

## Caution for installation and usage

### 1. Precautions for different DVR

Please use it with the corresponding PoC DVR. With PoC(Power over Coax) function, the DVR is able to supply camera with the power. And with CoC(Control over Coax) function, the DVR is able to send RS485 to the camera

- PoC DVR : When connecting to WEBGATE's PoC DVR, only the coaxial cable is needed between the camera and DVR to supply power and send RS485.
- Non PoC DVR : When connecting to Non PoC DVR, please separately connect DV12V to the camera.

### 2. Check Frame rate setting based on power frequency

- Set Frame rate to 25Hz if your region is using 50Hz(PAL) power frequency, or set to 30Hz for 60Hz(NTSC) region. (OSD : System → Frame rate).

### 3. Focus setup

To avoid losing focus at night time, please adjust camera focus as follows.

- 1) Connect OSD remote controller on the back of the camera.
  - 2) Press [SET] on the OSD remote controller and select "FOCUS ADJ" to enable "Adjust Focusing" mode.
  - 3) Use the lens' lever to adjust zoom and focus. (※Check the Focus Gauge)
  - 4) End the "Adjust Focusing" mode by pressing the [SET] on the OSD remote controller.
- ※ What is Focus Gauge?

When the user is manually adjusting the focus, the camera shows graphical bar to have the user look at the focus visually. When the yellow and green bar meets together, that's where the camera is focused.

### 4. Shutter mode setup based on installation environment

- INDOOR : Controls brightness for the best video quality at indoor environment.
  - OUTDOOR : Controls brightness for the best video quality at outdoor environment.
  - INDOOR/OUTDOOR-ANTI BLUR : Improves the motion blurring phenomenon than Indoor/Outdoor mode under dark environment but the brightness decreases relatively.
5. Do not expose this camera to rain or moisture to prevent malfunction, fire and shock hazard.
  6. DC12V(500mA over) power adapter must be used.
  7. Please contact to qualified service personnel in case of product damage. Do not attempt to repair product by yourself.
  8. Please avoid external shock and vibration on the product.
  9. Do not install product under excessive heat or cold environment. (recommended operation temperature is -10°C~50°C)
  10. Do not target lens to the sun. Image sensor might be damaged
  11. Do not open the product under any circumstances, it could void the warranty. Natural disaster like lightning, flood will need charge for repair.

## Feature

### PoC / CoC

PoC(Power over Coax) : WEBGATE PoC DVR supplies camera with power through connected coaxial cable.

CoC(Control over Coax) : WEBGATE PoC DVR supplies camera with RS485 without additional communication line. Allowing OSD control, zoom, focus, f/w upgrade and more.

※ All PoC supported cameras support CoC function as well.

### 2MP, Full HD high resolution picture quality

Full HD(1920x1080) provides 6 times higher resolution than SD level camera, and more clear video image can be achieved through 1/3", 2Megapixel progressive CMOS.

### High performance under low light environment

High performance quality can be achieved under low light environment by optimizing the image handling technology on CMOS sensor.

(B/W : 0.0005 Lux / Color : 0.2Lux@50IRE, F1.4, 3100K, DSS OFF)

### Indoor/Outdoor function

Minimizes the motion blur of object from slowly moving person(Indoor) to fast moving vehicle(outdoor) by optimizing the signal processing and controls brightness automatically to perform the best video image

### 3D-DNR

3D-DNR function efficiently removes video noise in dark environment, and shows clear image as a result.

### True Day & Night function

Camera senses the surrounding brightness automatically, and insert/remove the IR-CUT filter to get the best sensitivity performance.

### WDR/BLC/ACE/HLC

This is a light adjustment feature which can balance image brightness against images with high contrasts of light.

### DEFOG Function

Provides clear and undistorted images from fog, dust, sea fog and any bad weather conditions.

### Adjust Focusing function

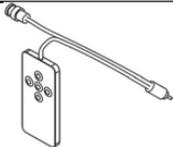
Even though D&N lens is in use, focus might be distorted in night time. To prevent this problem, camera supports Adjust Focusing function. After use this function, you can get clear video image both daytime and night time.

### Privacy support

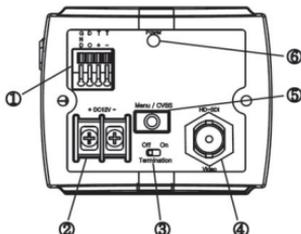
Camera can support up to 15 privacy masking areas.

## Supplied accessories

Please check if all the supplied accessories are included.

	
C1080PBM	Install and User's Manual
	
C Mount Adapter	Camera Remote Controller

## Product description



No	Name
1	RS-232/RS-485/Digital Output port
2	Power input port
3	RS485 Termination
4	Video Out(PoC,CoC)
5	Menu, CVBS Output
6	Power lamp

## Camera installation

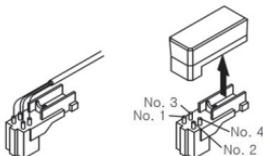
### Mount Lens

1. Remove C mount adaptor ring to use CS mount lens.
    - Connect C mount adaptor ring to use C mount lens.
  2. You may need to loosen the lens locking ring and its adjustment when you cannot get the focus.
- ※ Please pay special attention to the bottom of lens not to touch with the surface of CMOS sensor.

### Auto Iris connector wiring

In case of using Auto Iris lens, connect the Iris Jack of lens to the Iris connector of camera.

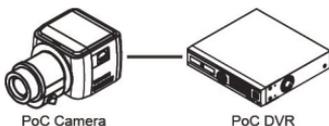
1	Damping -
2	Damping +
3	Drive +
4	Drive -



### How to Set up Install C1080PBM

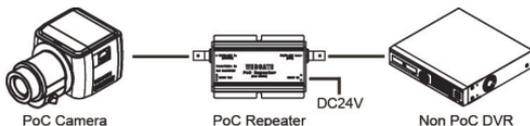
1. How to connect it with the WEBGATE PoC DVR

- Does not need any additional power adapter. Just connect coaxial cable higher than 4C-HFBT to the DVR.



2. How to connect it with the conventional DVR

- Connect the PoC repeater, RP101P, between the camera and DVR. And put additional power adapter.



### How to use OSD remote controller

1. CVBS output

- Connect CCTV monitor to OSD remote controller's CVBS output to check the image. (SD quality)
- When images stop coming out, press any button on the OSD remote controller to see the image again.

2. OSD Control

- Press OSD remote controller to control camera's OSD menu after connected.

### Caution in BNC connector connection

The impedance of BNC connector should be 75Ω.

If 50Ω connector is used, the transmission distance will be reduced approx. 10m

### Caution in cable selection

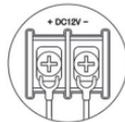
The maximum transmission distance of HD-SDI will vary depending on cable manufacturer and installation environment. Please refer to the below table to select suitable coaxial cable.

Cable Type	Distance	Details
5C2V	Approx. 90M	Analogue cable
4C-FB(T), 4C-HFB(T), RG59	Approx. 140M	High-expansion foam cable, recommends double(or triple) shielded cable
5C-FB(T), 5C-HFB(T), L-6CHD, RG6	Approx. 180M	Customized HD-SDI cable

### Caution when Connecting Power

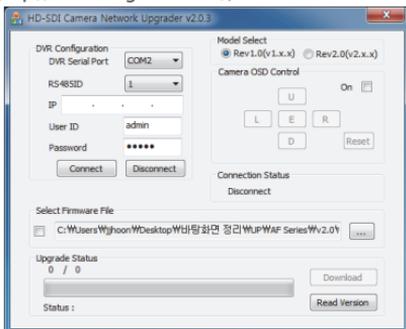
If the DVR does not support PoC function, then the power must be provided separately. DC12V is required.

When the user uses different power, the camera can seriously be damaged.



### How to upgrade F/W by using CoC(RS485)

1. Connect WEBGATE DVR with camera.
2. Run [HD-SDI Camera Network Upgrader] and select [CoC] on [Serial Port].
  - PC and DVR must be connected through network.
3. Select the desired camera's channel, then write down that DVR's IP address.
  - HD camera upgrade program and F/W can be downloaded from the website. (<http://www.webgateinc.com/>)



4. Insert DVR's Port, User ID, Password and press "Connect" to log-in to the DVR.
5. Select [ON] in Camera OSD Control, then press E,L,R,U,D buttons to check camera's OSD control.
  - When OSD control is not available, check DVR and camera's configuration.
6. Select the F/W and press "Load" to upgrade the camera. The camera will reboot.
  - Images will be stopped until the boot is complete.
7. When the upgrade is finished, the DVR and CMS (Control Center) can be used to remotely change the camera's settings.

<Note>

1) When upgrading F/W, the setting will be reset.

## How to use OSD menu

### OSD menu function

Press [SET] on the OSD remote controller to show OSD configuration menu.

- If OSD menu is not closed, it will be closed automatically in 1 minute.

- **(Changed configuration value will not be saved)**

- Bold font with underline means factory default.

OSD MENU	Function
FOCUS ADJ	This mode is only enabled in manual lens model. This function prevents out-focus during day/night.
LENS	<b>DC</b> : Auto iris lens mode <b>MANUAL</b> : Manual lens mode
DAY & NIGHT	<b>Color</b> : Maintains Color(Day) mode regardless brightness. <b>B&amp;W</b> : Maintains B&W(Night) mode regardless brightness. <b>Auto</b> : In accordance with brightness, camera switches Color mode and B&W mode automatically. - LUX LEVEL(LOW, MIDDLE, HIGH) : This value is the standard for Day & Night switching. If high is selected, camera will turn to Night(B/W) mode at higher LUX level than MIDDLE or LOW. - ANTI HUNT(LOW, MIDDLE, HIGH) : This value is the standard for threshold of Day & Night switching. Higher setting value will reduce the flickering by IR-CUT filter switching caused from misjudgment. - DELAY TIME(3~30sec) : Judgment period for Day & Night switching
D-EXPOSURE / N-EXPOSURE	<b>BRIGHTNESS</b> (8, <b>0~20</b> ) : Adjust the brightness of image. The more High value it has, the more bright image it shows <b>SHUTTER</b> : - INDOOR : controls brightness to show the best video quality at indoor environment. - OUTDOOR : controls brightness to show the best video quality at outdoor environment. - INDOOR-ANTI BLUR : It shows better anti-blur performance at dark indoor environment, but the brightness level decrease a little.

		<ul style="list-style-type: none"> <li>- OUTDOOR-ANTI BLUR : It shows better anti-blur performance at dark outdoor environment, but the brightness level decrease a little.</li> <li>- MANUAL : It fixes shutter speed within 1/30 ~ 1/60000.</li> </ul>
	ANTI-FLICKER	Removes Flicker problem due to the discordance of light frequency.
	DSS ( <b>AUTO</b> , OFF, x2~x10)	During night or low light environment, increase the scale factors to maintain the clear image. However, larger scales will have motion blurring effect on moving objects. In AUTO mode, DSS is ON when there are no motion detection. And when the camera detects a movement, DSS mode is automatically turned off for better quality.
	AGC (4, 1~10)	It will amplify video gain according to the light condition, but it will also increase noise level.
COLOR	AWB	<ul style="list-style-type: none"> <li>- <b>AUTO</b> : This mode automatically adjusts color white balance between 1,700°K ~ 11,000°K.</li> <li>- PRESET : Shoot a white paper in front of camera and press MENU button then white balance working will stop suitable for the condition. You must do this process again if light condition is changed.</li> <li>- MANUAL : User can select color temperature among 3300°K, 4300°K, 7600°K and adjust the details by KELVIN, R-GAIN and B-GAIN value.</li> </ul>
	CHROMA (10, 0~20)	Adjust Chroma level.
IMAGE	SHARPNESS (5, 0~10)	Adjust sharpness. The higher value will show more clear video image
	H-MIRROR	Mirror image. Left and right will be reversed.
	V-MIRROR	Flip image. Up and down will be reversed.
	Digital ZOOM	Zoom image by 16 steps. (1~16)
	PRIVACY	<p>This is for privacy zone masking</p> <ul style="list-style-type: none"> <li>- ZONE NO : Supports total 15 areas (1~15)</li> <li>- ZONE OP : Whether to use or not of selected area</li> <li>- X, Y-POS : Set the X,Y start position of an area</li> <li>- X, Y-SIZE : Set the width and height of an area</li> <li>- COLOR(WHT,YEL,CYN,GRN,MAG,RED,BLU,BLK) : Select color for masking.</li> <li>- TRANS(0~4) : Set transparency of masking.</li> </ul>
	SHADING	Before execute the SHADING function, shoot a white

	DET	paper in front of the camera, and do SHADING DET. If not, abnormal video might be output.
	SHADING	It compensates the difference of light caused by lens. To use this function, you should run Shading DET function first at System menu.
	DEFOG	Images can be corrected on Fog, Dust environment. - AUTO : Automatically corrects the images. - MANUAL : can be set to LOW, MIDDLE, HIGH.
	COLOR BAR	Output Color bar for test purpose (2 types). If there is no user action, it shows for about 1 minute.
WDR		This 3D backlight compensation function allows bright and dark area to be seen clearly together. - WDR WGT(0~4) : Select image mix ratio. The higher value, the bright part of the image appear more clearly.
BLC		Back light compensation function. - BLC LEVEL(LOW, MIDDLE, HIGH) : Set BLC level. - BLC OSD : Displays BLC area on the screen. - BLC POS-X, Y : Set X, Y start position. - BLC SIZ-X,Y : Set Width and Height size. - MASK : If there is very bright portion inside BLC area, this portion can be removed from the calculation of BLC compensation. This brightness level for masking can be decided by below MASK LEVEL. - MASK LEVEL(0~10) : Set brightness level for Masking.
HLC		High Light Compensation. If there is very bright portion inside a scene, camera can mask the portion, and the portion is removed from the calculation for exposure control. - LEVEL(5, 0~10) : Set the brightness level for masking. - Color : Set masking color
ACE (ON, OFF)		Adaptive Contrast Enhancement. Enhances image quality by raising the brightness of dark areas.
	DNR (LOW, MIDDLE, HIGH)	Reduce image noise under low light condition
	FRAMERATE (25Hz, 30Hz)	Power frequency 60Hz(NTSC) : 30Hz(fps) video out Power frequency 50Hz(PAL) : 25Hz(fps) video out
	SYSTEM	
	MODEL	Displays model name
	CAM ID	Max. 8 digits for camera name. Supports alphanumeric and some special characters
	RS485 ID	Set ID for RS485
	VERSION	Displays firmware version
	VIDEO	Full-Scale(BT 709), Comp-Scale(BT 601) support
	RESOLUTION	Displays video output resolution(1080p/720p)

	DIGITAL OUT	Provides control signal for external illuminator which is synchronized with image process. - DURATION(0~20) : Set the one cycle duration of TTL signal output (unit : msec) - POLARITY : Set the output level of TTL signal. (0 : 0V , 1 : 3.3V) * Output cycle is decided by 30Hz/25Hz.
	BOARDRATE (9600, <b>57600</b> )	Set RS485 communication speed.
	RESET	Make all configurations as factory default.
EXIT	SAVE&EXIT	Save configuration and exit menu.
	EXIT	Without saving configuration, exit menu. If there is no further action in menu, after 1 minute, OSD menu will exit without saving changes.

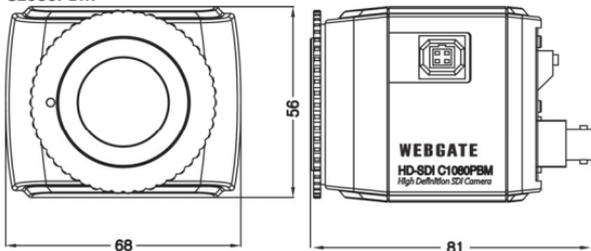
## Product Specification

Model		C1080PBM
<b>Video</b>		
<b>Sensor Type</b>		1/3", 2.1Megapixel CMOS
<b>Total Pixels</b>		1920(H) x 1080(V) = 2.1M pixels
<b>Scanning System</b>		Progressive Scan
<b>Min Illumination</b>	<b>B/W</b>	0.0005Lux@50IRE, F1.2, 3100K, DSS(OFF), AGC(10)
	<b>Color</b>	0.2Lux@50IRE, F1.2, 3100K, DSS(OFF), AGC(10)
	<b>Mount</b>	CS/ C(Ring Adaptor)
<b>Lens</b>	<b>Type</b>	DC Auto Iris, Manual
	<b>Output</b>	1(BNC 1.0 Vp-p, 75Ω)
<b>Video Output</b>	<b>Resolution</b>	1080p 30fps / 25fps, 720p 25fps / 30fps
	<b>HD-SDI</b>	SMPTE 292M compatible
	<b>Distance</b>	approx. 180m of RG6, 140m of RG59
	<b>Control Method</b>	DVR, CMS(Control Center),Remocon(5Push Buttons)
	<b>Filter</b>	True Day & Night
	<b>AGC</b>	1 ~ 10 steps
	<b>Mirror</b>	Horizontal / Vertical
<b>Video Control</b>	<b>WDR</b>	OFF, 0 ~ 4 setup
	<b>BLC</b>	OFF, LOW, MIDDLE, HIGH
	<b>ACE</b>	OFF, ON
	<b>DNR</b>	OFF, LOW, MIDDLE, HIGH
	<b>DSS</b>	AUTO, OFF, x2 ~ x10
	<b>White Balance</b>	AUTO, PRESET, MANUAL
	<b>Defog</b>	OFF, AUTO, MANUAL

<b>Electric Shutter</b>	INDOOR, OUTDOOR, INDOOR-ANTI BLUR, OUTDOOR-ANTI BLUR, MANUAL(12 steps), ANTI-FLICKER	
<b>Digital Zoom</b>	0 ~ 16 steps	
<b>Lens Shading</b>	OFF, ON	
<b>HLC</b>	0 ~ 10 steps	
<b>Privacy</b>	OFF/ON (15 Zones )	
<b>Control Interface</b>		
<b>CoC / RS485</b>	Upgrade Firmware / OSD Control	
<b>Strobe for external light</b>	TTL level(3.3v)	
<b>Camera Control Remocon</b>	OSD Control / 5Push Bottons CVBS(NTSC/PAL-Auto change)	
<b>Electricity</b>		
<b>Power Consumption</b>	DC 12V ± 10%, 2W or PoC(DC 24V ± 10%), 3W	
<b>Mechanical</b>		
<b>Dimension</b>	<b>C1080PBM</b>	68(W) x 81(D) x 56(H) mm
<b>Weight</b>	<b>C1080PBM</b>	320g (Lens not include)
<b>Environments</b>		
<b>Operation Temp. / Humidity</b>	-10 °C ~ 50 °C / 0%RH ~ 80%RH	
<b>Certifications</b>		
<b>Certifications</b>	KC, FCC, CE, RoHS, HDcctv	

## Dimension (unit : mm)

### C1080PBM



## Warranty

Product name	HD-SDI Camera	Warranty term
Model name	C1080PBM	<b>2 years after purchase</b>
Date of purchase	20 - -	
Warranty term	20 - -	
Serial number		

Customer's address	Name	
	Contact	
Address of shop(Company name)	Name	
	Contact	

◆ Please fill out vacant area before sending products.

### ★ For customer service ★

Please read this manual again before requesting customer service.

Any simple malfunctions due to customer's misunderstanding on the product could be resolved by customer.

How to request service?

Please inform details of malfunctions correctly.

Free or non free repair will be decided based on details of warranty card.

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The damages caused from following conditions will be repaired by customer's cost.

1. Any damage comes from customer's carelessness
2. When improper power is entered
3. When you repair unit by yourself
4. Any damage comes from natural disaster like lightning, flood, etc.
5. Consumable parts replacement



ENTERPRISE

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