

Digital Mobile Zoom Camera for Law Enforcement

DTR-600

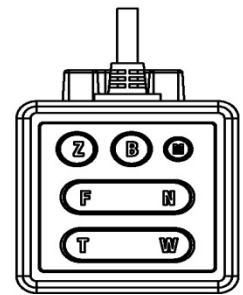
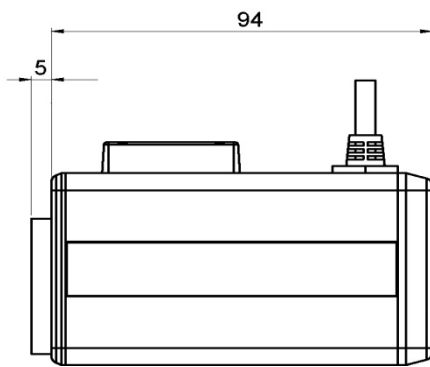
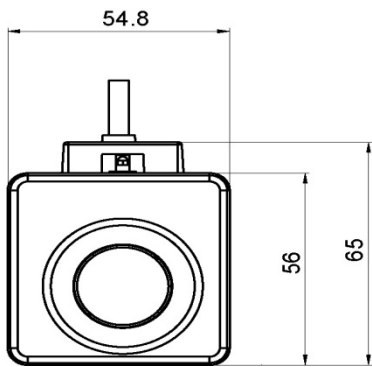
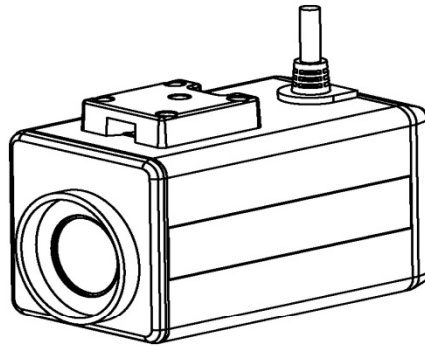
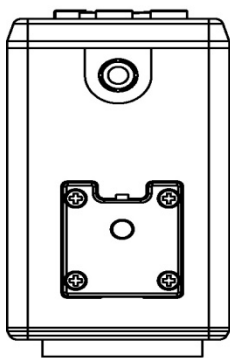
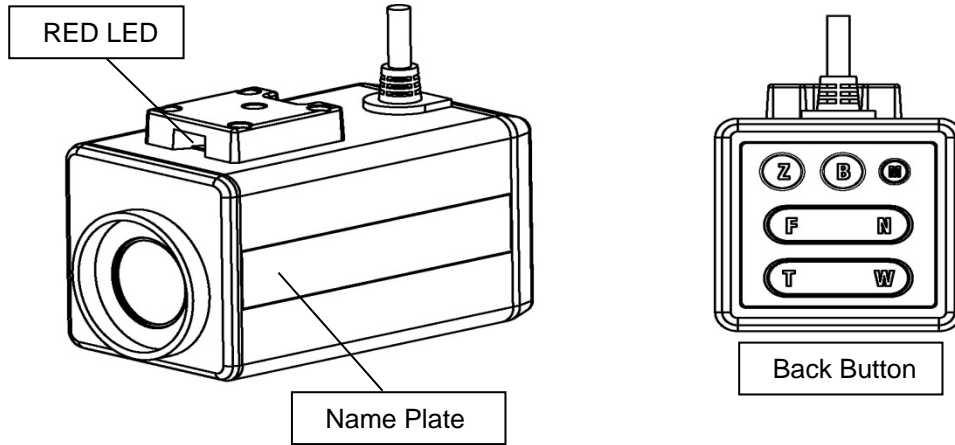


- Read this user's guide carefully for safe operation and proper use of the product.
- Features and specifications are subject to change without notification

Index

- 1. Overview**
- 2. Features**
- 3. Pin Assignment**
- 4. Menu Description**
- 5. Each Function & Operation of the Control Keys**
- 6. On-Screen Display**
- 7. Setting the Menu**
- 8. Specifications**

1. Overview



2. Features

- 1. 1/4 type Exview HAD CCD (PS) 550 TV lines High Resolution**
- 2. WDR (Wide Dynamic Range) Function**
- 3. Day/Night Function, Minimum Illumination – 0.5 lx/1/60 sec (F1.4, 50 IRE)**
- 4. 12x Optical Zoom (144x with Digital Zoom)**
- 5. Small and Lightweight**
- 6. High-speed serial communication (max. 38.4 kbps) and VISCA protocol**
- 7. SMART Lens Control**
- 8. High Performance Digital Signal Processor (DSP)**
- 9. Large Backlight buttons**
- 10. Entire Metal (Aluminum) Body**
- 11. One touch Smart Zoom-in, zoom-out button-Auto & Semi auto supported**
- 12. BLC On/Off Control by Back button**
- 13. Red LED for recording status**
- 16. Flicker / Flickerless mode**

3. Pin Assignment



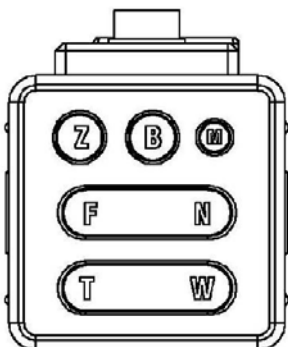
1. VIDEO OUT
2. GND
3. +12V
4. RXD
5. LED ON(OV:LED BLINKING)
6. TXD

4. Menu Description

MENU FORMAT

MAIN MENU
FOCUS SETUP : -
WB SETUP : -
AE SETUP : -
D-ZOOM : OFF
SPOT AE : -
SPECIAL : -
SMART ZOOM : -
FACTORY SET : OFF

5. Each Function & Operation of the Control Keys



Speed Zoom

Normal Operation : Smart Zoom – Two modes Auto / Semi Auto in the menu

Auto : when the zoom key is pressed, the camera will zoom into the pre- programmed position and stay for a number of seconds that is also pre-programmed before zooming out to default position.

Semi-Auto : When the zoom key is pressed, the camera will zoom into the pre-programmed position.
When the zoom key is pressed one more time, the camera will zoom out to default position

B L C

Normal Operation : Toggles back-light compensation mode on/off, **MENU Selection : Enter**

MENU

Menu Operation : Press and hold down for 2~3 seconds to turn on OSD menu.
Pushing MENU button when OSD is displayed will enter into sub-menu and
Pushing MENU button at sub-menu will exit from sub-menu.
If press MENU button in short, it can be Day/Night function

FAR

Normal Operation : Focus Far, **MENU Selection : DOWN**

NEAR

Normal Operation : Focus Near, **MENU Selection : UP**

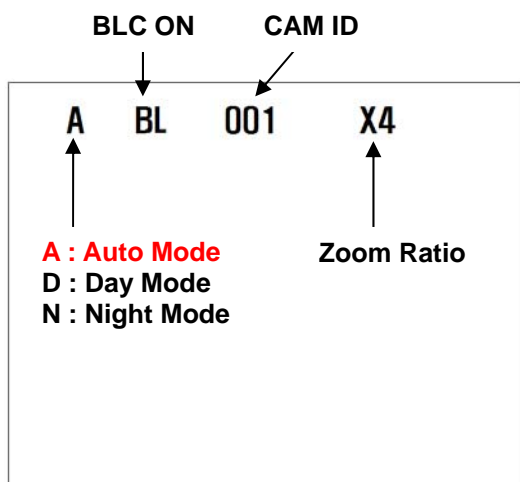
TELE

Normal Operation : Zoom Tele

WIDE

Normal Operation : Zoom Wide

6. On Screen Display



Note) Icon or abbreviation of the function will be displayed for about 5sec
When corresponding key is pressed

7. Setting the Menu

Normal operation : When MENU key pressed it will toggle Day & Night function.

(Auto Mode → Day Mode → Night Mode → Auto Mode →)

The Menu consists of “Main Menu” and “Sub-Menu”.

The main menu is displayed where 8 camera functions can be selected.

To the right of each main selection, the sub-menu is displayed.

Press MENU button for 2~3 seconds to access the main setup MENU. It will show the main MENU. And if you press shortly MENU button again, the screen will be returned to the normal status.

Press BLC(ENTER) button to access detail menu.

```
MAIN MENU
FOCUS SETUP : -
WB SETUP    : -
AE SETUP    : -
D-ZOOM      : OFF
SPOT AE     : -
SPECIAL     : -
SAMRT ZOM   : -
FACTORY SET : OFF
```

FOCUS

Select Camera Zoom and focus

Press FAR NEAR button to the sub menu

```
FOCUS SETUP
MODE       : AUTO
AF SENS    : HIGH
RAIN FOCUS : 30 CM
ZOOM START : X1
ZOOM END   : X12
```

MODE : AUTO / MANUAL

By using the button of B button, you can select Auto Mode or Manual Mode

AF SENS : High / Low --- Auto Focus Sensibility

RAIN FOCUS : 10CM ~ 10M ---- Minimum effective focus distance

ZOOM START : X1 --- Limit of Minimum optical zoom position

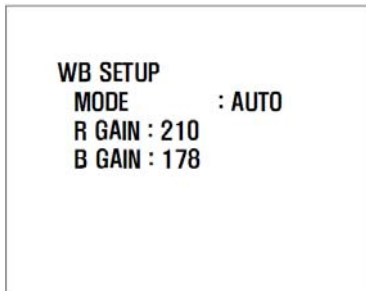
ZOOM END : X12 ---- Limit of the Maximum optical zoom position

Select appropriate magnification using TELE / WIDE key and push BLC(ENTER) to select

- ※ **DIGITAL ZOOM:** Set D-ZOOM value to MAX and set ZOOM END value using TELE KEY & WIDE KEY.
- ※ **ZOOM END value should be higher than ZOOM START value.**
If ZOOM START value is X12 and ZOOM END value is X1, ZOOM SATRT & ZOOM END Value will automatically be changed to X12.

WB(White Balance)

Use to adjust White Balance



MODE : AUTO / INDOOR / OUTDOOR / ATW / MANUAL

AUTO : This mode computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on a range of values from 3000 to 7500K.

INDOOR : 3200K Base Mode

OUTDOOR : 5800K Base Mode

ATW : Auto Tracing White balance (2000 to 10000K)

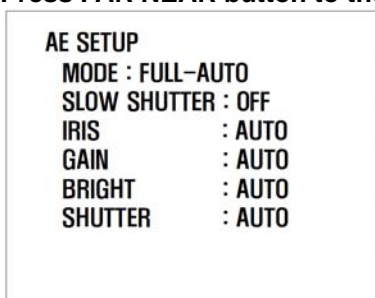
MANUAL : Manual control of R and B gain, 256(0~255) steps each

R-GAIN & B-GAIN can be change when MODE is set as MANUAL.

AE

Use to adjust picture brightness

Press FAR NEAR button to the sub menu



MODE : FULL AUTO, MANUAL, SHUTTER PRIO, IRIS PRIO, BRIGHT

SLOW SHUTTER : OFF, ON

IRIS : AUTO

GAIN : AUTO

Bright : AUTO

Shutter : AUTO.

In this mode, AE is adjusted automatically shutter speed selected (1/1~ 1/10000)

Note : Slow Shutter can be On only when Mode is Full Auto.

- ※ When MODE is FULL-AUTO (can change SLOW SHUTTER)**
- ※ When MODE is MANUAL (can change IRIS, GAIN, SHUTTER)**
- ※ When MODE is SHUTTER PRIO (can change SHUTTER)**
- ※ When MODE is IRIS PRIO (can change IRIS)**
- ※ When MODE is BRIGHT (can change BRIGHT)**

D - ZOOM

Configure magnification limit from OFF/MAX using the feature
By press BLC(ENTER) button you can select OFF/MAX Mode.

SPOT AE

```
SPOT AE SETUP
MODE      : MANUAL
POSITION X : 9
POSITION Y : 8
```

In Full Auto AE, the level for the entire screen is computed and the optimum Auto Iris and Gain levels are determined. In Spot AE, a particular section of the subject can be designated, and then that portion of the image can be weighted and a value computed so that Iris and Gain can be optimized to obtain an image.

MODE : MANUAL / AUTO
POSITION X : 9(1~16)
POSITION Y : 8(1~16)

SPECIAL SETUP

```
SPECIAL SETUP
WIDE-D    : ON
SHARPNESS : 12
E-FLIP    : OFF
MIRROR    : OFF
FLICKERLESS : OFF
CAMERA ID : 001
PROTOCOL  : SONY
BAUDRATE  : 9600
```

WIDE-D : ON/OFF WDR(Wide Dynamic Range On/Off)

SHARPNESS : 12 (1~16) : Increasing this value sharpness object edges.

E-FLIP : On/off Screen is inverted up or down

MIRROR : On/Off Screen is inverted to the left or right in On Mode.

FLICKERLESS: On/Off Auto mode on/off.

CAMERA ID : Unique identification number for each camera (000 ~255 settings)

PROTOCOL : SONY

BAUDRATE : 9600(9600, 19200, 38400)

SMART ZOOM

```
SMART ZOOM SETUP
MODE      : AUTO
ZOOM IN   : X4
ZOOM OUT  : X1
DWELL TIME : 10
```

Mode : AUTO/SEMI

Zoom In : x 4

Zoom Out : x 1

Dwell Time : 10 (you can select 1~30 settings)

- ※ When MODE is AUTO, DWELL TIME can be change.
- ※ When MODE is SEMI, DWELL TIME cannot be change.
- ※ ZOOM IN value should be higher than ZOOM OUT value.

FACTORY SET

Factory default of all settings is restored

```
MAIN MENU
FOCUS SETUP : -
WB SETUP    : -
AE SETUP    : -
D-ZOOM      : OFF
SPOT AE     : -
SPECIAL     : -
SMART ZOOM  : -
FACTORY SET : ON
```

FACTORY SET : ON → MENU - EXIT

Close menu

Press MENU button to close menu.

8. Specifications

Specifications		
Specifications	Image sensor	1/4-type EXview HAD CCD (PS)
	Effective number of pixels	NTSC : 380,000 pixels PAL : 440,000 pixels
	Lens	12x optical zoom lens f=3.7 mm (wide) to 44.4 mm (tele), F1.6 to F2.5
	Digital zoom	12x (144x with Digital Zoom)
	Horizontal resolution	550 TV lines
	Angle of view (H)	48° (wide end) to 2.8 ° (tele end)
	Minimum working distance	290 mm* (WIDE end) ~ 800 mm (TELE end) *Default: 290 mm
	Sync system	Internal
	Minimum illumination	Approx. 0.5 lx (F1.4, 50 IRE)
	S/N ratio	More than 50 dB
	Video output(CVBS)	VBS: 1.0 Vp-p (sync negative)
	Camera control interface	VISCA protocol 9.6 Kbps, 19.2 Kbps, 38.4 Kbps Stop bit, 1 bit
	Electronic shutter	NTSC : 1/4 sec to 1/10000 sec (20 steps) PAL : 1/3 sec to 1/10000 sec (20 steps)
	White balance	Auto, ATW, Indoor, Outdoor, Manual
	Gain	Auto/Manual/Max. Gain Limit (-3 to +28 dB, +2 dB step/total 16 steps)
	AE control	Auto, Manual, Priority mode (shutter priority & iris priority), Bright,
	Focusing system	Auto (Sensitivity: normal, low), Manual
	Storage temperature	-20°C ~ 60°C
	Operating temperature	-5°C ~ 60°C
Power requirements	9.0 V ~ 15.0 V DC	
Power consumption	3.7 W (motors active) / 2.4 W (motors inactive)	
Features	Wide-D	Yes
	Auto ICR	Yes
	2D/3D Noise Reduction	Yes
	Slow AE response	Yes (Longer than 10 min.)
	Picture effects	Yes (E-Flip, Mirror Image)
	Slow shutter	Yes
	Title display	Yes (English)
	Camera mode display	Yes