# COMBINATION DOME CAMERA SYSTEMS

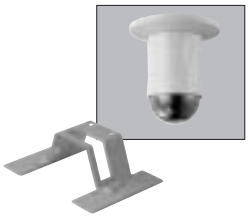
## Combination Dome Cameras



**C-CC504S**
**standard type**

**C-CC554S**
**multi function type**

## Brackets and Cover



**C-BC501**
Ceiling Mount Bracket



**C-BC501U**
Flush Ceiling Mount Bracket



**C-BC501T**
Ceiling Suspension Bracket



**C-BC501K**
Wall Mounting Bracket



**C-A501DM**
Smoked Dome Cover

## Controller and Units



**C-RM500**
Remote Controller



**C-IF500**
Interface Unit



**C-AL80**
Alarm Unit

TOA

# C-CC554S/C-CC504S

## Configuring a perfect surveillance system.

### High resolution
The cameras feature a high horizontal resolution of 480 lines (NTSC/PAL) for high quality images.

### Versatile installation
Designed to be compatible with various installation conditions, the cameras feature a water and dust-resistant construction (conforming to IP52 requirements).

### Silent operation
Effective surveillance needs to be silent. When operating, noise levels measured at just 25dB (A weighting) make sure cameras do not call attention to themselves.

### All-seeing high speed eyes
TOA's combination dome cameras don't miss a thing with their extended rotation range of 360° that covers every position point. The maximum high-speed rotating (pan/tilt) speed of 360°/second can also be slowed down as desired.




### Wide Dynamic Range Function*
TOA's combination dome cameras based on conventional technology met problems when the target field contained areas of different brightness. As these photographs visually illustrate the point, focusing on outdoor makes indoor too dark to comprehend (Photo A). On the other hand, focusing on indoor created whiteout of outdoor (Photo B). Combination Dome Cameras overcome this problem by use of special DSP. The result is single clear image resembling that of a human eyesight.



High-speed shutter loses details of indoor. (Photo A)

Low-speed shutter creates whiteout of outdoor. (Photo B)



Electronically combining the images taken using both low-speed and high-speed shutter gives single clear image.

### Closeup zooming
To enable accurate surveillance from a remote location, TOA's combination dome cameras feature highly two effective zoom modes — optical and electronic for enlarging the view beyond the optical zoom. Optical mode uses the lens to achieve a 22X (C-CC504S) or 23X (C-CC554S) zoom. The digital signal processing abilities built-into these units makes use of video memory to increase electronic sensitivity so that electronic zoom up to a maximum of 176X for the C-CC504S and 230X for the C-CC554S can be used.

### Presetting camera positions
Maximizing user convenience, these cameras allow covering 255 (C-CC554S) or 64 (C-CC504S) different positions. That allows a complete coverage of the area under a camera's surveillance. Camera direction, lens field of view angle and focus can all be preset. Up to 8 alphanumeric characters can be used to title each camera position utilized for identification and quick reference.

### Versatile autofocus modes
To suit application needs, TOA's cameras provide sophisticated auto-focusing with three modes. For normal operation, a single push activates auto focus. Stop Auto Focus is activated whenever the camera view or angle of view is changed. Continuous auto focus mode keeps the auto focus in continuous operation.

### Electronic sensitivity boost and B/W (black/white) mode.
Shutter speed can be adjusted down from a default setting for a higher sensitivity point to optimize image quality. Dark areas can be made up to 32 times brighter. The C-CC554S in addition, also provides a choice of B/W mode to monitor a target and target areas that cannot be seen in normal light.



Sensitivity boost allows cameras to provide good color image quality for dark areas.

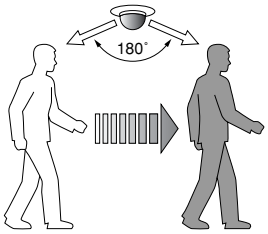
(color image)



C-CC554S B/W mode.

(B/W image)

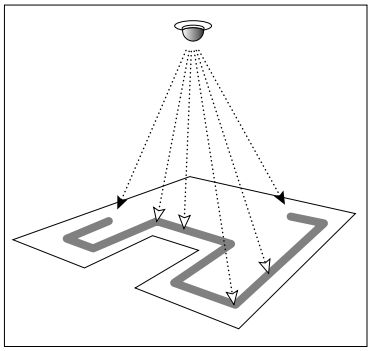
## Auto flip function*




Switching this function (Tilt: 0° – 180°) on prevents having to see an inverted image on the monitor when the camera rotates vertically through a 180° arc of travel. This function automatically flips over the image shown on a monitor so the image is always right side up.

## Route tracing (Auto trace function)*

A camera can be set to monitor preset points for up to 30 seconds, allowing a subject to be traced along a route.



## Autopan function

To effectively monitor a wide area, the autopan function's default Reverse mode allows selecting the left and right limits of camera travel so that it pans automatically between the set travel points. In Skip mode, the camera returns to its starting point before panning again. Selectable parameters for this mode include setting the degree of pan travel and the time between completion of a pan and the start of the next pan.

## Variable speed function

Using lens zooming will automatically set panning speed to ensure optimum performance.

## Preset Freeze function

The Preset Freeze function can be set to stop a camera displaying its view as it moves from one location to another. A pre-recorded image can be designated and displayed on the monitor as the camera moves.

## Preset sequence function*

This function allows presetting the positions to be monitored in numbered sequence or at random. It provides one touch operation for initiating a sequence as well as randomly accessing any desired position.

## Camera title and position reference

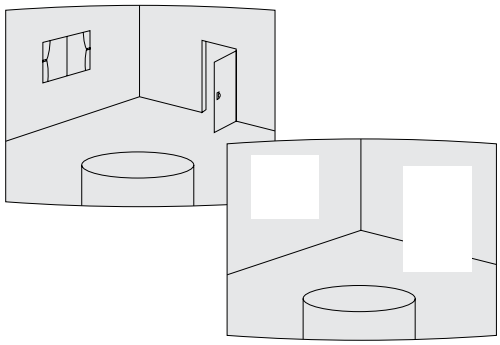
A useful display mode allows setting a title for each camera and position to be displayed on a monitor so that each camera as well as position can be confirmed.

## Alarms enhance system reliability

Each camera is equipped with an alarm input that handles a maximum of 8 alarms, allowing sensors to be connected, increasing overall system reliability.

## Discretionary surveillance with privacy masking*

Each camera allows up to 2 locations in a camera's field of view to be masked to protect privacy.



## Flicker-free operation

Even when used where the AC is at 50Hz instead of the more conventional 60Hz, TOA cameras remain free from flicker. For areas with fluorescent lighting, a flicker-reduction switch can be used to switch shutter speed.

***C-CC554S only**

**Function Comparison Chart**

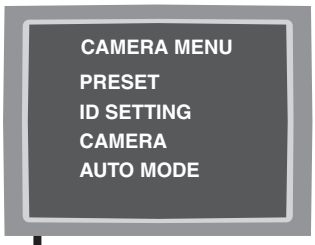
| | C-CC504S | C-CC554S |
|---|---|---|
| Number of Preset Positions | 64 | 255 |
| Zooming | 176x (optical 22x/electronic 8x) | 230x (optical 23x/electronic10x) |
| Tilt Rotation Range | 0° – 90° | 0° – 180° |
| Wide Dynamic range Function | — | ● |
| Auto-Focus | ● | ● |
| High-Sensitivity Function Color mode | ● | ● |
| Day/night camera mode | — | ● |
| Auto-Flip Function | — | ● |
| Privacy Masking Function | — | ● |
| Auto-Trace Function | — | ● |
| Preset Sequence Function | ● | ● |
| Auto-pan Function | ● | ● |
| Preset Freeze Function | — | ● |

# C-CC554S/C-CC504S

## SETTING GUIDE

## SETTING GUIDE

The camera menu screens are comprised of the following setting item screens.




**Setting Item**

- **PRESET** — Programs the camera position (camera orientation), displays setting status, and deletes set data.
  - **MEMORY** — Programs the camera position.
  - **MEMORY MAP** — Displays the set position status.
  - **MEMORY RESET** — Deletes the programmed position.
- **ID SETTING** — Sets the title.
  - **DISPLAY** — Displays camera/position numbers and their titles.
  - **CAMERA ID** — Sets the camera title.
  - **POS ID** — Sets the position title.
  - **ALL DISPLAYS** *1 — Sets the location of the title displays on the monitor.
  - **POS LOCATIONS** *1 — Assigns the same title display location to all camera positions or different display locations to individual camera positions.
  - **LOCATION SHIFT** — Fine-adjusts the title display locations on the monitor.
- **CAMERA** — Sets camera properties.
  - **WHITE BALANCE** *1 — Sets the camera's white balance.
  - **BACKLIGHT** *1 — Sets the backlight compensation.
  - **BRIGHTNESS** *1 — Adjusts the camera's brightness.
  - **SPECIAL** — Sets various camera characteristics.
    - **E-ZOOM** — Sets the maximum electronic zoom power.
    - **AUTO REFRESH** — Sets the automatic refresh function (restoring images displaced by position reproduction or removing dirt of horizontally rotating parts).
    - **ENHANCER** — Sets the contour enhancement function.
    - **CHROMA LEVEL** — Adjusts the chroma level.
    - **PRESET FREEZE** *2 — Freezes the display prior to position reproduction.
    - **AUTO FLIP** *2 — Reverses the displayed images.
    - **SYNC** — Enables camera synchronization and adjusts the phase.
    - **PASSWORD** — Sets the password for entering the camera menu screen.
    - **PRIVACY MASK** *2 — Sets locations to be masked out of view.
    - **DATA XFER** — Transfers data between camera unit and base unit.
      **Note:** This setting is for maintenance purposes only. Do not use in normal operation.
  - **AGC** — Automatically adjusts the camera's brightness.
  - **SHUTTER SPEED** *1 — Sets the shutter speed.
  - **B/W MODE** *2 — Assigns priority to either B/W mode or slow shutter mode depending on the subject's lighting conditions.
  - **SLOW SHUTTER** — Sets the slow shutter limit.
  - **AUTO FOCUS** — Sets the most appropriate auto focus mode.
  - **RESET** — Returns each item on the camera setting screen to the factory-preset status.
- **AUTO MODE** — Sets Auto-Pan, Sequence, and Trace functions to automatic operation.
  - **AUTO KEY** — Assigns automatic functions to the Auto key.
  - **AUTO PAN** — Selects the Auto-Pan function's Reverse or Skip mode.
  - **PAN PAUSE TIME** *1 — Sets the duration to stops at the end of travel during Auto- Pan operation.
  - **PAN SPEED** — Sets the Auto-Pan speed.
  - **PAN DIRECTION** — Sets the direction of Auto-Pan rotation.
  - **PAN LIMIT SETTING** — Sets the Auto-Pan function's left and right limit positions.
  - **PAN LIMIT RESET** — Disables the Auto-Pan function's set left and right limit positions.
  - **SEQUENCE** — Sets the order of sequential camera position displays (sequencing set camera positions to the monitor).
  - **SEQ INTERVAL** *1 — Sets the interval of Sequence displays.
  - **TRACE** *2 — Stores Trace movements (automatically following a set path between 2 predetermined points).
  - **TRACE PAUSE TIME** *2 — Sets the duration of pause interval between Trace operations when continuously repeating Trace displays.

*1 Can also be changed for individual positions at the camera setting screen for individual positions.
*2 Can be only set for the C-CC554S.

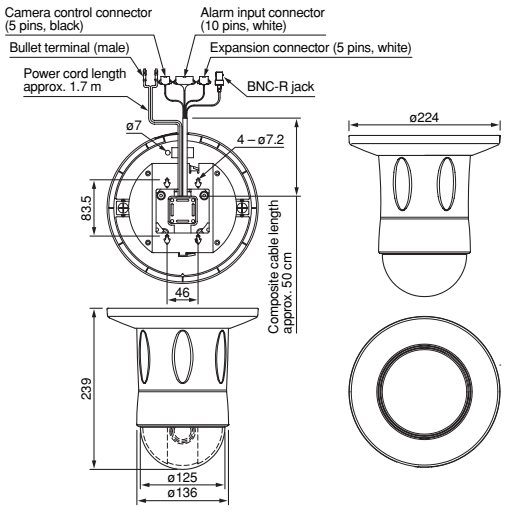
# C-CC554S

## COMBINATION DOME CAMERA



- 255 number of preset position
- 230X zooming (optical 23X, electronic 10X)
- Tilt rotation range 0° – 180° (when Autp-Flip function)
- Pan rotation range continuaus 360°
- Pan/tilt maixmum high speed rotating speed is 360°/sec
- 1/4 type CCD image device
- 480 lines high resolution
- Wide dynamic range
- Autofocus
- High-sensitivity function (color and B/W modes)
- Preset sequency function (number/random sequence)
- Privacy masking function
- Auto-trace function
- Autopan function
- Preset image freeze function

## APPEARANCE AND DIMENSIONAL DIAGRAM




Unit: mm

## SPECIFICATIONS (PAL)

| | |
|---|---|
| **Power source** | 24V AC 50/60Hz |
| **Power consumption** | 10W (normal operation), 25W max. |
| **Control** | RS-485 communications system |
| **Video Output** | VBS 1.0V(p-p) 75Ω |
| **Camera Control Terminal** | RS-485 camera control connector (5 pins, black) |
| **Alarm Input** | 8 channels, no-voltage make contact input, open voltage: 18V DC<br>short-circuit current; Under 2mA, alarm input connector (10 pins, white) |
| **Auxiliary Contact Output** | 2 channels, open collector output, withstand voltage: 30V DC,<br>permissible current: Under 100mA, expansion connector (5 pins, white) |
| **Sensor Power Supply** | 18V DC, 40mA max., expansion connector (5 pins, white) |
| **Synchronization** | Internal synchronization/power synchronization<br>(phase adjustable when in power synchronization mode) |
| **Camera/Position ID** | 8 alphanumeric characters |
| **No. of Preset Positions** | 255 Positions |
| **Camera Address** | 001 – 999 |
| **Camera** | |
| **Image device** | 1/4 type CCD |
| **Resolution** | Horizontal: 480 lines (at center) |
| **S/N ratio** | 50dB |
| **Minimum Illumination** | High-sensitivity function 0FF: 3 lx (350mV), 1 lx (140mV)<br>High-sensitivity function 0N: 0.03 lx (350mV), 0.01 lx (140mV) |
| **Backlight Compensation** | WIDE DYNAMIC/ON/OFF |
| **Dynamic range** | 46dB (backlight compensation: WIDE DYNAMIC operation) |
| **High-Sensitivity Function** | B/W mode and slow shutter mode (32 times max.) |
| **White Balance** | ATW/AWB |
| **Flicker Reduction** | Automatic correction |
| **Electronic Zooming** | 10x zooming |
| **Auto-Focus** | One push/stop AF/continuous |
| **Lens** | |
| **Zooming** | 23x |
| **Effective Focal Length** | f = 3.6 – 82.8mm |
| **Effective Angle of View** | Horizontal: 54° (W) – 2.5° (T), Vertical: 41.6° (W) – 1.9° (T) |
| **Maximum Aperture** | F 1.6 (W) – F 3.7 (T) |
| **Zoom Speed** | WIDE end to TELE end<br>Approx. 1.6s (preset operation), Approx. 2.9s (manual operation) |
| **Pan/Tilt Head** | |
| **Rotating Range** | Panning: Endless 360° rotation, Tilting: 0° to 180° |
| **Rotating Speed** | Panning/Tilting: 360°/s max. (preset operation), 120°/s max. (manual operation) |
| | |
| **Other Function** | Auto-pan, Preset Sequence, Auto-Trace (30s), Auto-Flip, Freeze Preset, Privacy Masking, Refresh Functions |
| **Operating Temperature** | –10˚C to +50˚C (continuously active for operation at temperature below 0°C) |
| **Operating Humidity** | Under 90% (no due condensation produced) |
| **Application** | Indoors and under the eaves |
| **Waterproof Capability** | IP-52 |
| **Finish** | Case/base: Aluminum die-casting, sand gray, paint<br>Dome cover: Acrylic resin (transparent) |
| **Dimensions** | Camera section external diameter: ø136 × 239 (H)mm dome external diameter: ø 125mm |
| **Weight** | 2.6kg |
| **Accessory** | Decorative frame × 1, Camera mounting bracket × 1, Camera base × 1,<br>Camera base mounting screw × 4, Bullet terminal (female) × 2, Insulating sleeve × 2,<br>Extension connector (alarm input, camera control, expansion) × 1 each, Safety wire × 1,<br>CD-R (instruction manual of PDF) × 1 |
| **Option** | Ceiling mounting bracket: C-BC501*, Wall mounting bracket: C-BC501K,<br>Ceiling suspension bracket: C-BC501T, flush ceiling mounting bracket: C-BC501U,<br>Smoked dome cover: C-A 501DM |

* Use this bracket when mounting the camera on the ceiling surface (such as the plasterboard in the double ceiling) not strong enough to structurally support the weight of the camera.

## SPECIFICATIONS (NTSC)

| | |
|---|---|
| **Power source** | 24V AC 50/60Hz |
| **Power consumption** | 10W (normal operation), 25W max. |
| **Control** | RS-485 communications system |
| **Video Output** | VBS 1.0V(p-p) 75Ω |
| **Camera Control Terminal** | RS-485 camera control connector (5 pins, black) |
| **Alarm Input** | 8 channels, no-voltage make contact input, open voltage: 18V DC<br>short-circuit current; Under 2mA, alarm input connector (10 pins, white) |
| **Auxiliary Contact Output** | 2 channels, open collector output, withstand voltage: 30V DC,<br>permissible current: Under 100mA, expansion connector (5 pins, white) |
| **Sensor Power Supply** | 18V DC, 40mA max., expansion connector (5 pins, white) |
| **Synchronization** | Internal synchronization/power synchronization<br>(phase adjustable when in power synchronization mode) |
| **Camera/Position ID** | 8 alphanumeric characters |
| **No. of Preset Positions** | 255 Positions |
| **Camera Address** | 001 – 999 |
| **Camera** | |
| **Image device** | 1/4 type CCD |
| **Resolution** | Horizontal: 480 lines (at center) |
| **S/N ratio** | 50dB |
| **Minimum Illumination** | High-sensitivity function 0FF: 3 lx (350mV), 1 lx (140mV)<br>High-sensitivity function 0N: 0.03 lx (350mV), 0.01 lx (140mV) |
| **Backlight Compensation** | WIDE DYNAMIC/ON/OFF |
| **Dynamic range** | 46dB (backlight compensation: WIDE DYNAMIC operation) |
| **High-Sensitivity Function** | B/W mode and slow shutter mode (32 times max.) |
| **White Balance** | ATW/AWB |
| **Flicker Reduction** | Automatic correction |
| **Electronic Zooming** | 10x zooming |
| **Auto-Focus** | One push/stop AF/continuous |
| **Lens** | |
| **Zooming** | 23x |
| **Effective Focal Length** | f = 3.6 – 82.8mm |
| **Effective Angle of View** | Horizontal: 54° (W) – 2.5° (T), Vertical: 41.6° (W) – 1.9° (T) |
| **Maximum Aperture** | F 1.6 (W) – F 3.7 (T) |
| **Zoom Speed** | WIDE end to TELE end<br>Approx. 1.6s (preset operation), Approx. 2.9s (manual operation) |
| **Pan/Tilt Head** | |
| **Rotating Range** | Panning: Endless 360° rotation, Tilting: 0° to 180° |
| **Rotating Speed** | Panning/Tilting: 360°/s max. (preset operation), 120°/s max. (manual operation) |
| | |
| **Other Function** | Auto-pan, Preset Sequence, Auto-Trace (30s), Auto-Flip, Freeze Preset, Privacy Masking, Refresh Functions |
| **Operating Temperature** | –10˚C to +50˚C (continuously active for operation at temperature below 0°C) |
| **Operating Humidity** | Under 90% (no due condensation produced) |
| **Application** | Indoors and under the eaves |
| **Waterproof Capability** | IP-52 |
| **Finish** | Case/base: Aluminum die-casting, sand gray, paint<br>Dome cover: Acrylic resin (transparent) |
| **Dimensions** | Camera section external diameter: ø136 × 239 (H)mm dome external diameter: ø 125mm |
| **Weight** | 2.6kg |
| **Accessory** | Decorative frame × 1, Camera mounting bracket × 1, Camera base × 1,<br>Camera base mounting screw × 4, Bullet terminal (female) × 2, Insulating sleeve × 2,<br>Extension connector (alarm input, camera control, expansion) × 1 each, Safety wire × 1,<br>CD-R (instruction manual of PDF) × 1 |
| **Option** | Ceiling mounting bracket: C-BC501*, Wall mounting bracket: C-BC501K,<br>Ceiling suspension bracket: C-BC501T, flush ceiling mounting bracket: C-BC501U,<br>Smoked dome cover: C-A 501DM |

* Use this bracket when mounting the camera on the ceiling surface (such as the plasterboard in the double ceiling) not strong enough to structurally support the weight of the camera.

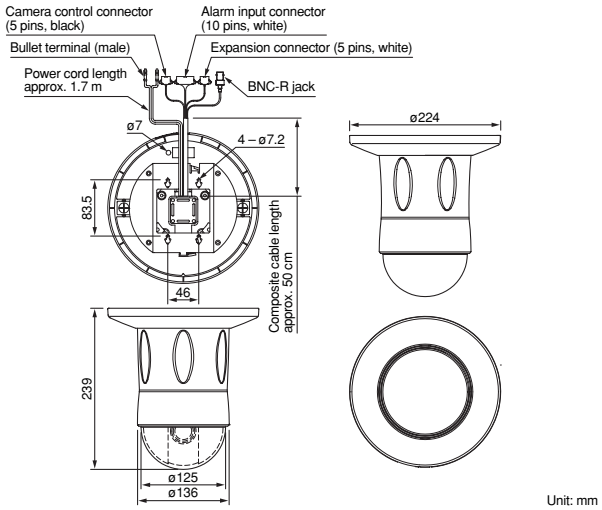
# C-CC504S

## COMBINATION DOME CAMERA



- 64 number of preset position
- 176X zooming (optical 22X, electronic 8X)
- Tilt rotation range 0° – 90°
- Pan rotation range continuaus 360°
- Pan/tilt maixmum high speed rotating speed is 360°/sec
- 1/4 type CCD image device
- 480 lines high resolution
- Wide dynamic range
- Autofocus
- High-sensitivity function (color mode)
- Preset sequency function (number/random sequence)
- Autopan function

## APPEARANCE AND DIMENSIONAL DIAGRAM




Unit: mm

## SPECIFICATIONS (PAL)

| | |
|---|---|
| **Power source** | 24V AC 50/60Hz |
| **Power consumption** | 10W (normal operation), 25W max. |
| **Control** | RS-485 communications system |
| **Video Output** | VBS 1.0V(p-p) 75Ω |
| **Camera Control Terminal** | RS-485 camera control connector (5 pins, black) |
| **Alarm Input** | 8 channels, no-voltage make contact input, open voltage: 18V DC<br>short-circuit current; Under 2mA, alarm input connector (10 pins, white) |
| **Auxiliary Contact Output** | 2 channels, open collector output, withstand voltage: 30V DC,<br>permissible current: Under 100mA, expansion connector (5 pins, white) |
| **Sensor Power Supply** | 18V DC, 40mA max., expansion connector (5 pins, white) |
| **Synchronization** | Internal synchronization/power synchronization<br>(phase adjustable when in power synchronization mode) |
| **Camera/Position ID** | 8 alphanumeric characters |
| **No. of Preset Positions** | 64 Positions |
| **Camera Address** | 001 – 999 |
| **Camera** | |
| **Image device** | 1/4 type CCD |
| **Resolution** | Horizontal: 480 lines (at center) |
| **S/N ratio** | 50dB |
| **Minimum Illumination** | High-sensitivity function OFF: 3 lx (350mV), 1 lx (140mV)<br>High-sensitivity function ON: 0.1 lx (350mV), 0.03 lx (140mV) |
| **Backlight Compensation** | ON/OFF |
| **High-Sensitivity Function** | Slow shutter mode (32 times max.) |
| **White Balance** | ATW/AWB |
| **Flicker Reduction** | Automatic correction |
| **Electronic Zooming** | 8x zooming |
| **Auto-Focus** | One push/stop AF/continuous |
| **Lens** | |
| **Zooming** | 22x |
| **Effective Focal Length** | f = 4.0 – 88mm |
| **Effective Angle of View** | Horizontal: 47.3° (W) – 2.2° (T), Vertical: 36.5° (W) – 1.7° (T) |
| **Maximum Aperture** | F 1.6 (W) – F 3.8 (T) |
| **Zoom Speed** | WIDE end to TELE end<br>Approx. 1.6s (preset operation), Approx. 2.9s (manual operation) |
| **Pan/Tilt Head** | |
| **Rotating Range** | Panning: Endless 360° rotation, Tilting: 0° to 90° |
| **Rotating Speed** | Panning/Tilting: 360°/s max. (preset operation), 120°/s max. (manual operation) |
| | |
| **Other Function** | Auto-pan, Preset Sequence, Refresh Functions |
| **Operating Temperature** | –10˚C to +50˚C (continuously active for operation at temperature below 0°C) |
| **Operating Humidity** | Under 90% (no due condensation produced) |
| **Application** | Indoors and under the eaves |
| **Waterproof Capability** | IP-52 |
| **Finish** | Case/base: Aluminum die-casting, sand gray, paint<br>Dome cover: Acrylic resin (transparent) |
| **Dimensions** | Camera section external diameter: ø136 × 239 (H)mm (dome external diameter: ø 125mm) |
| **Weight** | 2.6kg |
| **Accessory** | Decorative frame × 1, Camera mounting bracket × 1, Camera base × 1,<br>Camera base mounting screw × 4, Bullet terminal (female) × 2, Insulating sleeve × 2,<br>Extension connector (alarm input, camera control, expansion) × 1 each, Safety wire × 1,<br>CD-R (instruction manual of PDF) × 1 |
| **Option** | Ceiling mounting bracket: C-BC501*, Wall mounting bracket: C-BC501K,<br>Ceiling suspension bracket: C-BC501T, flush ceiling mounting bracket: C-BC501U,<br>Smoked dome cover: C-A 501DM |

* Use this bracket when mounting the camera on the ceiling surface (such as the plasterboard in the double ceiling) not strong enough to structurally support the weight of the camera.

## SPECIFICATIONS (NTSC)

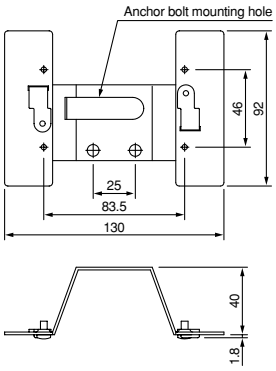
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| **Control** | RS-485 communications system |
| **Video Output** | VBS 1.0V(p-p) 75Ω |
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| **Image device** | 1/4 type CCD |
| **Resolution** | Horizontal: 480 lines (at center) |
| **S/N ratio** | 50dB |
| **Minimum Illumination** | High-sensitivity function OFF: 3 lx (350mV), 1 lx (140mV)<br>High-sensitivity function ON: 0.1 lx (350mV), 0.03 lx (140mV) |
| **Backlight Compensation** | ON/OFF |
| **High-Sensitivity Function** | Slow shutter mode (32 times max.) |
| **White Balance** | ATW/AWB |
| **Flicker Reduction** | Automatic correction |
| **Electronic Zooming** | 8x zooming |
| **Auto-Focus** | One push/stop AF/continuous |
| **Lens** | |
| **Zooming** | 22x |
| **Effective Focal Length** | f = 4.0 – 88mm |
| **Effective Angle of View** | Horizontal: 47.3° (W) – 2.2° (T), Vertical: 36.5° (W) – 1.7° (T) |
| **Maximum Aperture** | F 1.6 (W) – F 3.8 (T) |
| **Zoom Speed** | WIDE end to TELE end<br>Approx. 1.6s (preset operation), Approx. 2.9s (manual operation) |
| **Pan/Tilt Head** | |
| **Rotating Range** | Panning: Endless 360° rotation, Tilting: 0° to 90° |
| **Rotating Speed** | Panning/Tilting: 360°/s max. (preset operation), 120°/s max. (manual operation) |
| | |
| **Other Function** | Auto-pan, Preset Sequence, Refresh Functions |
| **Operating Temperature** | –10˚C to +50˚C (continuously active for operation at temperature below 0°C) |
| **Operating Humidity** | Under 90% (no due condensation produced) |
| **Application** | Indoors and under the eaves |
| **Waterproof Capability** | IP-52 |
| **Finish** | Case/base: Aluminum die-casting, sand gray, paint<br>Dome cover: Acrylic resin (transparent) |
| **Dimensions** | Camera section external diameter: ø136 × 239 (H)mm (dome external diameter: ø 125mm) |
| **Weight** | 2.6kg |
| **Accessory** | Decorative frame × 1, Camera mounting bracket × 1, Camera base × 1,<br>Camera base mounting screw × 4, Bullet terminal (female) × 2, Insulating sleeve × 2,<br>Extension connector (alarm input, camera control, expansion) × 1 each, Safety wire × 1,<br>CD-R (instruction manual of PDF) × 1 |
| **Option** | Ceiling mounting bracket: C-BC501*, Wall mounting bracket: C-BC501K,<br>Ceiling suspension bracket: C-BC501T, flush ceiling mounting bracket: C-BC501U,<br>Smoked dome cover: C-A 501DM |

* Use this bracket when mounting the camera on the ceiling surface (such as the plasterboard in the double ceiling) not strong enough to structurally support the weight of the camera.

# BRACKETS AND DOME COVER

## C-BC501
### Ceiling Mounting Bracket



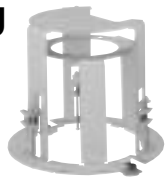


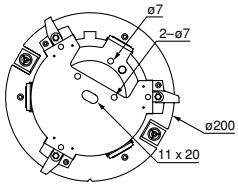

The TOA C-BC501 Ceiling Mounting Bracket is specially designed to mount TOA's Combination Dome Cameras directly on the wall. The bracket facilitates mounting of the camera on the plasterboard in the double ceiling or other locations where the mounting screws cannot be installed securely.

| | |
|---|---|
| **Mountable Board** | Under 40 mm in thickness |
| **Finish** | Surface-treated steel plate |
| **Dimensions** | 130 (W) x 41.8 (H) x 92 (D) mm |
| **Weight** | 130 g |
| **Accessory** | Safety wire (1 m)...1,<br>Bracket mounting screw...4 |
| **Applicable Camera (option)** | C-CC504S, C-CC554S |

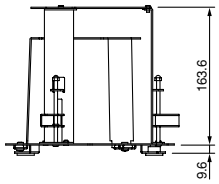
Unit: mm

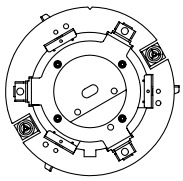
## C-BC501U
### Flush Ceiling Mounting Bracket






The C-BC501U bracket is designed to be exclusively used for flush ceiling mounting of TOA's Combination Dome Camera. Use this bracket when mounting the camera to the ceiling surface where the fixing screws cannot be securely installed, such as on the plaster panel of the dual-construction ceiling. Also use this bracket to minimize the exposure of the camera.



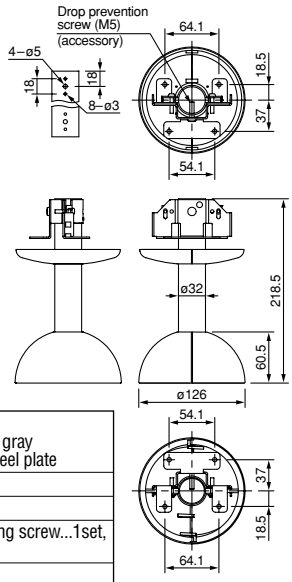



| | |
|---|---|
| **Mountable Board** | Under 40 mm in thickness |
| **Finish** | Surface-treated steel plate |
| **Dimensions** | ø200 x 173.2 (D) mm |
| **Weight** | 860 g |
| **Accessory** | Safety wire (1 m)...1,<br>Pattern paper...1,<br>Camera holder mounting screw...1 set |
| **Applicable Camera (option)** | C-CC504S, C-CC554S, |

Unit: mm

## C-BC501T
### Ceiling Suspension Bracket





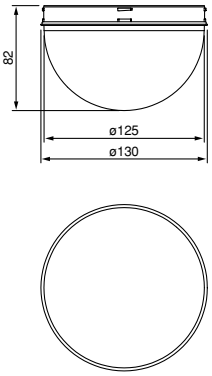

The TOA C-BC501T Ceiling Suspension Bracket is specially designed to mount TOA's Combination Dome Cameras in hanging ceiling installations.

| | |
|---|---|
| **Finish** | Pipe: Stainless steel pipe<br>Resin cover: ABS resin, sand gray<br>Metal part: Surface-treated steel plate |
| **Dimensions** | ø126 x 218.5 mm |
| **Weight** | 580 g |
| **Accessory** | Safety wire (1 m)...1, Mounting screw...1set,<br>Pattern paper...1 |
| **Applicable Camera (option)** | C-CC504S, C-CC554S |

Unit: mm

## C-A501DM
### Smoked Dome Cover





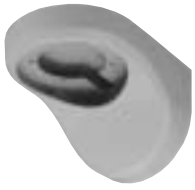

The TOA C-A501DM Smoked Dome Cover is specially designed to be used in conjunction with TOA's Combination Dome Cameras.
The Dome Cover is used to make it difficult for individuals to see the camera's orientation.

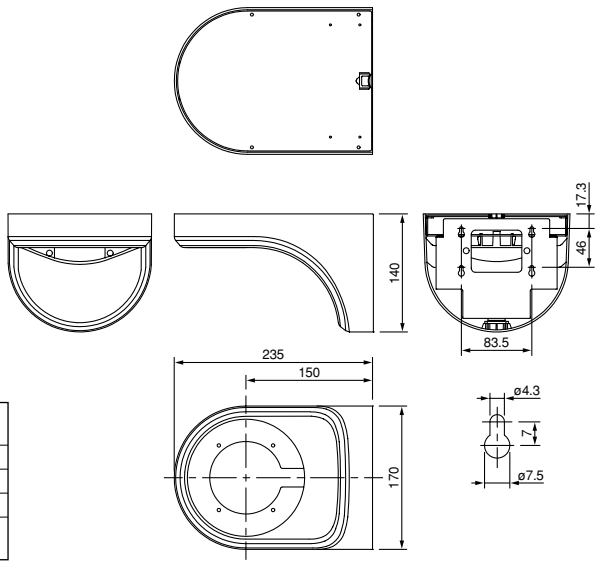
| | |
|---|---|
| **Transmissivity** | Approx. 20% * |
| **Finish** | Acrylic resin (smoked) |
| **Dimensions** | ø130 x 82 (H) mm |
| **Weight** | 60 g |
| **Applicable Camera (option)** | C-CC504S, C-CC554S |

* As a general guideline, the minimum object illumination of the camera equipped with the Smoked Dome Cover is approximately 5 times that of the camera without the cover.

Unit: mm

## C-BC501K
### Wall Mounting Bracket






The TOA C-BC501K Wall Mounting Bracket is specially designed to mount TOA's Combination Dome Cameras to wall surfaces.
Install the unit only in a location that can structurally support the weight of the unit and camera.

| | |
|---|---|
| **Finish** | Resin cover: ABS resin, sand gray<br>Metal part: Surface-treated steel plate |
| **Dimensions** | 170 (W) x 140 (H) x 235 (D) mm |
| **Weight** | 1.1 kg |
| **Accessory** | Mounting screw...1set, Cable clip...2 |
| **Applicable Camera (option)** | C-CC504S, C-CC554S |

Unit: mm

# C-RM500

## REMOTE CONTROLLER



The C-RM500 Remote Controller is designed for use in camera-based systems that allow remote control from up to 1.2km away over RS-485 communication lines. It allows video images to be switched remotely and can handle a maximum of 16 TOA's Combination Dome Cameras when used together with the TOA Multiplexer. Easy-to-see LEDs inform status of control, alarm, focus and other functions.

- **Control up to 16 TOA's Combination Dome Cameras**
  Realtime control as well as preprogrammed position retrieval of up to 255 positions is provided. Each position allows providing a specific title as well remote image quality adjustment.

- **Instant position recall**
  The most used camera and position numbers can be assigned to function keys A through H for one-touch instant recall. Other camera numbers and position numbers can be assigned to ID numbers from 1 through 512 and easily retrieved using the ten-key pad.

- **Controls Multiplexer**
  The C-RM500 can also control the TOA multiplexers and allows switching video image display modes – single screen, single screen in sequence, 4-screens in sequence, as well as 4, 9, 10 and 16-segment split screens.

- **Alarm capability**
  Alarm signals received by the alarm input of combination dome cameras can be transmitted to the C-RM500 via a pair of RS-485 communication line where the C-RM500's alarm operations can be activated, based on the alarm signal type received. This has reduced the number of signal lines that were conventionally required in an expanded system. An Alarm Hold function allows temporarily suspending automatic switching of video images triggered by an alarm to enable the operator to prioritise the screen currently being viewed. In addition, the C-RM500 can receive alarm signals from an C-AL80 unit through the RS-232C port.

- **2 Location Control**
  The system can be independently controlled in two separate locations by installing 2 C-RM500 units.

## APPEARANCE AND DIMENSIONAL DIAGRAM

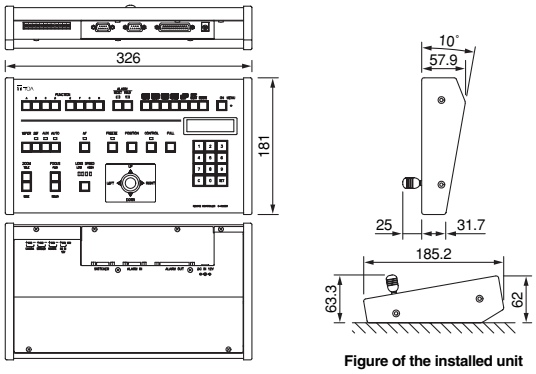



**Figure of the installed unit**

Unit: mm

## SPECIFICATIONS

| | |
|---|---|
| **Power Source** | 12 V DC |
| **Current Consumption** | 150 mA |
| **Slave Remote Controller** | RS-485, screwless connector |
| **Camera Control** | RS-485, screwless connector (*1) |
| **Switcher Control** | RS-485, screwless connector<br>RS-232C, D-sub connector (9 pins, male) |
| **Alarm Input** | RS-232C, D-sub connector (9 pins, male) |
| **Alarm Output/ Control Input** | Alarm output: 16 channels, NPN open collector output, withstand voltage: 30 V DC, control current: 20 mA<br>Alarm input: 1 channel, no-voltage make contact input, open voltage: 5 V DC, short-circuit current: 5 mA max.<br>Home position selection input: 1 channel, no-voltage make contact input, open voltage: 5 V DC, short-circuit current: 5 mA max.<br>D-sub connector (25-pins, female) |
| **Display** | LED indication of control status, alarm status, alarm hold status, still picture status, defroster, auxiliary setting, auto, auto focus, and lens speed<br>LCD indication of key entry confirmation |
| **Alarm Signal** | Continuous alarm tone (can be turned on and off) |
| **Number of Unit Connections** | Up to 2 (one to be set for MASTER unit, another for SLAVE unit) |
| **Maximum Cable Distance** | 1.2 km (*2) (between the Remote controller and the Combination cameras) |
| **Operating Temperature** | 0°C to +50°C |
| **Operating Humidity** | Under 90% RH (no due condensation produced) |
| **Finish** | Panel: Surface-treated steel plate, sand gray, paint<br>Sides: Rubber |
| **Dimensions** | 326 (W) × 62 (H) × 185.2 (D) mm |
| **Weight** | 1.8 kg |
| **Accessory** | D-sub connector (9 pins, male) × 1,<br>D-sub connector(25 pins, male) × 1 |
| **Applicable Model (option)** | Combination dome camera: C-CC504S, C-CC554S<br>Switcher: C-MS161D, C-MS91D<br>Slave remote controller: C-RM500<br>Interface unit: C-IF500<br>Alarm unit: C-AL80 |

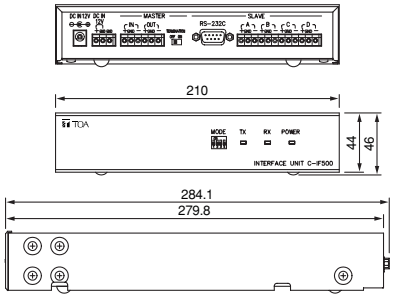
(*1) Can connect up to 31 units mixing with combination cameras and interface units.
(*2) Applies to the system where the unit and combination camera are connected in a matched pair. Represents the total of connected cable distances if multiple combination cameras or interface units are connected in the system (when the CPEV-S cable thicker than 0.65 mm in diameter is used).

# C-IF500
## INTERFACE UNIT



A useful option for configuring camera systems, the C-IF500 functions as a splitter. It provides control over expanding a camera system when the distance is over 1.2km (max. 3km) between the dedicated C-RM500 Remote Controller and system cameras linked to it. It will also allow configuring a star connection. Receiving the RS-485 communication line serial signals, the C-IF500 splits the signals into 4-channel data for slave units and converts into RS-232C data to be used for public line or fiber optics communication. Data communication between master and slave terminals is bidirectional. The C-IF500 also allows easily setting the data communication data transfer rate in four increments via DIP switch to suit network requirements.

## APPEARANCE AND DIMENSIONAL DIAGRAM




Unit: mm

## SPECIFICATIONS

| | |
|---|---|
| **Power Source** | 12 V DC |
| **Current Consumption** | 100 mA |
| **External Control** | Master: RS-485, screwless connector<br>terminating resistance (100 Ω) switch ON/OFF<br>Slave(*1): 4 channel, RS-485, screwless connector<br>RS-232C, D-sub connector (9-pin, male) |
| **Display** | Power LED indicator, communication LED indicators (TX, RX) |
| **Maximum Cable Distance** | RS-485: 1.2 km (*2)<br>RS-232C: 10 m |
| **Communication Speed** | 4800 bps, 9600 bps, 19200 bps, 38400 bps |
| **Operating Temperature** | -10°C to +50°C |
| **Operating Humidity** | Under 90% RH (no due condensation produced) |
| **Finish** | Panel: Aluminum, black, 30% gloss, paint<br>Case: Pre-coated steel plate, 30% gloss, black |
| **Dimensions** | 210 (W) x 46 (H) x 284.1 (D) mm |
| **Weight** | 1.4 kg |
| **Option** | Rack mounting bracket:<br>M-15B-BK (for rack mounting one C-IF500 unit)<br>MB-15B-J (for rack mounting two C-IF500 units) |

(*1) Communications cannot be made between slave terminals.
Each slave terminal can connect up to 31 cameras. (except RS-232C port)

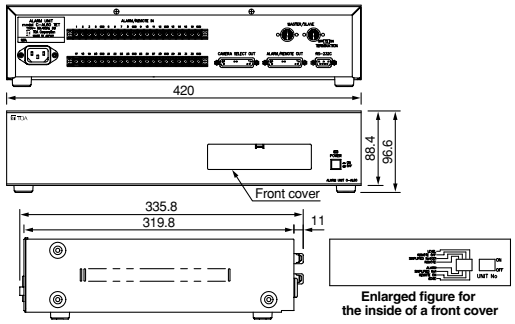
(*2) Applies to the system where the unit and combination camera are connected in a matched pair. Represents the total of connected cable distances if multiple combination cameras or Interface units are connected in the system (when the CPEV-S cable thicker than 0.65 mm in diameter is used).

# C-AL80
## ALARM UNIT



The C-AL80 Alarm Unit serves as the main controller for the alarm requirements of a system by converting alarm signals initiated by externally connected equipment into RS-232C-compatible signal data. In addition to its 32 alarm or remote inputs, the C-AL80 can also be linked to a maximum of 8 other C-AL80 units in master/slave configurations. This provides a total of 256 alarm or remote inputs to be transmitted to the C-RM500 remote controller.

## APPEARANCE AND DIMENSIONAL DIAGRAM



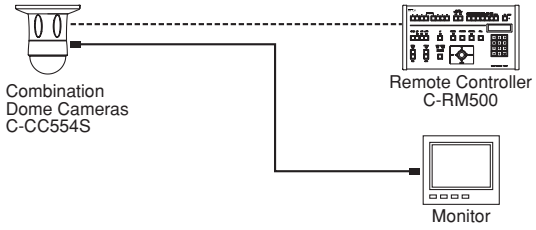

Unit: mm

## SPECIFICATIONS (H/L)

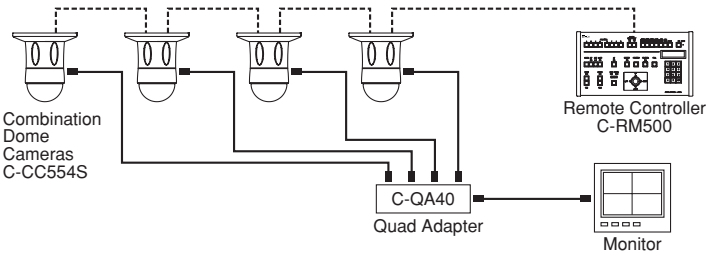
| | |
|---|---|
| **Power Source** | H: 230 V AC, 50/60 Hz<br>L: 120 V AC, 50/60 |
| **Power Consumption** | under 3 W |
| **Alarm/Remote Input** | 32 channels, no-voltage make contact input, open voltage: 5 V DC, short-circuit current: max. 5 mA, M3 screw terminal, distance between barriers: 7.62 mm |
| **Control Input/Output** | 1 channel, RS-232C, D-sub connector (9 P, male)<br>(only valid for master unit), fixed to 38,400 bps |
| **Master/sub Connection Terminal** | 2 channels, RS-485, maximum cable length: 1200m, DIN connector (5 P) |
| **Alarm Reset Input** | 1 channel, no-voltage make contact input, open voltage: 5 V DC, short-circuit current: max. 5 mA, D-sub connector (25 P) |
| **Setting Switches** | Master/Slave: 3-bit DIP switch<br>(Selection of Master or Slave 1—7)<br>Alarm/Remote: 1-bit DIP switch<br>(Alarm/Remote selection)<br>Alarm time: 1-bit DIP switch (Edge/Level selection)<br>RS-485 terminal: Rear-mounted slide switch (RS-485 termination, Enable/Disable selection) |
| **Application** | Indoor use |
| **Operating Temperature** | 0°C to +50°C |
| **Finish** | Panel: Aluminum extrusion, black, 30% gloss<br>Case: Pre-coated steel plate, black, 30% gloss |
| **Dimensions** | 420 (W) × 96.6 (H) × 335.8 (D) mm |
| **Weight** | 3.6 kg |
| **Accessory** | DIN plug × 2, RS-232C cable (2 m) × 1, D-sub connector (25 P) × 2, Power cord (2 m) × 1 |
| **Option** | Rack mounting bracket: MB-23B |
| **Application Model** | Remote controller: C-RM500 |

## SYSTEM EXAMPLES

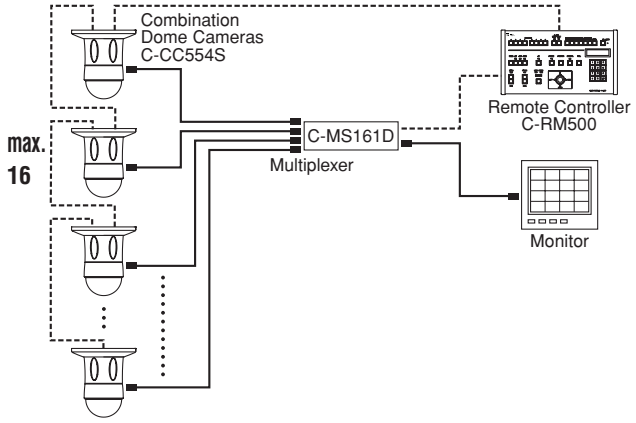
### 1. Combination Dome Camera (1 unit)



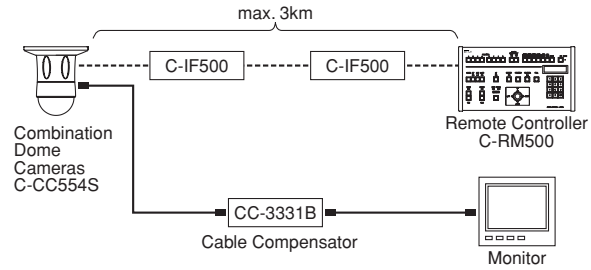

### 2. Combination Dome Cameras (4 units)



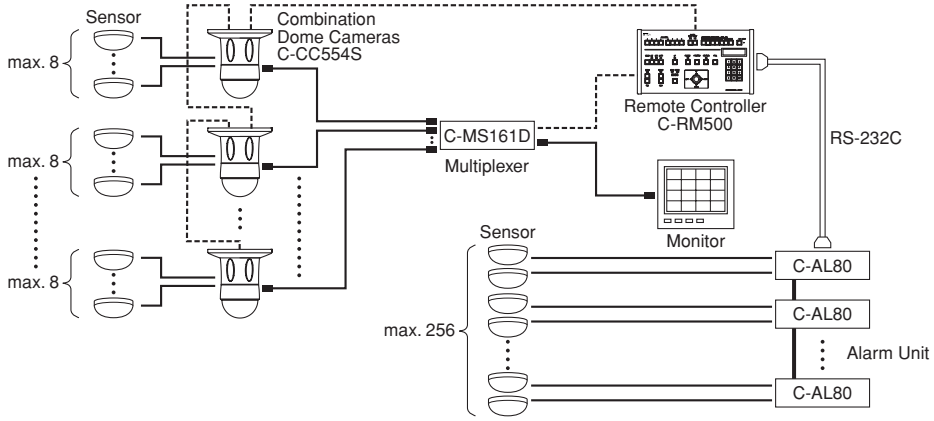

### 3. Combination Dome Camera (16 units)




### 4. When Combination Dome Camera and Remote Controller are separated by more than 1.2km.




### 5. Sensor-activated Dome Camera operation.




TOA Corporation

URL : http://www.toa.jp/

Specifications are subject to change without notice.
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