*i-****pro*** **SERIES**

IMAGE CAPTURE

PROCESSING

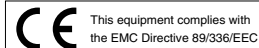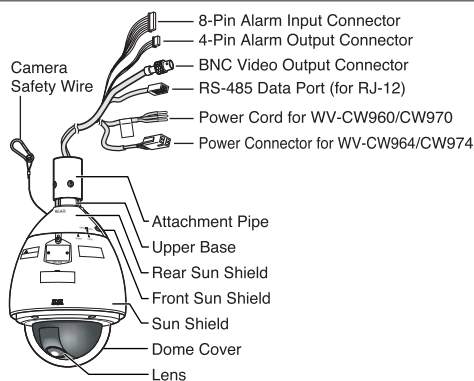**RECORDING/ARCHIVING**

VIEWING

Weather Proof Super Dynamic Ⅲ Colour Dome Cameras

WV-CW960 Series
WV-CW970 Series (Advanced Auto Track)

WV-CW960/CW970 (AC 220V - 240V)
WV-CW964/CW974 (AC 24V)

IP66 standard

30x OPTICAL ZOOM

V D 2 Sync Compatible

day/night

SD Ⅲ Super Dynamic

CE — This equipment complies with the EMC Directive 89/336/EEC

Wall Mount Bracket (optional)
WV-Q122

KEY FEATURES

• Advanced Auto Track (WV-CW970 Series only): New template matching algorithm provides advanced auto tracking capability. High-accuracy detection of individuals by memorizing the characteristics of the object including colour, shape and contrast. Featuring not only Pan and Tilt but also Zoom enables to keep the object centred in the field of view. Specific object can be locked to track by the system controller for operator's ease.
• IP66 rated water and dust proof.
• **Super Dynamic III**: The new Pixel Based 160x Dynamic Range Expansion technology with area free natural contrast correction.
• Higher resolution of 540 TV lines at colour mode, and 570 TV lines at B/W mode.
• Minimum illumination of 0.5 lux at colour mode, and 0.04 lux at B/W mode (Sens. up; off, AGC High).
• Innovative intelligent features:
  *Auto image stabilizer function for applications where vibration or wind is a concern.
  *Scene change detection alarms when lens is covered, spray painted, removed or defocused, or camera angle is changed.
• Day-Night: Switches between colour mode and B/W mode automatically or manually.
• 30x optical zoom lens (3.8 - 114 mm) plus 10x digital zoom, total 300x zoom.
• Panning speed of max. 400°/s at preset mode and 0.065°/s super fine control at manual mode.
• Multiplex-coaxial or RS-485 data communication.
• Four alarm inputs and two output terminals.
• 16 alphanumeric character display.
• Internal/Line-lock/Multiplexed Vertical Drive (VD2) synchronization.
• Built-in fan/heater for temperature changes of −40°C ~ +50°C.
• Built-in sun shield permits camera locations in direct sunlight.

MAJOR OPERATING CONTROLS

- 8-Pin Alarm Input Connector
- 4-Pin Alarm Output Connector
- BNC Video Output Connector
- RS-485 Data Port (for RJ-12)
- Power Cord for WV-CW960/CW970
- Power Connector for WV-CW964/CW974

Camera Safety Wire

- Attachment Pipe
- Upper Base
- Rear Sun Shield
- Front Sun Shield
- Sun Shield
- Dome Cover
- Lens

SPECIFICATIONS

Model No.	WV-CW960/WV-CW970	WV-CW964/WV-CW974
General		
Power Requirements	220 V - 240 V AC, 50 Hz	24 V AC, 50 Hz
Power Consumption	90 W	77 W
Pick-up Device	1/4-type interline transfer CCD	
Effective Pixels	752 (H) x 582 (V)	
Scanning Area	3.65 mm (H) x 2.71 mm (V)	
Signal	PAL	
Synchronization	Internal (INT), Multiplexed Vertical Drive (VD2), Line-Lock (LL)	
Scanning	2:1 interlace	
Scanning Frequencies	Horizontal: 15.625 kHz, Vertical: 50.00 Hz	
Video Output	VBS: 1.0 V [p-p] / 75 Ω (BNC plug)	
Horizontal Resolution	480 TV lines minimum (Colour NORMAL mode) 540 TV lines typ., 520 TV lines minimum (Colour HIGH mode) 570 TV lines minimum (B/W)	
Minimum Illumination	0.5 lux (Colour mode) 0.04 lux (B/W)	
Dynamic Range	54 dB typical (Super Dynamic III: ON)	
S/N Ratio	50 dB minimum (AGC: OFF)	
Ambient Operating Temperature	−40 °C ~ +50 °C	
Ambient Operating Humidity	90 % max. (non-condensation)[1]	
Water Resistance	IP66 protection from water jets from a nozzle (IEC60529/JIS C 0920)	
Dimensions	ø239 mm (D) x 395.5 mm (H)	
Weight	approx. 4.7 kg	
Finish	Camera: Die cast aluminum, baked on coating (Paint colour: Fine silver(901)) Sun shield: ASA resin, coated (Paint colour: Fine silver(901)) Dome: Clear polycarbonate resin	

[1] When power is on continuously, the camera's interior temperature is −10 °C or higher

Pan and Tilt	
Panning Range	360 ° endless
Panning Modes	Manual, auto, manual position, sequential position
Panning Speed[2]	Manual: approx. 0.065 °/s ~ 120 °/s 8 steps, 16 steps, 64 steps Preset: approx. 400 °/s
Tilting Range	−5 ° ~ 185 ° (horizontal - vertical - horizontal) (According to the TILT ANGLE)
Tilting Modes	Manual, manual position, sequential position
Tilting Speed[2]	Manual: approx. 0.065 °/s ~ 120 °/s 8 steps, 16 steps, 64 steps Preset: approx. 400 °/s

[2] Actual speed depends on type of controller being used.

Lens	
Zoom Ratio	30x (approx. 300x with digital zoom)
Focal Length	3.8 mm ~ 114 mm
Maximum Aperture Ratio	1:1.4 (WIDE) ~ 3.6 (TELE)
Object Distance	1.5 m
Iris Range	F1.4 ~ 22, Close
Angular Field of View	Horizontal: 1.8 ° (TELE) ~ 52 ° (WIDE) Vertical: 1.4 ° (TELE) ~ 40 ° (WIDE)

Main Functions	
Controller Interface	Coaxial Multiplex System, RS-485
Control Functions	Pan and tilt, zoom and focus, 256 preset positions, home position, patrol
AGC	ON (LOW), ON (MID), ON (HIGH), OFF
Title(ID)	ON, OFF (Preset ID, camera ID, area title: 16 alphanumeric characters)
Zoom Speed	approx. 6.0 seconds (TELE ~ WIDE) in manual mode
Zoom Limit	1x ~ 300x (Over 30x is digital zoom)
Password Lock	All menus
Auto Focus	MANUAL/AUTO (PAN, TILT, ZOOM linked)
Iris	ALC (Adjustable OPEN/CLOSE output target level)/MANUAL
Shutter	OFF (1/50), AUTO, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 s
Electronic Sensitivity Enhancement	32x max. (AUTO or FIX)
Auto Mode	OFF, SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK
Auto Pan Key	SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK
Digital Flip	ON/OFF
Super Dynamic III	ON/OFF
Video Motion Detector	OFF/MODE1/MODE2
Alarm Input/Output	4 inputs (ALARM IN 1 ~ ALARM IN 4) 2 outputs (ALARM/AUX1, BW/AUX2)
Black and White Mode Switching	AUTO/ON/OFF
Privacy Zone	ON/OFF (8 zone settings)
Patrol	STOP/PLAY/LEARN
Cleaning	ON/OFF
Image Hold	ON/OFF
Auto Image Stabilizer	ON/OFF
Scene Select Setting	INDOOR (L)/INDOOR (H)/OUTDOOR (L)/OUTDOOR (H)
Language Setting	English, German, French, Italian, Spanish, Russian, Chinese, or Japanese