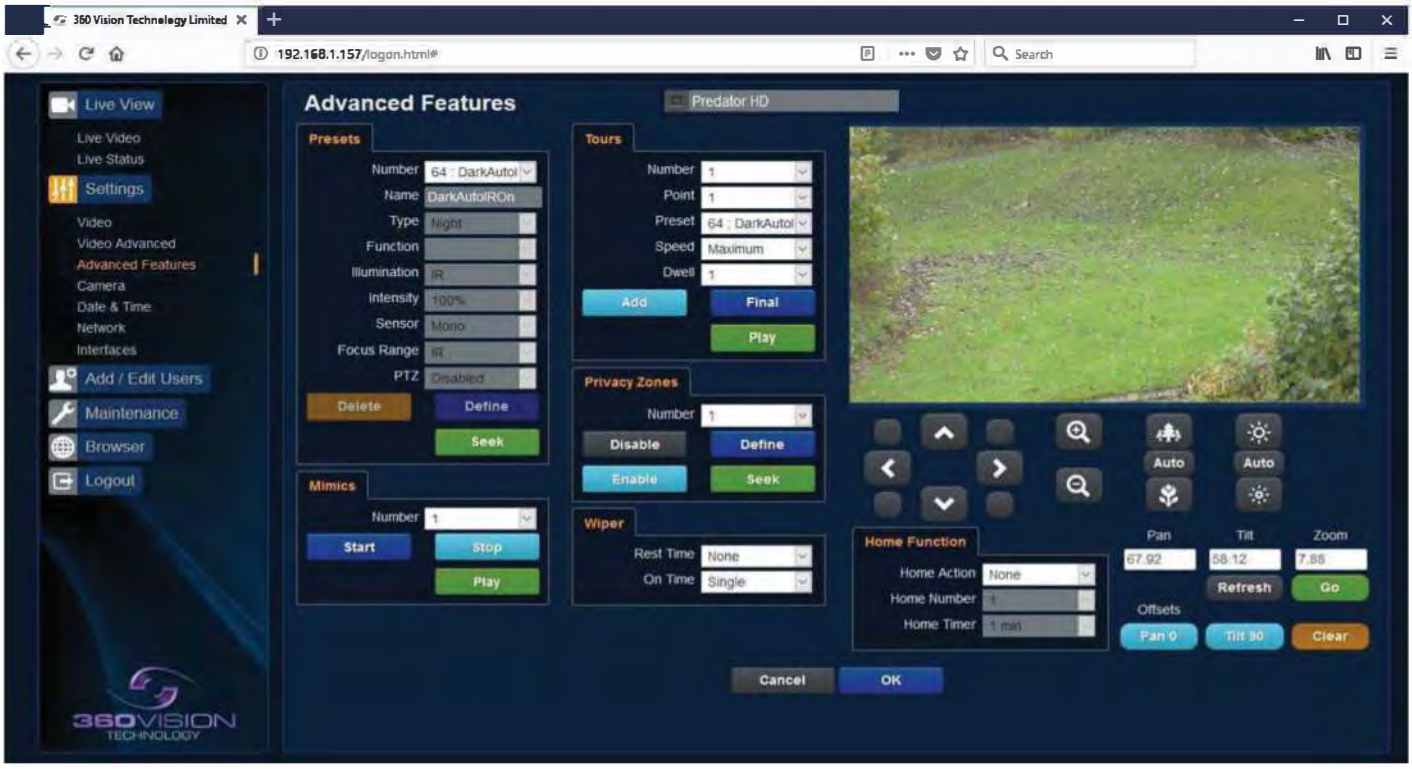
	Stream 1	
IP Ratio/GOP value (Type in a number)	25 (default)	E.g. 1 'i-frame' every 25th image.
RTP Block Size	1448 (default)	Range 0 (Ethernet MTU), 1440 to 65500
I Frame Size	55 (default)	Range 0 to 99 (average frame size x value/10 = i frame size)

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 Predator. **Cancel** to abandon the changes to the advanced video settings. **Default** is used to factory reset the video stream settings.

20 Advanced Features



The Advanced Features page, offers options to:-

- Camera – Cannot be edited, shows label/name given to the Camera.(See section Video – Camera – page 36)

A 'Preset' is a stored view. When a preset is defined, it will store the pan, tilt, zoom 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.

Set Preset using the following options:-

- Preset -Choose from a list off preset 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 preset page 41)
  Simple – For setting a simple PTZ preset, no lamp options.
  Wiper – Set the preset to activate the wiper.
  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. (See interfaces- Auxiliary page 45).
  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 for illumination, off or preset with night preset function enabled. Options are IR, White Light and off.
- Intensity – Set lamp intensity for the preset using the illumination chosen above.
- Sensor – Preset have the choice of being wither color 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 -The camera can be set to pan, tilt and zoom or not. This can be used to operate the sensor or lamp function.

Use the Seek preset button to test the preset.
Define preset button to set the above
parameters. Delete preset to remove the preset

Mimics

When a mimic tour is started, the Predator 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 Predator Hybrid.

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

Preset Tour

A tour of presets is stored in the Predator as a list of tour points. Each tour point consists of a preset number, the dwell time for which the Predator 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 Predator Hybrid and to define the required dwell times and speeds of travel that you will require the Predator to use when the tour is started.

A maximum of four individual tours of presets can be stored in each Predator. Each tour can have between 2 and 90 points, each point can be a preset in the range 1 to 300. 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 center 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.

Wiper

- Rest Time - Set wiper rest time.
- On Time - Set time period for how long wiper will run.

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.

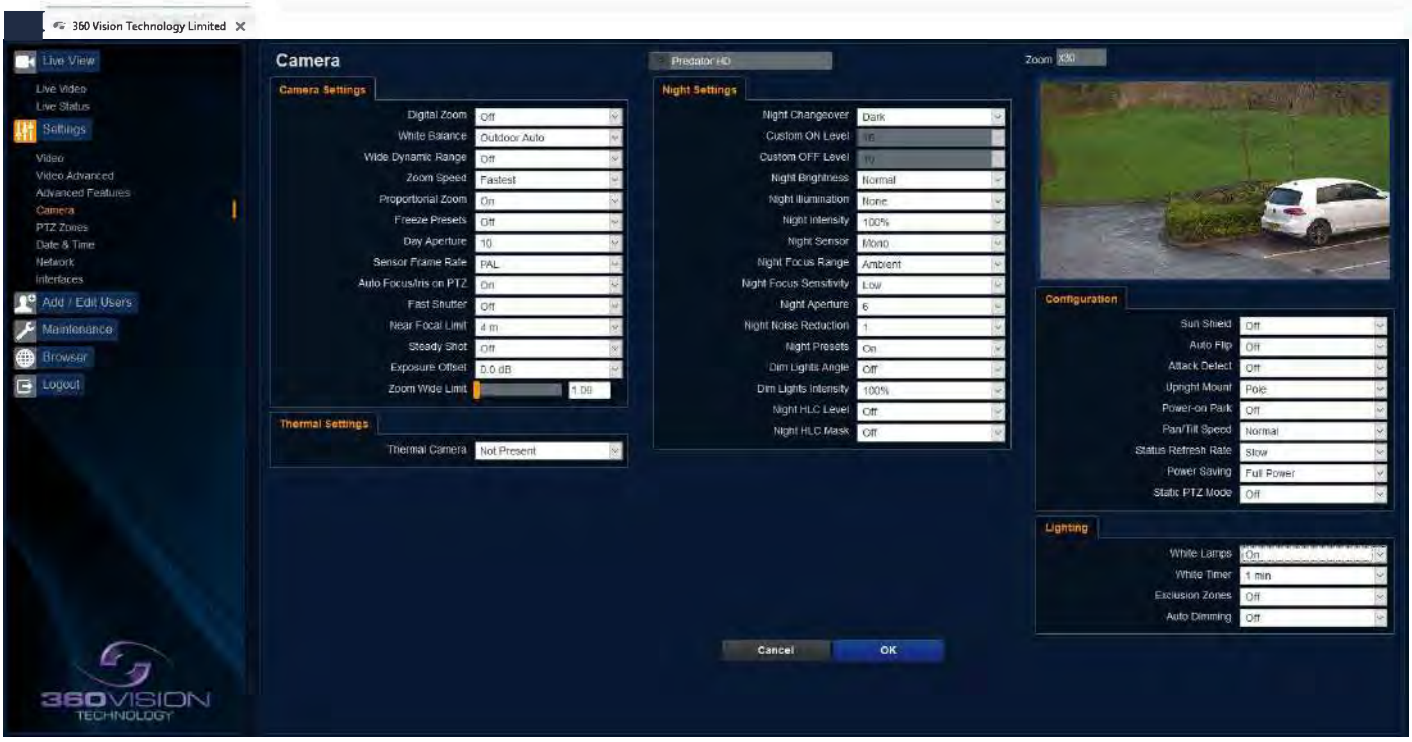
PTZ position co-ordinated are also shown, use the refresh button to refresh the data if the camera has been moved. PTZ position co-ordinated can also be added manually, use the go button to send the camera to the co-ordinated set.

Pan/Tilt Offset
Used to set current pan/tilt to zero.

- Set - Set current position to zero
- Clear - Clear current zero position.

OK to program the new settings into the Predator.
Cancel to abandon the changed to the advanced feature settings.

21 Camera



• Camera – cannot be edited, shows label/name given to the camera. **(See section Video - Camera page 36)**

The Camera page, offers options to:-

- Digital Zoom – Enable digital zoom. Default is off.
- White Balance – Select White Balance settings to suit camera location.

(See page 53 for table of options)

- Wide dynamic range – Enable SBR, Options available are ON, Auto and off. Default is Auto.
- Zoom Speed – Select zoom speed of the lens. Options are slow, medium, high and highest.
- Proportional Zoom – Automatically reduces/Increases pan/tilt speed depending zoom ratio. Default is on.
- Freeze Preset – This option freezes the image, when moving between preset. This can help reduce the bandwidth. Default is on.
- 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 25 fps (PAL) or 30 fps (NTSC). 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 Predator camera on an ANPR system. Default is off.

(See page 53 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 Predator. 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 with in the whole (un zoomed) 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.

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 Illumination - Choose which type of light source is required for when the camera is in dark mode. Options are IR or white light if supported by the camera.
- Night Intensity - Set what power the lamps will run at. Default is 100%.
- 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 off.
- Night Presets - This can be used to set the presets to different settings if required. Default is off. (See section Advanced Features - page 39)
- 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 - Reduces tilt range of the camera for when a sun shield is fitted.
- 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 - Attack Detect - Camera will re -initialize camera motors so that camera looks back to the original position, if the camera is physically forced/moved. Default is on.
- 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 camera internal refresh rate.
- Power Saving - Camera will reduce power when camera not being moved, Options are Full Power or Auto Saving default is Full Power.
- Static PTZ Mode - On stops all PTZ movement, off allows camera to be moved default is off.

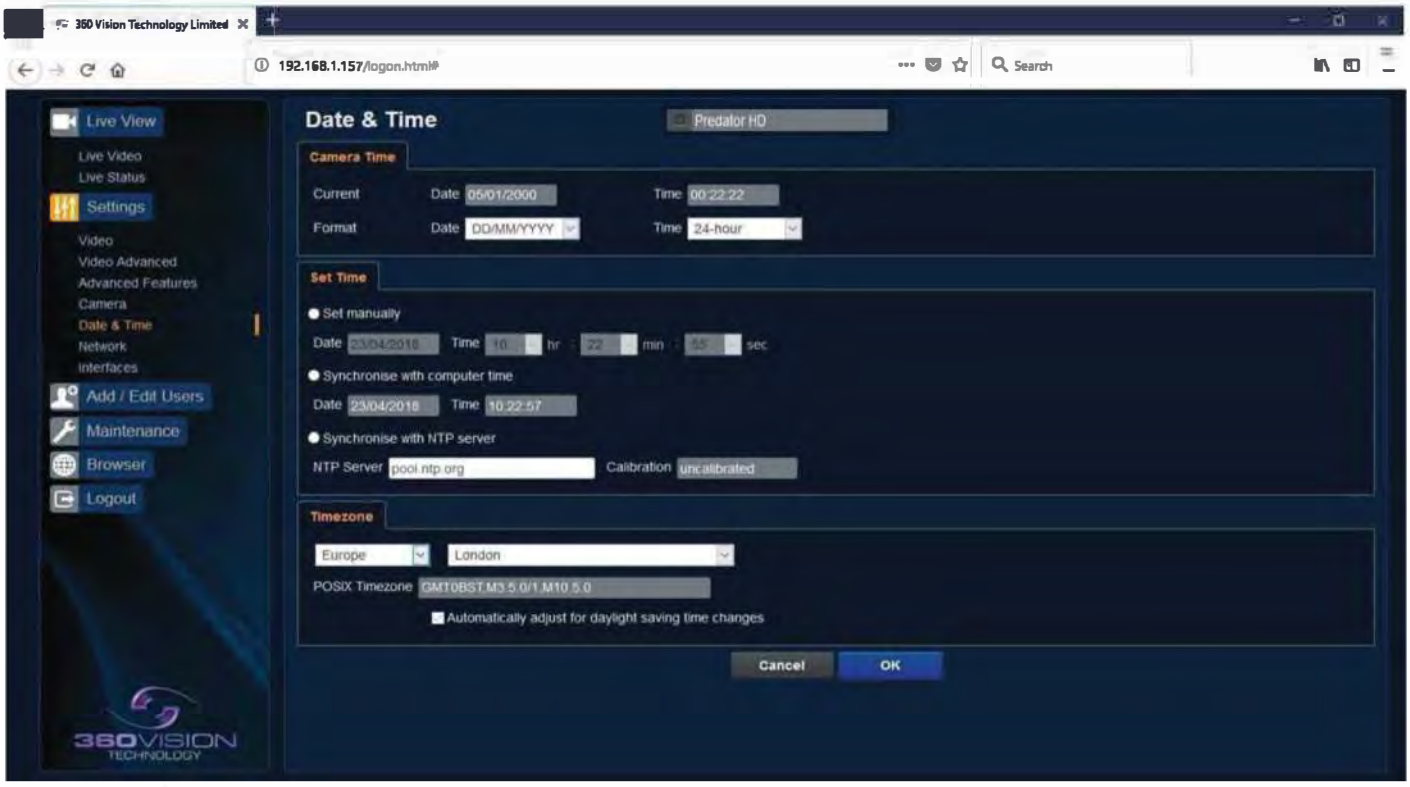
White Lights

- White Lamps - Set if white lights are to be used set to on or on motion default is off.
- White Timer - Set white light timer, for automatic switch off.
  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 Predator.

Cancel to abandon the changes to the settings.

22 Date/Time



- Camera - Cannot be edited, shows label/name given to the camera.
  (See section Video - Camera - page 36).
- Time in Camera - 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:-

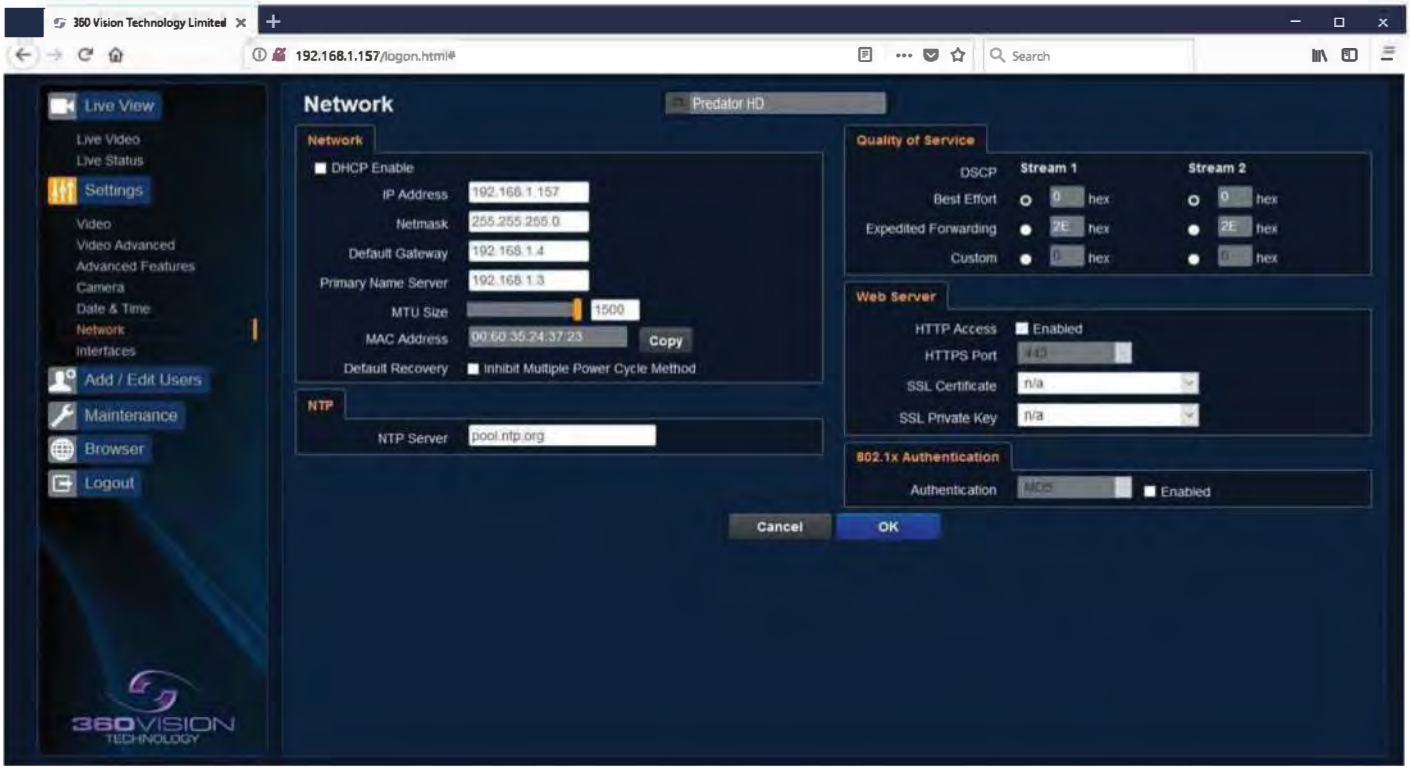
- Set Manually - Input time/date manually.
- Synchronize with Computer Time - Put a tick in the button and then click OK, to apply the local computer date/time to the camera.
- Synchronize with NTP Server - Put a tick in the button and then click OK, to apply the local server date/time to the camera.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

23 Network



- Camera - Cannot be edited, shows label/name given to the camera. (See Video - Camera - page 36)

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 - Inhibit Multiple Power Cycle Method, disables the Network recovery process (See Network Settings Recovery - page 50)

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

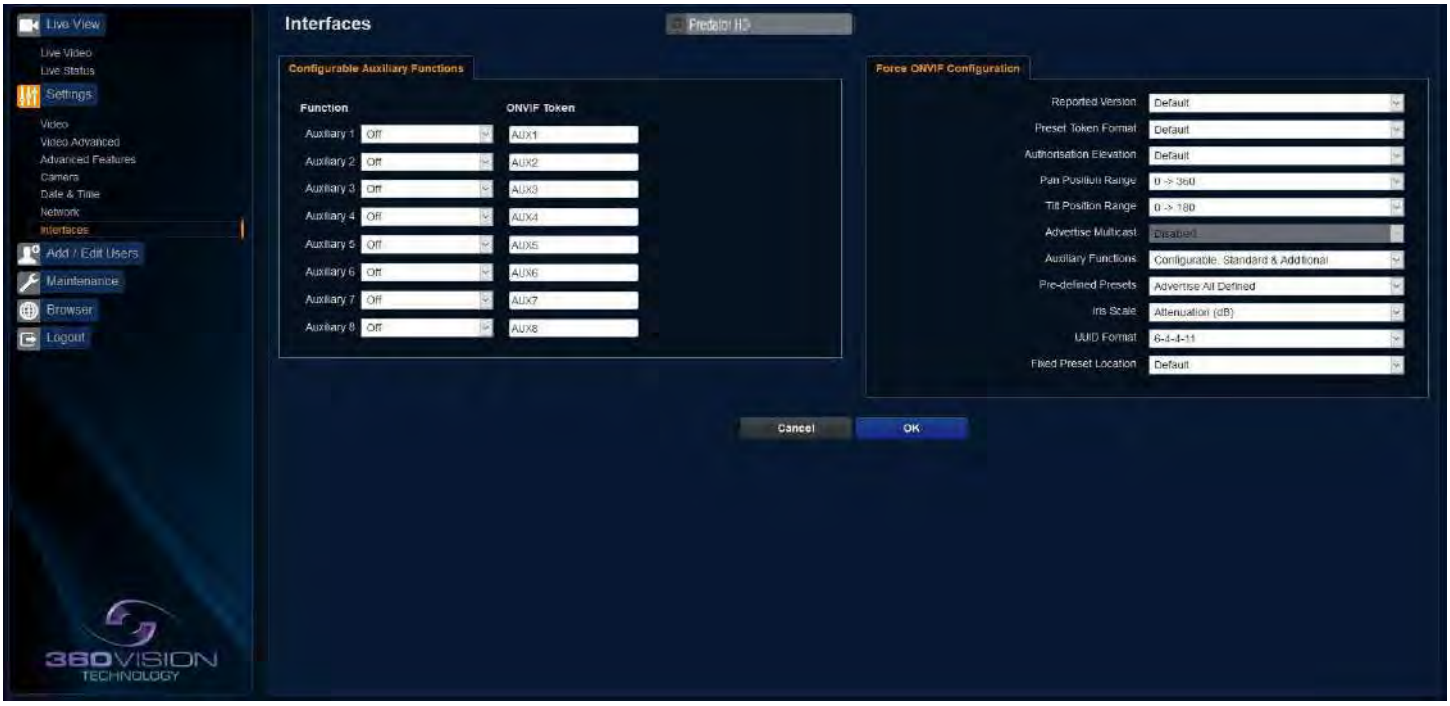
- HTTP access - Enable or disable HTTP access, must be connected using HTTPS.
  (See section Video - Camera page 44)
- HTTPS Port - Set required HTTPS port. Default is 443.
- SSL Certificate - Choose required SSL certificate.
- SSL Private Key - Choose required private key.

802.1x Authentication

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

OK to apply the new settings into the Predator. **Cancel** to abandon the changes to the network settings.

24 Interfaces



Auxiliary Functions

Allows the camera to be configured to use ONVIF Auxiliary commands. Features available are:-

- Force White Light On - Forces white lights on.
- Force White Light Off - Switches off forced white lights.
- Wiper On - Activates wiper.
- Wiper Off - Stops wiper.
- Dark IR Light On - Switch on IR, when dark.
- Dark White Light On -Switch on white light when dark.
- Dark Lights Off - When dark, switch off all lamps.
- Dark Sensor Mono - Sets the camera to a mono image, when in dark mode.
- Dark Sensor Colour - Sets the camera to a colour image, when in dark mode.
- 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.
- Washer On - Activates wash function, sends camera to preset 299, activates wiper.
- Washer Off - Stops wash function.
- 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.
- ONVIF Token - Used to alter the name of the ONVIF Auxiliary token.

Dark relates to when the camera is in dark mode see section Camera - Night change over - page 41

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 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).
- Authorization Elevation - Used on Vicon VMS, allows the anonymous user to be 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.

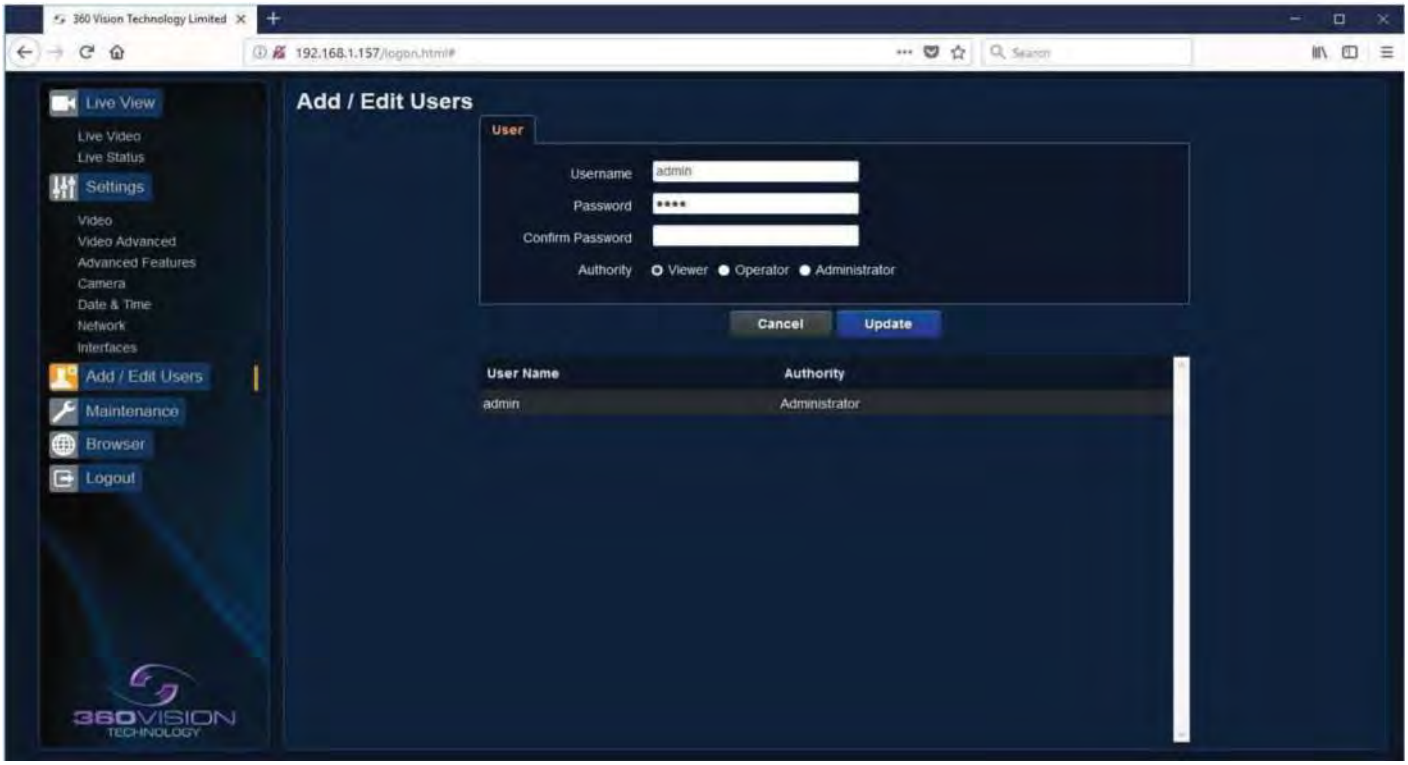
  Configurable - Aux 1 - 8, configurable via web page Standard - Standard ONVIF

  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 - VMS may require this setting to be changed to connect to the camera.
- Fixed Preset Location - The per-programed presets are moved to lower preset numbers for ease of use for VMS and DVR/NVR that can not use higher numbers for controls such as Wiper and white lights.

OK to apply the new settings into the Predator.
Cancel to abandon the changes to the settings.

25 Add/Edit Users



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 Predator Hybrid admin password if forgotten.

26 Maintenance

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.

Parameters and Settings

- Backup Settings - Save - Used to save the camera settings.

The file is displayed as PREDATOR_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 the codec file and then click on update. The camera codec will then be updated. The Predator camera will re-boot once the update has been performed.

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

Visit the camera Browser page (Framework), 360 Vision Technology web site or contact 360 Vision Technical Support for the link to the update application & codec update files.

Update Screen

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 an 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

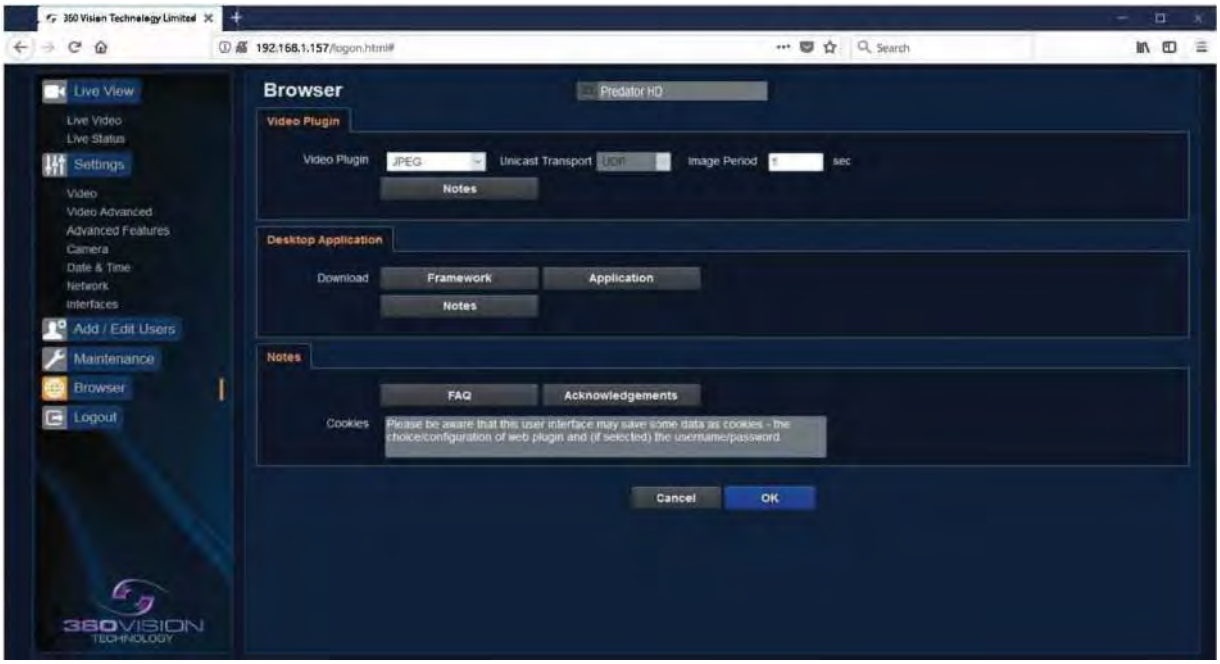
- Content Upload - Upload application software to camera memory.
- Server Upload - Download application files from FTP/HTTP server.

SSL Certificates and Keys

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

OK to apply the new settings into the Predator.
Cancel to abandon the changes to the maintenance settings.

27 Browser



Video Plugin

- **Video Plugin - Choose video plugin, 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 plugin 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 Predator.
Cancel to abandon the changes to the settings.

28 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 Predator 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 Predator 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 Predator is reconnected to the main network.

Procedure for 'Network Settings Recovery If necessary disconnect the Predator from the main network.

Tum power to the Predator OFF for 3 seconds.
Tum power to the Predator 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 Predator to Initialize . **(See section Locating the Predator on your Network- page 44)**

If using a Dual View please be advised both cameras will be reset to default IP 192.168.1.187

29 Special Presets

Illumination (When it is dark)	Seek 64 (On)	IR (Mono/Colour not changed)	Seek 66 (Off)
	Seek 65 (On)	White Lights (Mono/Colour not changed, no timer)	Seek 66 (Off)
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)
Wiper	Seek 81	Double Wipe	Seek 86 (Stop)
	Seek 82	Permanent Intermittent Wipe	
	Seek 83	Permanent Fast Wipe	
	Seek 84	Timed Intermittent Wipe	
	Seek 85	Timed Fast Wipe	
De-Fog	Seek 87 (On)		Seek 88 (Off)
Washer	Seek 89 (On)	Define Preset 299 (Defines Washer Position)	Seek 90 (Off)
White Lights (When it is dark)	Seek 100 (On)	White Lights (Change to colour, timer used)	Seek 101 (Off)
Power on Park	Define/Seek 150	Program/Recall Power on Park preset position	

30 Important - Care of Painted Surfaces

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

When the Predator 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 Predator e.g. fit anti-bird spikes.

31 Storage and Handling

Predator should be handled with care and must not be dropped. When the Predator camera are inside the transit packaging which is used for dispatch from the factory, they should not be stacked to a height of more than two. When the Predator cameras 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 be such that water vapor is non-condensing. The Predator camera can be allowed to be outside of 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 Predator should be clean and dry. (If necessary it should be cleaned and dried taking care that the glass is not scratched).

32 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.

33 PSU Enclosure

Material	PC/ABS
Dimensions (PRED-PSU-SM enclosure)	255 x 180 x 100mm

34. 1080p Stream Resolutions & RTSP Links

	Resolution
H.264 *(rtsp://ipaddress/h264main)*	720p (1280 x 720)
	D1 (720 x 576)
	SXVGA (1280 x 960)
	1080p (1920 x 1080)

	Resolution
MPEG4 *(rtsp://ipaddress/mpeg4main)*	720p (1280 x 720)
	D1 (720 x 576)
	SXVGA (1280 x 960)
	1080p (1920 x 1080)

	Resolution
MJPEG *(rtsp://ipaddress/mjpeg)*	1080p (1920 x 1080)

	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)
	1080p (1920 x 1080)	QVGA (432 x 240)
	1080p (1920 x 1080)	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)
	1080p (1920 x 1080)	QVGA (432 x 240)
	1080p (1920 x 1080)	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)
	1080p (1920 x 1080)	QVGA (432 x 240)
	1080p (1920 x 1080)	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)
	1080p (1920 x 1080)	QVGA (432 x 240)
	1080p (1920 x 1080)	D1 (720 x 576)

	Resolution	
H.264*(rtsp://ipaddress/h264main)* & MPEG4*(rtsp://ipaddress/mpeg4sub)*	D1 (720 x 576)	D1 (720 x 576)
	1080p (1920 x 1080)	D1 (720 x 576)

35 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

36. Recording and Recording Browser

Only available on Multimedia Edge Recording Predator

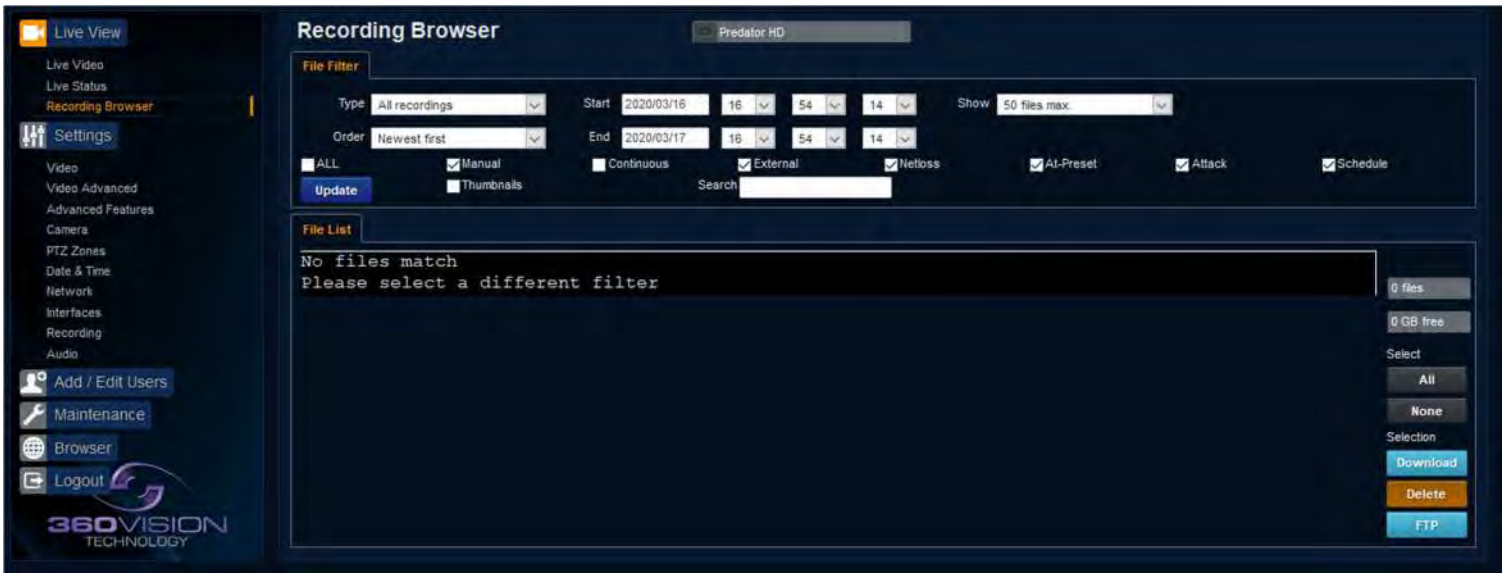
The role of the recording function is to store video streams as files on a storage device built into the camera. The recording function can auto-detect the necessary parameters from each configured stream, such as video compression, resolution, frame rate and bitrate. The size of the video created will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

Different options can be used to start a recording per stream, these are manual, continues, 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 indicated the recording trigger d is manual demand, a is attack detect and s is schedule)

- Camera – Cannot be edited, shows label/name given to the camera. **(See Video – Camera – Page 36)**
- 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 be then used as a filter in Recording browser. **(See Multimedia page 55)**
- Start/Stop – Demand a manual recording- use the start and stop to set.
- Continuous – Enable continues 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 below)**
- Lifetime – Recording schedule will stop after this period.

37. Recording Browser



The recording browser shows the recordings currently saved to the internal memory. The recording browser has the ability to filter files depending on your criteria for a specified time.

The files can be selected then downloaded or sent to FTP server. The files can also be deleted here too. File Filter:

Type

- All recordings - Shows all recordings
- Video recordings - Only video clips recorded are displayed.
- Image recording - Only display image recorded Order
- Newest first - Displays the most recent items first
- Oldest first - Displays the oldest item first.

Start - Filter by date and time to start applying the filter from
End - Filter by date and time to stop applying the filter to.

Show: Options of 50, 250, 500, 1000, 5000, 10000 Files to be displayed in a list format.

Options to filter by events are:

- All - Display all recordings of all events
- Manual – Display recording if the manual record has been applied.
- Continuous - Displays recordings when continuous recording has been applied.
- External - Displays when and external input triggered recording to start
- Net loss - Displays recording when a network connection loss was detected.
- At-presert- Displays recording when preset was called.
- Attack - Displays recordings when camera detects an attack
- Schedule - Displays recording if a schedule is in place.
- Thumbnail - A Thumbnail will be shown for the beginning of the recording if selected in configuration.

The events above will only display recording if camera has been configured to record upon the above events. Once your options have been selected in the filter click on Update and the display will show the results based on the files currently on the cameras internal storage device which comply with the filter settings.