SPECIFICATION

Articles	HVRM-HD18D28D / DID
Image Sensor	1/3" Progressive CMOS Sensor
Total Pixels	2010(H) x 1180(V) Approx. 2.22Megapixels
Effective Pixels	1944(H) x 1092(V) Approx. 2.122Megapixels
SYNC FORMAT	INTERNAL SYNC.
Video Output	1920(H) x 1080(V) 30p
Video Format	HD-SDI (SMPTE274M), NTSC, PAL, CVBS
S/N Ratio	More than 50dB
Min. Illumination	0.1Lux (F.1.2, 50IRE, AGC Max.), 0.00 Lux (IR LED On)
OSD	Built-In
- Display Mode	SDI SCALE, SDI FORMAT, SDI PFS, COLORBAR, SHADING DET, DEFFECT DET.
- LENS	MANUAL / DC / VIDEO
- SHUTTER / AGC	AUTO/MANUAL, AGC, DSS, FREQ
- AWB	AUTO / PUSHING / MANUAL (1/60~1/30,000 sec)
- PICT ADJUST	BRIGHTNESS, COLOR GAIN, ACE, MIRROR, FLIP, STILL, DZOOM, SHADING, HLMSK
- WDR/BLC/DNR	WDR/BLC/OFF, DNR (OFF/LOW/MIDDLE/HIGH)
- DAY/NIGHT	AUTO/COLOR/BW/EXT, AGC THRS (0~20Steps), MARGIN (0~20Steps), DELAY (LOW/MIDDLE/HIGH)
- PRIVACY	ON/OFF
- MOTION DET.	ON/OFF
- CAMERA ID	ON/OFF
LENS	DC2.8-12mm Auto Iris Lens
IR LED	HD18D28DID : 42 IR LEDS (130FT IR DISTANCE)
Power Source	12VDC/24VAC (Dual Voltage)
Power Consumption	200mA (12VDC
Operational Temperature	-10Degree Celsius ~ +50Degree Celsius
Dimension	130mm(W) x 90mm(H)
Weight	500mg

GENERAL FEATURES

1. MEGAPIXEL SUPER HIGH RESOLUTION
2. OUTSTANDING LOW LIGHT PERFORMANCE
3. BUILT-IN OSD
4. DIGITAL NOISE REDUCTION, DIGITAL ZOOM
5. WDR (WIDE DYNAMIC RANGE)
6. HLMASK (High Light Mask), MOTION DETECTION, PRIVACY

PACKAGE CONTENTS

Please make sure the following items are included in the package

1. 1 pc of Camera
2. 2 pcs of Mounting Screws
3. 1 Pc of Manual

OSD CONTROL & MENU TREE

OSD Control & Dimension

- Push the joystick S/W to pop up 0SD Menu and set up your desired value.

① ②

① : 2ⁿᵈ Video Out   ② : Set/Menu

Lens and Internal 3-Axis Bracket Control

Non- IR LED version

Pan Location   **Titl Location**   **2ⁿᵈ Pan(Lens) Location**

1. Set the desired Pan Location. and oosen the side screw manually.
2. Set the Tilt and the 2ⁿᵈ Pan (Lens)location with the lens holder.
3. Tighten the side screw manually and set the desired zoom and focus.

IR LED version

1. Disassemble the IR LED cover with the direction shown in the above picture and follow the instruction in the above.
2. Assemble the IR LED cover with the same direction of the lens.
3. Cover the dome cover and secure the dome housing.

OSD Menu Tree

DISPLAY MODE
- SDI SCALE - SDI FORMAT - SDI FPS - CVBS
- CVBS_RATIO - COLOR BAR - SHADING DET - DEFECT DET

LENS
- DC - VIDEO - MANUAL

AWB
- AUTO - PRESET - MANUAL

PICT ADJUST
- BRIGHTNESS - COLOR GAGIN - ACE - SHARPNESS
- MIRROR FLIP - FLIP - STILL - SHADING
- DZOOM - HLMASK

WDR / BLC / DNR
- MODE - WDR_WGT - BLC OSD - BLC POS-X - BLC POS-Y
- BLC SIZ-X - BLC-SIZ Y - DNR (OFF, LOW, MIDDLE, HIGH)

DAY & NIGHT
- AUTO - COLOR - BW - EXT

PRIVACY
- MODE - ZONE NO - X-POS - Y-POS
- X-SIZ - Y-SIZ - COLOR - TRANS

MOTION
- RESOLUTION - SENSITIVITY

CAMERA ID
- MODE - X-POS - Y-POS - SETUP ID

SYSTEM INFO

RESET

EXIT

SETUP Menu Functions

1) DISPLAY MODE

- SDI SCALE : Set the desired scale of picture
- SDI FORMAT : Set the video size. 720P & 1080P supported.
- SDI FPS : Set the frame per second of the video.
- CVBS : Set the TV system. NTSC & PAL supported.
- SDI FPS : Set the frame per second. 30 & 25FPS supported.
- CVBS_Ratio : Set the desired CVBS ratio. 4:3 & 16:9
- COLOR BAR : Check the colors with the color bar.
- SHADING DET : Check the video whether shaded or not.
- DEFECT DET : Check the defects of the video

2) LENS : Set the lens type

<MODE : DC / VIDEO / MANUAL>

3) SHUTTER / AGC : Adjust shutter & AGC setting.

- Shutter : Auto & Manual Mode selectable
- AGC : 0~ 10 levels are provided. Set the desired AGC Level.
- DSS (Digital Slow Shutter) : 4 levels are provided.
  " This feature is to enhance the low light performance, but if it is set the higher level, the video will have an ghost effect. Pls be sure of setting the proper level.
- FREQ : Set the proper frequency. (50Hz & 60Hz provided)

4) WHITE BAL.

<AUTO / PRESET / MANUAL>

AUTO : Auto White Balance.

PRESET :
- To find the optimal setting for current luminance environment in this mode. Set the point the camera towards a sheet of white paper and press the Joystick S/W. If the environment changes, readjust it.

MANUAL
- To fine-tune White Balance manually. Set White balance first by using ATW or AWC mode before Manual mode. After that , if there is still a white balance issue, switch to manual mode and have a fine-tune. Manual mode allows you to increase or decrease the red or blue factor.

5) PICT ADJUST.

BRIGHTNESS : Adjust Brightness of the lens (0~20 Steps)
COLOR GAIN : Adjust proper Color Gain (0~20 Steps)
ACE : Adoptive Color & Contrast Enhancement
SHARPNESS : Adjust proper Sharpness (0~10 Steps)
MIRROR : Change the video direction horizontally.
FLIP : Change the video direction vertically.
STILL : To hold the image to analyze precisely.
SHADING : Correct Lens (Video) shading.
DZOOM : Digital Zoom (0~112 steps)
HLMASK : To mask a strong light at the designated area.

6) WDR / BLC / DNR

MODE : OFF, WDR, BLC

WDR : (Wide Dynamic Range, 0 ~ 4 Steps)
- To distinguish an object in both bright and dare areas

WDR_WGT : Adjust WDR level (0~4 Steps)

BLC : Deliver a distinctive subject and background at the same time, even when the subject is in backlight
BLC OSD : On / Off
BLC POS-X : Position BLC area in X axis
BLC POS-Y : Position BLC area in Y axis
BLC SIZ-X : Define BLC area size in X axis
BLC SIZ –Y : Define BLC area size in Y axis

DNR : <Off / Low / Middle / High>
- To reduce the background noise in a low luminance environment with a filtering system.

7) DAY / NIGHT <AUTO / COLOR / BW / EXT>

AUTO : Automatic D/N switching according to ambient illumination.
COLOR : Display always color picture
B/W : Display always B/W picture
EXT : Automatic D/N switching by using external signals.

8) PRIVACY

To mask area which you want to mask. 31 areas selectable.

MODE : On / Off
X-POS : Position PRIVACY area in X axis
Y-POS : Position PRIVACY area in Y axis
X-SIZ : Define PRIVACY area size in X axis
Y-SIZ : Define PRIVACY area size in Y axis
COLOR : Define the color of masking areas. (8 colors)
TRANS : Define the transparent of masking areas. (0~4)

9) MOTION

To detect the motion or movement in the video.

RESOLUTION : 0~4 Steps.
SENSITIVITY : 0~20 Steps.

10) CAMERA ID

To display a title (ID) on the monitor

MODE : On / Off
X-POS : Position Camera ID in X axis
Y-POS : Position Camera ID in Y axis.
SETUP ID : Define Camera ID

11) SYSTEM INFO

Showing System version and Date

12) RESET

13) EXIT