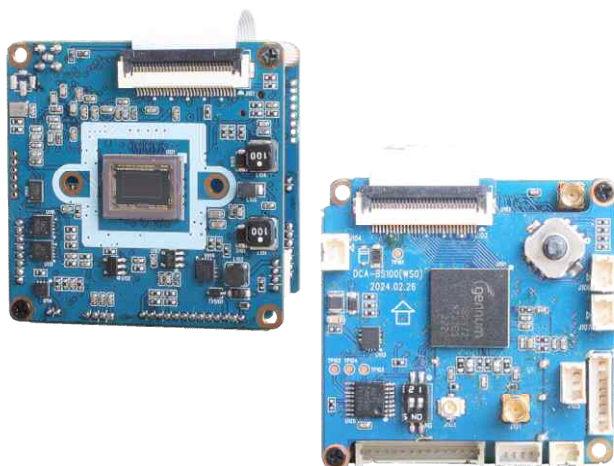


# DCC-2W60 (COMBINATION OF DCC-2W0 & DCA-BS100)



## CMOS SDI VIDEO MODULE



### Main Features

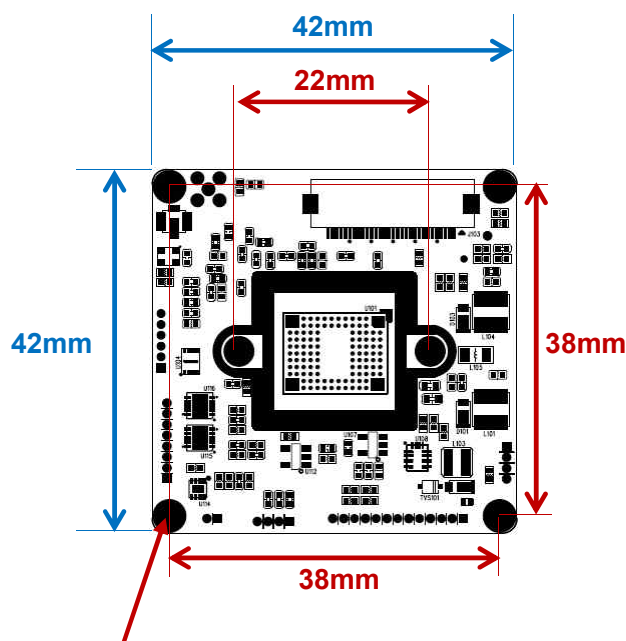
- 1/2.8" 2.9µm Pixel Progressive Sony Starvis CMOS Sensor
- 2 Mega Pixels – Maximum 1080p (1920x1080)
- Mountable Lens: Fixed & DC Auto IRIS, Auto Focus Motorized Lens
- TDN ICR Mechanism Available
- WDR, DSS, and 3D-NR Supported
- Built-in OSD Switch, AD & GPIO OSD Port Available
- Broadcast Compatible SDI Output (SMPTE292M & SMPTE424M)
- CMOS SDI Video Module (42x42mm 2-boards)



### Specification

| Model              | DCC-2W60   |
|--------------------|--|
| Signal System      | 3G-SDI (Serial Data Interface)   |
| Pickup Device      | <b>1/2.8"(D-6.46mm) 2.12M Sony CMOS Sensor</b>   |
| Scanning System    | Progressive Scan (16:9 )   |
| Sync. System       | Internal   |
| Total Pixels       | 2.16MP [1,945(H)x1,109(V)]   |
| Active Pixels      | 2.12MP [1,937(H)x1,097(V)]   |
| Min. Illumination  | 0.01Lux(F2.5 - 30IRE),<br>0.005Lux(ICR on), 0.0003Lux(DSS on)  |
| Mechanical ICR     | <b>Available (Option)</b>  |
| Video Out (1)      | 3G-SDI: 1080p25/30/50/60, 720p25/30/50/60, 1080i50/60  |
| Video Out (2)      | AHD, TVI, CVI or Analog CVBS<br>AHD, TVI and CVI: 1080p@25/30 / Analog CVBS: D1                      |
| Lens               | Option (Fixed & DC Auto IRIS & AF Stepping Motor Lens)   |
| Lens (Mount)       | Board/Pinhole Mount(M12), VF (Ø14) & C/CS Mount  |
| OSD                | Via OSD Switch, AD or GPIO OSD Port, Serial Communication  |
| Camera Title       | Off, On(Max. 8 Characters)   |
| Language           | English, Chinese(Simplified), Chinese(Traditional), Japanese, Korean                                 |
| Exposure           | DC, Manual   |
| White Balance      | AUTO, AUTOext, Preset, Manual  |
| BLC                | Off, HLC, BLC, WDR   |
| Day & Night Mode   | AUTO, COLOR, B/W, EXT. D&N   |
| Gain Control       | AGC (0~10)   |
| Electronic Shutter | Auto, Manual, Flickerless  |
| DSS(Sens-up)       | X32  |
| Noise Reduction    | 3DNR (Off, Low, Middle, High)  |
| Mirror             | Off, On(Mirror, Flip, Rotation)  |
| Other Features     | Motion Detection (4 Zones), Privacy Mask (16 Zones), ACE, D-Zoom, Defog, Gamma, Shading etc.         |
| Communication      | Pelco-D and Parantek Serial Protocol Supported<br><b>RS-232C TTL 3.3V (Default: 115,200bps, ID1)</b> |
| Microphone         | N/A  |
| Power Source       | DC 7~15V (±5%)   |
| Power Consumption  | Less than 3.6 Watts (300mA@DC12V)  |
| Operating Temp.    | -10°C ~55°C (Humidity :0%RH ~ 90%RH)   |
| Size (mm)          | 42(W) x 42(D) – 2 Boards   |
| Weight             | 20 g (Including standoffs)   |

### Dimension



Ø3.8(2.1mm hole x 4)

PCB Coordinate

(-19, 19) (19, -19)

(19, 19) (-19, -19)

ACC-2W0 PCB T=1.2mm  
DCA-BS100 PCB T=1.6mm

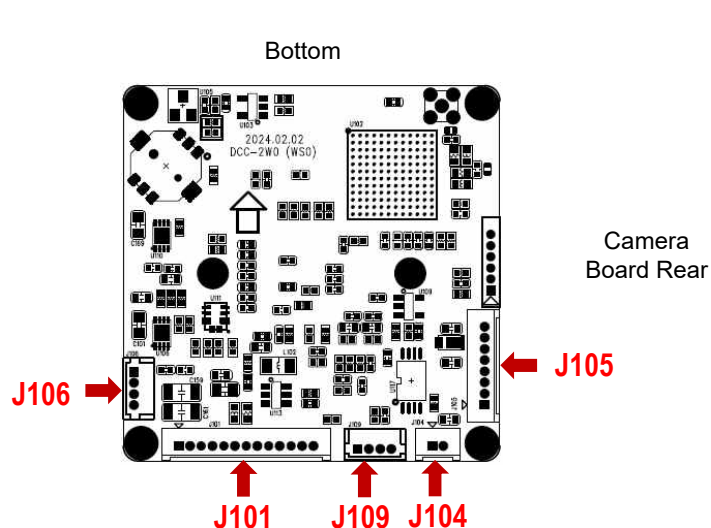
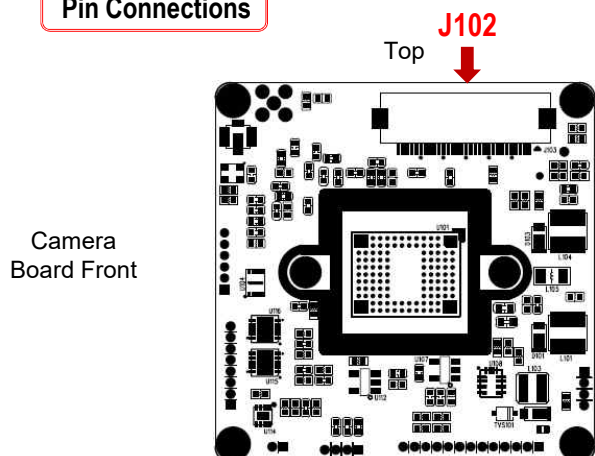
### Option

- Lens
- TDN ICR
- Standoffs
  - Female ends (8mm, 9.5mm, 11mm, etc.)
  - Male / Female (8, 9, 10, 10.5, 11, 12, 12.5mm, etc.)

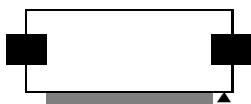
# DCC-2W60 (COMBINATION OF DCC-2W0 & DCA-BI100)

## CMOS SDI VIDEO MODULE

### Pin Connections



### J102 – BT.1120 & Etc.



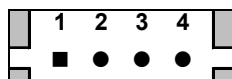
| No. | Pin Item                 | No. | Pin Item    |
|-----|--------------------------|-----|-------------|
| 1   | RXD                      | 16  | Y4          |
| 2   | TXD                      | 17  | Y5          |
| 3   | NC                       | 18  | Y6          |
| 4   | NC                       | 19  | Y7          |
| 5   | VCC (7~15V)              | 20  | GND         |
| 6   | VCC (7~15V)              | 21  | PIXEL CLOCK |
| 7   | VCC (7~15V)              | 22  | GND         |
| 8   | GND                      | 23  | C0          |
| 9   | GPIO                     | 24  | C1          |
| 10  | nRESET IN (Camera Reset) | 25  | C2          |
| 11  | GND                      | 26  | C3          |
| 12  | Y0                       | 27  | C4          |
| 13  | Y1                       | 28  | C5          |
| 14  | Y2                       | 29  | C6          |
| 15  | Y3                       | 30  | C7          |

Wafer SMD type: 0.5mm pitch – 30 pin

Manufacturer: Yeonho

MFG Part Number: 05002HR-H30J05

### J109 – DC IRIS



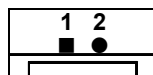
| No. | Pin Item | No. | Pin Item |
|-----|----------|-----|----------|
| 1   | DAMP +   | 3   | DRV +    |
| 2   | DAMP -   | 4   | DRV -    |

Wafer DIP type: 1.25mm pitch – 4 pin

Manufacturer: Molex

MFG Part Number: 53047-0410

### J104 – TDN ICR



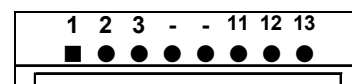
| No. | Pin Item | No. | Pin Item |
|-----|----------|-----|----------|
| 1   | ICR (+)  | 2   | ICR (-)  |

Wafer DIP type: 1.25mm pitch – 2 pin

Manufacturer: Yeonho

MFG Part Number: 12512WS-02B

### J101 – User Interface



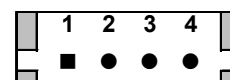
| No. | Pin Item         | No. | Pin Item           |
|-----|------------------|-----|--------------------|
| 1   | CVBS Out         | 8   | Key RIGHT          |
| 2   | GND              | 9   | Key LEFT           |
| 3   | DC12V In         | 10  | TXD Out (3.3V TTL) |
| 4   | GND              | 11  | RXD In (3.3V TTL)  |
| 5   | Key DOWN         | 12  | GND                |
| 6   | Key UP           | 13  | DC3.3V Out         |
| 7   | Key SET (AD Key) |     |                    |

Wafer DIP type: 1.25mm pitch – 13 pin

Manufacturer: Yeonho

MFG Part Number: 12512WS-13B

### J106 – LED



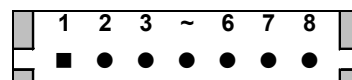
| No. | Pin Item | No. | Pin Item |
|-----|----------|-----|----------|
| 1   | LED VCC  | 3   | EXT_DN   |
| 2   | GND      | 4   | LED_CTL  |

Wafer DIP type: 1.25mm pitch – 4 pin

Manufacturer: Molex

MFG Part Number: 53047-0410

### J105 – Motor Control



| No. | Pin Item | No. | Pin Item |
|-----|----------|-----|----------|
| 1   | FOCUS A- | 5   | ZOOM B+  |
| 2   | FOCUS A+ | 6   | ZOOM B-  |
| 3   | ZOOM A-  | 7   | FOCUS B- |
| 4   | ZOOM A+  | 8   | FOCUS B+ |

Wafer DIP type: 1.25mm pitch – 8 pin

Manufacturer: Molex

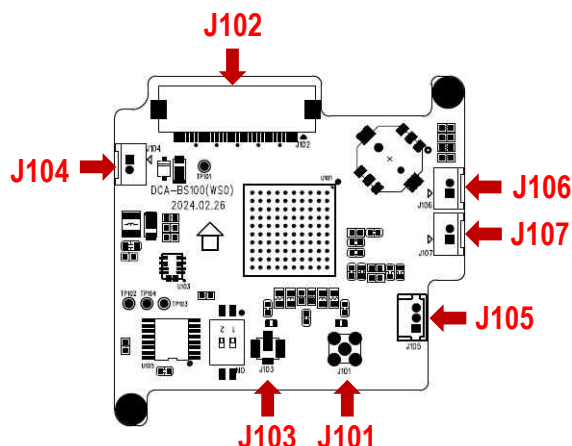
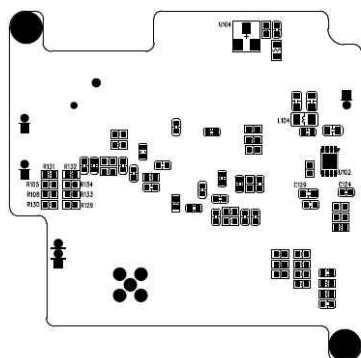
MFG Part Number: 53047-0810

# DCC-2W60 (COMBINATION OF DCC-2W0 & DCA-BS100)

## CMOS SDI VIDEO MODULE

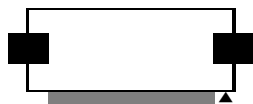
### Pin Connections

SDI Out Board Front



SDI Out Board Rear

### J102 – BT.1120 & Etc.



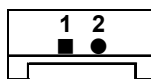
| No. | Pin Item    | No. | Pin Item                |
|-----|-------------|-----|-------------------------|
| 1   | C7 (In)     | 16  | Y3 (In)                 |
| 2   | C6 (In)     | 17  | Y2 (In)                 |
| 3   | C5 (In)     | 18  | Y1 (In)                 |
| 4   | C4 (In)     | 19  | Y0 (In)                 |
| 5   | C3 (In)     | 20  | GND                     |
| 6   | C2 (In)     | 21  | nRESET (Not in use)     |
| 7   | C1 (In)     | 22  | GPIO (Not in use)       |
| 8   | C0 (In)     | 23  | GND                     |
| 9   | GND         | 24  | DC12V                   |
| 10  | PIXEL CLOCK | 25  | DC12V                   |
| 11  | GND         | 26  | DC12V                   |
| 12  | Y7 (In)     | 27  | SDA PCA8575APW (In/Out) |
| 13  | Y6 (In)     | 28  | SCL PCA8575APW (In)     |
| 14  | Y5 (In)     | 29  | TXD (Out)               |
| 15  | Y4 (In)     | 30  | RXD (In)                |

Wafer SMD type: 0.5mm pitch – 30 pin

Manufacturer: Yeonho

MFG Part Number: 05002HR-H30J05

### J104 – Power



| No. | Pin Item | No. | Pin Item |
|-----|----------|-----|----------|
| 1   | DC (In)  | 2   | GND      |

Wafer DIP type: 1.25mm pitch – 2 pin

Manufacturer: Yeonho

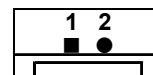
MFG Part Number: 12512WS-02B

\* When used through the port on the DCC-2W0, this port is not required to be used.

### J103 – MHF for SDI Output

### J101 – MMCX for SDI Output

### J106 – AD Key



| No. | Pin Item    | No. | Pin Item |
|-----|-------------|-----|----------|
| 1   | AD Key (In) | 2   | GND      |

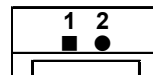
Wafer DIP type: 1.25mm pitch – 2 pin

Manufacturer: Yeonho

MFG Part Number: 12512WS-02B

\* When used through the port on the DCC-2W0, this port is not required to be used.

### J104 – AD Key



| No. | Pin Item              | No. | Pin Item |
|-----|-----------------------|-----|----------|
| 1   | AD Key (Out - bypass) | 2   | GND      |

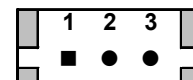
Wafer DIP type: 1.25mm pitch – 2 pin

Manufacturer: Yeonho

MFG Part Number: 12512WS-02B

\* When used through the port on the DCC-2W0, this port is not required to be used.

### J105 – UART



| No. | Pin Item  | No. | Pin Item |
|-----|-----------|-----|----------|
| 1   | GND       | 3   | RXD (In) |
| 2   | TXD (Out) |     |          |

Wafer DIP type: 1.25mm pitch – 3 pin

Manufacturer: Molex

MFG Part Number: 53047-0310

\* When used through the port on the DCC-2W0, this port is not required to be used.

| SETUP MENU | SUB MENU 1 | SUB MENU 2 | SUB MENU 3       | VALUE  |
|------------|------------|------------|------------------|--|
| IRIS       |            |            |                  | MANUAL/DC  |
| ZOOM/FOCUS | FOCUS MODE |            |                  | ONESHOT/MANUAL   |
|            | D&N FILTER |            |                  | SYNC OFF/SYNC ON   |
|            | POWER ON   |            |                  | ACTION/NO ACTION   |
|            | ONEPUSH AF |            |                  | Press ENTER key  |
|            | LENS RESET |            |                  | Press ENTER key  |
| EXPOSURE   | BRIGHTNESS |            |                  | 0 ~ 20   |
|            | SHUTTER    | AUTO       | Lens Mode DC     | INDOOR/OUTDOOR/DEBLUR  |
|            |            |            | Lens Mode Manual | NORMAL/DEBLUR  |
|            |            | MANUAL     |                  | NTSC : 1/30,60,120,250,500,1K,2K,4K,8K,15K,30K<br>PAL : 1/25,50,100,200,400,800,1.6K,3.2K,6.4K,12.8K,25.6K |
|            |            | FLICKER    |                  |  |
|            | SENS-UP    |            |                  | OFF/ X2/ X4/ X8 / X16 / X32  |
|            | AGC        |            |                  | 0 ~ 10   |
| BACKLIGHT  | OFF        |            |                  |  |
|            | HLC        | LEVEL      |                  | 0 ~ 20   |
|            |            | COLOR      |                  | BLK,WHT,YEL,CYN,GRN,MAG,RED,BLU  |
|            | BLC        | H-POS      |                  | 0 ~ 19   |
|            |            | V-POS      |                  | 0 ~ 18   |
|            |            | H-SIZE     |                  | 0 ~ 19   |
|            |            | V-SIZE     |                  | 0 ~ 18   |
|            | WDR        | WDR MODE   |                  | FRAME  |
|            |            | ROI MODE   | OFF/ON           |  |
|            |            |            | WINDOW ZONE      | 0 ~ 3  |
|            |            |            | WINDOW USE       | OFF/ ON  |
|            |            |            | DET H-POS        | 0 ~ 240  |
|            |            |            | DET V-POS        | 0 ~ 135  |
|            |            |            | DET H-SIZE       | 0 ~ 240  |
|            |            |            | DET V-SIZE       | 0 ~ 135  |
|            |            | WEIGHT     |                  | LOW/ MIDDLE/ HIGH  |
| DAY&NIGHT  | AUTO       | D>N THRES  |                  | 1(bright) ~ 20(dark)   |
|            |            | N>D THRES  |                  | 0(bright) ~ 19(dark)   |
|            |            | DELAY      |                  | 0 ~ 15sec  |
|            |            | BURST      |                  | OFF/ON   |
|            |            | SMART IR   | OFF/ON           |  |
|            |            | SAT. LEVEL |                  | (SMART IR : OFF ) NOT USED<br>(SMART IR : ON ) 0 ~ 20  |
|            | COLOR      |            |                  |  |
|            | B&W        | BURST      |                  | OFF/ON   |
|            |            | SMART IR   | OFF/ON           |  |
|            |            | SAT. LEVEL |                  | (SMART IR : OFF ) NOT USED<br>(SMART IR : ON ) 0 ~ 20  |
|            | EXT.D&N    | EXTERN SW  |                  | HIGH/LOW   |
|            |            | DELAY      |                  | 0 ~ 15sec  |
|            |            | BURST      |                  | OFF/ON   |
|            |            | SMART IR   |                  | OFF/ON   |
|            |            | SAT. LEVEL |                  | (SMART IR : OFF ) NOT USED<br>(SMART IR : ON ) 0 ~ 20  |
| WHITE BAL. | AWB        | AUTO       |                  |  |
|            |            | AUTOext    |                  |  |
|            |            | PRESET     |                  | Press ENTER key  |
|            |            | MANUAL     | C-TEMP.          | 3000K/ 5000K/ 8000K  |
|            |            |            | R-GAIN           | 0 ~ 20   |
|            |            |            | B-GAIN           | 0 ~ 20   |
|            | COLOR GAIN |            |                  | 0 ~ 20   |
| DNR        |            |            |                  | OFF/ LOW/ MIDDLE/ HIGH   |

| SETUP MENU      | SUB MENU 1 | SUB MENU 2     | SUB MENU 3          | VALUE  |
|-----------------|------------|----------------|---------------------|--|
| IMAGE           | SHARPNESS  |                |                     | 0 ~ 10   |
|                 | GAMMA      |                |                     | 0.45/ 0.55/ 0.65/ 0.75   |
|                 | MIRROR     |                |                     | OFF/ON   |
|                 | FLIP       |                |                     | OFF/ON   |
|                 | FREEZE     |                |                     | OFF/ON   |
|                 | D-ZOOM     |                |                     | 1.0X ~ 16.0X   |
|                 | ACE        |                |                     | OFF/LOW/ MIDDLE/ HIGH  |
|                 | DEFOG      | OFF            |                     |  |
|                 |            | ON             | MODE                | AUTO/MANUAL  |
|                 |            |                | LEVEL               | LOW/ MIDDLE/ HIGH  |
|                 | SHADING    | OFF            |                     |  |
|                 |            | ON             | WEIGHT              | 0~100%   |
|                 | PRIVACY    | BOX            | OFF/ON              |  |
|                 |            |                | ZONE NUM            | 0 ~ 15   |
|                 |            |                | ZONE DISP           | OFF/ ON  |
|                 |            |                | H-POS               | 0 ~ 60   |
|                 |            |                | V-POS               | 0 ~ 34   |
|                 |            |                | H-SIZE              | 0 ~ 60   |
|                 |            |                | V-SIZE              | 0 ~ 34   |
|                 |            |                | Y LEVEL             | 0 ~ 20   |
|                 |            |                | CB LEVEL            | 0 ~ 20   |
|                 |            |                | CR LEVEL            | 0 ~ 20   |
|                 |            |                | TRANS               | 0 ~ 3  |
|                 |            | POLYGON        | OFF/ON              |  |
|                 |            |                | ZONE NUM            | 0 ~ 7  |
|                 |            |                | ZONE DISP           | OFF/ ON  |
|                 |            |                | POS0-X ~ POS3-X     | 0 ~ 120  |
|                 |            |                | POS0-Y ~ POS3-Y     | 0 ~ 68   |
|                 |            |                | Y LEVEL             | 0 ~ 20   |
|                 |            |                | CB LEVEL            | 0 ~ 20   |
|                 |            |                | CR LEVEL            | 0 ~ 20   |
|                 |            |                | TRANS               | 0 ~ 3  |
|                 |            |                |                     |  |
|                 |            |                |                     |  |
| MOTION          | OFF        |                |                     |  |
|                 | ON         | DET WINDOW     | WINDOW ZONE         | 0 ~ 3  |
|                 |            |                | WINDOW USE          | OFF/ ON  |
|                 |            |                | DET H-POS           | 0 ~ 60   |
|                 |            |                | DET V-POS           | 0 ~ 34   |
|                 |            |                | DET H-SIZE          | 0 ~ 60   |
|                 |            |                | DET V-SIZE          | 0 ~ 34   |
|                 |            | SENSITIVITY    |                     | 0 ~ 10   |
|                 |            | MOTION OSD     |                     | OFF/ON   |
|                 |            | TEXT ALARM     |                     | OFF/ ON  |
|                 |            | SIGNAL OUT     |                     | OFF/ ON  |
| SYSTEM          | COMM       | CAM ID         |                     | 0 ~ 255  |
|                 |            | BAUDRATE       |                     | 2400, 4800, 9600, 57600, 115200                                  |
|                 |            | CAM ID DISPLAY |                     | OFF/ ON  |
|                 | OUTPUT     | FRAME RATE     |                     | 1080p30(25)/ 720p30(25)/ 720p60(50)/<br>1080i60(50)/ 1080p60(50) |
|                 |            | FREQ           |                     | 50Hz(PAL)/ 60Hz(NTSC)  |
|                 |            | SDI MODE       |                     | EX-SDI / HD-SDI  |
|                 |            | SDI OUT MODE   | EX-SDI              | 135M(V2.0), 135M+(V2.1), 270M(V1.0)                              |
|                 |            |                | HD-SDI              | OFF/HD-SDI   |
|                 |            |                | 1080p60(50), EX-SDI | Fixed [270M]   |
|                 |            | ANALOG MODE    |                     | CVBS/HD T/HD C/HD A  |
|                 |            | CVBS OUT MODE  |                     | CENTER CUT/FULL  |
|                 |            | DOUT EN.       |                     | OFF/ ON  |
|                 |            | CONFIRM        |                     | YES  |
|                 | LANGUAGE   |                |                     | ENG/ CHINESE/ CHINESE(S)/ JAPANESE/ KOR                          |
|                 | CAM TITLE  | OFF            |                     | OFF/ ON  |
|                 |            | RIGHT UP       |                     | 0 ~ 9, A ~ Z, blank  |
|                 |            | LEFT DOWN      |                     | 0 ~ 9, A ~ Z, blank  |
| FACTORY DEFAULT |            |                |                     | Reset to factory setting   |
| EXIT            |            |                |                     | Exit SETUP menu  |