HD-CCTV Camera

C1080PD-F1/C1080D-F1

Before attempting to connect or operate this product,
Please read these instructions carefully and save this manual for future use.
The design and specifications are subject to be changed without notice.

Introduction

C1080PD-F1/C1080D-F1 is integrated FULL HD CCTV camera to detect the flame source. The flame source generates the inherent infrared wavelength. To minimize the false alarm and to increase the accuracy and detection speed, the newest and high-performance infrared sensor is adopted. When a fire occurs, the alarm can be sent to the user within few seconds via DVR, CMS and smartphone app.

1. It provides rapid response and high accuracy for a fire by using the newest and high-performance infrared sensor.
2. Due to the rapid fire alarm via DVR, CMS and smartphone app, user can quickly respond to the fire.
3. Depending on the installation environment, user can set the sensitivity and recognition time.
4. When a fire occurs, user can know the location of fire through the smartphone app.
5. The maximum transmission distance is 400M by using EX-SDI.
6. C1080PD-F1 can transmit the power (PoC) and control signal (CoC) in addition to the video signal through only one coaxial cable.

※ Installation Precautions
1. This camera is not a fire-fighting appliance.
2. This camera is not applied by the law on fire protection installation maintenance and safety management.
3. If the camera flash, electric heaters, welding sparks, vibration, etc. are consistently occurred, they can cause malfunction.
4. The front of the sensor must always be kept clean.

Warranty

Product Name	Flame Detection Camera		Warranty Term
Model Name	C1080PD-F1/C1080D-F1		2 Years after purchase (This warranty term can be changed by contract for supply.)
Purchase	/ / /		
Warranty Term	/ / /		
Serial Number			
Customer's Address	Name		
	Contact		
Shop's Address (Company Name)	Name		
	Contact		

◈ Please fill out vacant area before selling products.

★ For customer service ★
Please read through product manual before claiming customer service.
Any simple malfunctions due to customer's misunderstanding on the product will be fixed by customer's side.

For requesting service?
Please inform details of malfunctions correctly.
Free or non-free repair will be decided based on details of warranty card.

The damage coming from following condition will be repaired at customer's cost.
1) Any damage comes from customer's carelessness.
2) In case not recommended power is entered.
3) In case user repair unit at their own.
4) Any damage comes from natural disaster (Fire, Flood, etc.)
5) Consumable parts replacement.

WEBGATE
HD-CCTV solution provider

Premium to your HD-CCTV solution

Dimension

C1080PD-F1

Video Output
(HD-SDI/EX-SDI)
PoC/CoC

C1080D-F1

RS485

DC 12V

RED: Flame Alarm
White: GND

Video Output
(HD-SDI/EX-SDI)
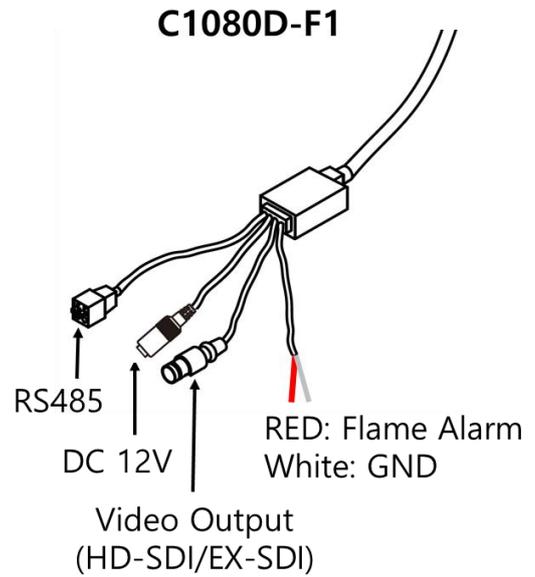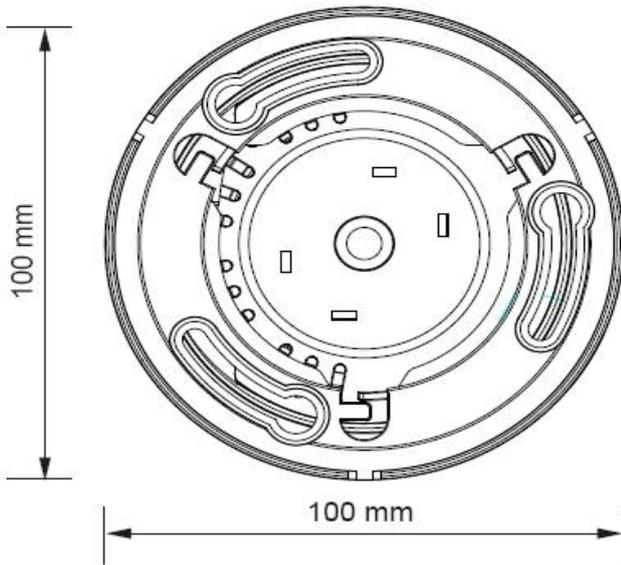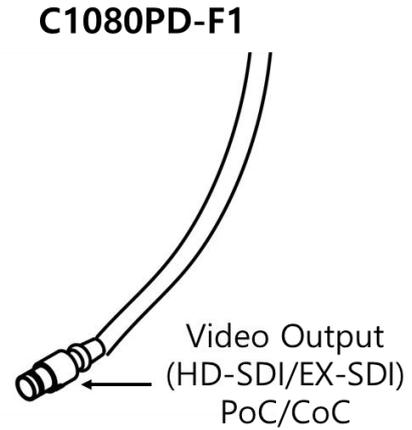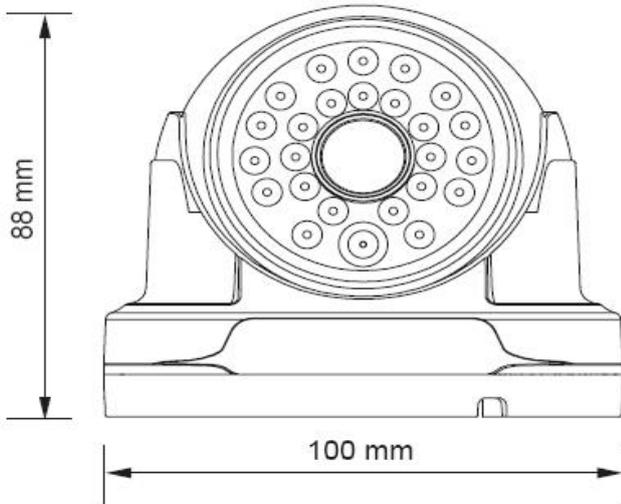
Specification

Item		
Sensor Type		1/3" 2.1 Megapixel CMOS
Total Pixels		1920(H) x 1080(V) = 2.1M pixels
Scanning System		Progressive Scan
Min Illumination	B/W	0.005325Lux, DSS(x32), AGC(10), Brightness(20)
	Color	0.15Lux, DSS(x32), AGC(10) , Brightness(20)
Lens	Filter	True Day & Night (ICR)
	Type	3.6mm F2.1 Fixed Mega Lens

Item		
Video Output	Output	1 (BNC 1.0 Vp-p, 75Ω)
	Resolution	1080p 30fps / 25fps, 720p 30fps / 25 fps
	Video Format	HD-SDI or EX-SDI Selectable
	Distance	HD-SDI: Max. 180m using RG6, 140m using RG59 EX-SDI: Max. 400m using RG6
Video Control	Control Method	DVR, CMS(Control Center), Remocon(5 Push Buttons)
	Filter	True Day & Night
	AGC	0 ~ 10 steps
	Mirror	Horizontal / Vertical
	WDR	OFF, LOW, MIDDLE, HIGH
	BLC	OFF, LOW, MIDDLE, HIGH
	ACE	OFF, LOW, MIDDLE, HIGH
	DNR	OFF, LOW, MIDDLE, HIGH
	DSS	OFF, AUTO, X2 ~ X32
Flame Detector	Method	Detection using IR Sensor
	Distance/Angle	30m / 80° (Fire : 1.5m / Sensitivity : 10)
	Sensitivity	1 ~ 10 steps
	Detection Time	3, 5, 10 Sec
	Action Time	Keep On, 20, 30, 40, 50, 60 sec
	Flame Alarm Out	Event: Low / Normal: Hi-Z (C1080D-F1)
Video Control	White Balance	AUTO, AUTO EXT, PRESET, MANUAL
	Defog	OFF, AUTO, MANUAL
	Electric Shutter	INDOOR, OUTDOOR, INDOOR-ANTI BLUR, OUTDOOR-ANTI BLUR, FLICKER, MANUAL
	Digital Zoom	1X ~ 16X
	Lens Shading	OFF, ON
	HLC	0 ~ 20 steps
	Privacy	OFF/ON (18 Zones)
Control Interface	CoC	Upgrade Firmware / OSD Control (C1080PD-F1 only)
	RS485	Upgrade Firmware / OSD Control (C1080D-F1 only)
	Camera Control	OSD Control / 5 Push Buttons
	Remocon	CVBS (NTSC/PAL-Auto change)
Environments	Operating Temp/Humidity	-10°C ~ 50°C / 0%RH ~ 80%RH
Certifications		KC, FCC, CE, RoHS, HD-cctv

※ **Camera menu can be changed without notice by firmware upgrading to increase the quality. It can be explained using additional paper. Please check the version of camera firmware and manual.**

MAIN MENU

User can change the setting of camera using 'Camera Setup' function of DVR. User can change the setting pressing left/right key. The menu having '↵' icon contains sub menu and you can enter into sub menu by pressing enter key.

```
                MENU

DAY&NIGHT           AUTO ↵
D-EXPOSURE              ↵
N-EXPOSURE             ↵
COLOR                  ↵
IMAGE                  ↵
DNR                 MIDDLE
FRAMERATE           30HZ
OUT-FORMAT          EX-SDI
FLAME DET              ↵
SYSTEM                 ↵
EXIT                   ↵
```

DAY&NIGHT

◈ DAY&NIGHT: Sets Day&Night.
   ▶ AUTO / COLOR (always color) / B&W (always black & white)
      ▷ AUTO mode has sub menu shown below.
◈ MODE: AUTO (determine day&night by analyzing image) / CDS (determine day&night by CDS sensor)
◈ LUX LEVEL: Sets switching level between day ↔ night. Lower the value is it switches under lower illuminance.
   ▶ AUTO→CDS mode: 0~10 steps
   ▶ AUTO→AUTO mode: LOW/MIDDLE/HIGH
◈ ANTI-HUNT: Sets threshold value for switching illuminance between day ↔ night. If the value is higher, frequent changing (malfunction) due to external light can be reduced.
   ▶ AUTO→CDS mode: 0~10 steps
   ▶ AUTO→AUTO mode: LOW/MIDDLE/HIGH
◈ DELAY TIME
   ▶ 3 Sec, 5 Sec, 10 Sec, 30 Sec

```
            DAY&NIGHT

MODE               CDS
LUX LEVEL          6 |ıııı|ııı|
ANTI-HUNT          4 |ıı|ıııı|
DELAY TIME         3 Sec
RETURN             ↵
```
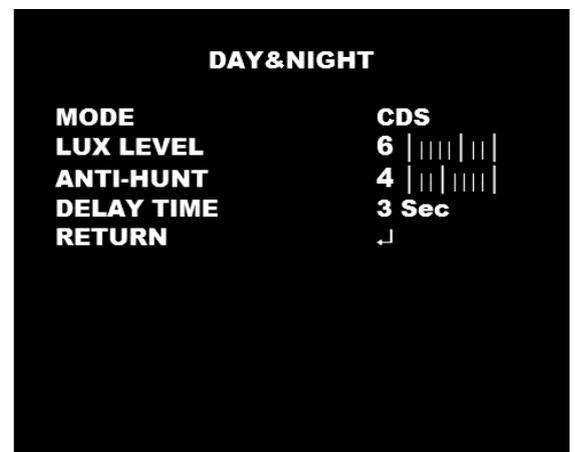
D-EXPOSURE / N-EXPOSURE

D-EXPOSURE is menu to adjust exposure against Day image, N-EXPOSURE is menu for Night image. Sub menu for both EXPOSURE menu are almost similar.

◈ BRIGHTNESS: Sets brightness. (0~20 steps)
◈ SHUTTER
   ▶ INDOOR, OUTDOOR,
     INDOOR-ANTI BLUR, OUTDOOR-ANTI BLUR,
     MANUAL, FLICKER
   ▶ In MANUAL mode, shutter speed can be

```
      D-EXPOSURE/N-EXPOSURE

BRIGHTNESS         10 |ııı|ııı|
SHUTTER            INDOOR
ANTI-BLUR          ---
BLC/HLC/WDR        OFF
DSS                OFF
AGC                5 |ııı|ıı|
RETURN             ↵
```
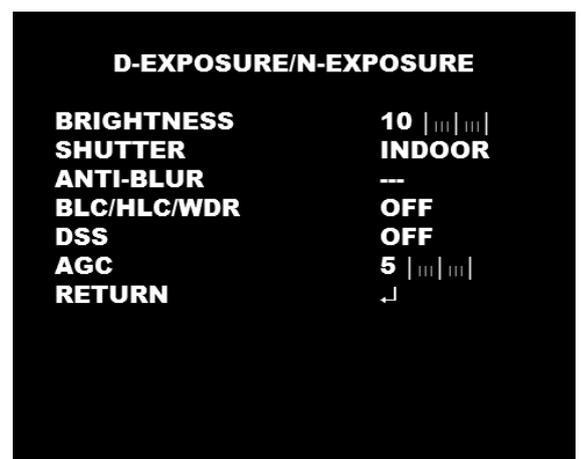
adjusted in 12 levels between 1/30~1/30000 sec. (12 steps)
◈ ANTI-BLUR
  ▶ Sets ANTI BLUR level (LOW/MIDDLE/HIGH) in OUTDOOR-ANTI BLUR mode. (N-EXPOSURE is not supported.)
◈ BLC / HLC / WDR
  ▶ BLC (Backlight Compensation): User can get clear image by setting selected area with relevant brightness. Click enter to enter sub menu to select area.
  ▶ HLC (Highlight Compensation): It revises overall exposure by masking area where exposure is overvalued than standard value. Click enter to select brightness level for masking and choosing masking color.
  ▶ WDR: 3D backlight compensation feature, enabling very bright or dark area shown well.
◈ DSS(Digital Slow Shutter): OFF, AUTO, X2, X4, X8, X16, X32
  ▶ Sensitivity, location and size of DSS area can be set when AUTO mode.
◈ AGC(Automatic Gain Control): 0~10 steps

COLOR

◈ AWB: Select white balance mode.
  ▶ AUTO / AUTOext / PRESET / MANUAL
    ▷ AUTO: Auto adjusted according to light.
    ▷ AUTOext: Extended mode of AUTO, suitable for extremely low and high temperature.
    ▷ PRESET: Focus white object and press enter key to adjust white balance.
    ▷ MANUAL
      ・KELVIN: Adjusts color temperature. (LOW / MIDDLE / HIGH)
      ・R-GAIN: Adjusts red gain. (0~20 steps)
      ・B-GAIN: Adjusts blue gain. (0~20 steps)
◈ CHROMA: Adjusts Chroma value. (0~20 steps)

```
                COLOR

AWB                       AUTO
CHROMA                    10 |ııı|ııı|
RETURN                    ↵
```

IMAGE

◈ SHARPNESS: Adjusts sharpness of image. (0~10 steps)
◈ ACE (OFF/LOW/MIDDLE/HIGH)
  ▶ Improves image quality by brightening the dark area when brightness gap of image is very high.
◈ GAMMA: Adjusts GAMMA of image. (0.45~0.75)
◈ H-MIRROR / V-MIRROR
  ▶ Inversing image in left/right, up/down.
◈ D-ZOOM
  ▶ Makes image larger up to 16 times. (1X ~ 16X)
◈ PRIVACY: Masks specific area (OFF / ON)
  ▶ Total 18 area can be set masked with preferable size, dimension, colors.

```
                IMAGE

SHARPNESS                 8 |ıııı|ı|
ACE                       OFF
GAMMA                     0.55
H-MIRROR                  OFF
V-MIRROR                  OFF
D-ZOOM                    1X
PRIVACY                   ↵
SHADING_DET               ON
SHADING                   OFF
DEFOG                     OFF
COLOR BAR                 OFF
RETURN                    ↵
```

◈ SHADING DET
  ▶ Detects light and shade arising from unbalance between center of lens and surrounding light by pressing enter key.
◈ SHADING: Compensates light and shade arising from unbalance between center of lens and surrounding light. (ON / OFF)
◈ DEFOG: Makes sharp image from blurred image by fog and dust.
◈ COLOR BAR: Outputs COLOR BAR or stress pattern for image test.
  ▶ During COLOR BAR and stress pattern outputs, OSD menu will be disappeared.

DNR

Reduces the image noise under low illuminance. (LOW / MIDDLE / HIGH / OFF)

FRAMERATE

Selects between 30Hz (NTSC) / 25Hz (PAL).

OUT-FORMAT

Selects video output format (via BNC) between EX-SDI and HD-SDI.

FRAME DET

Sets the flame detection features.

◈ SENSITIVITY: Sets recognizing sensitivity over flame. (1~10 steps)
◈ GUAGE DISP: Displays flame gauge on image.
◈ DETECT TIME: Sets detection time to judge object is flame or not.
◈ ACTION TIME: Sets alarm duration time after flame is recognized.
◈ ALARM DISP: Sets ON / OFF of alarm display feature.
  ▶ COLOR: Sets color of alarm image.
  ▶ LINE TRANS: Sets alarm image's transparency.
  ▶ LINE WIDTH: Sets thickness of alarm image.

```
              FRAME DET

SENSITIVITY          8 |ıɪɪɪ|ı|
GUAGE DISPLAY        ON
DETECT TIME          5 Sec
ACTIONI TIME         20 Sec
ALARM DISP           OFF
RETURN               ↵
```
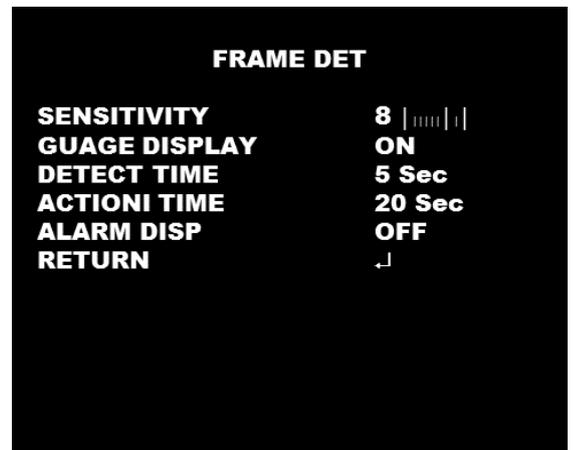
SYSTEM

◈ MODEL: Displays camera's model name.
◈ CAM ID: Enters camera's name up to 8 characters.
◈ RS485 ID
  ▶ Sets RS485 or CoC ID.
  ▶ All devices which is connected to the control signal line in series connection must have

their own ID to avoid confliction.

> ▶ For CoC, ID 1 is default.

◆ CAM VERSION: Displays firmware version of camera

◆ VIDEO
- ▶ FULL-SCALE (BT.709)
- ▶ COMP-SCALE(BT.601)
- ▶ USER: OFFSET (0~32)

◆ RESOLUTION
- ▶ Select resolution between 1920x1080 / 1280x720

◆ IR-LED (ON/OFF)
- ▶ Smart IR can be selected as ON when IR-LED is ON.

◆ BAUDRATE: Selects communication speed (bps) of RS485 or CoC (9600/57600)

◆ RESET
- ▶ Sets all settings back to factory default.
- ▶ **Caution: *OUT-FORMAT, RS485 ID, BAUDRATE values are not changed by RESET.***

```
              SYSTEM

    MODEL            PD-F1-30HZ
    CAM ID           OFF
    RS485 ID         1
    CAM VERSION      x.x.x
    VIDEO            FULL-SCALE
    RESOLUTION       1920x1080
    IR-LED           ON ↵
    BAUDRATE         57600
    RESET            ON 👤
    RETURN           ↵
```

※ If the user does not control any keys for a long time, OSD menu will be disappeared.

※ Please select EXIT → SAVE&EXIT to save the changed settings. If user select EXIT → EXIT or user does not control any keys for a long time, then the changed settings are not saved.

Key Features

- ▶ 1/3" 2.1 megapixel CMOS Sensor
- ▶ Supports PoC(Power over Coax), CoC(Control over Coax) (only C1080PBL-AF-F2)
- ▶ Flame Detection
  - - Adjustable sensitivity and recognizing time
  - - Detect 1.5m height flame source far from 30m distance, within 80° angle.
  - - Output: through ancillary data area of video signal (C1080D-F1 has additional output line for flame alarm)
- ▶ EX-SDI or HD-SDI selectable
  - - Supports Max. 400m (EX-SDI) or max. 180m (HD-SDI) transmission distance.
- ▶ Full-HD resolution: 1080p 30/25fps, 720p 30/25fps
- ▶ Various shutter mode: INDOOR / OUTDOOR / INDOOR-ANTI BLUR / OUTDOOR-ANTI BLUR / MANUAL / FLICKER
- ▶ Backlight Compensation (WDR / BLC / HLC)
- ▶ Digital Noise Reduction (DNR)
- ▶ Private Masking (Privacy)
- ▶ Removing dust and fog (Defog)
- ▶ OSD control and firmware upgrade through RS485(C1080D-F1)/CoC(C1080OD-F1)