

## FW7502-FAF

#### 2MP Fixed Vandal Proof Dome

FW7502-FAF is a high-quality IR Vandal Proof Dome IP camera which is equipped with 2.13MP Progressive Scan CMOS image Sensor. With the highest sensitivity Starvis sensor, it is especially superior in low light condition. As it supports simultaneous H.265, H.264 and MJPEG Video Compression, less network bandwidth and storage space required. It also delivers high quality video image at 30 fps@Full HD 1920X1080 in progressive mode.

### **Key Features**

- Ambarella platform Backdoor Issue free
- Sony Starvis 1/2.8" 2.13MP PS CMOS Sensor
- · Night Color with super high sensitive sensor
- 3.6mm Fixed Lens
- Quadruple Stream H.265, H.264, M-JPEG, JPEG
- Max. 30fps @ 2MP 1920x1080
- DOL WDR
- · Night Color level adjustment
- · Shutter limit Min./Max. setting
- Good for the better night time moving object image
- To avoid saturation under strong back light or IR reflection
- · OnVIF Profile S standard



#### **Tech Notes**

#### Backdoor Issue free

FlexWATCH uses backdoor issue free USA Ambarella platform.

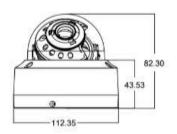
#### Latency

Latency is request and response time between IP cameras and remotely connected client devices or servers. FlexWATCh IP camera shows the lowest Latency time (25%~40% better) against popular other IP cameras from various brands.



# FW7502-FAF

## **Technical Specifications**



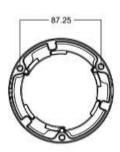


Image Sensor	Camera	
Day & Night         True Day & Night (ICR)           Min. Illumination         Color : 0.05 lux BW : 0.0005 lux / 0 lux (IR On)           IR illumination         20m, 15ea. 850nm IR LED           Video Stream         Ambarella 32bit Embedded Linux 256Mbyte SDRAM, 128Mbyte NAND Flash           Compression         H.265, H.264, M.JPEG, JPEG           Video Stream         Quadruple Streaming           Pesolution         1920x1080, 1280x720, 704x480, 640x480, 640x480, 640x352, 320x240           Max. Frame rate         Max. 30fps/25fps @ 2MP           Bit Rate Control         VBR/AVBR/CBR/ACBR, GOP           Video Setting         Exposure Control Mode           Exposure Control Mode         Day, Night, Motion detection, Digital input           Lens type         ELC / ALC           Auto Exposure Weight         25 ~ 400           AE Metering         Spot/ Average/ Center/ Center flip           Shutter Mode         Auto / Manual / Flicker           Electronic Shutter         Minimum/ Maximum, 1/25~1/32,000s           Sens Up         Off / x1 / x2           AGC         0 ~ 72           Back Light Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Color BaW/ Auto Night B&W, Auto Night Color (5 steps)           White Balance         Color Mode (Fl	Image Sensor	1/2.8" 2.13MP Sony Starvis PS CMOS
Min. Illumination	Lens	3.6mm Fixed Lens
Min. Illumination         B/W : 0.0005 lux / 0 lux (IR On)           IR illumination         20m, 15ea. 850nm IR LED           Video Stream         Ambarella 32bit Embedded Linux 256Mbyte SDRAM, 128Mbyte NAND Flash           Compression         H.265, H.264, MJPEG, JPEG           Video Stream         Quadruple Streaming 1920x1080, 1280x720, 704x480, 640x480, 640x352, 320x240           Max. Frame rate         Max. 30fps/25fps @ 2MP           Bit Rate Control         VBR/AVBR/CBR/ACBR, GOP           Video Setting         Exposure Control Mode           Exposure Control Mode         Day, Night, Motion detection, Digital input           Lens type         ELC / ALC           Auto Exposure Weight         25 ~ 400           AE Metering         Spot/ Average/ Center/ Center flip           Shutter Mode         Auto / Manual / Flicker           Electronic Shutter         Minimum/ Maximum, 1/25~1/32,000s           Sens Up         Off / x1 / x2           AGC         0 ~ 72           Back Light Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Day-Night Mode         Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)           White Balance         Cioudy/ Flash/ etc.           Digital Noise Reduction         3 DNR           Image Adjustment <td>Day &amp; Night</td> <td>True Day &amp; Night (ICR)</td>	Day & Night	True Day & Night (ICR)
B/W : 0.0005 lux / 0 lux (IR On)   IR illumination	Min. Illumination	Color: 0.05 lux
Video Stream         Ambarella 32bit Embedded Linux           System         Ambarella 32bit Embedded Linux           256Mbyte SDRAM, 128Mbyte NAND Flash           Compression         H.265, H.264, M-JPEG, JPEG           Video Stream         Quadruple Streaming           1920x1080, 1280x720, 704x480, 640x480, 640x480, 640x352, 320x240           Max. Frame rate         Max. 30fps/25fps @ 2MP           Bit Rate Control         VBR/AVBR/CBR/ACBR, GOP           Video Setting         Exposure Control Mode           Exposure Control Mode         Day, Night, Motion detection, Digital input           Lens type         ELC / ALC           Auto Exposure Weight         25 ~ 400           AE Metering         Spot/ Average/ Center/ Center flip           Shutter Mode         Auto / Manual / Flicker           Electronic Shutter         Minimum/ Maximum, 1/25~1/32,000s           Sens Up         Off / x1 / x2           AGC         0 ~ 72           Back Light Mode         BLC, DOL WDR           Day-Night Mode         Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)           White Balance         Cloudy/ Flash/ etc.           Digital Noise Reduction         3 DNR           Image Adjustment         Brightness, Contrast, Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor <td>B/W: 0.0005 lux / 0 lux (IR On)</td>		B/W: 0.0005 lux / 0 lux (IR On)
System         Ambarella 32bit Embedded Linux 256Mbyte SDRAM, 128Mbyte NAND Flash           Compression         H.265, H.264, M-JPEG, JPEG           Video Stream         Quadruple Streaming           Resolution         1920x1080, 1280x720, 704x480, 640x480, 640x352, 320x240           Max. Frame rate         Max. 30fps/25fps @ 2MP           Bit Rate Control         VBR/AVBR/CBR/ACBR, GOP           Video Setting         Exposure Control Mode         Day, Night, Motion detection, Digital input           Lens type         ELC / ALC           Auto Exposure Weight         25 ~ 400           AE Metering         Spot/ Average/ Center/ Center flip           Shutter Mode         Auto / Manual / Flicker           Electronic Shutter         Minimum/ Maximum, 1/25~1/32,000s           Sens Up         Off / x1 / x2           AGC         0 ~ 72           Back Light Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Digital Noise Reduction         3 DNR           Image Adjustment         Brightness, Contrast, Sharpness, Hue, Saturation           Image Direction         Vertical flip, Horizontal flip, Corridor           D-WDR         0 ~ 128	IR illumination	20m, 15ea. 850nm IR LED
System         256Mbyte SDRAM, 128Mbyte NAND Flash           Compression         H.265, H.264, M-JPEG, JPEG           Video Stream         Quadruple Streaming           Resolution         1920x1080, 1280x720, 704x480, 640x480, 640x352, 320x240           Max. Frame rate         Max. 30fps/25fps @ 2MP           Bit Rate Control         VBR/AVBR/CBR/ACBR, GOP           Video Setting         Exposure Control Mode           Exposure Control Mode         Day, Night, Motion detection, Digital input           Lens type         ELC / ALC           Auto Exposure Weight         25 ~ 400           AE Metering         Spot/ Average/ Center/ Center flip           Shutter Mode         Auto / Manual / Flicker           Electronic Shutter         Minimum/ Maximum, 1/25~1/32,000s           Sens Up         Off / x1 / x2           AGC         0 ~ 72           Back Light Mode         BLC, DOL WDR           Day-Night Mode         BLC, DOL WDR           Day-Night Mode         Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)           White Balance         Color/ Baw/ Auto Night B&W, Auto Night Color (5 steps)           White Balance         Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.           Digital Noise Reduction         3 DNR           Image Adjustment	Video Stream	
Compression  H.265, H.264, M-JPEG, JPEG  Video Stream  Quadruple Streaming  1920x1080, 1280x720, 704x480, 640x480, 640x352, 320x240  Max. Frame rate  Max. 30fps/25fps @ 2MP  Bit Rate Control  VBR/AVBR/CBR/ACBR, GOP  Video Setting  Exposure Control Mode  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Auto / Manual / Flicker  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  0 ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Digital Noise Reduction  Image Adjustment  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Image Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Analytics  Motion Detection  4 areas  Object Detection  -		
Video Stream       Quadruple Streaming         Resolution       1920x1080, 1280x720, 704x480, 640x480, 640x352, 320x240         Max. Frame rate       Max. 30fps/25fps @ 2MP         Bit Rate Control       VBR/AVBR/CBR/ACBR, GOP         Video Setting       VBR/AVBR/CBR/ACBR, GOP         Exposure Control Mode       Day, Night, Motion detection, Digital input         Lens type       ELC / ALC         Auto Exposure Weight       25 ~ 400         AE Metering       Spot/ Average/ Center/ Center flip         Shutter Mode       Auto / Manual / Flicker         Electronic Shutter       Minimum/ Maximum, 1/25~1/32,000s         Sens Up       Off / x1 / x2         AGC       0 ~ 72         Back Light Mode       BLC, DOL WDR         Day-Night Mode       Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)         White Balance       Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.         Digital Noise Reduction       3 DNR         Image Adjustment       Brightness, Contrast, Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor         D-WDR       0 ~ 128         Color Mode       Default / Standard/ Vivid         Text OSD       9 lines, settable size, color, position, etc.         Smart Video       ROI (Region of Interest) 8 areas <td></td>		
Resolution  1920x1080, 1280x720, 704x480, 640x480, 640x480, 640x352, 320x240  Max. Frame rate  Max. 30fps/25fps @ 2MP  Bit Rate Control  Video Setting  Exposure Control Mode  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  Day-Night Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Digital Noise Reduction  D-WDR  Oor 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  Polyect Detection  4 areas  Ooject Detection  -		
Resolution  640x352, 320x240  Max. Frame rate  Max. 30fps/25fps @ 2MP  Bit Rate Control  VBR/AVBR/CBR/ACBR, GOP  Video Setting  Exposure Control Mode  Day, Night, Motion detection, Digital input  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Auto / Manual / Flicker  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  0 ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  White Balance  Digital Noise Reduction  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Uvertical flip, Horizontal flip, Corridor  D-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  Analytics  Motion Detection  -	Video Stream	· · · · · · · · · · · · · · · · · · ·
Max. Frame rate  Max. 30fps/25fps @ 2MP  Bit Rate Control  VbR/AVBR/CBR/ACBR, GOP  Video Setting  Exposure Control Mode  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  O ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  White Balance  White Balance  Digital Noise Reduction  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Umage Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  Privacy Masking  Analytics  Motion Detection  Varias  VBR/AVBR/CBR/ACBR, GOP  Variation, Motion detection  Variation  Variation  Variation  Vertical flip, Horizontal flip, Corridor  Po-WDR  O ~ 128  Color Mode  ROI (Region of Interest) 8 areas  Privacy Masking  A areas  Analytics  Motion Detection  -	Resolution	
Bit Rate Control  Video Setting  Exposure Control Mode  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  Day-Night Mode  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  Day-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  Smat Video  Privacy Masking  Auto Aureas  Motion Detection  Vertection  Vertection  Verage/ Center/ Center flip  Auto / Manual / Flicker  ELC / ALC  Auto / Manual / Flicker  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  O ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  John Default / Standard/ Vivid  Text OSD  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  A Areas  Analytics  Motion Detection  -		<u> </u>
Video Setting  Exposure Control Mode  Lens type  ELC / ALC  Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  O ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Digital Noise Reduction  Image Adjustment  Image Direction  D-WDR  O ~ 128  Color Mode  Perivacy Masking  Analytics  Motion Detection  Auto Auco  Day, Night, Motion detection, Digital input  ELC / ALC  Auto / Incandescent/ Fluorescent/ Underwater/  Cloudy/ Flash/ etc.  Digital Noise Reduction  D-WDR  O ~ 128  Color Mode  Perivacy Masking  A Areas  Analytics  Motion Detection  4 areas  Object Detection  -		
Exposure Control Mode  Day, Night, Motion detection, Digital input  Lens type  ELC / ALC  Auto Exposure Weight  25 ~ 400  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Auto / Manual / Flicker  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  0 ~ 72  Back Light Mode  BLC, DOL WDR  Day-Night Mode  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  Jona  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Uertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Motion Detection  -	Bit Rate Control	VBR/AVBR/CBR/ACBR, GOP
Lens type	•	
Auto Exposure Weight  AE Metering  Spot/ Average/ Center/ Center flip  Shutter Mode  Auto / Manual / Flicker  Electronic Shutter  Minimum/ Maximum, 1/25~1/32,000s  Sens Up  Off / x1 / x2  AGC  0 ~ 72  Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Cloudy/ Flash/ etc.  Digital Noise Reduction  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Image Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  Privacy Masking  8 Areas  Analytics  Motion Detection  -	Exposure Control Mode	Day, Night, Motion detection, Digital input
AE Metering Spot/ Average/ Center/ Center flip Shutter Mode Auto / Manual / Flicker  Electronic Shutter Minimum/ Maximum, 1/25~1/32,000s Sens Up Off / x1 / x2 AGC 0 ~ 72  Back Light Mode BLC, DOL WDR  Day-Night Mode Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction 3 DNR  Image Adjustment Brightness, Contrast, Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor  D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Motion Detection -	Lens type	ELC / ALC
Shutter Mode Auto / Manual / Flicker  Electronic Shutter Minimum/ Maximum, 1/25~1/32,000s  Sens Up Off / x1 / x2  AGC 0 ~ 72  Back Light Mode BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance White Balance Digital Noise Reduction Image Adjustment Image Direction D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Analytics Motion Detection -  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  3 DNR  Brightness, Contrast, Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor  D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection -	Auto Exposure Weight	25 ~ 400
Electronic Shutter Minimum/ Maximum, 1/25~1/32,000s  Sens Up Off / x1 / x2  AGC 0 ~ 72  Back Light Mode BLC, DOL WDR  Day-Night Mode Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance Cloudy/ Flash/ etc.  Digital Noise Reduction 3 DNR  Image Adjustment Brightness, Contrast, Sharpness, Hue, Saturation Image Direction Vertical flip, Horizontal flip, Corridor  D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Motion Detection 4 areas  Object Detection -	AE Metering	Spot/ Average/ Center/ Center flip
Sens Up Off / x1 / x2  AGC 0 ~ 72  Back Light Mode BLC, DOL WDR  Day-Night Mode (5 steps)  White Balance Cloudy/ Flash/ etc.  Digital Noise Reduction 3 DNR  Image Adjustment Brightness, Contrast, Sharpness, Hue, Saturation Image Direction Vertical flip, Horizontal flip, Corridor  D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection -	Shutter Mode	Auto / Manual / Flicker
AGC 0 ~ 72  Back Light Mode BLC, DOL WDR  Day-Night Mode Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance Adjustment Brightness, Contrast, Sharpness, Hue, Saturation Image Direction Vertical flip, Horizontal flip, Corridor D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection -	Electronic Shutter	Minimum/ Maximum, 1/25~1/32,000s
Back Light Mode  BLC, DOL WDR  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  3 DNR  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  4 areas  Object Detection  -	Sens Up	Off / x1 / x2
Day-Night Mode  Color/ B&W/ Auto Night B&W, Auto Night Color (5 steps)  White Balance  Digital Noise Reduction Image Adjustment Image Direction  D-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  Analytics  Motion Detection  Cloudy/ Flash/ etc.  JURI Driverscent/ Underwater/ Cloudy/ Flash/ etc.  Sharpness, Hue, Saturation Vertical flip, Horizontal flip, Corridor  Vertical flip, Horizontal flip, Corridor  D-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  -	AGC	0 ~ 72
Day-Night Mode  (5 steps)  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Image Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  4 areas  Object Detection  -	Back Light Mode	BLC, DOL WDR
White Balance  Auto / Incandescent/ Fluorescent/ Underwater/ Cloudy/ Flash/ etc.  Digital Noise Reduction  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  4 areas  Object Detection  -	Day-Night Mode	Color/ B&W/ Auto Night B&W, Auto Night Color
White Balance  Cloudy/ Flash/ etc.  Digital Noise Reduction  3 DNR  Image Adjustment  Brightness, Contrast, Sharpness, Hue, Saturation  Image Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  4 areas  Object Detection  -	Day-Night Mode	(5 steps)
Cloudy/ Flash/ etc.  Digital Noise Reduction 3 DNR  Image Adjustment Brightness, Contrast, Sharpness, Hue, Saturation Image Direction Vertical flip, Horizontal flip, Corridor  D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection 4 areas  Object Detection -	White Balance	Auto / Incandescent/ Fluorescent/ Underwater/
Image Adjustment Image Direction  D-WDR  O ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  Privacy Masking  Analytics  Motion Detection  Brightness, Contrast, Sharpness, Hue, Saturation  Vertical flip, Horizontal flip, Corridor  0 ~ 128  Default / Standard/ Vivid  Plines, settable size, color, position, etc.  ROI (Region of Interest) 8 areas  Analytics  Motion Detection  4 areas  Object Detection  -		Cloudy/ Flash/ etc.
Image Direction  Vertical flip, Horizontal flip, Corridor  D-WDR  0 ~ 128  Color Mode  Default / Standard/ Vivid  Text OSD  9 lines, settable size, color, position, etc.  Smart Video  ROI (Region of Interest) 8 areas  Privacy Masking  8 Areas  Analytics  Motion Detection  4 areas  Object Detection	Digital Noise Reduction	3 DNR
D-WDR 0 ~ 128  Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection 4 areas  Object Detection -	Image Adjustment	Brightness, Contrast, Sharpness, Hue, Saturation
Color Mode Default / Standard/ Vivid  Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection 4 areas  Object Detection -	Image Direction	Vertical flip, Horizontal flip, Corridor
Text OSD 9 lines, settable size, color, position, etc.  Smart Video ROI (Region of Interest) 8 areas  Privacy Masking 8 Areas  Analytics  Motion Detection 4 areas  Object Detection -	D-WDR	0 ~ 128
Smart Video ROI (Region of Interest) 8 areas Privacy Masking 8 Areas Analytics Motion Detection 4 areas Object Detection -	Color Mode	Default / Standard/ Vivid
Privacy Masking 8 Areas  Analytics  Motion Detection 4 areas  Object Detection -	Text OSD	9 lines, settable size, color, position, etc.
Analytics Motion Detection 4 areas Object Detection -	Smart Video	ROI (Region of Interest) 8 areas
Motion Detection 4 areas  Object Detection -	Privacy Masking	8 Areas
Object Detection -	Analytics	
·	Motion Detection	4 areas
Video Analytic -	Object Detection	-
	Video Analytic	-

Security	IP Filtering, HTTPS, Encrypted & Basic
Security	Authentication, Management White List
Supported Protocols	HTTP, RTP/RTSP (Uni/Multicast), TCP/IP
	(v4/v6), UDP, FTP, Telnet, HTTPS, RARP,
	SNMP (option), DHCP, NTP, SMTP client, uPn
	ZeroConf
DDNS	www.ipcctvdns.com
Interface	RJ45 Ethernet 10/100Mbps
Cybersecurity	
Asymmetric Encryption Algorithm	RSA 2048 bits
Digital Signature Algorithm	RSA 2048 bits
Symmetric Encryption Algorithm	AES-128, AES-256
Cryptographic Hash Functions	SHA-256, MD5
Token Authentication Code	SHA-256, MD5
Key Exchange Protocols	RSA Key Exchange
Certificate	X.509
System Integration	
Application Programing Interface	SDK, ONVIF Profile S
Event Condition	Motion detection, audio detection, external digit
Event condition	input, external input data, SD card error
	Pre-alarm & Post-alarm buffer
Event Action	Image upload: FTP (periodic, buffer)
Event Action	Notification: email, HTTP, TCP, UDP
	External digital output
Peripheral & Auxiliary I/O	
Onboard Recording	MicroSD card slot, support up to 1TB
Audio	-
External alarm	-
Serial interface	-
Video out	0)/00/00
VIUEO OUL	CVBS (SD analog)
Software Software	CVBS (SD analog)
	IE, Chrome, Edge, Firefox, Safari
Software	
Software Web Browser	IE, Chrome, Edge, Firefox, Safari
Software Web Browser Mobile Viewer	IE, Chrome, Edge, Firefox, Safari iOS, Android
Software Web Browser Mobile Viewer CMS	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player
Software Web Browser Mobile Viewer CMS NVR	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license)
Software Web Browser Mobile Viewer CMS NVR Device manager	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer Metal/ White
Software Web Browser Mobile Viewer CMS NVR Device manager General	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer Metal/ White DC12V / 1A
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer  Metal/ White DC12V / 1A PoE: IEEE 802.3af Max. 5.3W
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment	IE, Chrome, Edge, Firefox, Safari iOS, Android  Smart Multi Viewer and Player  SmartNVR (up to 9 channels free license)  IP Installer  Metal/ White  DC12V / 1A  PoE: IEEE 802.3af  Max. 5.3W  -20°C ~ +60°C, 10% ~ 90% RH
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment Dimension	IE, Chrome, Edge, Firefox, Safari iOS, Android  Smart Multi Viewer and Player  SmartNVR (up to 9 channels free license)  IP Installer  Metal/ White  DC12V / 1A  PoE: IEEE 802.3af  Max. 5.3W  -20°C ~ +60°C, 10% ~ 90% RH  112.35\( \phi \times 82.30(H) \) in mm
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment Dimension Weight	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer  Metal/ White DC12V / 1A PoE: IEEE 802.3af Max. 5.3W -20°C ~ +60°C, 10% ~ 90% RH 112.35\psi x 82.30(H) in mm About 430g without Power Supply
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment Dimension Weight Protection	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer  Metal/ White DC12V / 1A PoE: IEEE 802.3af Max. 5.3W -20°C ~ +60°C, 10% ~ 90% RH 112.35\psi x 82.30(H) in mm About 430g without Power Supply IP66, IK10
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment Dimension Weight Protection Warranty	IE, Chrome, Edge, Firefox, Safari iOS, Android  Smart Multi Viewer and Player  SmartNVR (up to 9 channels free license) IP Installer  Metal/ White  DC12V / 1A  PoE: IEEE 802.3af  Max. 5.3W  -20°C ~ +60°C, 10% ~ 90% RH  112.35\(\phi\) x 82.30(H) in mm  About 430g without Power Supply IP66, IK10  2-year warranty
Software Web Browser Mobile Viewer CMS NVR Device manager General Case/ Color Power Supply Power Consumption Operating Environment Dimension Weight Protection	IE, Chrome, Edge, Firefox, Safari iOS, Android Smart Multi Viewer and Player SmartNVR (up to 9 channels free license) IP Installer  Metal/ White DC12V / 1A PoE: IEEE 802.3af Max. 5.3W -20°C ~ +60°C, 10% ~ 90% RH 112.35\psi x 82.30(H) in mm About 430g without Power Supply IP66, IK10

Note: IR performance can be affected by environment.