CCD Camera Manual

1. Camera ........................1pcs.
2. Cable ..........................1pcs.

### Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>1/4&quot; Color EF100 + EXview HAD CCD II (OSD)</td>
</tr>
<tr>
<td>Video System</td>
<td>NTSC/PAL</td>
</tr>
<tr>
<td>Pixel size</td>
<td>5.0um x 6.5um</td>
</tr>
<tr>
<td>Effective image area</td>
<td>5.58mm x 4.67mm</td>
</tr>
<tr>
<td>Number Of Effective Pixels</td>
<td>976 x 582 (NTSC) / 976 x 494 (PAL)</td>
</tr>
<tr>
<td>Sensor scan mode</td>
<td>INTERLACE</td>
</tr>
<tr>
<td>Resolution (TV Lines)</td>
<td>650 TV Lines</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td>50dB</td>
</tr>
<tr>
<td>Minimum Illumination</td>
<td>0.001 Lux at F2.0</td>
</tr>
<tr>
<td>Shutter Speed</td>
<td>1/50 ~ 1/1000000 secretory</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2450 mV</td>
</tr>
<tr>
<td>Horizontal Sync Frequency</td>
<td>15.73kHz (NTSC) / 15.62kHz (PAL)</td>
</tr>
<tr>
<td>Vertical Sync Frequency</td>
<td>60Hz (NTSC) / 50Hz (PAL)</td>
</tr>
<tr>
<td>Gamma Consumption</td>
<td>0.45</td>
</tr>
<tr>
<td>Video Output</td>
<td>1Vp-p, 75ohms Composite</td>
</tr>
<tr>
<td>Built-In Lens</td>
<td>3.7mm/ F2.0</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-30 to 60 Degree C</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-10 to 45 Degree C</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Camera: DC 6~12 V</td>
</tr>
<tr>
<td>Power Current</td>
<td>200<del>120mA (DC 6</del>12V)</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>Camera: 11x11mm + main board: 18.5x95x9.75mm, 25cm flexible cable between the mini lens and the slim camera board</td>
</tr>
</tbody>
</table>

### Instruction Drawing & Description

1. VIDEO
2. DC 6~12V
3. GND
4. AUDIO (Optional)

### OSD Control key

Internal osd consists of menu osd which, by pressing the enter button, display the menu screen for setup and function toggle osd (including motion icon display) which assigns the main functions (NR, BLC, ATR, Day & Night, AGC) to the five buttons (enter, up, down, left, right) as toggles.

### Attention

We provide reference to use the OSD to adjust parameter values to

#### SETUP MENU 1/3

1. SHUTTER/AGC
   - LOW LUMINANCE
     - select: AGC → SLOW
   - Brightness [can select: 0.25]
2. WHITE BAL
   - select: ANTI CR
3. ATR-EX
   - [Adaptive Tone Reproduction, digital Wide Dynamic Range]
   - select: CONTRAST to be LIGHT

#### 4. NR
   - select 3D NR, 2D NR LEVEL to be MID

#### 5. DAY/NIGHT
   - select: EXT or AUTO
   - sub menu set IR OPT (IROPTIMIZER SMART Function) ON

When you select SAVE ALL & EXIT to quit the menu after changing the setting, the system will be update with the settings.

### Using MENU

1. Using buttons (enter, down, left, right) to choose items and set it.
2. Press the MENU/ENTER button about 3 sec. to start MENU. The menu will display on the monitor.
3. Please select any function by using the UP/DOWN button.
4. Press the RIGHT/LEFT button to change mode or press the MENU/ENTER button to the sub menu.
5. Please select “SAVE ALL” then press the MENU/ENTER button to save all the change settings.
6. Please select “EXIT” then press the MENU/ENTER button to quit the menu.

2. AUTO: Auto-Iris Lens used mode.

#### LENS

1. MANUAL: Manual Lens used mode.

When you select LENS type to “Auto”, press the MENU/ENTER button to open the sub menu. In sub menu, you can select the lens type to DC or VIDEO, and iris mode to be AUTO & always OPEN or CLOSE. And the SPEED can be adjusted within the range of 0 ~ 255.

#### 2. SHUTTER/AGC

This menu sets the Manual or Auto functions.

**AUTO**

**HIGH LUMINANCE**

When LENS types “AUTO”

You can select SHUT+AUTO/IRIS or AUTO IRIS mode

That BRIGHTNESS can be adjust within the range of 0~255

LOW LUMINANCE

You can select AGC, SLOW, SLOW+AGC, AGC→SLOW, SLOW→AGC & OFF that BRIGHTNESS can select 0.25, 0.50, 0.75, 1

**MANUAL**

You can select SHUT&SLow mode

That SHUT can select 1/80(1/50), 1/100(1/120), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000

When you select SLOW mode. That SHUT can select 2.4, 4, 8, 16, 32, 64, 128, 256.

AGC can select 6.00, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, 48.00
3. PICT ADJUST
This menu sets the MIRROR, CONTRAST, SHARPNESS, HUE, R-GAIN & B-GAIN.
When you selected the MIRROR function, you can set the OFF, V-FLIP, H-FLIP & HV-FLIP.

You can adjust the CONTRAST, SHARPNESS, HUE, R-GAIN & B-GAIN.
The CONTRAST can be adjusted within the range of 0 ~ 63.
The SHARPNESS can be adjusted within the range of 0 ~ 15.
The HUE can be adjusted within the range of 0 ~ 15.
The R-GAIN & B-GAIN can be adjusted within the range of 0 ~ 255.

4. WHITE BAL
This menu sets the white balance adjustment function.
You can select ANTI CR, MANUAL, PUSH LOCK, ATW, PUSH, USER1 & USER2.

When you select MANUAL
In sub menu, you can adjust the level up and down.

When you select ATW
In sub menu, you can adjust the SPEED and DELAY CNT within the range of 0 ~ 255.
That ATW FRAME can select the X0.5, X1.00, X1.50, X2.00.
That ENVIRONMENT can select INDOOR or OUTDOOR.

When you select USER1 or USER2
In sub menu, you can adjust the B-GAIN and R-GAIN within the range of 0 ~ 255.

5. ATR-EX
When you selected the ATR-EX function,
you may press the MENU/ENTER button to sub menu to adjusted the ATR-EX

In sub menu, you can select mode to be NORMAL & LIGHT.
you can select CONTRAST mode to be LOW, MIDLOW, MID, MIDHIGH & HIGH.

6. NR
When you selected the NR function,
you may press the MENU/ENTER button to sub menu adjusted the NR

In sub menu, you can select LEVEL mode to be OFF, LOW, MIDLOW, MIN, MIDHIGH & HIGH.

7. NEXT
When you selected the NEXT function, you may press MENU/ENTER button to next menu.

8. HLC/BLC
When you selected the HLC/BLC function,
you may press the MENU/ENTER button to sub menu adjusted the HLC/BLC.

In sub menu, you can select HLC mode to be OFF, ON & AUTO.
The CLIP LEVEL can be adjusted within the range 0 ~ 255.
The SCALE can be adjusted within the range 0 ~ 15.
When you select BLC mode to be OFF & ON.

9. DAY/NIGHT
This menu sets DAY/NIGHT function that switches camera working on the daytime or night-time conditions.
You can select EXT & AUTO.
When you selected EXT mode, In sub menu you can set ACTIVE (D/N IN) LOW / HIGH.
When in the NIGHT mode, the D/N OUT will from the low potential to high potential.
In sub menu you can set IR OPTIMIZER (IR SMART Function) ON / OFF.
The IR OPTIMIZER function can adjust the mode to "AUTO" or "CENTER" & the range to 0 ~ 31.
The ACTIVE function you can set LOW / HIGH.

When you selected AUTO mode, camera will be working on the COLOR mode in daytime conditions and B/W mode in night-time conditions or low illuminance environment.
In AUTO mode, you may press MENU/ENTER button to the sub menu.
You can adjust the DELAY CNT, DAY → NIGHT & NIGHT → DAY.
The DELAY CNT can be adjusted within the range of 0 ~ 255.
The DAY → NIGHT & NIGHT → DAY can be adjusted within the range of 0 ~ 255.
IR OPTIMIZER (IR SMART Function) ON / OFF.
The IR OPTIMIZER function can adjust the mode to "AUTO" or "CENTER" &
the range to 0~31.

### 10. EZOOM
When you selected EZOOM function, you can press the MENU/ENTER button to
sub menu. In sub menu, you can set the MAG to be 0~255, and you can also
press the LEFT/RIGHT button to adjust the image to PAN / TILT.
The PAN can be adjusted within the range of 0~1023.
The TILT can be adjusted within the range of 0~511.

### 11. DIS (Digital Image Stabilizer)
Suppress shaking function. When you selected the DIS function, you can select
OFF & ON.

### 12. PRIVACY
When you selected the PRIVACY function, you may press the MENU/ENTER
button.

In ON mode,
Sets the privacy area on the screen. You can setup to 15 areas on the screen.
In sub menu,
you can set AREA1~AREA15, AREA size / position & AREA COLOR
(8 color can be select).
When you selected the TRANSP function, you can set the 0.00, 0.50, 0.75
& 1.00.
Then you selected the MOSAIC function, you can set the OFF or Number

### 13. MOTION DET
Sets the detection function.
You can set up to 4 detection area on the display and each one of detection area
can set the detection mode.
The detection sensitivity can be adjusted within the range of 0 ~ 127.
When you selected the MONITOR AREA function, you may press MENU/ENTER
button to sub menu. You can set the area size / position

### 14. CAMERA ID
Sets the camera title to appear on display with up to 52 characters.
You can select OFF or ON, when you selected ON, you may press the
MENU/ENTER button to sub menu. Then the CAM TITLE, CLEAR, END will be appear on display.
You can move the cursor by using LEFT/RIGHT button and changing the character by using UP/RIGHT
button. When you moved the cursor to CLEAR, you can press the MENU/ENTER
button to clear all characters.

### 15. LANGUAGE
Sets the language of OSD menu, have 8 type can be select.
- ENGLISH
- JAPANESE
- SIMPLIFIED CHINESE
- TRADITIONAL CHINESE

### 16. CAMERA RESET
To reset to the default setting.

Moved the cursor to the CAMERA RESET, press the MENU/ENTER button, then all the setting value will reset to the default setting and return to
main menu.

### 17. BACK
When you selected the BACK function, you may press MENU/ENTER button to
back menu.

### 18. SAVE ALL & EXIT
When you select SAVE ALL & EXIT to quit the menu after changing the setting,
the system will be update with the settings.
ES-19 SERIES- 1/4" Color SONY EFFIO-S +CCD II (OSD) WDR Camera

With Sony® Super EXview HAD II + Sony® EDDIO-S DSP CCD image sensor, it provides astonishing and ultra sharp pictures. It's features enable users to customize the video results. Features include the BLC (Backlight Compensation), WDR (Wide Dynamic Range), 3D DNR (3D Digital Noise Reduction) OSD (On Screen Display), as e-zoom, slow shutter, and other functions. It is a signal processing LSI for complementary color CCD cameras.

Advanced Features

► Hight color Reproduction
► More excellent color reproduction
► Wide range ATW [1,800 K to 10,500 K]

► Color chart (Machbeth) under halogen lamp
► Still-life object under artificial sunlight

► Hight Resolution
► Confirmed maximum resolution to achieve the 700TVL.!!

► Present OSD Menu & Exposure Control for IR Light
► OSD function provides preset menus in 8 languages.(EN, FR, DE, ES, POR, CN, RU, JP)
Noise Reduction-OSD FUNCTION
Effio-S comes with two noise reduction (NR) functions, one is space-based (2D-NR) and the other is time-based (3D-NR).

2D-NR

2D+3D-NR

ATR (Adaptive Tone Reproduction)-OSD FUNCTION
Gradation compensation to improve image contrast
Improvement of loss of dark detail and overexposure area

Low-light Function & Slow Shutter
Low-light Function: AGC Slow-shutter DNR (Noise Reduction) SENS-UP increase minimum illumination