WV-RD5500-C

Only available in U.S. and Canada

Security Radar for wide area detection with built-in camera

- 180° Wide area coverage (up to 100m[328ft] for vehicle,70m[230ft] for people)
- Made in Japan 60GHz millimeter wave radar
- Up to 4 Edge-AI PTZ cameras integration without any server
- Built-in camera for alignment and basic visual check
- IP66, IK10 certified
- NDAA, TAA compliant
- FIPS 140-3 Level 3 Certified SecureElement (NXP® EdgeLock® SE052F)

SPECIFICATIONS

Radar	
Profiles	Area Monitoring
Sensor	FMCW (Frequency Modulated Continuous Wave)
Detection Data	Position, speed, direction, type
Frequency	61.01 - 61.49 GHz
RF Transmission Power	Less than 100mW *Free license, harmless radio waves
Detection target	Moving human ・ vehicles
Radar detection mode	Detection areas, Line crossing, Loitering
Object classification	Human, Vehicle, unknown
Detection Range	Human detection: 3m [9.8ft] to 70m [230ft] Vehicle detection: 3m [9.8ft] to 100m [328ft] *Detection distance and detection performance vary depending on the installation environment.
Horizontal Detection Angle	180°
Depression Adjustment Angle	0° - 35°
Maximum Detection Speed	65 km/h {40 mph}
Minimum space difference	3m {9.84 feet}
Speed Accuracy	± 1 km/h
Distance Accuracy	0.46 m [1.5ft]
Angle Accuracy	1.7°
Spatial Differentiation	3 m [9.8ft]
Data Refresh Rate	5 Hz
Detection Coverage	Human detection: 7,700 ㎡ Vehicle detection: 15,700 ㎡
Non-interference Range	250m {820.21 feet} radius or more
Radio Interference Avoidance	Up to 6 devices, requires connection on the same wired LAN network
PTZ camera linked tracking	Up to 4 cameras *Only our PTZ cameras are supported
Others	Mask area settings, Trajectory data display, Radar interference detection, Radar transmission on/off, Detection sensitivity, Detection filter settings, Fluctuation filter strength, Radar screen transparency settings, Point cloud data display

System Integration	
Application Programming Interface	ONVIF profile S ONVIF profile M ONVIF profile G ONVIF profile T
Analytics	Radar Motion Detection (Object Detection, Tracking, Classification)
Detection Functions	Analysis (intrusion detection, direction detection, line crossing, occupancy detection), Angle detection, Impact detection, Obstruction detection, Audio jack input for microphone* *Option
Event Actions	Built-in video recording (SD card/recorder), Radar map recording (SD card/recorder),Smtp(mail), Network alarm notification (HTTP, HTTPS, TCP, MQTT publish) i-PRO PTZ camera linked tracking recording (up to 4 cameras)
Data Streaming	Video Data from Built-in Camera, Radar Map Video Data, Onvif-M Detection event data (type. latitude, longitude, direction, speed)
Installation Support Functions	Reference Map Calibration, Linked PTZ Camera Calibration

Network	
Network IF	10BASE-T/100BASE-TX, RJ45 connector
Resolution	<Radar／Camera> 1920x1080/1280x720/640x360/320x180
H.265/H.264 Transmission Priority/Type	[Transmission priority] <Radar／Camera> Constant bit rate/ VBR/ Frame rate/ Best effort [Transmission type] <Radar／Camera> Unicast port (AUTO)/ Unicast port (MANUAL)/ Multicast
No. of Stream	2
JPEG (MJPEG) Image Quality	<Radar／Camera> 10 steps: 0(SUPER FINE) - 9(LOW)
Smart Coding	[GOP(Group of pictures) control] <Camera> Off/ Low (Variable GOP 1s-8s)/Mid (Variable GOP 4s-16s)/ Advanced (Fixed GOP 60 seconds with 1 second Key frame)/ Frame rate control (Variable GOP 4s-16s with frame rate control) *Advanced and Frame rate control are only available with H.265. [Auto VIQS] On/ Off

Recording to SD	<Radar／Camera> Stream(1) Radar/Camera ／Stream(2) Radar/Camera／Off
Audio Compression Method *1	G.726 (ADPCM): 16 kbps/ 32 kbps G.711: 64 kbps AAC-LC 64 kbps/ 96 kbps/ 128 kbps
Audio Transmission Mode *1	Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)
Supported Protocol	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, LLDP, MQTT IPv4: 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, LLDP, MQTT, NTCIP
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
Secure	FIPS 140-3 level 3, CC EAL6+ (NXP® EdgeLock® SE052F), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, digest authentication, Host authentication, IEEE802.1X, System log, Image transmission log, brute-force protection, Alteration Detection, Secure boot, Signed firmware
SDXC/SDHC/SD Memory Card (Option)	microSDXC memory card: 64 GB, 128 GB, 256 GB, 512 GB microSDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB microSD memory card: 2 GB
Mobile Terminal Compatibility	iPad / iPhone (iOS 8.0 or later), Android™ terminals

Input/Output

Built-in Microphone	-
Audio Input *2	ø3.5 mm monaural mini jack [For microphone input] ø3.5 mm stereo mini jack (monaural output) Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV [For line input] Input level: Approx. -10 dBV
Audio Output *2	ø3.5 mm stereo mini jack (monaural output) Output impedance: Approx. 600 Ω (unbalanced) *Uses an external speaker with a built-in amplifier Output level: -20 dBV
External I/O Terminals *2	ALARM IN1 (Alarm input 1 / Black & white Input / Auto time adjustment Input / Radar Self-Diagnosis Start) (x1) ALARM IN2 (Alarm input 2 / ALARM OUT) (x1) ALARM IN3 (Alarm input 3 / ALARM OUT/ AUX OUT/ Radar Self-Diagnosis result output) (x1)
Monitor Output	-

Built-in camera

Resolution	1920x1080
Maximum Frame Rate	30 fps
Angular Field of View	Horizontal: 180° Vertical: 90°
Minimum Illumination	Color : 0.14 lx {0.0130 footcandle} (50IRE, F2.2, Maximum shutter: Off (1/30 s), AGC: 11) 0.0088 lx {0.0008 footcandle} (50IRE, F2.2, Maximum shutter: max. 16/30 s, AGC: 11)* * Converted value
Day/Night	Off / Auto
IR LED Light	-

General

Safety	UL (UL62368-1), c-UL (CSA C22.2 No.62368-1)
EMC	FCC (Part15 SubpartB, ClassA), ICES-003 ClassA
Wireless Standard	FCC Part15 Subpart C, RSS-Gen, RSS-210
Power Source / Power Consumption *2	[Power Source] DC12 V ± 10% DC24 V ± 10% PoE+ (IEEE802.3at compliant) [Power Consumption] DC 12V : 2.0A / Approx. 24 W DC 24V : 1.0A / Approx. 24 W PoE+ DC 54V : 440mA / Approx. 24 W (Class 4 device)
Ambient Operating Temperature	-40 °C to +60 °C {-40 °F to +140 °F} (Power On range: -20 °C to +60 °C {-4 °F to +140 °F})
Water and Dust Resistance	IP66 (IEC 60529), Type 4X (UL50E), NEMA 4X compliant
Shock Resistance	IK10 (IEC 62262)
Wind Resistance	Up to 40 m/s {approx. 89 mph}
Dimensions	[Main body] 232 mm (W) ×163 mm (D) ×141 mm (H) {9-9/64 inches (W) ×6-27/64 inches (D) ×5-35/64 inches (H)} [When installed on the wall] 232 mm (W) ×163 mm (D) ×150 mm (H) {9-9/64 inches (W) ×6-27/64 inches (D) ×5-29/32 inches (H)} [When installed on the pole] 232 mm (W) ×200 mm (D) ×150 mm (H) {9-9/64 inches (W) ×7-7/8 inches (D) ×5-29/32 inches (H)} [When installed on the pipe] 232 mm (W) ×202 mm (D) ×150 mm (H) {9-9/64 inches (W) ×7-61/64 inches (D) ×5-29/32 inches (H)}
Mass (approx.)	Main body: 1.5 kg {3.30 lbs} When installed on the wall: 2.1 kg {4.63 lbs} When installed on the pole: 2.6 kg {5.73 lbs} When installed on the pipe: 2.6 kg {5.73 lbs}
Finish	Main body: PC resin (i-PRO White), Aluminium die cast (black paint) Mounting bracket: Stainless (black / corrosion-resistant treatment) Outer fixing screws: Stainless (corrosion-resistant treatment) Front panel: PC resin, Clear

Easy Kitting	Supported
Recorder Compatibility	WJ-NX510, WJ-NX410, WJ-NX310, WJ-NU301, WJ-NU300, WJ-NU201, WJ-NU101
Others	Tamper-resistant enclosure

NOTES

*1 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .
*2 When using a 12V DC and 24 VDC power supply, EXT I/O terminal, audio input, and audio output, multi cable (model no. WV-QCA503) is required.

Important
– Safety Precautions : Carefully read the Basic Information,Installation Guide and Operating Instructions before using this product.
– i-PRO Co., Ltd. cannot be held responsible for the performance of the network and/or any third-party products (including applications) used on the network.
– Masses and dimensions are approximate.
– Specifications are subject to change without notice.
– This product is a regulated commodity (or technology) as stipulated in the Foreign Exchange and Foreign Trade Act. If you export this product (including providing technology) outside of Japan, please take the necessary procedures,
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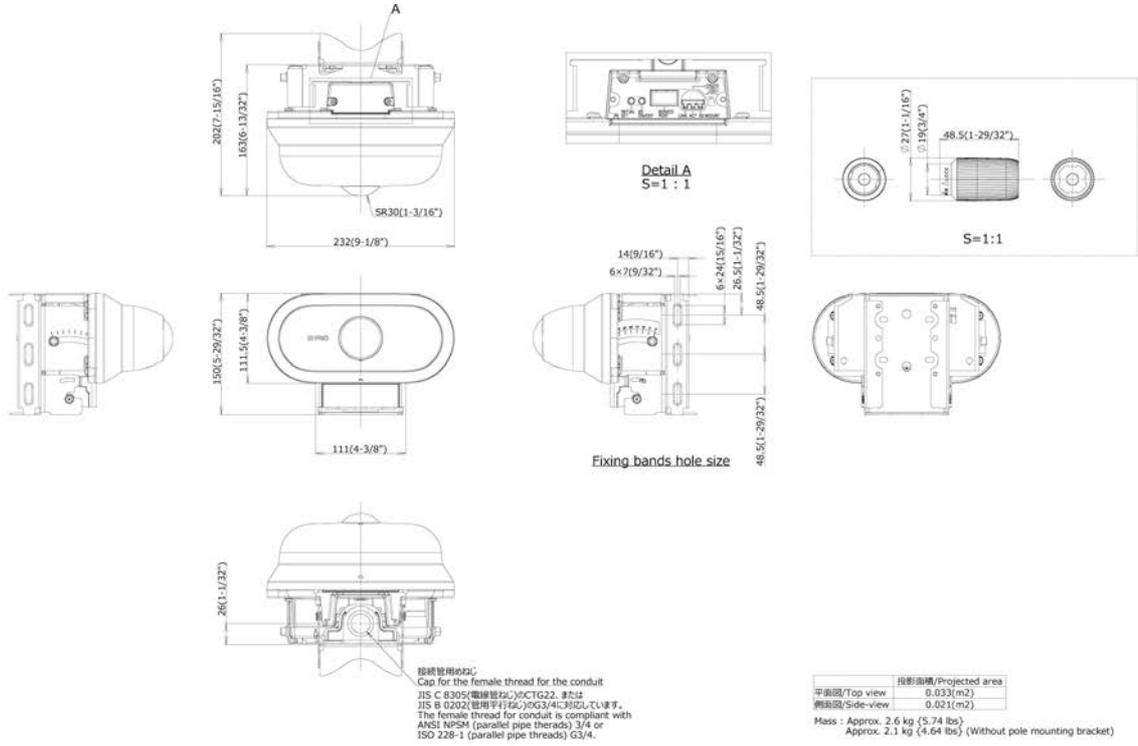
OPTIONAL ACCESSORIES

Select a compatible accessory
[Accessory Selector (i-pro.com)](i-pro.com)

WV-QCA503
I/O Cable for Security radar

APPEARANCE

Detail A
S=1 : 1

Fixing bands hole size

S=1:1

接続管用ねじ
Cap for the female thread for the conduit
JIS C 8305(電線管ねじ)のCTG22、または
JIS B 0202(管用平行ねじ)のG3/4に対応しています。
The female thread for conduit is compliant with
ANSI NPSM (parallel pipe threads) 3/4 or
ISO 228-1 (parallel pipe threads) G3/4.

	投影面積/Projected area
平面図/Top view	0.033(m2)
側面図/Side-view	0.021(m2)

Mass : Approx. 2.6 kg {5.74 lbs}
Approx. 2.1 kg {4.64 lbs} (Without pole mounting bracket)

S=1:2   Unit:mm