





- 1/3" High Density Sony Super HAD CCD (960H) w/ Effio-A DSP
- 750 TV Lines of Resolution (960H)
- E-WDR by ATR-EX (Adaptive Tone Reproduction)
- Lens Shading Compensation
- 24 Dynamic Infrared LEDs with up to 65' Range
- 0.003 Lux / 0 Lux with IR LEDs On
- IR Corrected 3.6mm Electronic Iris Lens / Smart IR / Mirror
- D-WDR / Backlight & Hightlight Compensation
- 3DNR Noise Reduction
- Privacy Masking / Motion
- ATW / Push / User1 / User2 / MANUAL / Push Lock
- OSD (On Screen Display) menu and Camera ID
- 3-Axis Concealed Bracket
- IP-67 Rated Water Resistance
- Cable Feed Through Mount for tamper resistance
- 12 VDC Operation



#### CAUTION

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of non-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**INFORMATION** This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These Limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordanc with the instruction manual, may cause harmful interference to radio communications.

WARNING Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION To prevent electric shock and risk of fire hazards • Do NOT use power sources other than that specifide. • Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

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## Warnings

The camera needs periodic inspection.

· Contact an authorized technician for inspection.

Stop using camera if there is a malfunction.

• If your using your camera around smoke or inusual heat for a long time, fire may be caused.

Do not install the camera on a surface that can not support it.

· Unless the surface is suitable, injury or other hazards may occur.

Do not disassemble the camera.

· It may result in fire, electric shock or other hazards.

Do not hold plug with wet hands.

· It could cause an electric shock.

Do not use the camera close to a gas or oil leak.

· It may result in fire or hazards.

## Precautions

## Ø Do not install the camera in extreme temperature conditions.

- $\bullet$  Only use the camera under conditions where temperatures are between -14  $^\circ\text{F}$  and +122  $^\circ\text{F}.$
- Be especially careful to provide ventilation when operating under high temperatures.

## Ø Do not drop the camera or subject it to physical shocks.

· It may cause malfunctions to occur.

# Ø Never point camera into a strong light source, such as the sun or bright spotlight.

• It can damage the CMOS Sensor.

## Ø Do not expose the camera to radioactivity.

• This will damage the CMOS sensor.

## NOTE

• If the camera is exposed to spotlight or object reflecting strong light, smear or blooming may occur.

Please check power specs before connecting power.

## FEATURES

- 1/3" High Density Sony Super HAD CCD (960H) w/Effio-A DSP
- High Resolution of 750 TVL
- E-WDR by ATR-EX (Adaptive Tone Reproduction)
- 24 Dynamic Infrared LEDs with up to 65' Range
- 0.003 Lux / 0 Lux with IR LEDs On
- IR Corrected 3.6mm Electronic Iris Lens / Smart IR / Mirror
- Auto Day/Night
- DIS(Digital Image Stabilizer), LSC (Lens shading compensation)
- BLC / HLC / Flickerless
- Anti-Color Rolling
- De-Fog
- Motion Detection
- · Privacy Masking
- Advanced Digital Noise Reduction(2D + 3D)
- OSD (On Screen Display) menu and Camera ID
- IP67 Rated Water Resistance
- 12VDC Operation

## [OSD Setup Menu]

SETUP
SCENE SELECT
PICT ADJUST
EZOOM
DIS
PRIVACY MASK
MOTION DET
SYS SETTING
LANGUAGE
VERSION
MAINTENANCE
EXIT

MAIN MENU	SUB MENU I	SUB MENU II	ADJUSTMENT			
				AE LEVEL	1 ~ 250	
			AUTO	AGC MAX	6 ~ 44.8 DB	
				SENS UP	AUTO / OFF	
				RETURN		
		SHUTTERIAGO	MANULAL	SHUTTER	2 ~ 256 FLD, 1/50 ~ 1/10000	
		SHOTTERAGO	WANDAL	AGC MAX	6 ~ 44.8 DB	
				RETURN		
			FIX	SHUTTER	2 ~ 256 FLD, 1/50 ~ 1/10000	
			FIA	AGC	0 ~ 44.8 DB	
				RETURN		
				SPEED	0 ~ 255	
	CUSTOM / FULL AUTO / INDOOR / OUTDOOR / BACKLIGHT / ITS	WHITE BAL		DELAY CNT ATW FRAME	0 ~ 255	
			ATW		0 ~ 255	
SCENE SELECT				ENVIRONM ENT	ATUO / INDOOR / SUNNY / SHADE	
				RETURN		
			PUSH			
			USER1	B-GAIN	0 ~ 255	
				R-GAIN	0 ~ 255	
				RETURN		
				B-GAIN	0 ~ 255	
			USER2	R-GAIN	0 ~ 255	
				RETURN		
			MANUAL	LEVEL	0~63	
			-	RETURN		
			PUSH LOCK	1		
			HIC	CLIP LEVEL	0 ~ 255	
				RETURN		
		HLC/BLC	BLC	1		
			OFF			

MAIN MENU	SUB MENU I	SUB MENU II	ADJUSTMENT								
		ATR-EX		CONTRAST CLEAR FACE RETURN	LOW / MID / HIGH OFF / LOW / MID / HIGH						
			OFF								
		DND	LEVEL	0~6							
		Dirik	RETURN	1							
				BURST	ON / OFF						
				CNTL SIGNAL	INT / EXT1 / E	XT2					
			AUTO	DELAY CNT	0~255						
				DAY→NIGH1	0~255						
		DAY/NIGHT		NIGH I →DAY	0~255						
			DAV	RETURN							
			DAT	DUDET	ON LOFE						
	_		NIGHT	DETLIDN	UN/OFF						
CUSTOM / FULL AUTO		, , , , ,		MODE	AUTO / CENT	FR					
					TOP	0~6					
	CUSTOM /				BOTTOM	0~6					
	INDOOR /					LEET	LEET 0~8				
	OUTDOOR / BACKLIGHT / ITS		IR ARE	IR AREA	RIGHT	0~8					
					WEIGHT	0~15					
SCENE SELECT										RETURN	
				LEVEL	0~12						
						LEVEL MIN	0~ 255				
		IR	ON		DAY/NIGHT	LEVEL MAX	0~ 255				
		OPTIMIZER	014	IR LED		RETURN					
					FIX	LEVEL	0~ 255				
						RETURN					
					OFF						
				COLOR NIGHT	ON	COLOR GAIN	LOW / MID / HIGH				
						RETURN					
								OFF			

MAIN MENU	SUB MENU I	SUB MENU II		ADJUSTMENT			
						PATTERN	SET 1 ~ 3
						POSH	0~959
						POSV	0~959
		IR OPTIMIZER		IR SHADE COMP	ON	LEVEL	OFF / LOW / MID / HIGH
						RETURN	
					OFF		
				RETURN			
	CUSTOM /		OFF				
SCENE	INDOOR /			PATTERN	SET 1 ~ 3		
SELECT	OUTDOOR /	OOR / LENS SHD GHT / COMP	ON	POSH	0~959		
	BACKLIGHT /			POSV	0~959		
	ITS		OFF	RETURN			
		DEFOG	011	LEVEL	LOW / MID / HIGH		
			DEFOG	RETURN			
			OFF				
		FLK LESS	AUTO	MODE	SHUTTER	FIX / GAIN C	NTL
				RETURN			
			ON		SHUTTER	FIX / GAIN C	NIL
			OFF	TREFORM	1		
		ANTI CR	AUTO / OI	N / OFF			
		RETURN					
	BRIGHTNESS	0~255					
	CONTRAST	0~63					
PICT	SHARPNESS	0~15					
ADJUST	HUE	0 ~ 127					
	COLOR GAIN	0~255					
	RETURN						
		MAG	0 ~ 255				
	01	PAN	0~1023				
EZOOM	ON	TILT	0~511				
		RETURN					
	OFF						

MAIN MENU	SUB MENU I	SUB MENU II	ADJUS	TMENT			
DIS	ON / OFF						
	AREA SEL	1/15 ~ 15/15					
	DISPLAY	ON / OFF					
	POSITION						
PRIVACY MASK	COLOR	BLUE / YELLOW / CYAN	BLUE / YELLOW / CYAN / MAGENTA / WHITE / BLACK / RED / GREEN				
	TRANSP	0.00 ~ 1.00					
	MOSAIC	ON / OFF					
	RETURN						
		DETECT SENSE	0 ~ 127				
		INTERVAL	0~127				
	ON	BLOCK DISP	ON / OFF				
		MASK AREA	1~96				
			RETURN				
		MONITOR AREA	AREA SEL	1/4 ~ 4/4			
			AREA MODE	ON /OFF			
MOTION DET			TOP	0 ~ 15			
			BOTTOM				
			LEFT	0.13			
			RIGHT				
			RETURN				
		RETURN					
	OFF						
	SYNC MODE	INT					
			TYPE	DC / VIDEO			
				AUTO			
SVS SETTING		AUTO	MODE	OPEN			
010 0211110	LENS			CLOSE			
			ADJUST	ENTER TO CANCEL			
			SPEED	0 ~ 255			
		MANUAL					

MAIN MENU	SUB MENU I	SUB MENU II		ADJUSTMENT		
	FLIP	V/H/HV/OFF				
	LCD/CRT	LCD / CRT				
		PROTOCOL	PROTOCOL PELCO-D			
		ADDRESS	ADDRESS 1 ~ 255			
		BAUDRATE	ATE 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200			
SYS SETTING	COMMUNICATION	DATABIT	8 BIT			
		PARITY	ODD / EVEN / OF	F		
		STOPBIT	1 BIT			
		RETURN				
	CAMERA ID	ON / OFF	ON / OFF			
	RETURN					
LANGUAGE	ENGLISH / ESPAÑO	L / РУССКИЙ / PORT	UGUÊS / DEUTSCH	I/FRANCAIS/日本語		
VERSION						
			REGISTRATION			
		MANUAL	REG.POINT	WHITE / BLACK / OFF		
			CURSOR	WHITE / BLACK / RED / GREEN		
			COLOR	/ BLUE		
			BLINK	ON /OFF		
	W PIX MASK		REG.NUMBER			
MAINTENANCE			RETURN			
WAINTENANCE			LEVEL 1	0 ~ 255		
		AUTO	LEVEL 2	0 ~ 255		
			AUTO			
			RETURN			
		DATA CLEAR				
	CAMERA RESET					
	RETURN					
EXIT	SAVE / NOT SAVE /	CANCEL / BACK				

## [HOW TO OPERATE OSD JOYSTICK]



OSD menu is controlled by OSD joystick in OSD Board or OSD Cable

-▲ (UP), ▼ (DOWN), ◄ (LEFT), ► (RIGHT), ● (SET / ENTER)

## [OSD SET UP]

Press Enter button of the OSD Joystick to enter into OSD main menu.

SETUP MENU	
1/ SCENE SELECT PICT ADJUST EZOOM DIS PRIVACY MASK MOTION DET SYS SETTING EXIT J	2 FULL AUTOJ ON OFF J OFF J

### 1. SCENE SELECT

You can select options according to the environment: FULL AUTO, INDOOR, OUTDOOR, BACKLIGHT, ITS (Traffic Monitoring) and CUSTOM (User defined).

## 1.1.SHUTTER/AGC

ADVANO	ED MEI	NU	
SHUTTE WHITE B HLC/BLC ATR-EX DNR DAY/NIG IR OPTIN RETURN	1/2 R/AGC AL HT MIZER	AUTO J ATW J OFF OFF J AUTO J OFFJ	

This function can set the SHUTTER/AGC level to AUTO, MANUAL or FIX.

SHUTTER/AGC	DESCRIPTION
AUTO	Video level is automatically controlled by settings of AE LEVEL, AGC, MAX and SENS UP. Under lowest light level, AGC is maximized by automatic gain controller Also can set SENS UP, ON or OFF.
MANUAL	Video level is manually controlled by the settings of SHUTTER, AGC MAX. Available DC Auto Iris Lens only in this mode.
FIX	Video level is fixed.

#### 1.2. WHITE BAL

ATW	
SPEED DELAY CNT ATW FRAME ENVIRONMENT	230 200 INDOOR
RETURN J	

You can choose from different white balance modes: ATW, PUSH, USER1, USER2, MANUAL and PUSHLOCK.

Only when you choose the CUSTOM mode in the SCENE SELECT menu will the 'WHITE BALANCE' sub-menu ATW/ PUSH/ USER1/ USER2/ MANUAL/PUSH LOCK appear, you can now adjust the mode.

Otherwise the white balance is fixed. The other mode in the SCENE SELECT sub menu is a fixed ATW setting only.

#### 1.2.1. ATW (AUTO WHITE BALANCE)

You can set the SPEED, DELAY CNT, ATW FRAME and ENVIRONMENT.

ATW	DESCRIPTION				
SPEED	Set the AWB compensating speed				
DELAY CNT	Adjusts the AWB compensation delay to next update of AWB.				
ATW FRAME	Determines the ATW range with respect to the fundamental range.				
ENVIRONMENT	Select INDOOR, SUNNY, SHADE or AUTO.				

#### 1.3. HLC/BLC

#### HLC (HIGHLIGHT COMPENSATION)

This function is used to black out highlighted areas in order to enable a clear visual image of objects, such as the license plates of an oncoming vehicle or other objects that may be obstructed by bright headlamps.



HSBLC ON

HSBLC OFF

#### BLC (BACKLIGHT COMPENSATION) :

This is a useful function that brightens an image in the foreground with a highly lite area behind it such as sunlight thus eliminating the affect of a silhouette.







#### 1.4. ATR-EX (Adaptive Tone Reproduction-EX)



Set to enable or disable ATR (Adaptive Tone Reproduction) compensation for a better dynamic range (D-WDR) of the image. This function provides gradation compensation to improve the contrast of subjects whose gradation has been lost in cases where both low-luminance and high-luminance areas exist in the same picture.

#### 1.4.1. ATR-EX SETUP

User can select CONTRAST and CLEAR FACE values from LOW / MID / HIGH to achieve the best image quality.

#### 1.5. DNR

ADVANO	ED MEN	U	]
SHUTTE WHITE B HLC/BLC ATR-EX DNR DAY/NIG IR OPTIN RETURN	1/2 R/AGC AL HT MIZER	AUTO J ATW J OFF OFF AUTO J ON J	

You can adjust the level of noise reduction, the bigger the value, the higher the noise reduction level. DNR (Digital Noise Reduction) removes the temporal noise reduction by 3D filtering while using frame memory spatial noise is reduced by the 2D filtering. Setting a higher level of noise reduction may result in the loss of sharpness and the tail effect of a comet may occur.

#### 1.6. DAY/NIGHT



Day/night function is for the user to use the camera for different occasions. There are three modes, DAY, NIGHT and AUTO

DAY/NIGHT	DESCRIPTION
AUTO	This function controls the camera output Color or B&W image according to the strength of the light. You Can set the parameter according to the environment. Camera decides DAY or NIGHT through in coming light level itself.
DAY	Video is always in Color.
NIGHT	Video is always in Black & White.

#### 1.7. IR OPTIMIZER

This is a useful function for IR LED cameras in night mode only.

If subjects which can cause overexposure are located near the monitored area, you can adjust IR OPTIMIZER level or area by Selecting ON or OFF.

If IR OPTIMIZER is set to "ON",

IR OPTIMIZER	DESCRIPTION	
MODE	Select AUTO or CENTER to reduce over-saturation. <b>AUTO:</b> Reducing the over-saturation is automatically adjusted along with the location of the subject.	
IR AREA	Sets the IR OPTIMIZER AREA and the function works selected area in 'CUSTOM preset only.	
LEVEL	This function is used to adjust the overall when IR OPTIMIZER is working. If the LEVEL is too high, the over-saturation could occur.	
IR LED	Set the IR LED ON/OFF • DAY/NIGHT : Follows the setting automatically DAY/NIGHT function. • OFF : Turn IR LED off. • FIX : Fixes the brightness of IR LED in any condition.	
COLOR NIGHT	Displays night video in color.	
IR SHADE COMP	This function is used to compensate for IR shade of the side area on screen when IR LED is ON. You can adjust the shading PATTERN, POSITION and LEVEL. If the LEVEL is high, the screen noise could be increased at the side area.	

MODE	DESCRIPTION	
LENS SHD COMP	Lens shading compensation. This function is used to calculate the compensation data for lens shading. The convex shape of the lens causes the light to enter the camera unevenly and typically makes the center of the screen brighter than the rest. It is used to compensate for this undesirable effect and make the screen more even. Set to 'ON', you can adjust the shading PATTERN and POSITION.	
DEFOG	<ul> <li>You can choose the Defog function according to the environment. The visibility of the camera can be enhanced in any weather condition. You can select from OffLow/Middle/High to display.</li> <li>If set to ON, the WDR/BLC function will be deactivated.</li> </ul>	
FLK LESS	This function is used to remove the flickering on screen due to differences in light and electric frequencies. Selects AUTO, OFF or ON.	
ANTI-CR	This mode can minimize the problems related to color rolling caused by differences between the flicker of fluorescent lights and the frequency of the camera. Selects AUTO, OFF or ON	

## 2. PICT ADJUST

PICT ADJUST BRIGHTNESS CONTRAST SHARPNESS HUE COLOR GAIN	
COLOR GAIN	118

PIC ADJUST	DESCRIPTION	
BRIGHTNESS	Increases or decreases the brightness of the picture. Do not increase this too much this will cause the dynamic range for the highlighted areas to decrease.	
CONTRAST	Adjust the strength of the image Contrast. If Contrast is set to too high, the dark area may lose detail and the high luminance area may be saturated.	
SHARPNESS	Increase or decreases the Sharpness of the picture. Setting the Sharpness too high will cause more noise and a harsh image.	
HUE	Adjusts hue for NTSC version only.	
COLOR GAIN	Increases or decreases the Color Saturation.	

### 3. EZOOM

Sets the maximum digital zoom magnification. E.ZOOM function enlarges the pixel itself, which can cause deterioration of the picture quality.

SETUP MENU	
<ul> <li>1 SCENE SELECT PICT ADJUST EZOOM DIS PRIVACY MASK MOTION DET SYS SETTING EXIT</li> </ul>	/2 CUSTOM J OFF OFF J OFF J

You can setup according to the needs of area size and position.

EZOOM	DESCRIPTION
MAG	MAG is the magnification ratio of the electronic zoom. Sets from x000 to x255.
PAN When MAG is greater than 0, the electronic pan is available. 000 is th most pan and 1023 is the right most pan.	
TILT	When MAG is greater than 0, the electronic tilt is available. 000 is the upper most tilt and 511 is the lower most tilt.

## 4. DIS (Digital Image Stabilization)

This function is used to reduce and stabilizes the shaky image from a camera installed in the vibrated area. FOV(Field of view) will be reduced if set to ON.

SETUP MENU	
<ul> <li>1/ SCENE SELECT PICT ADJUST EZOOM</li> <li>DIS PRIVACY MASK MOTION DET SYS SETTING EXIT J</li> </ul>	2 CUSTOM J J OFF OFF OFF

## 5. PRIVACY MASK

Sets ON/OFF for enabling/disabling PRIVACY. Up to 15 privacy areas are available and each area is programmable in size, position, color and transparency of the chosen area.

· The privacy areas are masked with the color selected by PRIVACY MASK>COLOR.

PRIVACY MASK SETUP		
AREA SEL	1/15	
DISPLAY	OFF	
POSITION		
COLOR		
TRAMSP		
MOSAIC		
RETURN.	1	

PRIVACY MASK	DESCRIPTION	
AREA SEL	Select the area to be masked AREA1~AREA15 to be adjusted.	
DISPLAY	Choose ON / OFF for the masked areas which you selected 'AREA SEL'.	
POSITION	Adjust the masked area positions by UP/DOWN/LEFT/RIGHT.	
COLOR:	Selects one of 8 colors (Red, Green, Blue, Yellow, Cyan, Magenta, White and Black) for selected mask window at 'AREA SEL'.	
TRANSP	Transparency rate for the mask can be adjusted.	
MOSAIC	Enables or disables the mosaic effect for the selected mask window at 'AREA SEL'.	

## 6. MOTION DETECTION

Up to 4 Motion Detection areas are available settings include DETECTION SENSE / INTERVAL / BLOCK DISP / MASK AREA / MONITOR AREA and each area is programmable in size and location.

MOTION DETECTION	
DETECT SENSE INTERVAL BLOCK DISP MASK AREA MONITOR AREA RETURN J	016 000 0FF J J

MOTION DETECTION	DESCRIPTION
DETECT SENSE	Adjust the sensitivity level for detecting motion. A higher value is more sensitive.
INTERVAL	Set the interval time from the starting motion operation until being ready for the next motion operation.
BLOCK DISP	Enables or disables displaying blocks for the area which the motion is detected.
MASK AREA	Sets MASK AREA for disabling MOTION DETECTION. Selects number of area cells to set the area you need.
MONITOR AREA	Sets the MOTION DETECTION area on screen. For visual surveillance area and you can adjust the parameter values to adjust the surveillance area location.

#### 6.1. BLOCK DISP

The motion is displayed by means of blocks when MOTION DET and MOTION DET>BLOCK DISP are ON.

. 1	2	3	4	5	6	7	8	9	10	11	12	_
13	14	15	16	17	18	19	20	21	22	23	24	-
25	26	27	28	29	30	31	32	33	34	35	36	+
37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	
61	62	63	64	65	66	67	68	69	70	71	72	_
73	74	75	76	77	78	79	80	81	82	83	84	+
85	86	87	88	89	90	91	92	93	94	95	96	-

## 7. SYS SETTING

SYSTEM SETTING SYNC MODE INT LENS AUTOJ LCD/CRT CRT COMMUNICATION J CAMERA ID ON RETURN J
---

SYS SETTING	DESCRIPTION			
LENS	Selects the lens type: AUTO or MANUAL.			
FLIP	Use to inverse the pictures coming from the camera. • V : Vertical Flips the video signal vertically • H : Horizontal Flips the video signal horizontally • HV : Horizontal and Vertical Flips the video signal horizontally and vertically.			
LCD/CRT	Select the correct type of viewing monitor CRT or LCD this will ensure the most optimal picture.			
COMMUNICATION	Set up COMMUNICATION related functions PROTOCAL / ADDRESS / BAUD RATE / DATAIT / PARITY / STOPBIT according to your needs.			
CAMERA ID	Set the camera ID as numbers, uppercase letters, and related symbols.			

## 7.1. COMMUNICATION

Set up COMMUNICATION related functions PROTOCAL / ADDRESS / BAUD RATE / DATAIT / PARITY / STOPBIT according to your needs.

COMMUNICAT	ION
PROTOCOL ADDRESS BAUDRATE DATABIT PARITY STOPBIT RETURN,J	PELCO-D 2400 8BIT OFF 1BIT

#### 7.2. CAMERA ID

CAMERA ID SETUP	
ABCDEFGHIJKLMNOPQRSTUV WXYZ0123456789-!*#\$%&'( )_`,¥:;<=>?@\^*114/ CHR1 CHR2 ←→11 CLRJ POS J	

Set the camera ID as numbers, uppercase letters, and related symbols.

- ←↑↓→: Up/Down, Left/Right
- CLR : clear camera name
- · POS : for position.
- · RETURN" : return to the upper menu.

## 8. LANGUAGE

SETUP MENU
♦ 2/2 ♥
LANGUAGE ENGLISH VERSION 1.0 MAINTENANCE J
EXIT 1

Select from 8 languages: ENGLISH, SPANISH, RUSSIAN, PORTUGUESE, GERMAN, FRENCH, CHINESE and JAPANESE.

#### 9. VERSION

The camera firmware version is displayed.

#### **10. MAINTENANCE**

Set up functions for WHITE PIXEL MASK and CAMERA RESET.

SETUP MENU 2/2 ENGLISH LANGUAGE 1.0 MAINTENANCE J
EXIT 4

#### 10.1. W.PIX MASK

This function is used to compensate white pixels. When used camera in high-temperature environment, there might be dead pixel on image CCD sensor. With this function ON the dead pixel is to be masked so as to improve the picture quality. There are three settings: MANUAL / AUTO / DATA CLEAR.

MAINTENANCE		1
W.PIX MASK CAMERA RESET	MANUALJ	
RETURN 4		

MAINTENANCE	MODE	DESCRIPTION
	REGISTRATION	Detect each white pixel using the cursor.
ΜΑΝΠΑΙ	REG. POINT	Displays detected white pixels in color.
COMP	CURSOR COLOR	Select cursor color: WHITE / BLACK / RED / GREEN / BLUE
COMI	BLINK	Set the cursor to blink or not blink.
	REG. NUMBER	Display quantity of detected white pixels.
	LEVEL1	Sets the threshold to detect white pixels.
AUTO COMP	LEVEL2	Sets the threshold to detect very large white pixels.
	AUTO	Start automatic detection of white pixels.
DATA CLEAR		Clear the W.PIX data or not.
CAMERA RESET		This function is used to RESET to the factory defaults of the camera settings. You should confirm before using this operation.

10

#### SETUP MENU (OSD)

## 11. EXIT

Exits SETUP MENU and returns to the normal display.

EXIT MENU	
PLEASE CHOOSE SAVE J NOT SAVE J CANCEL J BACK J	

EXIT MODE	DESCRIPTION
SAVE	Saves all the settings before exiting the setup menu.
NOT SAVE	Exit the setup menu without saving.
CANCEL	Cancel the exit mode.
BACK	Go back to the previous menu mode.

## Dimensions

(unit: inches)





Specifications	
Image Device	1/3" High-Resolution Inter-Line CCD (960H) w/ Effio A
Resolution	750 TVL (960H)
Effective Pixels	976(H) x 494(V)
Minimum illumination	0.003 Lux (0 Lux with LED 0N)
Infrared LEDs	24 Dynamic IR LEDs
IR Distance	65' (20m)
Day/Night	Auto
Built-In Lens	3.6mm IR Corrected Lens
Light Compensation	HLC (Highlight Compensation) / BLC (Backlight Compensation)
Noise Reduction	3DNR
White Balance	ATW / Push / User1 / User2 / MANUAL / Push Lock
E-WDR	E-WDR by ATR-EX
Lens Shading Compensation	YES
Motion Detection	YES
Privacy Masking / Motion	UP to 15 Programmable Mask Areas
Water Resistance	IP67
Power Source	DC12V (±10%)
Power Consumption	70mA / 240mA (IR OFF/ON)
Operating Conditions	14°F to +140°F (-10°C to +60°C) @ 85% RH
Dimensions	2.80" x 7.09" x 2.58" (71 x 180 x 65.5mm)

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## OTHER PRODUCTS FROM VITEK Spire Series 960H Digital Video Recorders



## **VT-SRL Series**

Spire Series 4, 8, & 16 Channel 960H Digital Video Recorders

- Supports High Resolution 960H Cameras
- 4, 8 or 16 Video Inputs with 1 HDMI, 1 Spot Monitor Output, and 1 VGA output
- · H.264 Compression
- Up to 480fps Live Display & 480fps Recording (VT-SRL916) / 240/240 (VT-SRL908) / 120/120 (VT-SRL904)
- · Supports both Dynamic and Static IP Addresses
- 4 Alarm Inputs / 1 Relay Out
- Supports two internal Hard Drives (VT-SRL908/VT-SRL916) / One internal Hard Drive (VT-SRL904)
- · Remote Viewing over the Internet, LAN, Explorer, Safari, Firefox, Opera and Chrome
- · Applications for iPhone, iPad, iTouch and Android Devices
- Mac OSX Client & PC CMS Central Management Software Included
- Thumbnail Search
- · Automatic sending of Health & Event notifications via email
- · Control locally via USB Mouse or with the Included IR Remote control
- PTZ Control over RS-485

## VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

The product must have been used only for its intended purpose, and not been subjected to damage by misuse, willful or accidental damage, caused by excessive voltage or lightning.

The product must not have been tampered with in any way then the guarantee will be considered null and void.

This guarantee does not affect your statutory rights.

Contact your local VITEK Reseller should servicing become necessary.

Vitek makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.

