

C-CC704 Combination Camera



DESCRIPTION

The C-CC704 is a high-resolution, indoor-use, vandal-resistant 24V AC type surveillance camera with 360° coverage, a 10X optical zoom lens, and a high-speed camera drive for 200° horizontal rotation and vertical tilting per second. A 12X electronic zoom works in tandem with the 10X optical zoom lens for greatly enhanced 120X zooming. The unit's privacy masking feature enables user-selected areas in a camera's field of view to be excluded from surveillance. A route tracing function enables the traces of joystick movement to be recorded as a route for up to 120 seconds. Eight different routes can be programmed. A tour function allows users to program up to 60 steps out of 64 preset camera positions as a tour pattern to automatically monitor the preset positions in order. This allows a camera to continuously repeat a travel pattern as a tour, for up to 8 tour patterns. Each tour program may be replaced by a different travel pattern that has been activated by an alarm input or timer. This alarm function enables three desired camera operations -- position replay, touring and tracing -- to be programmed to activate when the camera receives an alarm input. The camera is equipped with a maximum of four alarm inputs and each alarm input can be set to respond with a different preprogrammed camera movement pattern. Since the camera unit is constructed of diecast aluminum alloy and its dome cover is made of polycarbonate, the C-CC704 is highly resistant to even powerful impacts.

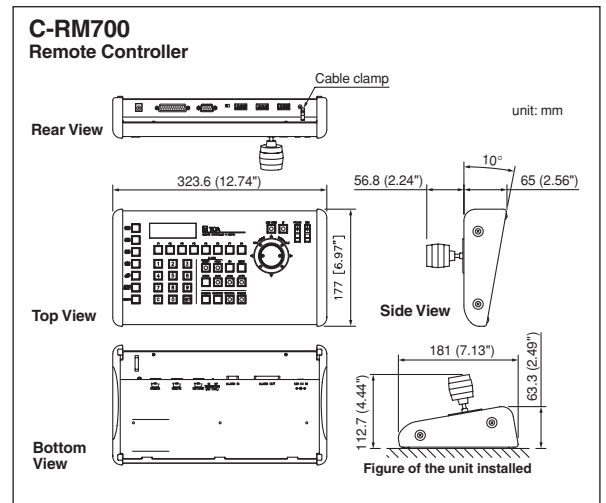
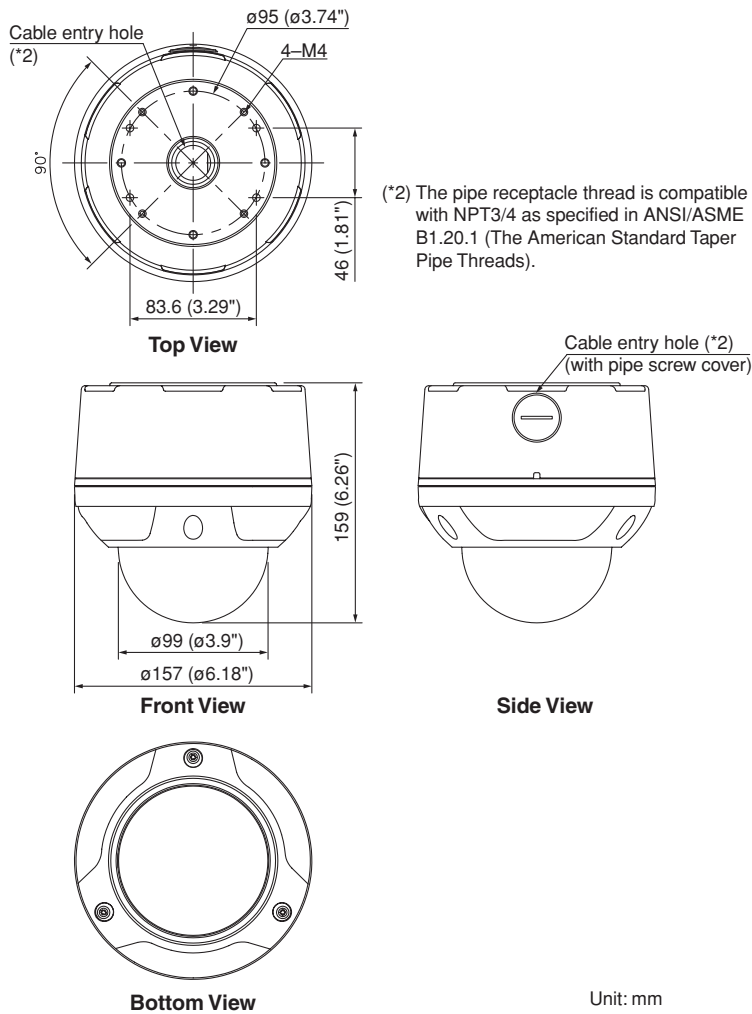
FEATURES

- High resolution: 470 TVL
- 1/4-inch CCD with a resolution of 380,000 pixels (NTSC)
- High sensitivity
Minimum Illumination: 2 lx (High sensitivity mode off, 50 IRE)
0.1 lx (High sensitivity mode on, 50 IRE)
- 64 preset positions
- 120X zoom (optical 10X, electronic 12X)
- Auto-focus
- Tilt rotation range: +2° to -90°
- Pan rotation range: continuous 360°
- High speed pan/tilt: 200°/ second
- Four alarm inputs
- Dust and water-proof construction (IP66*)
*When C-BC704W or C-BC704PB is used.
- High resistance to strong impacts
- Privacy masking function (up to 8)
- Auto-pan, Auto-trace, and Auto-tour functions
- RS-485 protocol control



NTSC

APPEARANCE AND DIMENSIONAL DIAGRAM



SPECIFICATIONS

Power Source	24V AC 50/60Hz
Power Consumption	11W
Control	RS-485 communications system (applicable protocol: Type A, Type B)
Video Output	VBS 1.0V(p-p), 75Ω
Camera Control Terminal	RS-485 camera control connector
Alarm Input	4 channels, no-voltage make contact input, open voltage: 5V DC, short-circuit current: Under 8mA (settable alarm action)
Synchronization	Internal synchronization
ID	8 characters (alphanumeric and symbols) Camera, Position, Trace, Auto-pan, Tour, Sector
No. of Preset Positions	64
Automatic Operation	Auto-pan, Auto-trace (8 preset patterns (120s)), Tour (8 preset patterns)
Timer	Refresh: Starts at the preset time every week by timer settings
Language	English, Japanese
Camera	
Image device	1/4 type CCD
Resolution	Horizontal: 470 lines (at center)
Number of Effective Pixels	768 (H) x 494 (V) (380,000 pixels)
Scanning System	2 : 1 interface
Scanning Frequency	Horizontal: 15.734kHz, Vertical: 59.94Hz
S/N ratio	50dB
Minimum Illumination	High-sensitivity function OFF: 2 lx (50 IRE), 0.4 lx (20 IRE) High-sensitivity function ON: 0.1 lx (50 IRE), 0.03 lx (20 IRE)
Backlight Compensation	ON/OFF
High-Sensitivity Function	Slow shutter mode (64 times max.)
White Balance	ATW/AWB
Iris	Automatic
Flicker Reduction	Automatic correction
Electronic Zooming	12x zooming
Auto-Focus	Stop AF

Lens	
Zooming	10X
Effective Focal Length	f = 3.8 – 38mm (10X)
Effective Angle of View	Horizontal: 50.7° (W) – 5.4° (T), Vertical: 39.1° (W) – 4.1° (T)
Maximum Aperture	F 1.8 (W) – F 2.4 (T)
Zoom Speed	WIDE end to TELE end Approx. 2.1s (preset operation), Approx. 2.1s (manual operation)
Pan/Tilt Head	
Rotating Range	Panning: Endless 360° rotation, Tiltting: +2° to –90°
Rotating Speed	Panning/Tiltting: Approx. 200°/s max. (preset operation), Approx. 200°/s max. (manual operation)
Other Function	
Operating Temperature	Privacy Masking (up to 8), –10°C to +50°C (14°F to 122°F) (The power needs to be continuously kept on under 0°C (32°F))
Operating Humidity	Under 90% RH (no condensation)
Application	Indoor used
Dust/Water Protection	IP66*
Finish	Case, decorative frame: Die-cast aluminium, light gray, paint Dome cover: PC resin (transparent)
Dimensions	Camera section external diameter: ø157 × 159 (H)mm (ø6.18" × 6.26"), Dome external diameter: ø99mm (ø3.9")
Weight	1.8kg (3.97 lb)
Accessory	CD (manual (PDF)) × 1, Dome cover mounting screw (M4 × 10) × 3, Composite cable × 1, TORX wrench × 1, Sealing tape × 1
Option	Wall mounting bracket: C-BC704W, Pole mounting bracket: C-BC771PM, Flush ceiling mounting bracket: C-BC704U, Pendant adapter: C-BC704PB

*1 Provided that the optional C-BC704W Wall Mounting Bracket or C-BC704PB Pendant Adapter is used in combination.

ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

GENERAL REQUIREMENTS

The product specified shall be a motorized speed dome camera system designed for indoor surveillance applications. The camera system consists of a high resolution CCD camera using 1/4-inch type CCD imager with a motorized 10X zoom, auto-iris, auto-focus lens; electronic 12X digital zoom; a high speed, continuous 360 degree/second, pan/tilt mechanism; programmable privacy masking; internal CPU circuitry with external programming via RS-485 from camera remote control unit or RS-232 from PC with TOA camera setup software; compatible with Pelco-D, Bosch and Panasonic protocols.

Alarm inputs: (4) Four channels shall be provided to trigger preset selected targets.

Titling options: To facilitate camera use, various titles can be input and displayed on the monitor.

In addition to camera and position titles, other titles for display include: trace title (displayed while the trace function is on), tour title (displayed when tour function is activated) and alarm title (displayed when an alarm input is received).

Preset operation start with Timer program function: The camera shall conveniently be set to begin operation at a preset time with a built-in timer. The timer can be set for a specific date, day of the week or daily.

Fully automatic operation mode shift includes sensitivity boost, AGC, normal condition and backlight compensation to smoothly transition as lighting conditions change.

Route tracing function: The traces of joystick movement can be recorded as a route for up to 120 seconds. (8) Eight different routes can be programmed.

Tour function: Among 64 preset positions, up to 60 steps can be programmed as a tour pattern to automatically monitor preset points in order. Up to (8) eight tour patterns can be programmed. Any tour program is able to have a different travel pattern that can be activated by an alarm input or timer.

Programmable Alarm function: Desired camera operations such as position replay, touring and tracing can be programmed to activate when the camera receives an alarm input. The camera is equipped with (4) four alarm inputs and each alarm input can be set to respond with different preprogrammed operation.

Outdoor Installation: The camera shall fully conforms to IP66 standards. Other functions shall include 64 preset positions, automatic positional correction (automatic positional deviation) and refresh function (slip-ring cleaning).

The camera shall have flexible installation options utilizing the wide range of mounting brackets available.

CAMERA SPECIFICATIONS

Image device: 1/4 type CCD

Horizontal Resolution: 470 TVL (at center) NTSC

Signal to Noise Ratio: 50dB

Minimum Illumination:

High-sensitivity function OFF: 2 lx (50 IRE), 0.4 lx (20 IRE)

High-sensitivity function ON: 0.1 lx (50 IRE), 0.03 lx (20 IRE)

Backlight compensation: ON/OFF

High-Sensitivity Function: Slow shutter mode (64 times max.)

White Balance: ATW/AWB

Flicker Reduction: Automatic correction

Electronic Zooming: 12x zooming

Auto-Focus: Stop AF

LENS SPECIFICATIONS

Zooming: 10x

Effective Focal Length: $f=3.8\text{--}38\text{mm}$ (10x)

Effective Angle of View: Horizontal: 50.7° (W) – 5.4° (T)
Vertical: 39.1° (W) – 4.1° (T)

Maximum Aperture: F 1.8 (W) – F 2.4 (T)

Zoom Speed: WIDE end to TELE end

Approx. 2.1 sec (preset operation)

Approx. 2.1 sec (manual operation)

PAN/TILT HEAD SPECIFICATIONS

Rotating Range: Panning: Endless 360°

Tilting: $+2^\circ$ to -90°

Rotating Speed: Panning/Tilting: 200°/sec max. (preset operation),
200°/sec max. (manual operation)

ELECTRICAL SPECIFICATIONS

Power Source: 24V AC 50/60 Hz

Power Consumption: 11W

Control: RS-485

Video output: VBS 1.0V(p-p), 75Ω

MECHANICAL SPECIFICATIONS

Dimensions: Camera section external diameter: $\phi 157 \times 159$ mm (H)
($\phi 6.18" \times 6.26"$)

Dome external diameter: $\phi 99\text{mm}$ ($\phi 3.9"$)

Weight: 1.8 kg (3.97 lb)

Rotating range: Panning: Endless 360° rotation,
Tilting range: $+2^\circ$ to -90°

Rotating speed: Panning/Tilting: 200°/sec max. (preset operation),
200°/sec max. (manual operation)

Finish: Case, decorative frame: Die-cast aluminum, light gray, paint
Dome cover: PC resin (transparent)

ENVIRONMENTAL SPECIFICATIONS

Operating temperature: -10°C to $+50^\circ\text{C}$ (14°F to $+122^\circ\text{F}$)

Operating humidity: Under 90% RH (no dew condensation)

CERTIFICATIONS AND RATINGS

Dust/Water protection: IP66

This device complies with part 15 of FCC rules.

Safety: UL Listed

The speed dome camera shall be TOA model C-CC704.

The remote controller shall be TOA model RM-700.

The wall mounting bracket shall be TOA model C-BC704W.

The flush ceiling mounting bracket shall be TOA model C-BC704U.

The pole mounting bracket shall be TOA model C-BC771PM.

The pendant-mount adapter shall be TOA model C-BC704PB.



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