

Panasonic Unitized Dome Camera RS-485 Configuration



Panasonic ideas for life

Configure the DVR

• Configure DIP Switches

■ Mode Switch

RS485 interface is used to communicate between this unit and the PS-Data compatible system device. In this case, it is necessary to terminate both devices on both ends of the RS485 connection. The settings of the mode switch will be different depending on whether this unit is used as a receiver or a controller. When an RS 485 camera is connected to this unit, it is necessary to terminate both devices on both ends of the connection.

• When connecting RS485 cameras

Set the termination switch of the connected RS485 (CAMERA) port to ON.

Connected to the RS485 (CAMERA) port 1: Set the RS485 (1) termination switch to ON.

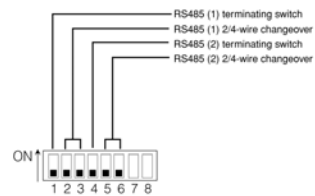
Connected to the RS485 (CAMERA) port 2: Set the RS485 (2) termination switch to ON.

• For 2-wire communication

Connected to the RS485 (CAMERA) port 1: Set the switch No.2 and No.3 to ON.
Connected to the RS485 (CAMERA) port 2: Set the switch No.5 and No.6 to ON.

• For 4-wire communication

Connected to the RS485 (CAMERA) port 1: Set the switch No.2 and No.3 to OFF.
Connected to the RS485 (CAMERA) port 2: Set the switch No.5 and No.6 to OFF.



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Configure DVR Programming - 1

- In the Advanced programming menu, under COMM, Camera Control:
- Change the type to RS485 for any cameras to be controlled via RS-485

SETUP MENU
Advanced

System Recording Event Schedule
Switcher Display Comm Maintenance LIVE

Camera Control

- PS DATA Setup
- RS485 Setup
- RS232C Setup
- NW Setup 1
- NW Setup 2
- NTP Setup
- Quick Menu

■ Type of Camera Control

CAM	COMP	TYPE	CAM	TYPE
CAM1	S	COAX	CAM9	PSD
CAM2	S	COAX	CAM10	
CAM3	S	COAX	CAM11	
CAM4	S	COAX	CAM12	
CAM5	S	COAX	CAM13	RS485
CAM6	S	COAX	CAM14	
CAM7	S	COAX	CAM15	
CAM8	S	COAX	CAM16	

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Configure DVR Programming - 2

- In the Advanced programming menu, under COMM, RS485:
- Configure the correct Baud Rate.

SETUP MENU
Advanced

System Recording Event Schedule
Switcher Display Comm Maintenance LIVE

Camera Control

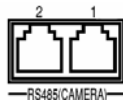
- PS DATA Setup
- RS485 Setup
- RS232C Setup
- NW Setup 1
- NW Setup 2
- NTP Setup
- Quick Menu

■ Baud Rate 19200
■ Control Camera CH SETUP
■ Data Bit 8
■ Parity NONE
■ Stop Bit 1

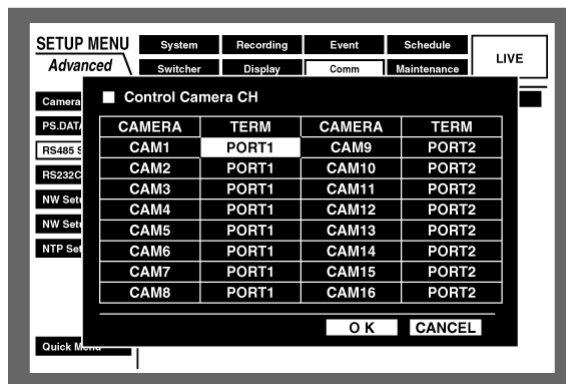
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Configure DVR Programming - 3

- In the Advanced programming menu, under COMM, RS485, Control Camera Channel:
- Set the cameras to the correct RS485 ports



Rear of DVR

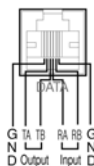


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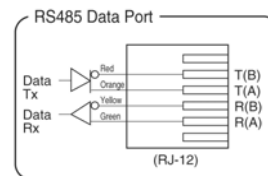
Cabling

- DVR Side

■ RS485 Port



Camera Side

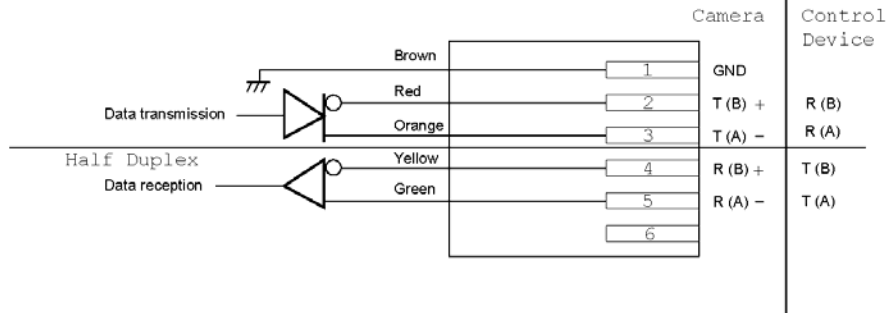


- Transmit A goes to Receive A
- Transmit B goes to Receive B
- Receive A goes to Transmit A
- Receive B goes to Transmit B
- When using Half Duplex – 2 wire: The camera only receives information, the DVR only transmits information.
- The pigtail on the camera can be plugged directly in to the DVR

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Cabling Re-Cap

• RS485 Connection



Note:

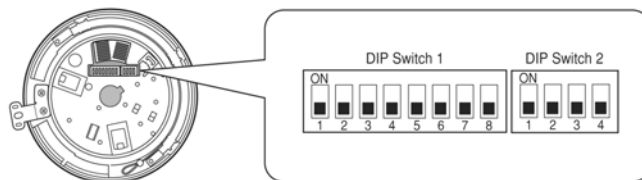
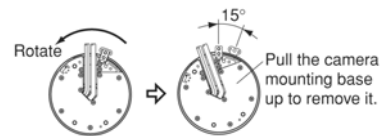
Use the cable that is described below for RS485 site communication.

- Shielded, twisted pair cable
- Low impedance
- Wire gauge size is thicker than AWG #22 (0.33 mm²).

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Configure the Camera - 1

- Remove the camera from the mounting base to access DIP Switches.



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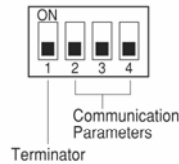
Configure the Camera - 2

- Configure DIP Switch 2:

- Set Duplex
- Set Termination

■ Communication Parameters (DIP Switch 2)

The factory default settings of these DIP switches are all OFF.



Switch 1: Terminator (Internal Termination Resistance)

Set it to ON in the following situations.

- When only one camera is connected.
- When only one camera is connected via a daisy chain over a long distance.

Switches 2 through 4: Communication Parameters

This setting toggles between 2-line and 4-line communication. Use these switches to select the communication protocol being used.



4-line Communication



2-line Communication

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Configure the Camera - 3

- Configure DIP Switch 1 for the correct Baud rate

	BAUD RATE : 19 200 bit/s, DATA BIT : 8 bit, PARITY CHECK : NONE, STOP BIT : 1 bit
	BAUD RATE : 9 600 bit/s, DATA BIT : 8 bit, PARITY CHECK : NONE, STOP BIT : 1 bit
	BAUD RATE : 4 800 bit/s, DATA BIT : 8 bit, PARITY CHECK : NONE, STOP BIT : 1 bit

- Power the camera on and wait until the self-check routine finishes.

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Configure the Camera - 4

- Re-configure DIP Switch 1 for the correct unit number. See the manual for DIP switch settings.
- Power the camera on and wait until the self-check routine finishes.
- Note: If using Pelco-P protocol, Switch 6 & 8 (See page 13)
- If using AD Manchester protocol, swap Switch 7 & 8 (See page 14).

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Wireless and other transmission media

- It is recommended that you configure the system wired directly to the DVR.
- Once you have the system up and running, then proceed to introduce the wireless, fiber, etc.
- Don't forget – any other transmission media is just emulating a straight through cable!!

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AD Protocol

DIP SW 1		UNIT#	DIP SW 1		UNIT#	DIP SW 1		UNIT#
LSB	MSB							
00000010		64	01101010		22	00110110		44
10000010		1	11101010		23	10110110		45
01000010		2	00011010		24	01110110		46
11000010		3	10011010		25	11110110		47
00100010		4	01011010		26	00001110		48
10100010		5	11011010		27	10001110		49
01100010		6	00111010		28	01001110		50
11100010		7	10111010		29	11001110		51
00010010		8	01111010		30	00101110		52
10010010		9	11111010		31	10101110		53
01010010		10	00000110		32	01101110		54
11010010		11	10000110		33	11101110		55
00110010		12	01000110		34	00011110		56
10110010		13	11000110		35	10011110		57
01110010		14	00100110		36	01011110		58
11110010		15	10100110		37	11011110		59
00001010		16	01100110		38	00111110		60
10001010		17	11100110		39	10111110		61
01001010		18	00010110		40	01111110		62
11001010		19	10010110		41	11111110		63
00101010		20	01010110		42			
10101010		21	11010110		43			

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Pelco-P Protocol

CAMERA ADDRESS	DIP SW							
	(LSB)						(MSB)	
1 ch	1	0	0	0	0	1	0	0
2 ch	0	1	0	0	0	1	0	0
3 ch	1	1	0	0	0	1	0	0
4 ch	0	0	1	0	0	1	0	0
5 ch	1	0	1	0	0	1	0	0
6 ch	0	1	1	0	0	1	0	0
7 ch	1	1	1	0	0	1	0	0
8 ch	0	0	0	1	0	1	0	0
9 ch	1	0	0	1	0	1	0	0
10 ch	0	1	0	1	0	1	0	0
11 ch	1	1	0	1	0	1	0	0
12 ch	0	0	1	1	0	1	0	0
13 ch	1	0	1	1	0	1	0	0
14 ch	0	1	1	1	0	1	0	0
15 ch	1	1	1	1	0	1	0	0
16 ch	0	0	0	0	1	1	0	0
17 ch	1	0	0	0	1	1	0	0
18 ch	0	1	0	0	1	1	0	0
19 ch	1	1	0	0	1	1	0	0
20 ch	0	0	1	0	1	1	0	0
21 ch	1	0	1	0	1	1	0	0
22 ch	0	1	1	0	1	1	0	0
23 ch	1	1	1	0	1	1	0	0
24 ch	0	0	0	1	1	1	0	0
25 ch	1	0	0	1	1	1	0	0
26 ch	0	1	0	1	1	1	0	0
27 ch	1	1	0	1	1	1	0	0
28 ch	0	0	1	1	1	1	0	0
29 ch	1	0	1	1	1	1	0	0
30 ch	0	1	1	1	1	1	0	0
31 ch	1	1	1	1	1	1	0	0
32 ch	0	0	0	0	0	1	0	0