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POC Transmitter

User's Manual

V1.0.0



DH-PFM811-C and DH-PFM811-4CH

1.2.51.32.12695-001

ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

Important Safeguard and Warning

Please read the manual carefully before use, in order to prevent danger and property loss. Strictly conform to the manual during application and keep it properly after reading.

Operating Requirement

- Please don't place and install the device in an area exposed to direct sunlight or near heat generating device.
- Please don't install the device in a humid, dusty or fuliginous area.
- Please don't drip or splash liquids onto the device; don't put on the device anything filled with liquids, in order to prevent liquids from flowing into the device.
- Use the device only within rated input and output range.
- Please don't dismantle the device arbitrarily.
- Please transport, use and store the device within allowed humidity and temperature range.

Auxiliary Material Requirement

- Power adapter is not a standard configuration, so it shall be bought according to actual conditions and used within labelled voltage scope.
- Power of the power adapter shall be greater than total power of loaded camera; otherwise, it may not start or may power down halfway. For details, please refer to POC Power Configuration Table (Table 4-2).
- Performance of RG59 and RG6 cables shall meet standard requirements. For example, conductor resistance of RG59 cable is 3.6ohms/100m and braiding resistance is 1.35ohms/100m.

About this Document

- This document is for reference only. Please refer to the actual product for more details.
- The user shall undertake any losses resulting from violation of guidance in the document.

1 Product Overview

1.1 Product Overview

POC (Power over Coaxial) transmitter connects front-end HDCVI camera and rear-end storage device, and transmits video signal and power with one coaxial cable. Front-end HDCVI camera doesn't need to connect an adapter to supply power.

1.2 Product Feature

- Support 400m RG59 transmission; support max. 15.6W HDCVI camera in single channel;
- Support 400m OSD control;
- Support DC 12V~36V wide voltage power supply;
- Support simultaneous power supply to max. 4 HDCVI cameras;
- Support hot plugging.

2 Port Introduction

Note

- Structural drawings are schematic diagrams, which are used to introduce functions of cable ports.
- Different devices may have different cable structures. For details, please refer to actual products.

2.1 Transmitting End

POC transmitting end is called PD end (PD: Power Device) for short, power receiving device in coaxial power supply system. It receives power from PSE and supplies power to the camera, while receiving and transmitting camera video to PSE receiving end.

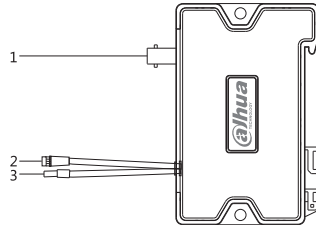


Figure 2-1 Schematic Diagram of POC Transmitting End (PD End)

No.	Port Name	Functional Description
1	BNC female	Connect PD end and PSE end.
2	BNC male	Connect HDCVI camera and PD end.
3	DC male	Output DC12V to HDCVI camera.

Table 2-1 Functional Description of Ports

2.2 Receiving End

POC receiving end is called PSE end (Power Sourcing Equipment) for short, power supply device in coaxial power supply system. It provides power for PD end, and transmits video signal from PD to rear-end storage device.

Note

- PD end shall be used with PSE end.
- PSE end can be used with PD end or HDCVI with POC function.

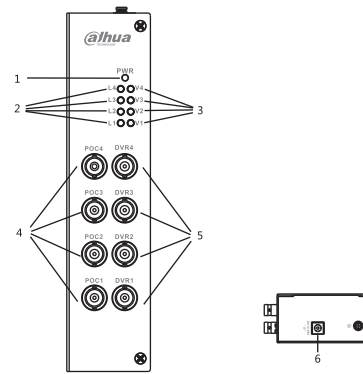


Figure 2-2 Schematic Diagram of POC Receiving End (PSE End)

No.	Port Name	Functional Description
1	Power indicator light, PWR	<ul style="list-style-type: none"> • When PWR indicator light is on, it means that PSE end is power-on; • When PWR indicator light is off, it means that PSE end isn't power-on.
2	Load identification indicator light L1-L4	<ul style="list-style-type: none"> • When lights are normally on, it means that loads of corresponding channels are lawful and power-on; • When they are off, it means that corresponding channels don't have loads or non-POC device is connected; • If lights flicker quickly (0.5 second/time) for 2 seconds and turn off, it means that loads of corresponding channels are pulled out; • If lights flicker slowly (1 second/time) for 5 seconds and turn off, it means that corresponding channels are subject to overcurrent or short circuit.
3	Video signal indicator light V1-V4	<ul style="list-style-type: none"> • If lights are on or flicker, it means that POC of corresponding channels has received video signal successfully; • If they are off, it means that corresponding channels haven't received video signal.
4	BNC female	POC1~ POC 4, connect PSE end and PD end.
5	BNC female	DVR1~ DVR 4, connect PSE end and rear-end storage device.
6	DC female	DC 12V ~ DC 36V power input

Table 2-2 Functional Description of Ports

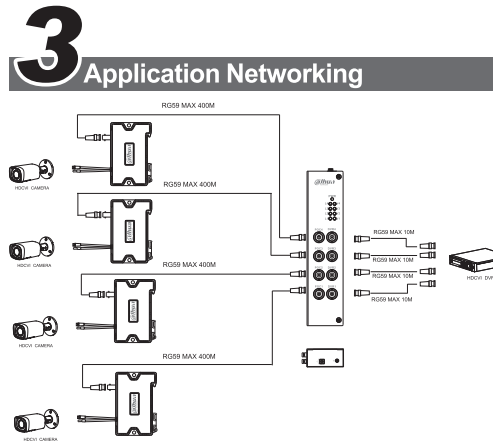


Figure 3-1 POC Application Networking

Operating Steps

Step 1 Connect all ports of POC transmitter, as shown in Figure 3-1.

1. BNC female (POC1 ~ POC4) of PSE end is connected to BNC female of PD end with coaxial cable.

2. BNC female (DVR1 ~ DVR4) of PSE end is connected to rear-end storage device.
3. BNC male of PD end and DC male are connected to HDCVI camera.

Step 2 Connect DC female of PSE end to power adapter.

When power indicator light (PWR) of PSE end turns on, it means that POC receiving end is power on successfully.

Note

Power adapter is not a standard configuration, so it shall be bought according to actual conditions.

Step 3 Observe status of load identification indicator light.

- Load identification indicator light L1 ~ L4: if lights are normally on several seconds after connecting PD device, it means that POC transmitting end is identified successfully and power-on. If they don't turn on for a long time (over 10 seconds), it means that the device connecting with POC receiving end is not a legal device. Please check whether front-end device is a legal PD.
- Video signal indicator light V1 ~ V4: if they flicker or they are normally on, it means that POC receiving end has received video signal successfully. If they are off for a long time, it means that POC receiving end hasn't received video signal. Please check connection of front-end device.

4 Technical Specification

No.	Parameter	Description		
1	Video transmission feature and port	Transmission channel	<ul style="list-style-type: none"> • PD end: 1 channel • PSE end: 4 channels 	
		Transmission signal	<ul style="list-style-type: none"> • Support HDCVI 720P/1080P • It doesn't support AHD and TVI 	
		Transmission distance	Max. distance: 400m	
		Transmission medium	RG59 and RG6	
	Adaptive power range	Adaptive power range	DC 12V ~ DC 36V (for details, please refer to Table 4-2)	
		Output voltage of PD end	DC 12V	
		Output power of PD end	Instantaneous max. power: 15.6W	
2	Protection	Electrostatic protection	<ul style="list-style-type: none"> • PD end: contact discharge 6k, air discharge 8k • PSE end: contact discharge 6k, air discharge 8k 	
		Lightning protection grade	<ul style="list-style-type: none"> • PD end: common mode 4k • PSE end: common mode 2k 	
	Stability	MTBF	> 5000H	
		Physical property	Dimension (L*W*H)	<ul style="list-style-type: none"> • PD end: 79mm x 64mm x 27mm • PSE end: 183mm x 105mm x 42mm
			Material	<ul style="list-style-type: none"> • PD end: PC+ABS • PSE end: SECC
5	Working environment	Weight	<ul style="list-style-type: none"> • PD end: 80g • PSE end: 650g 	
		Working temperature	<ul style="list-style-type: none"> • PD end: -30°C ~ +60°C • PSE end: -10°C ~ +55°C 	
		Humidity	≤95%	

Table 4-1 POC Technical Specification

No.	Power Specification	Channel			
		15W Camera	12W Camera	6W Camera	
1	12V	12V2A (24W)	-	1CH	2 CH
		12V3A (36W)	1 CH	2 CH	4 CH
		12V5A (60W)	2 CH	4 CH	4 CH
2	24V	24V2.5A (60W)	2 CH	4 CH	4 CH
		24V2A (48W)	2 CH	3 CH	4 CH
		24V3A (72W)	3 CH	4 CH	4 CH
3	36V	36V1A (36W)	1 CH	2 CH	4 CH
		36V2A (72W)	3 CH	4 CH	4 CH

Note

Above testing conditions are as follows:

- RG59-400m (DC impedance of RG59 cable is 5 Ohm for every 100 meters);
- All cameras turn on infrared + 1 channel variable power and zoom.

Table 4-2 RG59-400m Ultimate Power Configuration Table



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