**i-PRO WV-S2536LTNA FIXED NETWORK CAMERA**

**TECHNICAL SPECIFICATIONS**

**DIVISION 28 – ELECTRONIC SAFETY AND SECURITY**

**28 20 00 ELECTRONIC SURVEILLANCE**

**28 23 00 VIDEO SURVEILLANCE**

**28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SONSORS**

*This specification is intended for use by the design/construction professional and any user of i-PRO Security products to assist in developing project specifications for security and video surveillance systems.*

*Specifier Notes: This guide specification incorporates CSI MasterFormatTM 2014 Edition Numbers and Titles.*

*Notes in Italics, such as this one, are explanatory and intended to guide the design professional/specifier and user in the proper selection and use of materials. This specification should be modified where necessary to accommodate individual project conditions.*

**PART 1 GENERAL**

* 1. **SUMMARY**
	2. **WARRANTY**
1. Provide manufacturer's standard warranty.

**PART 2 PRODUCTS**

1. **MANUFACTURERS**
	1. i-PRO Sensing Solutions Co., Ltd
	2. Provide Video Surveillance Camera from single source manufacturer
2. **i-PRO WV-S2536LTNA FIXED NETWORK CAMERA**
	1. **GENERAL CHARACTERISTICS**
		1. The Fixed Camera shall deliver H.265 stream and H.264 stream.
		2. The Fixed Camera shall produce a resolution of 1920x1080 pixels at up to 60 fps with a 16:9 aspect ratio.
		3. The Fixed Camera shall produce a resolution of 1280x960 pixels at 30fps with a 4:3 aspect ratio.
		4. The Fixed Camera shall utilize an approximate 1/2.8 type high sensitivity CMOS image sensor.
		5. The Fixed Camera shall feature a 144dB wide dynamic range based on Enhanced Super Dynamic and Adaptive Black Stretch technology (ABS).
		6. The Fixed Camera shall produce a color image with a minimum illumination of 0.011 lux and a monochrome image with 0.008 lux at F1.3, shutter speed of 1/30s and AGC 11.
		7. The Fixed Camera shall offer a built-in IR illumination to produce a clear monochrome image in zero lux conditions with 70m (230 feet) irradiation distance.
		8. The Fixed Camera shall generate multiple simultaneous video streams of up to four (4) H.265 (Main profile) or H.264 (High profile) streams and JPEG streams.
		9. The Fixed Camera shall be equipped with an AI engine capable of supporting up to 2 Edge AI analytic applications
		10. The Fixed cameras should be equipped with the improved intelligent auto mode to monitors the dynamics and movement of important subject’s scenes and to capture license plates and human faces more clearly.
		11. The fixed camera should be equipped with improved smart coding with GOP control (including frame control), and it monitors the movement of important subject’s scenes to reduce bit rate for longer recording and reduce network load.

* + 1. The Fixed Camera shall produce encrypted stream.
		2. The Fixed Camera shall realize SSL / TLS communication with CA certificate.
		3. A user shall be able to view videos on a PC using a browser.
		4. A user shall be able to view videos on a smartphone and tablet using viewer software for iPhone and Android.
		5. The Fixed Camera shall offer Video Motion Detection (VMD) with four (4) programmable detection areas, 15 steps sensitivity level and 10 steps detection size.
		6. The Fixed Camera shall have Fog compensation function.
		7. The Fixed Camera shall have High light compensation (HLC) function.
		8. The Fixed Camera shall have Super Chroma Compensation (SCC) which realizes a better color reproducibility in the low illumination.
		9. The Fixed Camera shall provide up to eight (8) areas of electronic privacy masking.
		10. The Fixed Camera shall have an SD memory card slot that supports SD, SDHC and SDXC memory cards for local storage.
		11. The Fixed Camera shall offer full-duplex bi-directional audio communication capability between the camera and monitoring site.
		12. The Fixed Camera shall have three (3) alarm sources of terminal input, VMD, and command alarm that activate the processes such as SDXC/ SDHC/SD memory recording, E-mail notification, HTTP alarm notification, Indication on browser and TCP alarm notification output.
		13. The Fixed Camera shall conform to the ONVIF standard.

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| CAMERA |
| Minimum Image Sensor | Approx. 1/2.8 type CMOS image sensor |
| Minimum Illumination* + - 1. Color
			2. BW
 | Color : 0.011 lx (30IRE, F1.7, 1/30s)Color : 0.015 lx (50IRE, F1.7, 1/30s)BW : 0.008 lx (50IRE, F1.7, 1/30s)BW : 0 lx (50IRE, F1.7,1/30s with IR LED) |
| Dynamic Range | Max.144 dB (Super Dynamic : On, Level 31) |
| Built-in IR Illumination1. Irradiation Range
 | 70 m {Approx. 230 ft} (30IRE) / 50 m {Approx. 164 ft} (50IRE) |
| AI Analytics | AI Video Motion Detection, AI Privacy Guard, AI Face Detection, AI People Detection,AI Vehicle Detection, AI Non mask Detection, AI Occupancy Detection, AI Scene Change DetectionFor detailshttps://i-pro.com/global/en/surveillance/products/i-pro-ai-application3rd party applications are alsoavailable.https://i-pro.com/global/en/surveillance/i-pro-application-platform/application-list |
| AI Sound Classification | Gunshot, Yell, Vehicle horn, Glass break |

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| LENS |
| Focal Length | 9 - 21 mm {11/32 inches - 13/16 inches} |
| Maximum Aperture Ratio | 1 : 1.7 (WIDE) – 1 : 3.0 (TELE) |
| Angular Field of View1. 16:9 aspect ratio
2. 4:3 aspect ratio
 | [16 : 9 mode] Horizontal : 15° (TELE) – 36° (WIDE), Vertical : 9° (TELE) – 20° (WIDE)[ 4 : 3 mode] Horizontal : 11° (TELE) – 27° (WIDE), Vertical : 9° (TELE) – 20° (WIDE) |
| Adjusting Angle | Horizontal : -194 to +166°, Vertical : -30 to +85°, Yaw : ±100° |
| Focus Adjustment | Auto focus |
| Optical Zoom Ratio | 2.3x (Motorized zoom / Motorized Focus) |

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| VIDEO |
| Compression Format | H.265/ H.264/ JPEG (MJPEG) |
| Image Resolution1. 16:9 aspect ratio
2. 4:3 aspect ratio
 | [16 : 9 mode (60 fps mode)] , [16 : 9 mode (30 fps mode)], [16 : 9 mode (50 fps mode)] ,[16 : 9 mode (25 fps mode)] : 1920x1080, 1280x720, 640x360, 320x180[4 : 3 mode (30 fps mode)], [4 : 3 mode (25 fps mode)] : 1280x960, VGA, QVGA[4 : 3 mode (15 fps mode)], [4 : 3 mode (12.5 fps mode)] : 2048x1536 , 1280x960, VGA, QVGA |
| H.265/ H.2641. Transmission Mode
2. Transmission Type
 | [Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort[Transmission Type] Unicast port (AUTO) / Unicast port (MANUAL) / Multicast |
| JPEG 1. Image quality
2. Transmission Type
 | [Image Quality] 10 steps |
| Smart Coding* + - 1. GOP (Group of Picture) control
			2. Auto VIQS
 | GOP (Group of pictures control): Off/ Low (Variable GOP 1s-8s)/ Mid (Variable GOP 4s-16s)/ Advanced(Fixed GOP 60s w/1s key-frame)/ Frame rate control (Variable GOP 4s-16s with frame rate control)\*Advanced and Frame rate control are only available with H.265.Smart VIQS: On(High)/On(Low)/Off, Smart P-picture control: On/Off |

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| AUDIO |
| Audio Compression | G.726 (ADPCM) : 16kbps / 32kbps , G.711 : 64kbps , AAC-LC : 64kbps / 96kbps / 128kbps |
| Audio Mode | Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex) |

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| OPERATION |
| Super Dynamic | On / Off, The level can be set in the range of 0 to 31. |
| Intelligent Auto | On / Off |
| Adaptive Black Stretch | The level can be set in the range of 0 to 255. |
| Fog compensation | On / Off (only when Intelligent auto / auto contrast adjust : Off) |
| Back light compensation /High light compensation | BLC (Back light compensation) / HLC (High light compensation) /Off (only when Super dynamic / Intelligent Auto : Off) |
| AGC | The level can be set in the range of 0 to 11. |
| Shutter Speed | [60 fps Mode] 1/60 Fix to 1/10000 Fix, [30fps/15fps mode] 1/30 Fix to 1/10000 Fix[50 fps Mode] 1/50 Fix to 1/10000 Fix, [25fps/12.5fps mode] 1/25 Fix to 1/10000 Fix |
| Digital Noise Reduction | The level can be set in the range of 0 to 255. |
| Video Motion Detection (VMD) | On / Off, 4 areas available |
| Privacy Zone | On / Off, Up to 8 zones available |
| Camera Title (OSD) | On / Off, Up to 40 characters (alphanumeric characters, marks) |
| Digital Zoom | 2.3x - 6.9x (when resolution is 640 x 360) |

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| NETWORK |
| Network IF | 10Base-T / 100Base-TX, RJ45 connector |
| Supported Protocol1. IPv6
2. IPv4
 | IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, SMTP, DNS, NTP, SNMPv1/v2/v3, DHCPv6,RTP, MLD, ICMP, ARP, IEEE 802.1X,DiffServ, FTP, SFTP, MQTT, LLDPIPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, RTSP, RTP, RTP/RTCP, SMTP, DHCP, DNS, DDNS, NTP, SNMPv1/v2/v3, UPnP, IGMP, ICMP, ARP, IEEE 802.1X, DiffServ, SRTP, FTP, SFTP, MQTT, LLDP |
| Max. User access | Up to 14 users (Depends on network conditions) |
| Mobile Terminal Compatibility | iPad, iPhone, Android™ terminals |

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| INTERFACE |
| Monitor Output | VBS : 1.0 V [p-p] / 75 Ω, composite, Pin jackAn NTSC or PAL signal can be outputted from camera |
| Microphone input/ Line input | ø3.5 mm stereo mini jackFor microphone input : Recommended applicable microphone : Plug-in power type(Sensitivity of microphone : -48 dB±3 dB (0 dB=1 V/Pa, 1 kHz))Input impedance : Approx. 2 kΩ (unbalanced)Supply voltage : 2.5 V ±0.5 V / For line input : Input level: Approx. –10 dBV |
| Audio Output | ø3.5 mm stereo mini jack (monaural output)Output impedance : Approx. 600 Ω (unbalanced) / Output level : –20 dBV |
| External I/O Terminals | ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1)ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1), ALARM IN 3 (Alarm input 3/ AUX OUT) (x1) |
| SD memory card slot | SDXC/SDHC/SD memory recording |

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| ELECTRICAL |
| Power Source  | DC power supply : DC12 V 730 mA, Approx. 8.8 WPoE (IEEE802.3af compliant) |
| Power Consumption | Device : DC48 V 190 mA, Approx. 9.1 W (Class 0 device) |

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| SAFETY/EMC |
| Safety | UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1 |
| EMC | FCC (Part15 ClassA), ICES-003 ClassA, EN55032 ClassB, EN55035 |

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| MECHANICAL |
| Dimensions | ø154 mm x 105 mm (H) {ø6-1/16 inches x 4-1/8 inches (H)} |
| Weight  | Approx. 1.1 kg {2.43 lbs.} |
| Finish1. Main body
2. Dome cover
 | Main body : Aluminum die cast and resin, i-PRO whiteDome section : Polycarbonate resin, Clear |

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| ENVIRONMENTAL |
| Vandal Resistance | 50J (IEC 60068-2-75 compliant), IK10 (IEC 62262) shock resistance |
| Operating Temperature | -40 °C to +60 °C (-40 °F to 140 °F)(Power On range : –30 °C to +60 °C {–22 °F to +140 °F}) |
| Operating Humidity | 10 to 100 % (no condensation) |