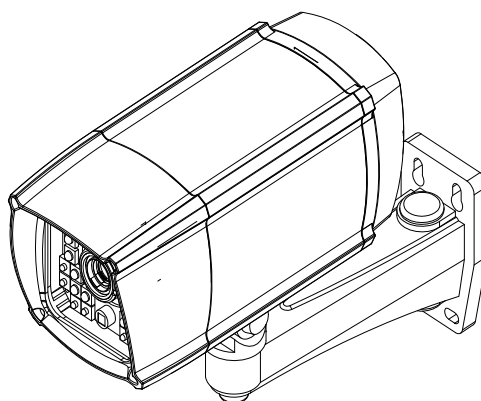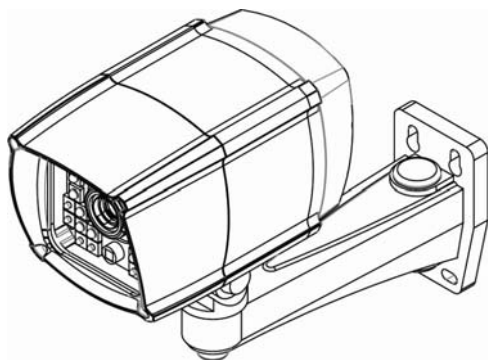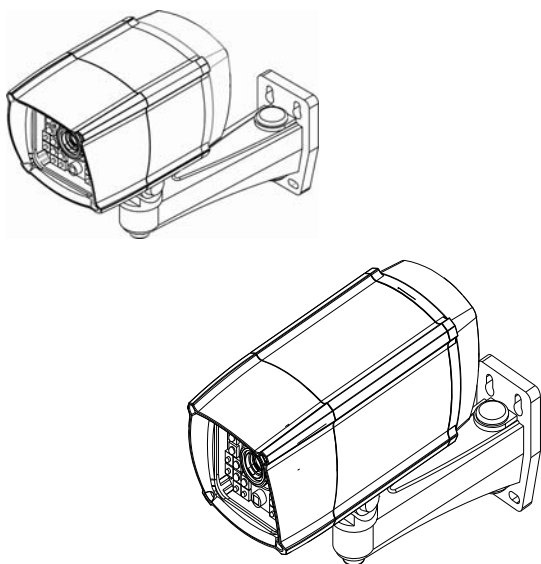Thank you for purchasing our product.
Please read this User's Manual before
using the product. Change without Notice

WDR Tube Camera

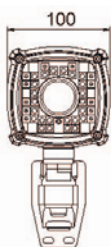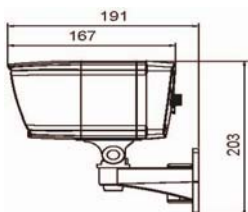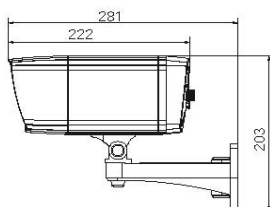# User's manual

SONY Super HAD CCD II

C E FC

Specification

1. SONY WDR (Wide Dynamic Range) Total Solution.

2. 700 TV Lines High Resolution.

3. 0.1Lux@F1.0; Sense-up: 0.001Lux@F1.0.

4. OSD Control by Button / Keyboard / Remote Controller.

5. RS485 Interface OSD Control by Pelco-D, Pelco-P.

6. Ideal for Backlight Environments.

7. 2D/3D Noise Reduction & Sense Up (512x) Functions.

8. Shutter Mode (SCHEDULE / DAY&NIGHT).

9. Face Detection of up to 4 faces.

10. Privacy Mask 8 Zones Programmable.

11. Advanced Motion Detection Function.

12. Auto Zoom by face tracking or motion detection

13. Picture-Effect : Mirror / Flip / E-Zoom 1~16x.

14. Alarm relay out : NO + COM / NC + COM.

Model	typeA	typeB
Pick up device	1/3" double-density CCD	
Total Pixels	NTSC:1028(H) x 508(V) / PAL:1028(H) x 596(V)	
Effective Pixels	NTSC:976 (H) x 494(V) / PAL:976 (H) x 582(V)	
Resolution	700 TV lines	
Synchronizing System	2:1 Internal	
Scanning System	NTSC: 525Lines/60Fields;PAL:625Lines/50Fields	
S/N Ratio	More than 52dB (AGC OFF, Weight on)	
Electronic Shutter	Auto 1 / 60 (1/50) ~1/100,000 sec	
Min. Illumination	0.1Lux@ F1.0, Sense-up: 0.001Lux@F1.0	0.1Lux@ F1.6, Sense-up: 0.001Lux@F1.6
Video Output	1.0 Vp-p / 75 ohm	
IR Distance	50M (36pcs IR LED : 18pcs Piranha / 18pcs Reflection)	
IR Trigger	3.1lux / 3.7lux IR On / Off	
WDR Function	ON / OFF	
AGC	Auto	
BLC	WDR / BLC / OFF	
White Balance	Auto / Manual / Outdoor / Indoor / CRS	
Lens Type	Varifocal Lens: 6 ~ 50 mm / F1.6	
IR Cut	Auto	
OSD Control	Button / Control keyboard / Remote controller	

Face Detection	4 Face Detection	
Motion Detection	ON / OFF (24x16 Zones)	
Picture-Effect	Mirror / Flip / E-Zoom 1~16x	
Auto-Zoom	Optional Under auto face tracking or motion detection	
Alarm relay out	NO + COM / NC + COM	
Privacy	ON / OFF (8 Zones Programmable, Mosaic)	
RS485 Protocol	Pelco-D, Pelco-P	
Power Source	DC12V; DC12/AC24V	DC12V; DC12/AC24V; AC110V~240V
Power Consumption	Standard : DC12V ±10% / 1.5 A Optional : DC12V ±10% / 1.5 A ; AC24V±10% / 1.5 A	Standard : DC12V ±10% / 1.5 A / AC 24V Optional : DC12V ±10% / 1.5 A ; AC 110V~240V
Current	1.5A (Max)	
Operating Temperature	-10℃ ~ 50℃ (14℉ ~ 122℉)	
Storage Temperature	-20℃ ~ 70℃ (-4℉ ~ 158 ℉)	
Dimension	100(W) x 203(H) x 222(D)mm	100(W) x 203(H) x 167(D)mm
Weight	N.W./G.W.: 1.74kg / 2.15kg	N.W./G.W.: 1.4kg / 1.85kg
Weatherproof	IP67	

Dimension

BEFORE ATTEMPTING TO HOOK UP AND OPERATE, PLEASE READ THIS MANUAL.

CAUTIONS

(1) To reduce the risk of electric shock, do not remove cover(or back). No user serviceable parts inside. Refer servicing to qualified service personnel.
(2) Never point the camera toward the sun and do not expose the lens directly to sun or strong light as this may damage the pick-up device.
(3) Handle this camera with care. Avoid any shock or impact to the camera as it contains sensitive parts which can be damaged by improper handling.
(4) Requires a proper operating environment this camera is designed for indoor use. This allowable temperature range for operation of this camera is between 14℉ to 122℉ and the allowable humidity is 85% maximum. If the camera is to be placed in an extremely dusty location, a special housing may be necessary to protect the camera and lens.

⚠ Please use suitable adapter DC12V ± 10 %,1A. Otherwise, this product will be damaged.
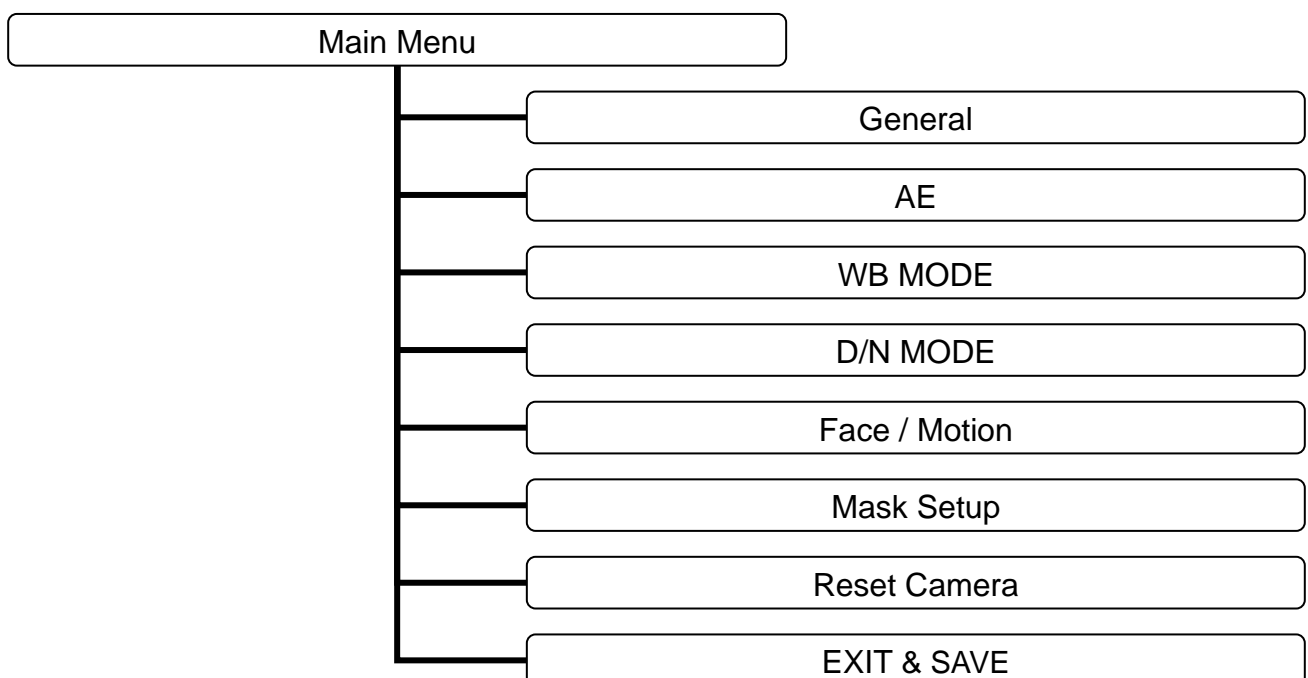
DIP Switcher
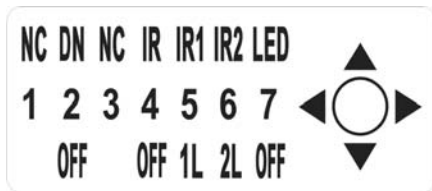
1. N/A
2. DN, day and night. On(auto)/off(day)
3. N/A
4. Reflection LED on/off switch
5. Piranha LED high/low power switch
6. Reflection LED high/low power switch
7. LED light

OSD MENU

Main Menu Tree

Main Menu

General

AE

WB MODE

D/N MODE

Face / Motion

Mask Setup

Reset Camera

EXIT & SAVE

RS485 ID	1 ~ 254		
Baud Rate	4800		
	9600		
	14400		
Flip/Mirror	OFF		
	FLIP		
	MIRROR		
	ROTATE180		
DNR	2D-NR	ON	
		OFF	
	3D-NR	ON	
		OFF	
PTZ SPEED	1 ~ 15		
RETURN			
EXIT & SAVE			

RS485 ID and baud rate depends on keyboard. Camera's protocol Pelco P and D are embedded.

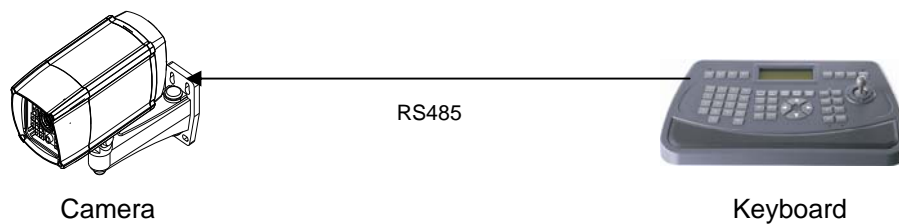Camera   Keyboard

Image effect: Flip / Mirror / Rotate180

DNR (Digital noise reduce)
The image performance would be improved when the DNR mode on.

PTZ Speed, auto zoom speed under face or motion detect mode

WDR/BLC Set	OFF	DC LEVEL	80 ~ 240
		SHUTTER	1/60~1/10000(PAL 1/50)
	WDR	WDR LEVEL L	50 ~ 250
		WDR LEVEL S	10 ~ 250
		L/S POINT	200 ~ 1200
	BLC AUTO	DC LEVEL	80 ~ 240
		SHUTTER	1/60~1/10000(PAL 1/50)
	BLC FIX	BLC Level	0 ~ 31
		BLC Window	CENTER_LEFT
			CENTER
			CENTER_RIGHT
			BOT_LEFT
			BOT_CENTER
			BOT_RIGHT
			TOP_LEFT
			TOP_CENTER
			TOP_RIGHT
		DC LEVEL	80 ~ 240
		SHUTTER	1/60~1/10000(PAL 1/50)
DSS MAX	OFF,1~20,40,60,80,100,200		
AGC MAX	80 ~ 120		
FLICKER	ON		
	OFF		
RETURN			
EXIT & SAVE			

WB MODE

User can adjust white balance effect, the function like as Auto Tracking White balance (ATW), Auto White Balance adjust (AWB), Indoor or outdoor environment.

AUTO		
Manual	R Gain	-5 ~ 5
	B Gain	-5 ~ 5
	RETURN	
	EXIT & SAVE	
Outdoor		
Indoor		
CRS		

D/N MODE

EXT	DELAY	1 ~ 10
	RETURN	
	EXIT & SAVE	

DETECT MODE	AUTO FACE	FACE MODE	SINGLE FACE(only one face zoom)		
			MULTI FACE(balance all face zoom)		
		RETURN			
		EXIT & SAVE			
	BY LABEL	LABEL1~4 SETUP	FACE	LABEL FRAME	ON
					OFF
				LABEL COLOR	Red
					Green
					Blue
					Pink
					Yellow
					Cyan
					Coffee
					White
				H Start	0 ~ 23
				H End	0 ~ 23
				V Start	0 ~ 15
				V End	0 ~ 15
				RETURN	
				EXIT & SAVE	
			Motion	LABEL FRAME	ON
					OFF
				LABEL COLOR	Red
					Green
					Blue
					Pink
					Yellow
					Cyan
					Coffee
					White
				H Start	0 ~ 23
				H End	0 ~ 23
				V Start	0 ~ 15
				V End	0 ~ 15
				RETURN	
				EXIT & SAVE	
		FR. AUTO OFF	DISABLE		
			ON(frame window auto hide)		
			OFF(frame window off)		
		HOLD DELAY	1 ~ 5		
		RETURN			
		EXIT & SAVE			
	DISABLE				
AUTO ZOOM	ON				
	OFF				
SENSITIVITY	MD THRESHOLD	0 ~ 20			
	FD THRESHOLD	0 ~ 40			
	RETURN				
	EXIT & SAVE				
ALARM SETUP	MD ALARM	ON			
		OFF			
	MD ALARM SET	NORMAL OPEN			
		NORMAL CLOSE			
	FD ALARM	ON			
		OFF			
	FD ALARM SET	NORMAL OPEN			
		NORMAL CLOSE			
	NIGHT COLOR	ON			
		OFF			
	RETURN				
	EXIT & SAVE				
RETURN					
EXIT & SAVE					

Special Features

Detect mode:

Auto face:

There are two choices available:

- *Single face* which means just one frame will appear and the camera will track the face within his field of view
- *Multi face* which means it can track up to 4 different face in the same windows

If auto zoom is enabled, it will make a digital zoom on the face

By label

User select an area and draw a frame which will be the detect label area 1 or maximum 4 area. Each label owns single detect mode, face or motion. Motion and face detect only available on frame window of lens view.

Sensitivity

Motion or face threshold. Lower figure means detection is more sensitive.

Alarm setup

To active alarm relay when face or motion is detected. Can be set to normally open or normally close. Example it can be connected to a buzzer or light for immediate action

Mask Setup

Mask1 ~ 8	MASK	ON
		OFF
	Color	Red
		Green
		Blue
		Pink
		Yellow
		Cyan
		Coffee
		White
	H START	0 ~ 500
	H END	0 ~ 500
	V START	0 ~ 280
	V END	0 ~ 280
	RETURN	
	EXIT & SAVE	

Reset Camera

Back to factory default.

EXIT

Menu Quit.

Face/Motion reference setting form

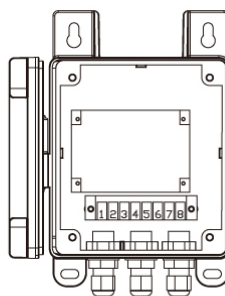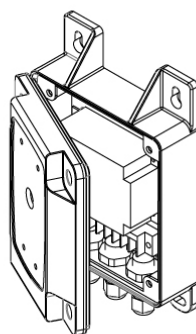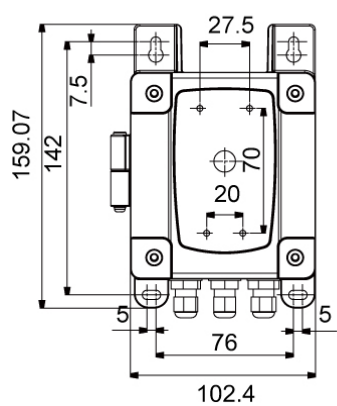| DETECT MODE	DISABLE	AUTO FACE		BY LABEL			
AUTO ZOOM	ON/OFF	OFF	ON Will automatically ZOOM IN	OFF		ON Will automatically ZOOM IN	
FR. AUTO OFF (frame window auto off)	No option	No option	No option	OFF The LABEL frame setting display frame	ON After quit OSD it automatically hides all frame (if available)	OFF The LABEL frame setting display frame	ON After quit OSD it automatically hides all frame (if available)
Additional notice	Disable FACE/ MOTION feature	Internal frame display	Internal cover frame	Manual frame setting by user can't be hidden	After entered OSD Menu if enter in BY LABEL menu page will automatically open frame, helping user confirm location	Manual frame setting by user can't be hidden	After entered OSD Menu if enter in BY LABEL menu page will automatically open frame, helping user confirm location

Detect flow

START

Detect mode

N → DISABLE

Y

Detect action

N → Detect area only

Y → BY LABEL

Detect area only
Y → BY LABEL
N → AUTO FACE

BY LABEL
Detect area frame window
PS. face and motion detect

AUTO FACE
Only face detect

Auto zoom Enlarge
N → **AUTO ZOOM : OFF**
Y → **AUTO ZOOM : ON**

Auto zoom Enlarge
N → **AUTO ZOOM : OFF** frame window display
Y → **AUTO ZOOM : ON** No frame window display

EXIT OSD (SAVE) and start to detect

Frame window auto hide
Y → **FR. AUTO OFF：ON**
N → **FR. AUTO OFF：OFF**

LABEL detect mode, position, color

EXIT OSD (SAVE) and start to detect   END

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Optional with power box

Power Box Pin defines:

Pin

1. power+

2. power -

3. face + (RS485+)

4. face - (RS485-)

5. alarm + (Audio+)

6. alarm - (Audio-)

7. video +

8. video -

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