VITEK®
INDUSTRIAL VIDEO PRODUCTS, INC.

VTC-C2B-HS
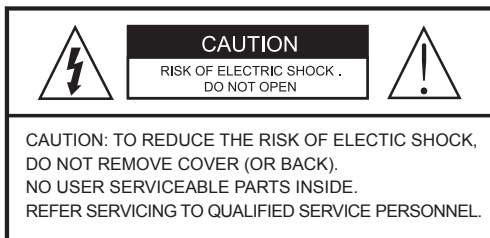## 2.1MP HD-SDI Smart WDR Camera

FEATURES:

- 1/2.9" Sony CMOS

- 2.1 MegaPixel With full 1080p/720p HD-SDI Output (SMPTE 292M)

- Smart Motion Zoom tracks motion, then intelligently zooms into that area of the frame

- Mechanical IR Cut Filter (True Day/Night)

- Small scale design to fit in 5" dome enclosures such as the Pelco DF5 Housing

- Fully programmable advanced WDR

- Sensitivity of 0.0005 Lux

- Advanced OSD Functions: Defog, BLC/HLC, Motion Deblur, Pixel Defect Compensation, Mirror, Flip

- 100% Pure Digital Transmission of video data

- Up to 700' HD Transmission Range (Depending on cable characteristics and integrity)

- 12VDC / 24VAC Dual Voltage Operation

OnCUe
HDcctv

Safety Precaution

- To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- To prevent electric shocks and risk of fire hazards, do NOT use other than specific power source.

> **CAUTION**
> RISK OF ELECTRIC SHOCK .
> DO NOT OPEN
>
> CAUTION: TO REDUCE THE RISK OF ELECTIC SHOCK,
> DO NOT REMOVE COVER (OR BACK).
> NO USER SERVICEABLE PARTS INSIDE.
> REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the unit.

- **Warning** :

  This equipment has been tested and found to comply with the 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 accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- **Caution** :

  Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
  Mains power quality should be that of a typical commercial environment. If the user of the model requires continued operation during power mains interruptions, it is recommended that the model be powered from an uninterruptible power supply (UPS) or a battery.

Safety Precaution

NOTICE

- The image used in this instruction manual are processed to help comprehension and may differ from actual video of the camera.
- Avoid installing in areas where shock or vibration may occur.
- Pay attention to safety when running the connection cable and observe that the cable is not subjected to heavy loads, kinks or damage and no moisture can get in.
- Never open the device.
- The warranty becomes void if repairs are undertaken by unauthorized persons.
- Maintenance and repair have to be carried out only by authorized service centers.
- Use only a mild detergent to clean the housing.
- The camera should never be operated beyond the technical specifications.
  This can lead to damaging the camera and voiding the warranty.
- The camera should never be operated in water.

Contents

Features

Key Features

- Full HD, 2Mega Pixel HD-SDI CAMERA, 1920x1080(30p/25p)
- True WDR(Wide Dynamic Range)
- Improved Noise filter with the enhanced 3D-NR
- CS mount supported (Option: C-mount adaptor)
- Non Compressed digital streaming up to 1.485Gbps.
- Intelligent focusing status indicator on screen
- Dual Filter Switcher
- Pointing Zoom which enables the flexible zooming of any area.
- Smart Motion Zoom in combination with Pointing Zoom.
- Selectable Scale down or Cropped image to 720p mode
- Motion Detection, Privacy Mask, Defog, Sens-up(x32), D-WDR, H/V/HV Flip, D-Zoom(1.1x~8x), LSC(Lens Shade Compensation), BLC/HLC, Motion Deblur, Pixel Defect Compensation, Title Set
- Back focus Flange
- Top performance at low light sensitivity (Sens-up On)
- OSD menu & CVBS Video output BNC for easy installation & maintenance.
- Circuit protection against reverse power polarity
- Isolated power supply to help avoid ground loop problem
- Remote control via RS-485 (Pelco-D/P)

General Description

This camera incorporates a full (1920 x 1080p) HD camera module.

- With ICR mechanism,
  - Enhances its sensitivity about 10x at night time
  - Can accept infrared light
- With Intelligent Focus Indicator and FOCUS ASSIST menu,
  - Offers easy adjustment of Focus
- With 24VAC/12VDC dual power design,
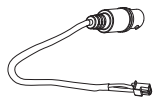 - Offers flexibility of installation

Composition
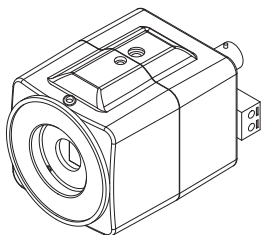
Compact Box Camera

Operating
Instruction

Dust Protection
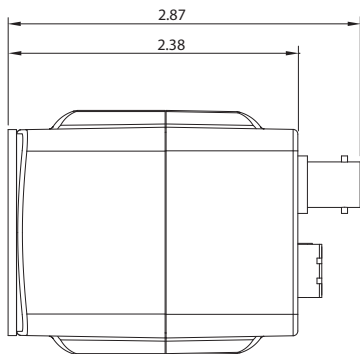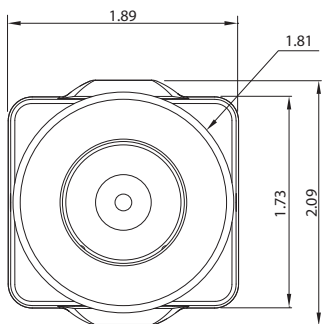Cap (1pc)

Video Sub-out
Cable (1pc)
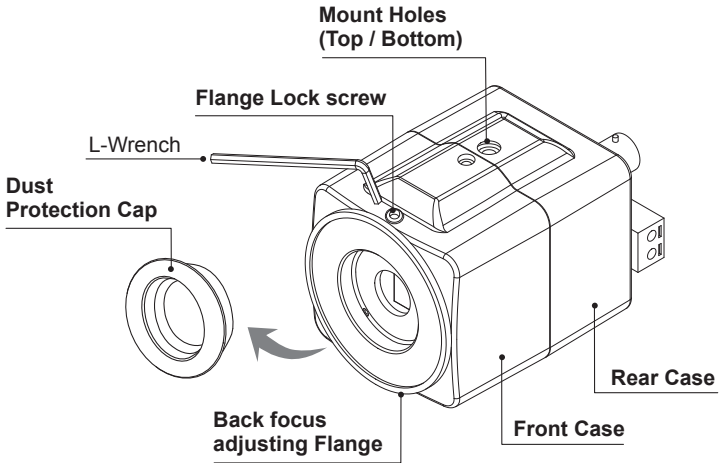
L- Wrench:
1.5mm (1pc)

Dimensions

(unit : inches)

1.89

1.81

1.73

2.09

2.87

2.38

Part Names

**Mount Holes
(Top / Bottom)**

Flange Lock screw

L-Wrench

**Dust
Protection Cap**

Rear Case

**Back focus
adjusting Flange**

Front Case

REAR VIEW

VIDEO

CONTROL

HD-SDI   CVBS

POWER   DC LENS
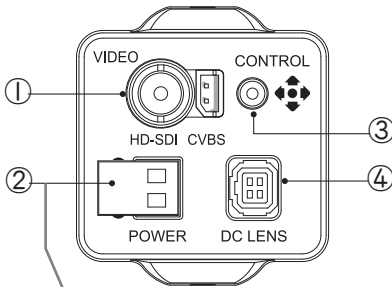
Ⓛ Video out connector(BNC)
② Power input terminal
③ OSD Control Joy stick
④ DC Auto Iris Lens connector

PIN 4   **PIN 2**

DC LENS

PIN 3   **PIN 1**
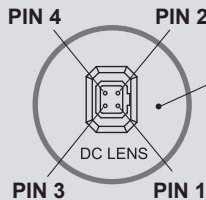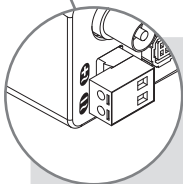
**Lens Connector
for Auto Iris lenses**

No.	DC Iris
1	Damp(-)
2	Damp(+)
3	Drive(+)
4	GND

Installation Instructions

Installation and commissioning Instructions

• Make sure the power is removed before installation.
• Follow the order for applying power.
  When using 12VDC or 24VAC power make power connections
  at camera first then apply power. this will help avoid unnecessary
  power surges to camera.

1. Remove the dust protection cap from the lens mount.
2. Screw the lens onto the camera firmly (do not over tighten).
3. Plug the lens into the lens connector on the rear of camera case.
4. Mount the camera to the wall or ceiling with a corresponding mounting bracket
   through the camera mount holes (1/4" thread insert) on its top or bottom.

⚠ CAUTION

• Care should be taken the cable is NOT damaged, kinked or exposed in
  any hazardous area.
• Do not expose the camera lens directly to a strong light source such as the sun or
  spot light.

Setting the back focus adjustment

For easier and better adjustment, this camera provides FOCUS ADJUST menu
which will assist you in the focusing of the camera.
When enabling FOCUS ASSIST menu, follow the procedure to get the best back
focus adjustment.

1. Set the lens for the zoom position to WIDE and the focus position to INFINITE(∞).
2. Point the camera at an object about 30' away
3. Adjust 'Back focus adjusting Flange' until the optimum focus is achieved.
4. Set the lens zoom position to TELE and adjust the lens focus for best focus.
5. Set the lens zoom position to WIDE again, check if the focus adjustment
   was the best. If not, re-adjust 'Back focus Flange' slightly.
6. After the setting, tighten the 'Flange lock screw' with L-wrench supplied.

Start up

When the camera is powered properly, it starts up with initializing the internal
parameters.

Installation Instructions

Using OSD Controller

Setup menu can be accessed and controlled by OSD control joy stick on the rear of the camera unit.

Five commands are available with the joy stick.

The design of rear panel could be different according to the camera models.

◀◉▶ Description of the joystick operation

1) SET Key (●) : Access to the menu or enter the setting.
   To enter the main menu, press the Set Key down for about 2sec
2) UP/DOWN Key (▲/▼) : Choose the desired sub-menu and to move the cursor up or down.
3) LEFT/RIGHT Key (◄/►) : Set up the value of the selected menu. Used to adjust the desired menu selection and to move the cursor left or right.
4) '⬚' denotes a long press down, for about 2 seconds

Operating Instructions

OSD menu Startup

Press '●' (OSD menu Joy stick key) down for about 2 seconds to access the setup menu mode.

```
          MENU   V3.12

  1. EXPOSURE           ↵
  2. LENS               DC ↵
  3. FOCUS ASSIST       ↵
  4. SCENE ENHANCE      NORMAL
  5. 3D-NR              MID
  6. DAY/NIGHT          AUTO
  7. PICT ADJUST        ↵
  8. SPECIAL            ↵
  9. SYSTEM             ↵
  A. EXIT               SAVE&EXIT ↵
```

Direct Control menu

MAIN	DEFAULT	DESCRIPTION
EXPOSURE	-	Sets EXPOSURE MODE, BRIGHTNESS, SENS-UP, AGC and MOTION DEBLUR.
LENS	DC	Sets Lens types.
FOCUS ASSIST	-	Sets FOCUS
SCENE ENHANCE	NORMAL	SCENE ENHANCE provides several ways to enhance the video in various environments with settings in NORMAL, WDR, D-WDR, BLC and HLC. **NORMAL** – Optimized for normal indoor and outdoor in good lighting condition. **WDR** – This function extends the gain range of the screen that is useful if the camera takes a simultaneous picture of both indoor and outdoor. It improves contrast of the picture in outdoor scenery as well as indoor. Video image is processed from two images by dual shutter (long and short shutter) in a field to provide the best dynamic range. Highlight area is compensated by the short shutter and dark area is compensated by the long shutter. Final video may have less contrast compared to the conventional camera which does not have WDR function." ※ CVBS video signal:Connecting 2nd video to CVBS port disables WDR function temporary. It should be considered when installer adjusts the video with installation monitor via CVBS video signal. **D-WDR** – Improves the visibility by compensating the video gain for the dark area. Noise can increase in the dark area accordingly.

Operating Instructions

SCENE ENHANCE	NORMAL	**BLC** – Improves the visibility of bright back light. Outside area of BLC window can over saturate. BLC has a target window for compensation and its size and position can be set by H-POS, V-POS, H-SIZE and V-SIZE. **HLC** – Cuts out the bright area with black mask and excludes it from compensation. Lower HLC LEVEL the more sensitive it is to bright light.
3D-NR	MID	Enables to set OFF, LOW, MID and HIGH. 3D-NR is a very sophisticated and powerful time-based noise reduction technology by monitoring the noise for the several video frames and defining and eliminating them consecutively at low light. Higher setting reduces noise more but results in losing the sharpness and tail effects or motion blur may occur.
DAY/NIGHT	EXT for IR LED AUTO for No IR LED	Sets DAY / NIGHT to EXT, AUTO, COLOR and B/W. SMART IR can be set to reduce saturation by strong IR illumination at night in any menu of EXT, AUTO and B/W(NIGHT) Setting SMART IR in any menu is identically applied to other menu. Zero(0) turns off SMART IR and High setting decreases saturation but the corners will become darker accordingly. IR LED Control(AUTO/OFF) is available with IR LED model only. If IR LED is set to OFF, IR LED will be turned OFF but DAY or NIGHT is still determined by the built-in light photo sensor. **EXT** – DAY or NIGHT is determined by the built-in light photo sensor. Camera with IR LED must be set to EXT. **AUTO** – Used when DAY or NIGHT is determined by light level through the lens and DAY from/to NIGHT is switched automatically by the scene brightness. D<-->N THRESHOLD, D<->N DELY and SMART IR can be set in the menu. When EXPOSURE>AGC is less than 12, DAY/NIGHT AUTO is disabled and forcibly switches to color (DAY) to avoid malfunction. EXT, B/W(NIGHT) and COLOR(DAY) is independent on AGC level. When EXTERNAL IR LED is used with NON IR LED model, please set to IR LED MODE ON. **B/W(NIGHT)** – Forcibly removes IR cut filter and switches to B/W regardless of light level. **COLOR(DAY)** – Forcibly DAY/NIGHT is disabled and outputs color video.
PICT ADJUST		Sets WHITE BAL, SHARPNESS, COLOR GAIN, GAMMA, SHADING
SPECIAL		Sets MIRROR/FLIP, PRIVACY, MOTION, PIXEL DEFECT, TITLE SET, DISPLAY, DEFOG, POINTING ZOOM
SYSTEM		Sets TV SYSTEM, RESOLUTION, COMM.SETUP, LANGUAGE and FACTORY DEFAULT
EXIT		SAVE & EXIT – Exits the menu after saving the parameters. EXIT – Exits the menu without saving the menu.

Operating Instructions

1. EXPOSURE

```
                EXPOSURE

    SHUTTER        AUTO
    BRIGHTNESS     |:::::::|:::::::| 10
    SENS-UP        OFF
    AGC            |:::::::|:::::::| 12
    RETURN         RET ↵
```

1-1. SHUTTER (default: AUTO)

: Ability to set EXPOSURE MODE to AUTO, MANUAL and Flickerless. MANUAL and Flickerless modes disable SENS-UP and MOTION BLUR functions.

• AUTO: Optimizes the video level by controlling the iris and the shutter speed automatically.
• MANUAL: Iris and Shutter can be set to fix.
• Flickerless : Reduces the flicker in video when US(60Hz)/EU(50Hz) mode is used in 50Hz/60Hz fluorescent lighting respectively.

1-2. BRIGHTNESS (default: 10)

: Adjusts the brightness of video(0~20).

2-3. SENS-UP (default: AUTO)

: Brighter video can be obtained by increasing the exposure time at night with SENS-UP. SENS-UP is the maximum integrations of frame by DSS (Digital Slow Shutter) in low light.

• AUTO: SENS-UP is enabled or disabled automatically by the scene brightness. Higher SENS-UP can get brighter video but slower frame rates with motion blur and more white pixels. If set to AUTO, maximum integration limit for SENS-UP can be set to x2, x4, X8, x16, X32 in SENS-UP menu.
• OFF: Disables SENS-UP.

2-4. AGC (default: 12)

: AGC(0~20) amplifies the video gain for brighter video but more noise and white pixel will occur.
AGC level less than 10 disables AUTO in DAY/NIGHT.

Operating Instructions

2. LENS

Lens can be selected either DC or MANUAL lens.
Lens MUST be set to DC for the best image when DC iris lens is installed

DC	
MODE	DEBLUR
RETURN	RET ↵

MANUAL	
MODE	NORMAL
RETURN	RET ↵

2-1. DC (default: DEBLUR for None LED type)

: Selects lens mode according to installation location. INDOOR or DEBLUR for
  indoor installation according to environment.

• OUTDOOR: Optimized for outdoor environment.
• INDOOR: Optimized for indoor environment.
• DEBLUR: It enables to reduce the blur in certain indoor environments.
  Noise or color rolling may increase.

2-2. MANUAL (default: NORMAL for None LED type)

: Horizontal wave or bar may be seen when MANUAL is selected and the camera
  is working under florescent or similar lights.

3. FOCUS ASSIST

FOCUS ASSIST	
DN DWELL	5s
POP ON FOCUS	OFF
RETURN	RET ↵
FOCUSING STATUS	

Usually cameras are installed in the day time and they often become OUT OF
FOCUS at night time and IN FOCUS again the next day.
This problem can occur with cameras regardless of types or manufacturers.

Operating Instructions

FOCUS ASSIST menu is a unique and patented feature that assists in focusing by simulating DAY & NIGHT conditions.
Set zoom first and adjust focus to get best picture when switching from DAY to NIGHT.

• DN DWELL (5s): ICR switcher switches DAY to NIGHT and back at the interval of D/N DWELL to help with focusing in DAY and NIGHT modes.

• POP ON FOCUS (OFF): ON zooms into the center of the picture at 2X for better focusing.

• FOCUSING STATUS (ON): Shows focus indicator on how focus is set.
When blue bar doesn't show up, try the lens focus to NEAR and FAR.
The maximum blue bar indicates the best focusing position.

4. PICT ADJUST

```
          PICTURE

WHITE BAL      ATW
SHARPNESS      |:::::::|::::::| 10
COLOR GAIN     |:::::::|::::::| 10
GAMMA          0.50
SHADING        OFF
RETURN         RET ↵
```

4-1. WHITE BAL (default: ATW)

: ATW, ATWext, ONE PUSH and MANUAL are available for white balance modes.

• ATW: White balance is continuously working along with the color temperature changes in the range of 2,000K~8,500K.
• ATWext: White balance is continuously working along with the color temperature changes in the range of 1,800K~11,000K.
• ONE PUSH: White balance works only while ● is pressed.
• MANUAL: White balance is fixed to the settings of R_GAIN and B-GAIN. This mode can be used only when the color temperature does not vary.

4-2. SHARPNESS (default: 10) : Adjusts the sharpness of video(0~20).

4-3. COLOR GAIN (default: 10) : Adjusts the color level of video(0~20).

Operating Instructions

4-4. GAMMA (default: 0.5) : Adjusts the gamma of video.

4-5. SHADING (default: OFF) :
    ON enables the ability to compensate the shade caused by a wide lens setting.

5. SPECIAL

SPECIAL	
MIRROR/FLIP	OFF
PRIVACY	↵
MOTION	OFF
PIXEL DEFECT	OFF
TITLE SET	↵
DISPLAY	↵
DEFOG	OFF
POINTING ZOOM	↵
RETURN	RET↵

5-1. MIRROR/FLIP (default: OFF)

   : Reverses the video left and right and/or up and down by MIRROR/FLIP.

   • OFF : Normal display without mirroring or flipping
   • Hor. : Video is reversed left and right
   • Ver. : Video is reversed upside down
   • HV : Video is reversed left and right and upside down.
    When the video is reversed by Ver. or HV, then the joystick directions are
    reversed accordingly. This feature is very useful when a camera is
    installed upside down.

5-2. PRIVACY

   : 10 Privacy zones which can be enabled individually by ZON DISP are
    available to mask the video.

   • ZONE NUMBER : Set a number to select a privacy zone from 1~10.
   • ZONE DISP : ON enables to display relevant privacy zone
   • H-POS, V-POS, H-SIZE and V-SIZE : Adjust the size and position of zone
   • COLOR : Select the color used for masking the zone form eight colors.
   • TRANSPARENCY : Defines the transparency for the mask zone.

Operating Instructions

5-3. MOTION (default: OFF)

: MOTION can detect the changes in the motion window and displays the results in blocks and/or a text message on screen.

• SENSITIVITY : Adjusts the detection sensitivity for motion.
Higher value increases the sensitivity to detect small motion easier. Too low of sensitivity will cause erratic detection.
• H-POS, V-POS, H-SIZE, V-SIZE: Adjust the size and position of the detection window.
• BLOCK DISP : ON enables to display the blocks for the detected area.
• MOTION OSD : ON enables to display a text message, MOVING !!!,
• SMART MOTION ZOOM : ON enables to Automatic Zoom IN/OUT when motion is detected and also enables MOTION OSD to ON.
Area to be zoomed in by SMART MOTION ZOOM can be set at SPECIAL> MOTION> SMART MOTION ZOOM>ZOOM TARGET. Adjusting ◄,►
(Joystick) for ZOOM TARGET varies the viewing angle to be zoomed when motion occurs.
Set the video left and right and/or up and down by MIRROR/FLIP.

※SMART MOTION ZOOM does not work in low light condition and BW.

• STAY ZOOMING : Sets the duration time for zooming by Motion.

⚠ *CAUTION*

• Set the direction of video by MIRROR/FLIP before SMART MOTION ZOOM setting. Otherwise ZOOM TARGET could be different from your intention.

5-4. PIXEL DEFECT (default: OFF)

: Detects and compensates the white pixels which become defective.
Once CALIBRATE is selected, the pixel calibration is initiated with lens closed and can not be canceled.

• THRESHOLD : Defines the level of detection and low value detects more pixels. Be sure to set the value so that the pixels are uniformly blinking over the entire screen. Too low of value will get bad results because too many pixels are detected as bad pixels and the maximum number of pixels for compensation will be filled by the upper area.
• EXECUTE ' ⌨ ' : Long pressing will execute the pixel calibration for the detected pixels. Menu will exit automatically after compensation.

Operating Instructions

5-5. TITLE SET

: Camera title(name) can be set and edited up to 15 alpha numeric and symbolic characters from ASCII codes(ENGLISH only). ▲,▼,◄,► moves the cursor to next input.

Choose a character and ' ' selects it. The selected characters are added and displayed on the top left Corner and the cursor moves right automatically for next input.

• SP - Space is inserted when pressed '●'
• BS – Cursor moves back when pressed '●'
• CLR – Clears all the characters on input line when pressed '●'.
• POS – To be able to set the title position by ▲,▼,◄,► and ●.

5-6. DISPLAY

: Enables or disables the OSD display.
• ID : ON enables camera ID display defined by SYSTEM>COMM. SETUP>CAM ID.
• TITLE : ON enables camera title (name) display set by SPECIAL> TITLE SET.
• D-ZOOM RATIO : ON enables to display the zoom ratio on the bottom right corner. DZx.x will display by multiplying the actual digital zoom ratio.

5-7. DEFOG (default: OFF)

• AUTO : Enhance foggy video automatically according to status of scene.
• MANUAL : Sets to enhance foggy video manually regardless of status of scene.
• LEVEL : LOW, MID, HIGH
Video quality can be less in normal environments.

5-8. POINTING ZOOM

ON enables to set off-centered location to be the center of zoom H-POINTER, V-POINTER- Able to set the location of zoom center D-Zoom is available DZx1.1~x8.0

⚠ CAUTION

• Set the direction of video by MIRROR/FLIP before POINTING ZOOM setting. Otherwise location of zoom center could be different from your intention.

Operating Instructions

Detail Function Description

▌SMART MOTION ZOOM

SMART MOTION ZOOM enlarges the area defined by a yellow window
to a full size image when motion is detected in the black window.
SMART MOTION ZOOM window can be re-sized by adjusting D-ZOOM RATIO
and moved by H-POINTER and V-POINTER.

UNLIKE the conventional zoom which can zoom in/out the center area of image
only, the flexible zoom location and area, SMART MOTION ZOOM differentiates
its usefulness from others.
That is, a conventional camera installed in the corner of the ceiling can zoom the
center of the floor in a room and result in losing the image of door on the side
wall. However, SMART MOTION ZOOM can be set to see the door side and zoom
in that area without missing the IMPORTANT security point.

```
              SMART MOTION ZOOM

        H-POINTER          10
        V-POINTER          10
        D-ZOOM RATIO       MZ2.0
        MOTION CHK CUNT    2
        RETURN             RET↵
```

• H-POINTER (10): Moves MOTION ZOOM area(Yellow window) horizontally.
• V-POINTER (10):Moves MOTION ZOOM area(Yellow window) vertically.
• D-ZOOM RATIO (MZ2.0): Sets the area size to be digitally zoomed when
 motion occurs in the black window.
• MOTION CHK COUNT (2) - SMART MOTION ZOOM is activated after the
 motions in MOTION CHK COUNT are detected in a certain period.
 For example, SMART MOTION ZOOM is activated after set # of triggers
 by motion.

Operating Instructions

▌POINTING ZOOM

This camera has a very useful and powerful feature, POINTING ZOOM, which can zoom in/out of any area in the scene.

UNLIKE the conventional zoom which can zoom in/out the center area of image only the flexible zoom location and area POINTING ZOOM differentiates its usefulness from others. That is, a conventional camera installed in the corner of ceiling can zoom the center of the floor in a room and result in losing the image of door on the side wall.
However, POINTING ZOOM can be set to see the door side and zoom in on that area without missing the IMPORTANT security point.
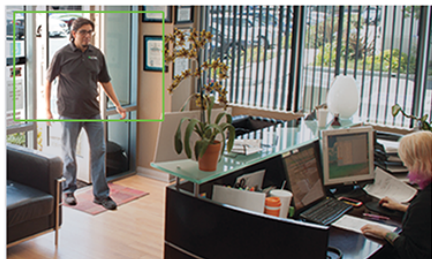POINTING ZOOM can be activated by the joystick operations of ▲ for zoom in and ▼ for zoom out.

```
            POINTING ZOOM

       H-POINTER        10
       V-POINTER        10
       RETURN           RET ↵
```
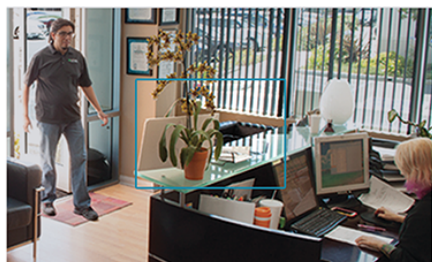
- H-POINTER (10): Sets the horizontal location of area to be zoomed by POINTING ZOOM.
- V-POINTER (10) : Sets the vertical location of area to be zoomed by POINTING ZOOM

Operating Instructions

* EXAMPLE OF SMART MOTION & POINTING ZOOM

Smart Motion & Pointing Zoom

Conventional Zoom

Operating Instructions

6. SYSTEM

```
                SYSTEM

TV SYSTEM              US(NT)
RESOLUTION             1080P
COMM. SETUP              ↵
LANGUAGE               ENG ⌐
FACTORY DEFAULT         NO
RETUTN                 RET↵
```

5-1. TV SYSTEM (default: US or EU)

: Selects HDTV standards for US(60HZ) or EU(50HZ). By this selection, 2nd analog video output switches to NTSC or PAL accordingly.

5-2. RESOLUTION (default: 1080P)

: Three resolutions,1080P/720P(SCALED)/720P(CROPPED) are available.
1080P outputs 1920x1080 video at the frame rate of 30P/25P.
720P(SCALED) Image is scaled down from 1080P and outputs 1280x720 video without loss of field of view at the frame rate of 30P/25P.
720P(CROPPED) image is cropped at the center area from the image sensor and outputs 1280x720 video at the frame rate at 60P/50P but the image refresh rate is 30P/25P. Cropped image has narrowed field of view

5-3. COMM. SET UP

: COMM. SETUP defines the CAM ID, BAUD RATE and PROTOCOL.
Data length, stop bit and parity are fixed to 8bit, 1stop bit and no parity bit.

• CAM ID – Assigns the camera ID from 1~255 for the comm. address.
• BAUD RATE – Selects the baud rate from 2400~115200.
• PROTOCOL – Selects the comm. Protocol from PELCO-D/P or VISCA.

(Refer to 'TIP' for setting RS-485 communication with PTZ Controller)

5-4. LANGUAGE (default: ENG)

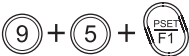: 8 languages are available for ENGLISH, JAPANESE, GERMAN, FRENCH, ITALIAN, SPANISH, POLISH and TURKISH.
When changing LANGUAGE, select language and press ⌐ to load.

5-5. FACTORY DEFAULT (default: NO)

: RECALL ⌐ Loads and saves the factory defaults.

Operating Instructions

TIP

Setting for RS-485 Communication with PTZ Controller

● Enter the MENU :
 Press buttons 9+5+PSET (PRESET)   (9) + (5) + (PSET F1)

● Move the cursor in the MENU :
 Moves UP/DOWN/LEFT/RIGHT Joy stick

● Select or Choose value in the MENU : (OPEN)
 Press button OPEN (IRIS OPEN)

● D-Zoom IN : Press button TELE
● D-Zoom OUT : Press button WIDE   (TELE L   WIDE R)

Detailed Specifications

Sensor	1/2.9" Sony® CMOS
Resolution	2.1 MegaPixel (1080p / 720p)
S/N	More than 50 dB (AGC Off)
Video Output	1x HD-SDI (BNC) / 1x SD CVBS (BNC)
Lens	CS Mount Lens Support (Not Included)
Digital Zoom	1.1x ~ 8x
Minimum Illumination	.0005 Lux (@AGC Max. DSS x2)
Day/Night	Mechanical IR Cut Filter (True Day/Night)
Electronic shutter speed	Auto (1/ 30sec ~ 1/ 60,000sec)
White Balance	ATW / ATWext / One Push / Manual
Brightness	YES
DSS (Sens-Up)	OFF / AUTO / X2 ~ X32
DNR	3D-DNR
WDR	YES
Privacy	YES (10 Zones)
Motion Detection	YES
ACE (Adaptive Color Enhancement)	YES
Advanced OSD Functions	Defog, BLC/HLC, Motion Deblur, Pixel Defect Compensation,Title Set, Mirror, Flip, LSC (Lens Shade Compensation)
Communication	RS-485 (Pelco® D/P)
HD Transmission Range	Up to 700' (Depending on cable characteristics and integrity)
Operating Conditions	14°-122°F (-10°-50°C) < 80% RH
Input Voltage	12VDC / 24VAC (Dual Voltage)
Power Consumption (12VDC)	250mA (3Watt)
Power Consumption (24VAC)	230mA (2.8Watt)
Dimensions	1.89" x 2.09" x 2.89" (W x H x D)

LIMITED LIABILITY 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 nontransferable 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 or 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.

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