



Production Control Software

Installation Guide

Software Version 2.0

PWA-PRC1

NOTICE TO USERS

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Overview

PWA-PRC1 Production Control Software V2.0 is application software to control the PWS-4500 Multiport AV Storage Unit, play-out live video at slow speeds, and manage clips/playlists.

This document explains installation of PWA-PRC1 V2.0, and the necessary settings and connections to use PWA-PRC1.

The intended audience for this documentation is engineers who perform system integration and installation.

Operating Environment

Required Equipment

To use PWA-PRC1 V2.0, the following equipment is required.

- PWS-100PR1 or PWS-100MG1
- PWS-4500 multiport AV storage unit
- PWSK-4403 USB control device (up to two devices can be connected)
- MSQ-S321 XAVC 4K/HD codec card (pre-installed in the PWS-100PR1)

Note

MSQ-S321 uses the Source Code of T-Kernel 2.0 under T-License 2.0 granted by T-Engine Forum (www.t-engine.org).

The following are optional equipment for file transfer and/or archive.

- PWA-MGW1 media gateway software
- PWS-100MG1 Media Gateway Station (with PWA-MGW1 installed)

Obtain the following adapters if a DisplayPort-to-HDMI adapter or DisplayPort-to-DVI adapter is required when connecting the main display.

- DisplayPort → HDMI adapter: StarTech.com DisplayPort to HDMI Active Adapter
- DisplayPort → DVI adapter: XFX MA-AP01-PD1K Active DisplayPort to DVI Adapter

For touch panel operation, prepare the following display.

- Dell S2240T

Submonitors can be used to display the settings and control status of each operation panel.

Recommended submonitor devices:

- ADTECHNO CL5585H
- Sony CLM-V55 Clip-on LCD Monitor

Use with the following AC adaptor.

AC-PW10AM

Notes

- Use the same model submonitor if using two submonitors.
- Obtain the USB external graphic adapter if using second submonitor.

Tested USB external graphic adapter:

- I-O DATA USB-RGB3/H
- StarTech.com USB32HDES Slim USB3.0 to HDMI External Video Card Multi Monitor Adapter

Preparation

Note

User's Guide, Installation Guide, Release Note are installed below in PWS-100PR1.

C:\ProgramData\Sony\Documents\PWA-PRC1

PWA-PRC1 V2.0 Software Package

Package Name: Sony_PWA-PRC1_(version)_package.zip

Copy the above file, which is downloaded from the eCSite to an arbitrary directory and extract the file there.

The following files are contained in Sony_PWA-PRC1_(version)_package.zip.

- PWA-PRC1 Installer : Sony_PWA-PRC1_(version).exe
- PWSK-4403 Driver : pwsk-4403_drv.zip
- User's Guide (Japanese) : PWA-PRC1_UG_(version)_JP.pdf
(English) : PWA-PRC1_UG_(version)_GB.pdf
(Chinese) : PWA-PRC1_UG_(version)_CS.pdf
- Installation Guide (Japanese) : PWA-PRC1_IG_(version)_JP.pdf
(English) : PWA-PRC1_IG_(version)_GB.pdf
- Release Note (Japanese) : ReleaseNotes_PWA-PRC1_(version)_ja.pdf
(English) : ReleaseNotes_PWA-PRC1_(version)_en.pdf

Notes

- PWA-PRC1 V2.0 does not support the sleep mode of PC. Do not let PC go to sleep while operating PWA-PRC1.
- Use the same Video Format and Timecode drop-frame mode settings for devices in a system.

Attaching MSQ-S321 (pre-installed in the PWS-100PR1)

Attach MSQ-S321 if installing PWA-PRC1 V2.0 in PWS-100MG1 device.

1. Install the MSQ-S321 board in the top slot of the PWS-100MG1.

Refer to the PC and MSQ-S321 service manual for details on installation and associated notes.

2. Install the MSQ-S321 device driver.

Refer to MSQ-S321's service manual for details on installation.

Note

Two MSQ-S321 boards are installed in the PWS-100PR1.

Board No.	Mounting slot	Board ID (DIP switch S4002 settings)
Board 1	Lower	0 (Bits 1 to 4 are Off)
Board 2	Upper	1 (Bit 1 only is On)

Installing the PWSK-4403 Driver (pre-installed in the PWS-100PR1)

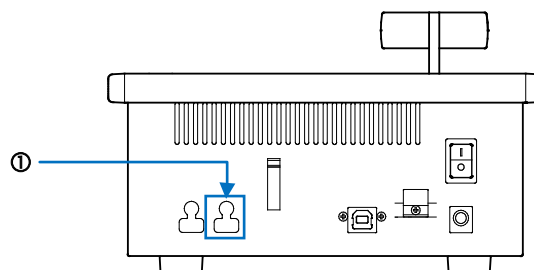
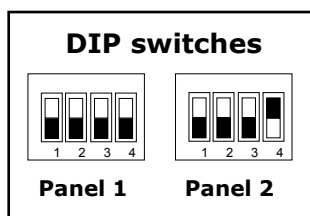
1. Connect between PWSK-4403 and PC with a USB cable.
2. Turn on PWSK-4403.
3. Decompress PWSK-4403 Driver file (pwsk-4403_drv.zip).
4. Open [Device Manager], and then click [Other devices].
5. Right-click [Unknown device], and then click [Update Driver Software...].
6. On the [Update Driver Software] window, click [Browse my computer for driver software].
7. On the [Browse For Folder] window, select the "\\pwsk-4403_drv\package" folder and click [OK].
8. Click [Next].
9. On the [Windows Security] window, click [Install].
Driver installation starts.
10. On the [Device Manager] window, click [Universal Serial Bus Controller], and check to see "Sony Control Device Panel (version)" is recognized correctly.

Settings When Using Two PWSK-4403 Panels

Configure the following settings when using two PWSK-4403 panels.

1. Remove the cap ① from the rear of the PWSK-4403.
2. Set the DIP switches as follows.

PWSK-4403	DIP switches	
	Bit 3	Bit 4
Panel 1	OFF	OFF
Panel 2	OFF	ON



PWSK-4403 rear view

Note

If the PWSK-4403 connection is changed after starting PWA-PRC1 V2.0, click [Update] under [GUI and Panel links] on the Settings screen of PWA-PRC1 V2.0.

For details about the Settings screen of PWA-PRC1 V2.0, refer to the User's Guide.

Configuring PRC Manager

PRC Manager software is included with PWA-PRC1 V2.0. PRC Manager is software that manages the PWS-4500 devices, PWA-PRC1, and PWA-MGW1 on a network without using an operation screen.

Only one PRC Manager instance must be running on a network, regardless of whether there is only one PWA-PRC1 or multiple PWA-PRC1 installations on the same network.

Note

If both PWA-PRC1 and PWA-MGW1 are on the same network, do not use PRC Manager on the PWA-MGW1.

To perform management functions using PRC Manager, the PWS-4500 and PWA-MGW1 must have the following settings.

PWS-4500 settings

Click [System] – [Network], and configure the following settings in [PRCM Setting] on the displayed screen.

Item	Setting
Port Number	50000
PRCM 1 Connection	Enable
PRCM 1 IP Address	IP address of PC on which PRC Manager is installed

PWA-MGW1 settings

Click [Settings] – [PRC Manager] – [PRC Manager List] – [Add], and configure the following settings on the displayed screen.

Item	Setting
IP Address	IP address of PC on which PRC Manager is installed
Port Number	51000

PWA-PRC1 settings

If using an NMI and Share Play, different settings for PTP domain are required. If the settings need to be changed, change the PTP domain setting in [Settings] – [System] – [PRC manager].

Configuring Share Play

The following configuration is required in order to use the PWA-PRC1 Share Play function.

PWS-4500 settings

Click [System] – [Share Play], and configure the following settings in [Share Play Network Setting] – [Primary] on the displayed screen.

Item	Setting
IP Address	IP address for Share Play
Subnet Mask	255.255.255.0

Click [System] – [Share Play], select the format to use in [Share Play Video Format] and configure the following settings on the displayed screen.

Item	Setting
Tx:Rx	Set to the following according to the set value of [Maximum Tx Number]. 2:2 (if [Maximum Tx Number] is 2 or higher) 1:3 (if [Maximum Tx Number] is 1) 0:4 (if [Maximum Tx Number] is 0)

Configuring the PWS-4500

1. Configure the PWS-4500 Port A through Port D settings, according to the PGM mode used by PWA-PRC1 V2.0.

When each condition is selected in the following figure (①), select the desired settings from the enabled I/O configurations.

Refer to the PWS-4500 Operation Manual for details on port settings.

Note

PWA-PRC1 V2.0 does not support 1-IN, 2-IN, 3-IN, 4-IN, 2-OUT, 3-OUT, 4-OUT, 1-IN 3-OUT, and 2-IN 3-OUT configurations.

Board Setting
Step 1. System Frequency
Step 2. Port Type
Step 3. Port Codec
Step 4. Port Configuration
Step 5. Remote
Step 6. Send Form

Select Recommended Solution

If you have narrowed down the solutions, the following settings will be easy.

☐ Select All

Select Condition

Codec

☒ XAVC
☐ Avid DNxHD(R)

Pixel and FPS

☐ HD/2K with 1x fps
☐ HD with 2x - 4x fps
☐ HD with 6x - 8x fps
☒ 4K/QFHD with 1x fps
☐ QFHD with 2x fps

HD Cut Out

☒ Unavailable
☐ Available

Preview Control

☒ Unavailable
☐ Available

Selected Combinations: 5

Definition of Port Type

Name	XAVC	Avid DNxHD(R)
Input	Input: HD with 1x - 4x fps, 4K with 1x fps, Sub Recording	Input: HD with 1x fps
HD Multi-Input	Input: HD with 1x fps, 2 Input Ports per 1 Board	Input: HD with 1x fps, 2 Input Ports per 1 Board
Input with 2 Boards	Input: HD with 6x - 8x fps, 4K with 2x fps, Sub Recording	Input: Not Supported
Output	Output: HD and 4K	Output: HD
HD Multi-Output	Output: HD, 2 Output Ports per 1 Board	Output: HD, 2 Output Ports per 1 Board
HD Cut Out	Output: HD Cut Out	Output: Not Supported

Select a Combination of Port Type

4-IN

3-IN 1-OUT

2-IN 2-OUT

1-IN 3-OUT

4-OUT

Port A	Input	Input	Input	Input	Output
Port B	Input	Input	Output	Output	Output
Port C	Input	Input	Input	Output	Output
Port D	Input	Output	Output	Output	Output

6-IN 2-OUT

5-IN 2-OUT

4-IN 2-OUT

3-IN 2-OUT

Port A	HD Multi-Input	Input	Input	Input
Port B	HD Multi-Input	HD Multi-Input	Input	Input
Port C	HD Multi-Input	HD Multi-Input	HD Multi-Input	Input
Port D	HD Multi-Output	HD Multi-Output	HD Multi-Output	HD Multi-Output

6-IN 1-OUT

4-IN 2-OUT

2-IN 3-OUT

Port A	HD Multi-Input	HD Multi-Input	HD Multi-Input
--------	----------------	----------------	----------------

2. Configure each port.

Note

PWA-PRC1 V2.0 may not function properly if the following settings are not correctly made. Be sure to make the following settings.

- Make the same Video Format settings for each port.
- In Cut Out mode, make the same Format settings for PortD: Output and [Monitor Out].
- In Cut Out mode, make the same settings for [Monitor Out] for each port.
- In modes other than Cut Out mode, set [Monitor Out] to "xxp to xxI & HD-SDI" (where "xx" is the resolution) where available.

Board Setting > Step 1. Frequency + I/O > Step 2. Port Type > Step 3. Port Codec > **Step 4. Port Configuration** > Step 5. Remote > Step 6. Send Form

Common Settings

If you have set common settings of SDI Type, each port settings of SDI Type will be selected by priority.

SDI/IMI Type for Cable: ☐ HD-SDI ☐ 3G-SDI (Level A) ☒ 3G-SDI (Level B)

SDI/IMI Type for QFHD/4K: ☒ Square Division ☐ 2-Sample Interleave Division

SDI Type for 2x mode: ☒ Aligning with Horseshoe-shape Field ☐ Aligning with Field

Monitor Out: ☒ HD-SDI ☐ 3G-SDI (Level A) ☐ 3G-SDI (Level B)

Port A-1: Input: HD with 1x - 4x fps, 4K with 1x fps, Sub Recording

XAVC	HD: 1280 x 720 YPbPr 4:2:2 10bit Class 100	HD: 1920 x 1080 YPbPr 4:2:2 10bit Class 100	QFHD: 3840 x 2160 YPbPr 4:2:2 10bit Class 300	4K: 4096 x 2160 YPbPr 4:2:2 10bit Class 300
59.94i		<input type="radio"/>		
59.94i 2x		<input type="radio"/>		
59.94i 3x		<input type="radio"/>		
59.94i 4x		<input type="radio"/>		
29.97PsF		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29.97p		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59.94p	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
59.94p 2x	<input type="radio"/>	<input type="radio"/>		
59.94p 3x	<input type="radio"/>	<input type="radio"/>		
59.94p 4x	<input type="radio"/>	<input type="radio"/>		

Next: 59.94p QFHD: 3840 x 2160 YPbPr 4:2:2 10bit XAVC Class 300

SDI/IMI Type for Cable: ☐ HD-SDI ☐ 3G-SDI (Level A) ☒ 3G-SDI (Level B)

SDI/IMI Type for QFHD/4K: ☒ Square Division ☐ 2-Sample Interleave Division

SDI Type for 2x mode: ☐ Aligning with Horseshoe-shape Field ☐ Aligning with Field

Monitor Out: ☒ 59.94p to 59.94i & HD-SDI ☐ 59.94p & 3G-SDI (Level A) ☐ 59.94p & 3G-SDI (Level B)

Sub Recording: ☒ Off ☐ Using Internal Signal ☐ Using External Interface

Sub Recording Configuration: Unusable Configuration

Port B-1: Output: HD and 4K

XAVC	HD: 1280 x 720 YPbPr 4:2:2 10bit	HD: 1920 x 1080 YPbPr 4:2:2 10bit	QFHD & 4K to QFHD: 3840 x 2160 YPbPr 4:2:2 10bit	4K: 4096 x 2160 YPbPr 4:2:2 10bit
59.94i		<input type="radio"/>		
59.94p to 59.94i		<input type="radio"/>		
29.97PsF		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29.97p		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59.94p	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Next: 59.94p QFHD & 4K to QFHD: 3840 x 2160 YPbPr 4:2:2 10bit XAVC

SDI/IMI Type for Cable: ☐ HD-SDI ☐ 3G-SDI (Level A) ☒ 3G-SDI (Level B)

SDI/IMI Type for QFHD/4K: ☒ Square Division ☐ 2-Sample Interleave Division

SDI Type for 2x mode: ☐ Aligning with Horseshoe-shape Field ☐ Aligning with Field

Monitor Out: ☒ 59.94p to 59.94i & HD-SDI ☐ 59.94p & 3G-SDI (Level A) ☐ 59.94p & 3G-SDI (Level B)

Sub Recording: ☐ Off ☐ Using Internal Signal ☐ Using External Interface

Sub Recording Configuration: Unusable Configuration

- Set [Chunk File] of the input port to "24H".
- TC to Input shall be in synchronization. Set [TCG Source] of the input port to "Master TC".
- Configure the correct [DF mode] for each input/output port. Do not mix DF and NDF settings.

Note

Correct operation will not occur if a TC jump exists in the recorded file.

HomeStatusSystemPortFileStorageMaintenanceSNMP

CommonPort A-1Port B-1Port C-1Port D-1

Board A: Input: HD with 1x - 4x fps, 4K with 1x fps, Sub Recording

Port A-1

IN QFHD → FILE QFHD

Next: CAM1

CLOSE

IN59.94p 3840x2160 YPbPr 4:2:2 10bit XAVC

FILE59.94p 3840x2160 YPbPr 4:2:2 10bit XAVC Class 300

TR 1	TR 2	TR 3	TR 4	TR 5	TR 6	TR 7	TR 8	TR 9	TR 10	TR 11	TR 12	TR 13	TR 14	TR 15	TR 16
CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	CH 9	CH 10	CH 11	CH 12	CH 13	CH 14	CH 15	CH 16
SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI

Option

Remote 9pinOffOff

Remote 25pinOffOff

Chunk File24H24H

User Specified NameCAM1CAM1- Template -SubmitCancel

TC

TC Setup

TCG SourceMaster TCMaster TC

REGENE SourceTC & UBTC & UB

RUN ModeFree RunFree Run

DF ModeDFDF

TC OUTRegeneRegene

Timer SelectTC TC

Timer Set: Disabled-- -- -- --SetReset

- Set [Forced Shuttle Mode] of the output port to "Off".

Home Status System **Port** File Storage Maintenance SNMP

Common Port A-1 **Port B-1** Port C-1 Port D-1

Board B: Output: HD and 4K

Port B-1 NONE → QFHD

59.94p 3840x2160 YPbPr 4:2:2 10bit XAVC

CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	CH 9	CH 10	CH 11	CH 12	CH 13	CH 14	CH 15	CH 16
TR 1	TR 2	TR 3	TR 4	TR 5	TR 6	TR 7	TR 8	TR 9	TR 10	TR 11	TR 12	TR 13	TR 14	TR 15	TR 16
SDI-A/E	SDI-A/E	SDI-A/E	SDI-A/E	SDI-A/E	SDI-A/E	SDI-A/E	SDI-A/E	SDI	SDI	SDI	SDI	SDI	SDI	SDI	SDI

Option

Remote 9pin

Remote 25pin

Continuous Mode

Feed Play Mode

Forced Shuttle Mode

TC

TC Setup

TCR Select

DF Mode

TC OUT

- Set [Shuttle Muting] of the output port to "On".

Audio

Audio Output Select

	CH01	CH02	CH03	CH04	CH05	CH06	CH07	CH08	CH09	CH10	CH11	CH12	CH13	CH14	CH15	CH16
Track	01 ▾	02 ▾	03 ▾	04 ▾	05 ▾	06 ▾	07 ▾	08 ▾	09 ▾	10 ▾	11 ▾	12 ▾	13 ▾	14 ▾	15 ▾	16 ▾

Shuttle Muting

Audio Output Phase samples [0 ≤ 128:default ≤ 255]

- When using Cut Out mode, set [Time Shifted Play] to “From Storage Only”.

The screenshot shows the 'System Parameters' configuration page. The 'Time Shifted Play' option is highlighted with a red box, indicating it is set to 'From Storage Only'. Other parameters include Reference Source, Preroll Time, Rec Inhibit, Frame PB Mode, Freeze PB Mode, Record File Naming, File Delete Mode, Front LED Mode, QFHD/4K SDI with TC, Output Port SDI-1,2,3,4, No Video Output Signal, Control Inhibit, Automatic Start, Master TC, TCG Source, REGENE Source, and DF Mode.

- When recording using Loop Recording, set all recording ports on the PWS-4500 to the same settings.

Note

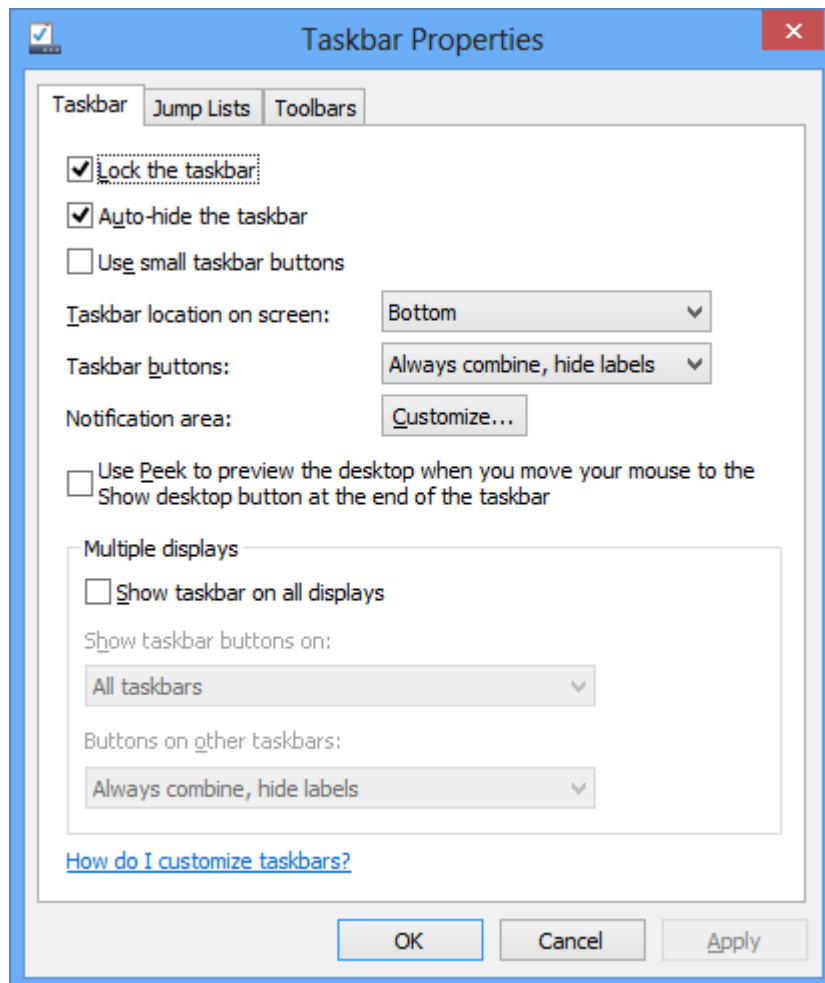
If the port settings are changed, reconfigure [Create Loop Recording Area].

The screenshot shows the 'Create Loop Recording Area' configuration page. The 'Port A-1' and 'Port C-1' sections are highlighted with a red box, showing the 'Assign Port' and 'Assign Area' settings. The 'Assign Port' is set to '59.94p 3840x2160 YPbPr 4:2:2 10bit XAVC Class 300' and the 'Assign Area' is set to 'Memory Board: 6/16 - Size: 676 GB - Time: About 02 h 15 min'. The 'Area Information' is set to 'Area 1' for Port A-1 and 'Area 2' for Port C-1. The 'Submit' and 'Cancel' buttons are visible at the bottom of the highlighted section.

Configuring the PC

Taskbar settings

1. Right-click the taskbar and select [Properties].
2. In the [Taskbar Properties] dialog, turn [Auto-hide the taskbar] on.
3. If using a submonitor, turn [Show taskbar on all displays] off under [Multiple displays].



Multi-language input settings

PWA-PRC1 supports English, Japanese, and Chinese character input. To enter clip names, playlist names, and server names in a language other than English, configure the following settings.

1. Select [Control Panel] – [Language].
2. Click [Add Language].
3. Select the language to add.

For example, to enter text in Japanese, select “Japanese”.

4. Click the [Add] button.
5. Repeat steps 3 and 4 to add any additional languages.

To switch the input language

Press the Windows + space key combination. The languages added above appear in a menu. Select a language to change the input language.

Settings for Archiving/Retrieving Playlist and Cut Out Data

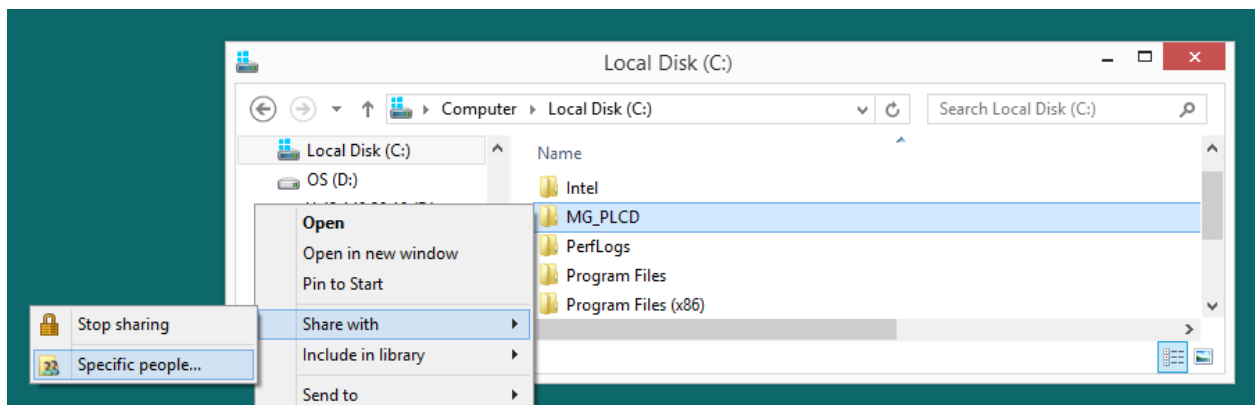
Shared folder settings are required when archiving playlist and cut out data created using PWA-PRC1 V2.0, and when retrieving from the PWA-MGW1 service.

1. PWA-MGW1 shared folder settings

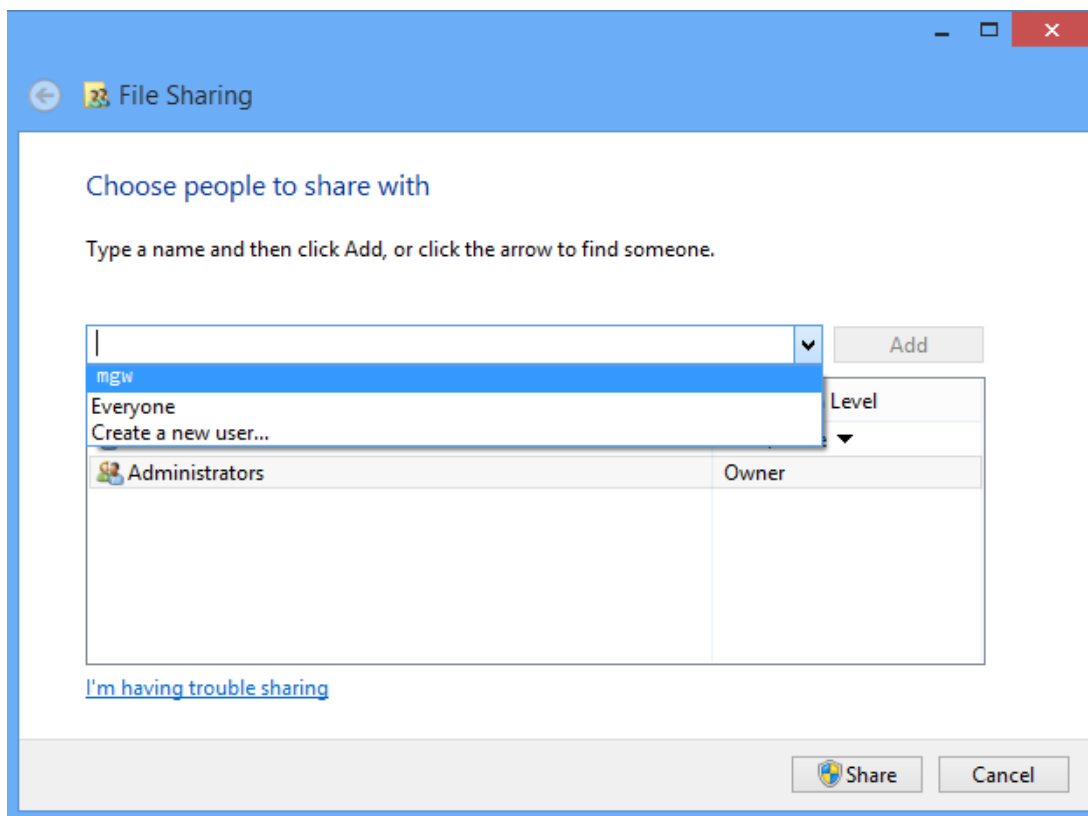
- (1) Right-click the C:\MG_PLCD folder on the PC on which PWA-MGW1 is installed, and select [Share with] → [Specific people...].

Note

The “MG_PLCD” folder is created when PWA-MGW1 starts.

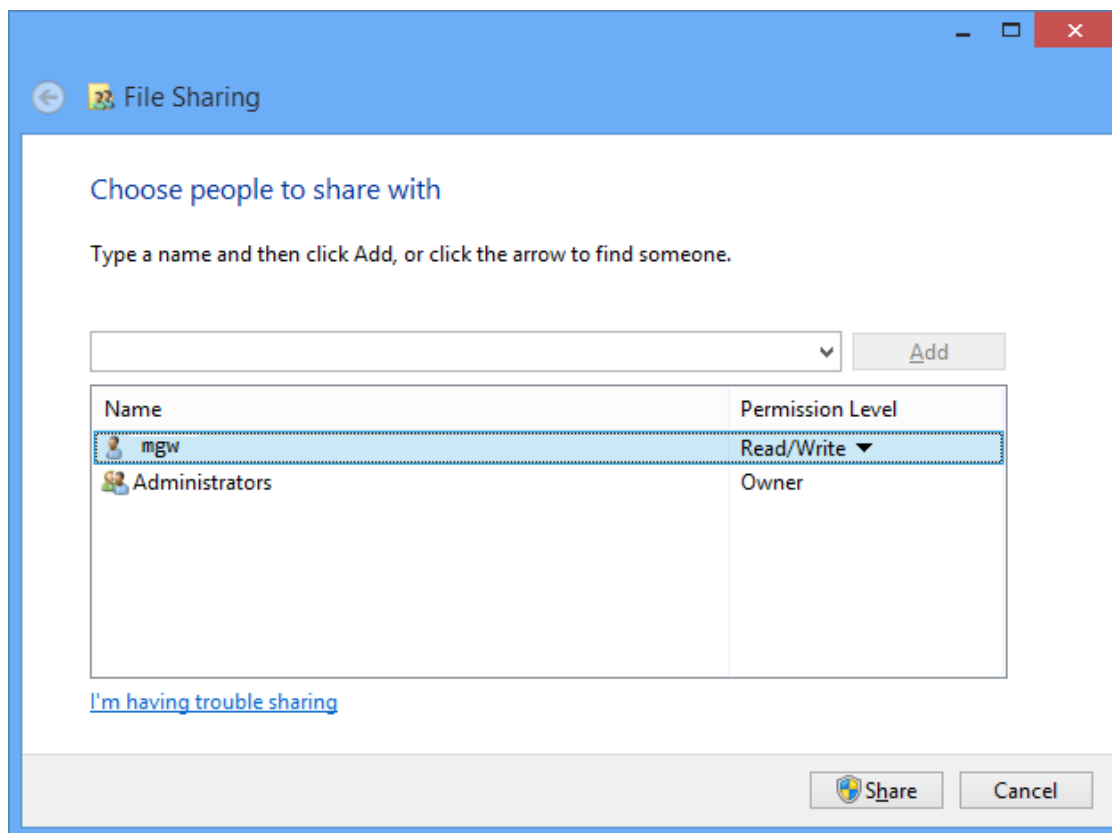


- (2) In the [File Sharing] dialog, select the account to permit sharing, and click the [Add] button.



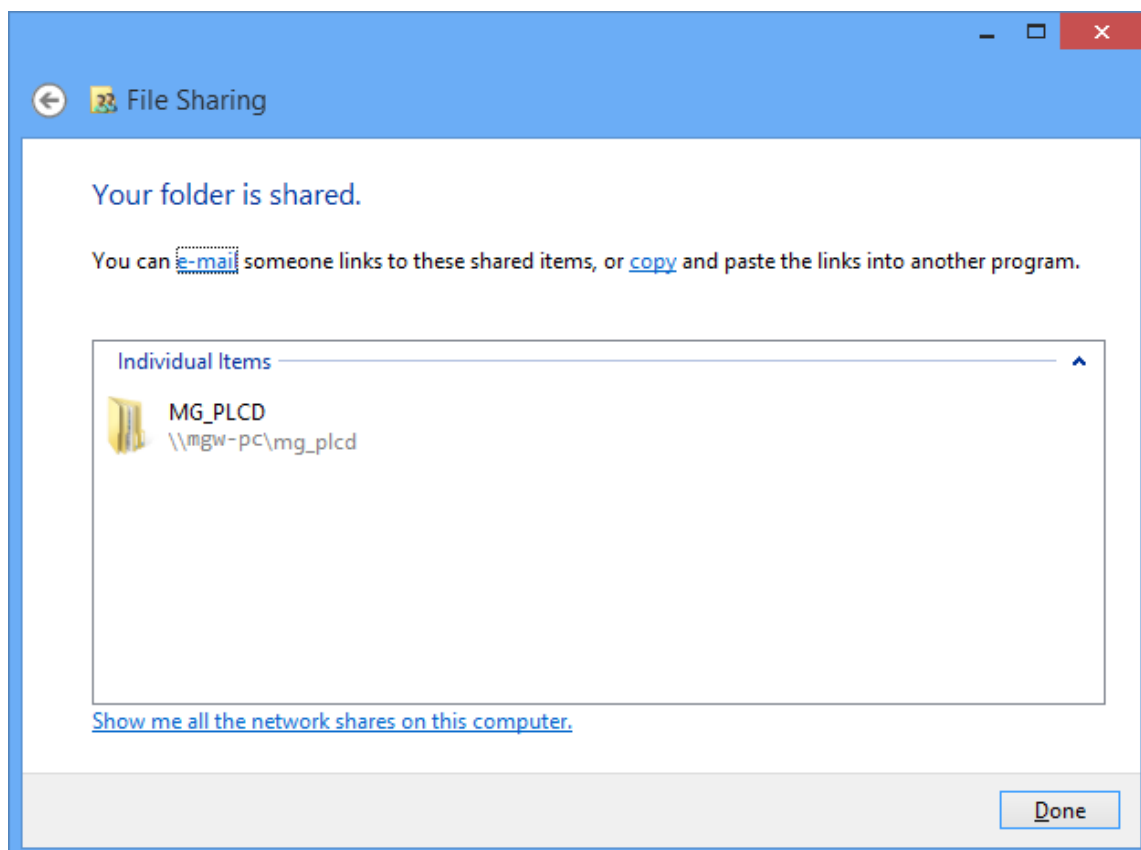
(3) Set [Permission Level] to "Read/Write."

(4) Click the [Share] button.



(5) Check the setting in the confirmation dialog, and click the [Done] button.

The "MG_PLCD" folder becomes shared.



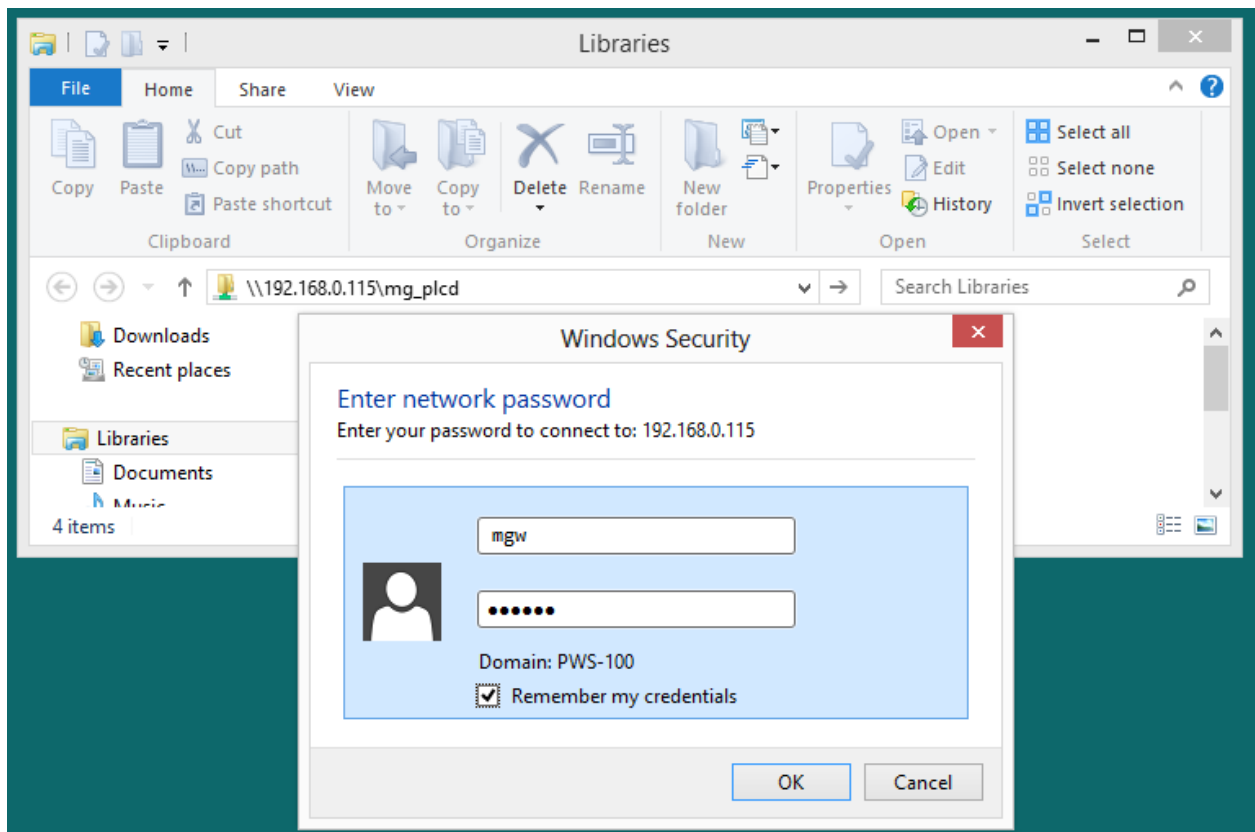
2. PWA-PRC1 access credentials settings

- (1) Open Explorer, enter "\\IP address of PC with PWA-MGW1 installed\mg_plcd," and press the [Enter] key.

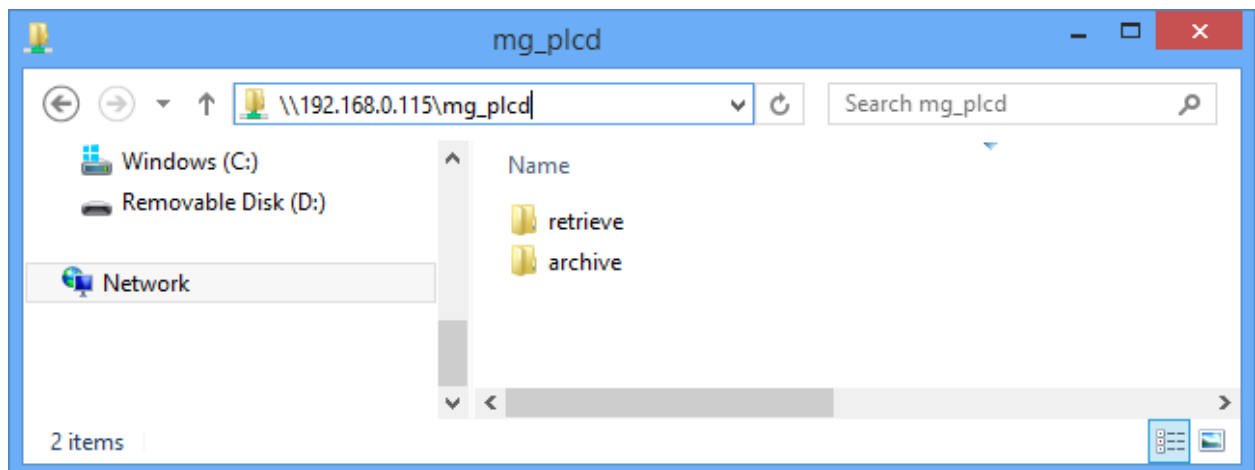
The [Windows Security] dialog appears.

If the contents of the "MG_PLCD" folder are displayed, the folder access credentials have already been configured, and the following configuration is not required.

- (2) Enter the account name and password for which "MG_PLCD" folder sharing was configured in "1. PWA-MGW1 shared folder settings."
- (3) Place a check mark in the [Remember my credentials] checkbox, and click the [OK] button.



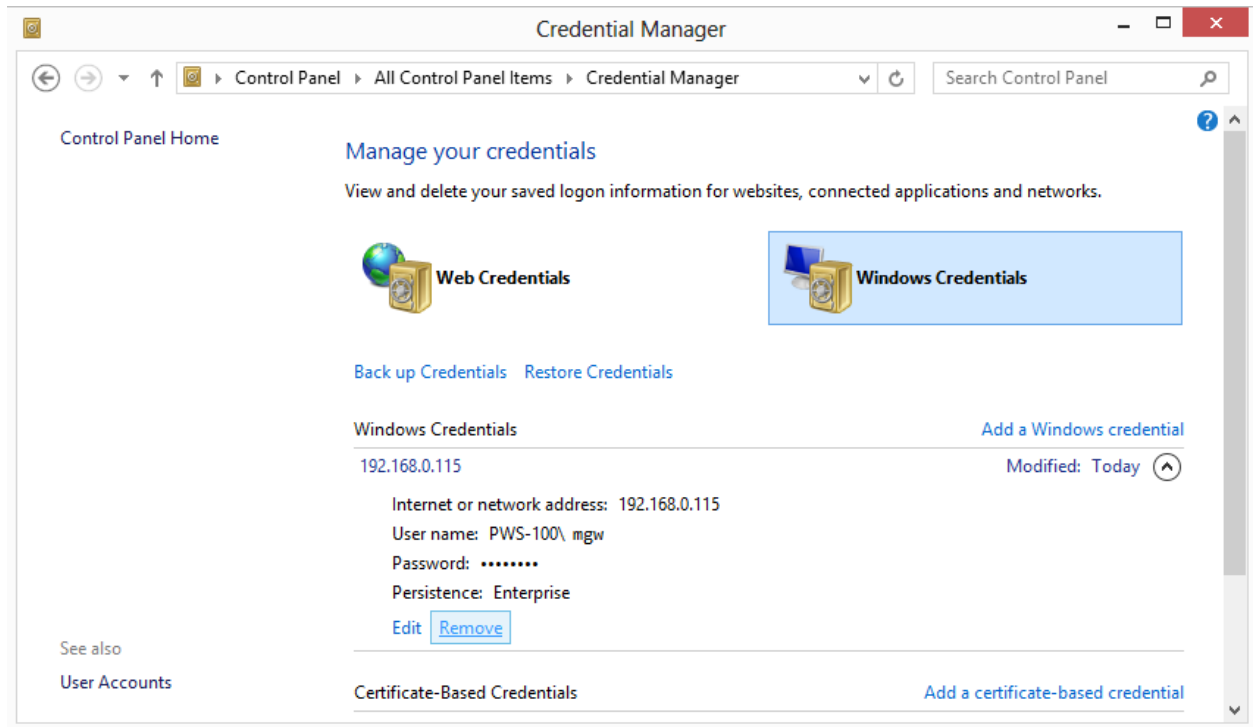
- (4) Check that "archive" and "retrieve" folders appear inside the "MG_PLCD" folder.



To remove access credentials settings

- (1) Open [Control Panel] -> [Credential Manager].
- (2) Click [Windows Credentials].
- (3) Click the down arrow (V) to display the corresponding access credentials, and click [Remove].

The access settings are deleted.

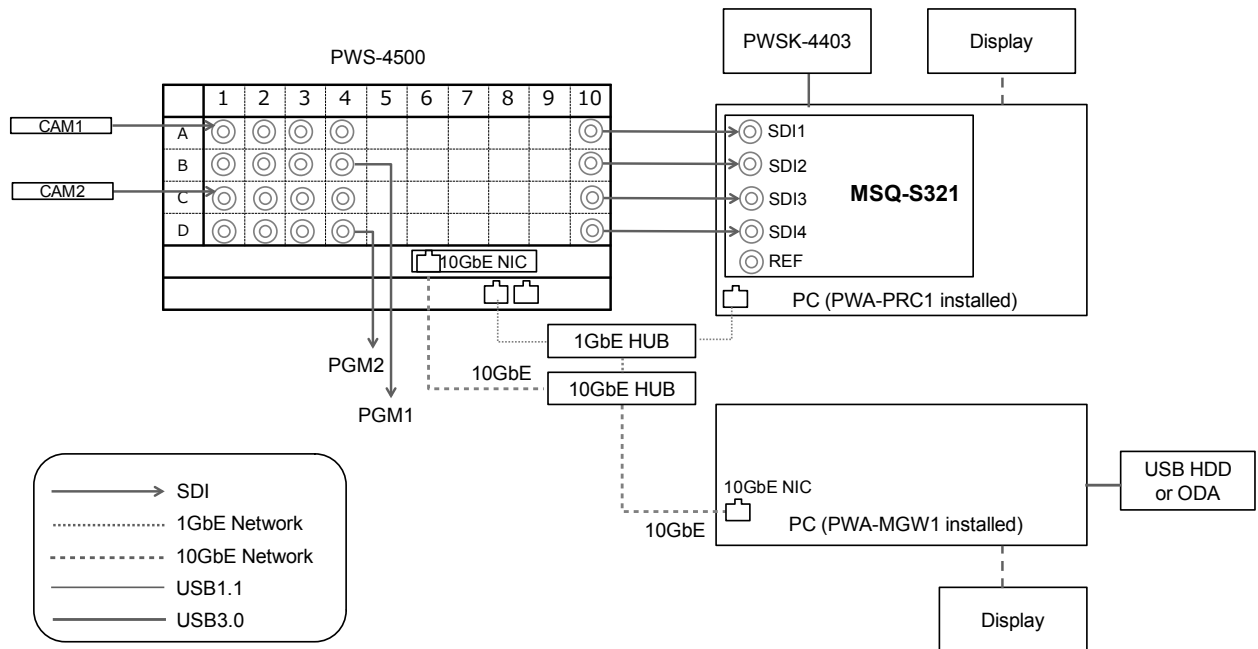


Settings for using submonitor

1. Right-click on the desktop and select [Screen Resolution] from the menu displayed.
2. Set [Resolutions] as follows.
 - ADTECHNO CL5585H: 1280x720
 - Sony CLM-V55 Clip-on LCD Monitor: 1280x768

Connections

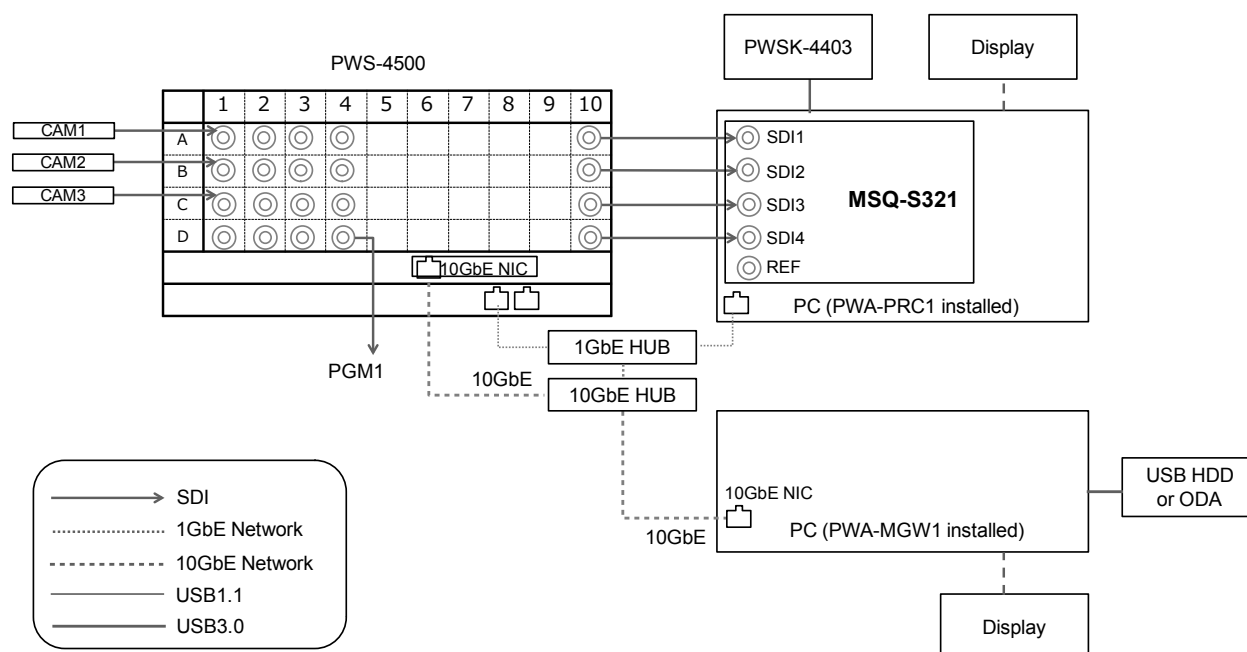
2IN/2OUT (4K) with 10GbE Network



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

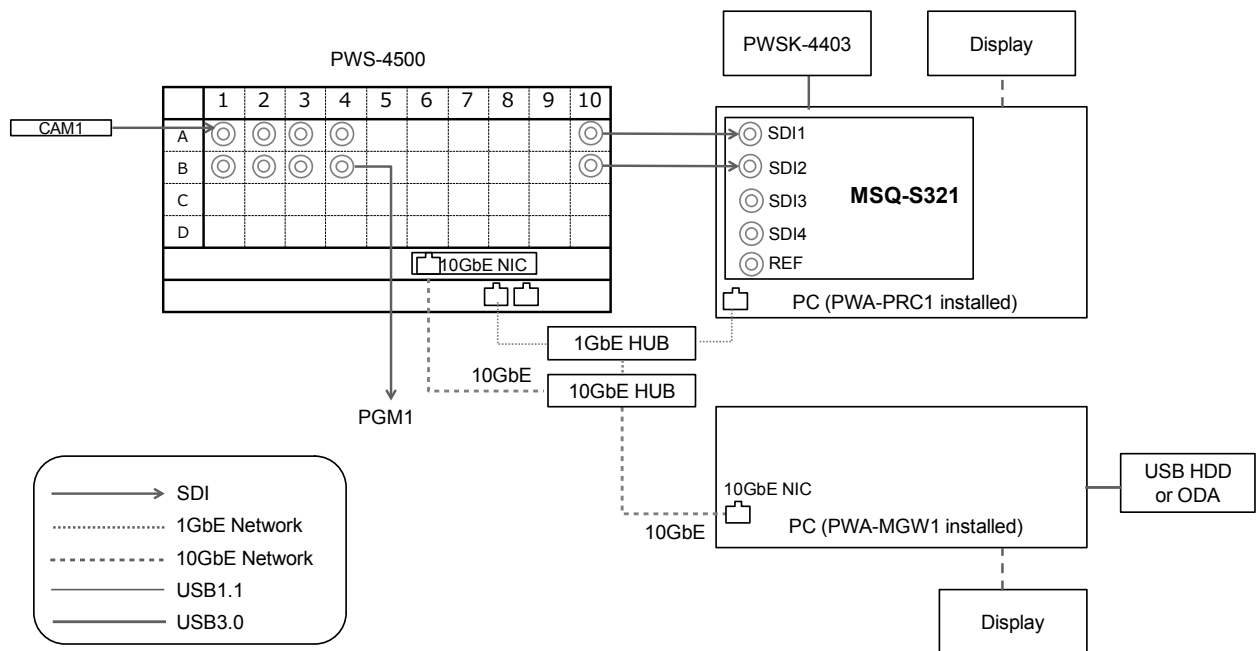
3IN/1OUT (4K) with 10GbE Network



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

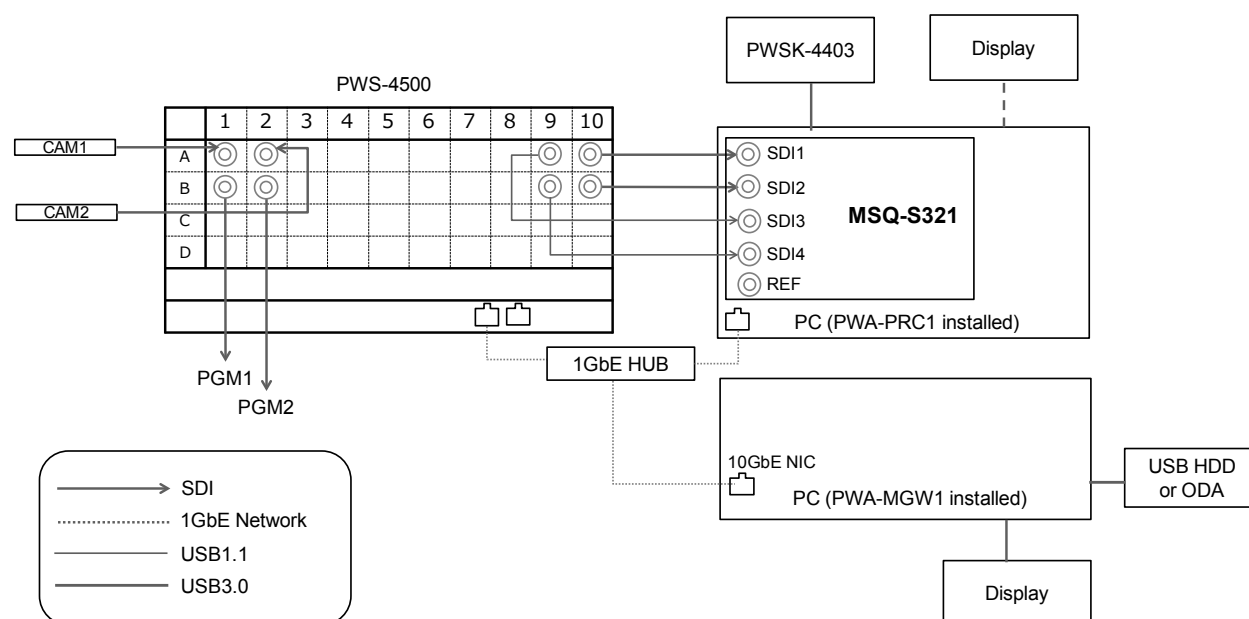
1IN/1OUT (4K) with 10GbE Network, without PWSK-4504



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

2IN/2OUT (HD) with 1GbE Network, without PWSK-4504



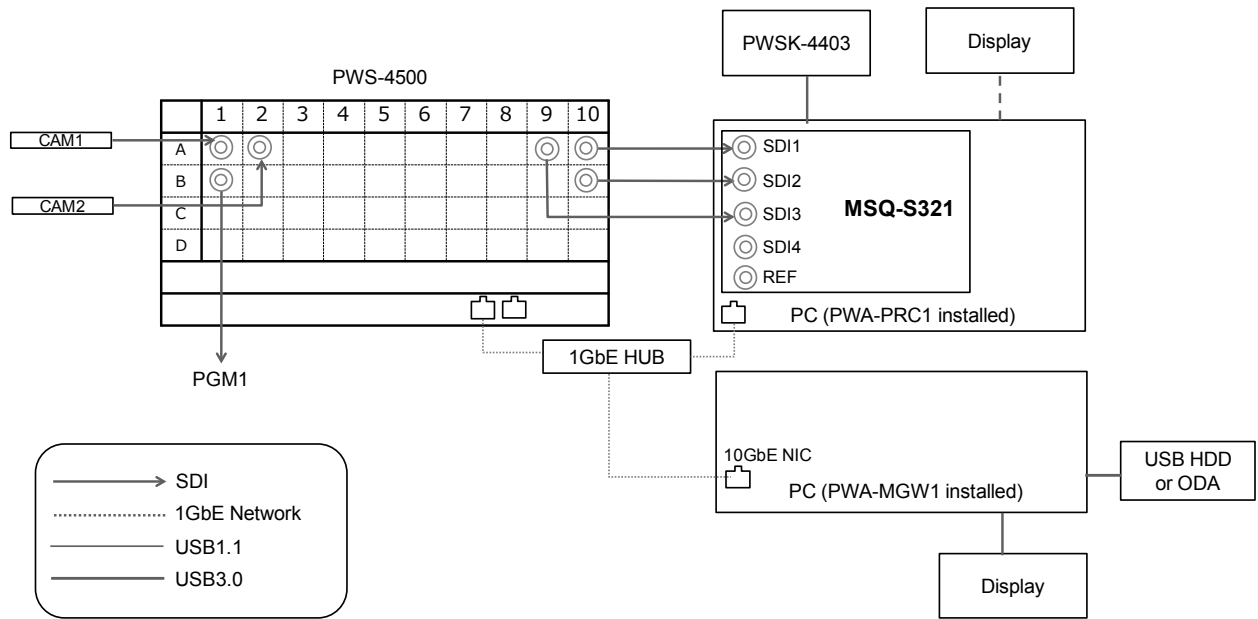
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

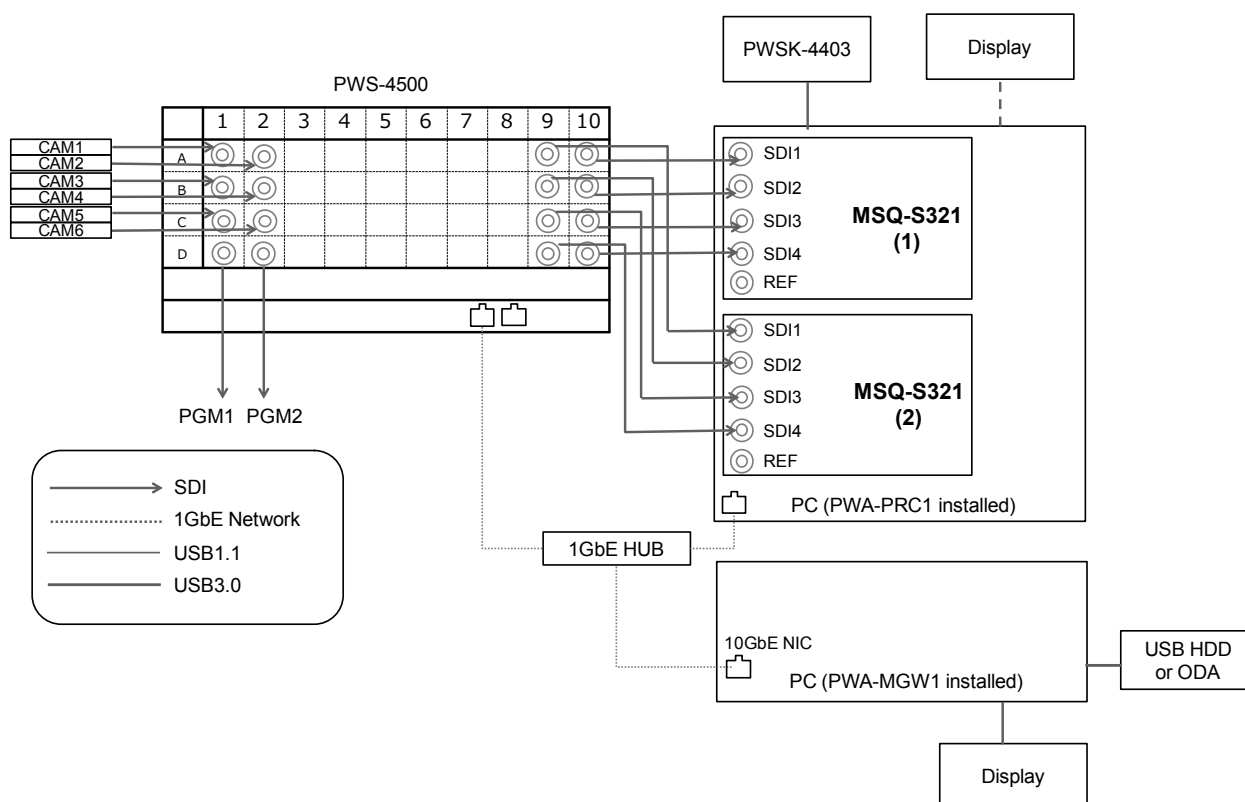
2IN/1OUT (HD) with 1GbE Network, without PWSK-4504



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

6IN/2OUT (HD) with 1GbE Network, without PWSK-4504



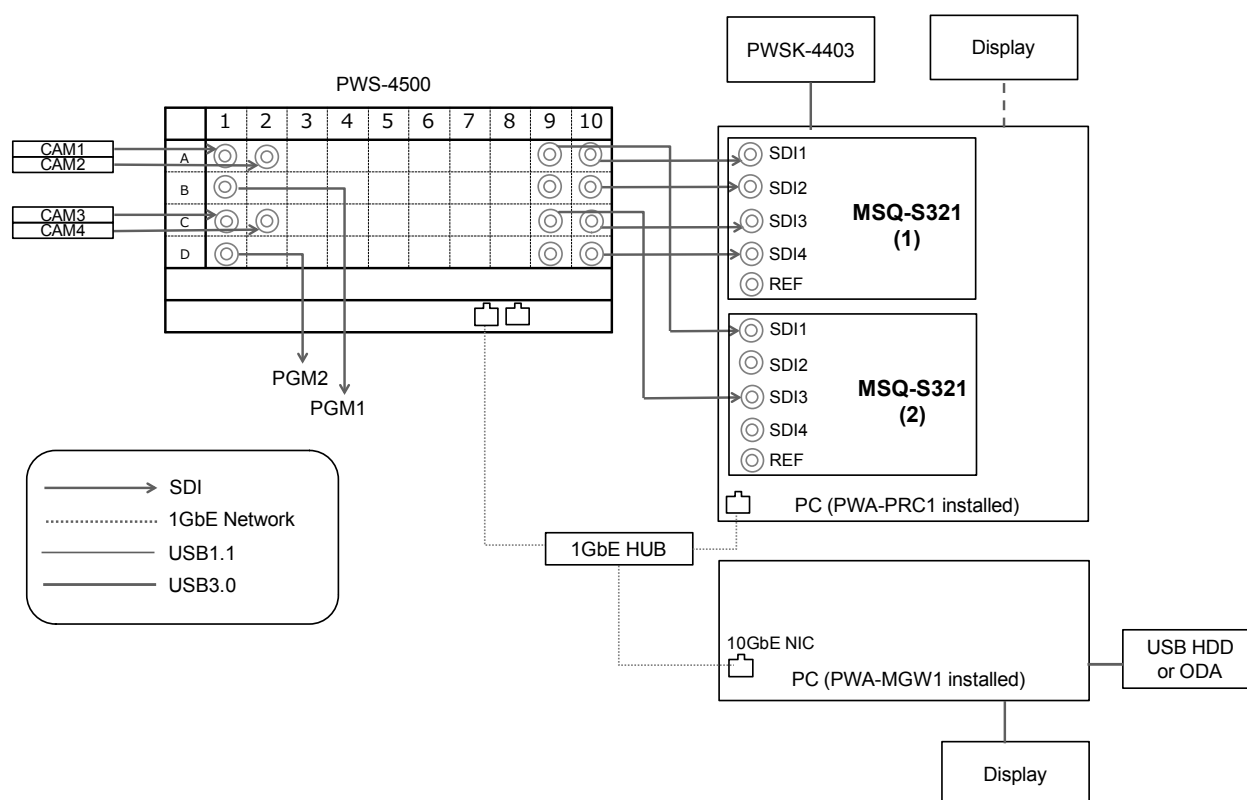
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

4IN/2OUT (HD) with 1GbE Network (PWS-100PR1 connection only)



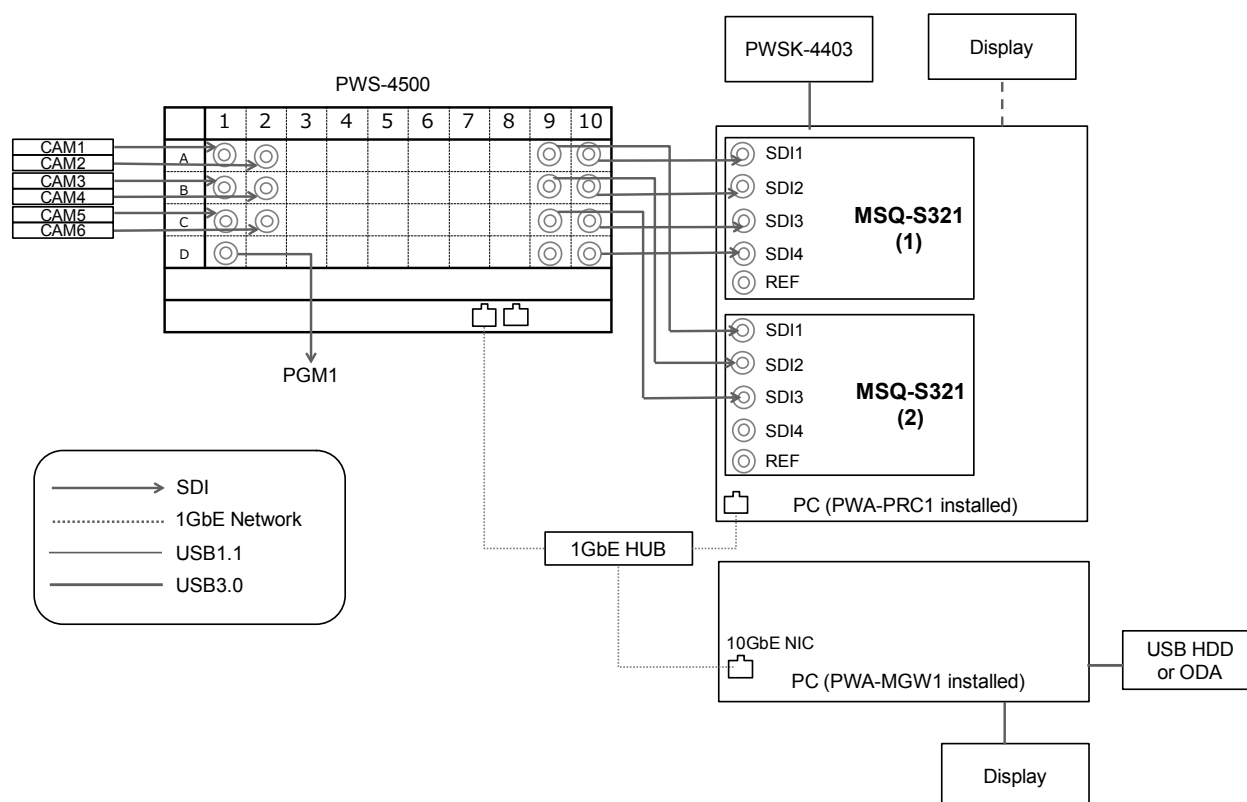
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

6IN/1OUT (HD) with 1GbE Network (PWS-100PR1 connection only)

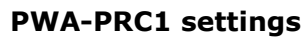


PWA-PRC1 settings

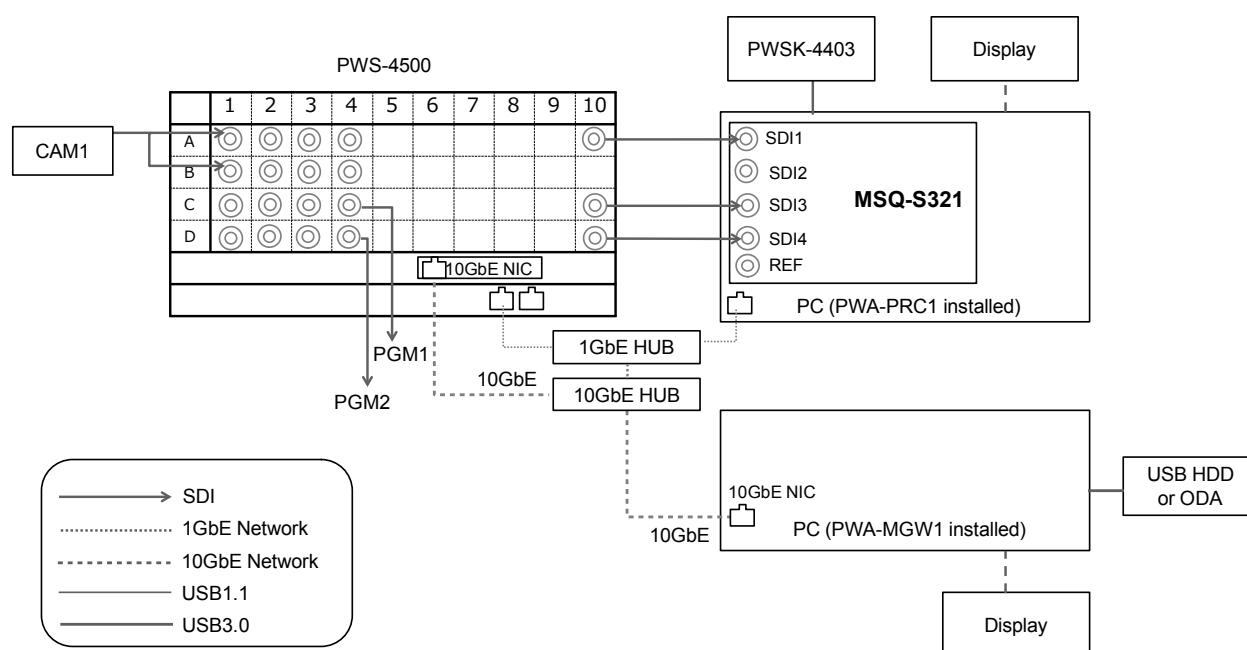
[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

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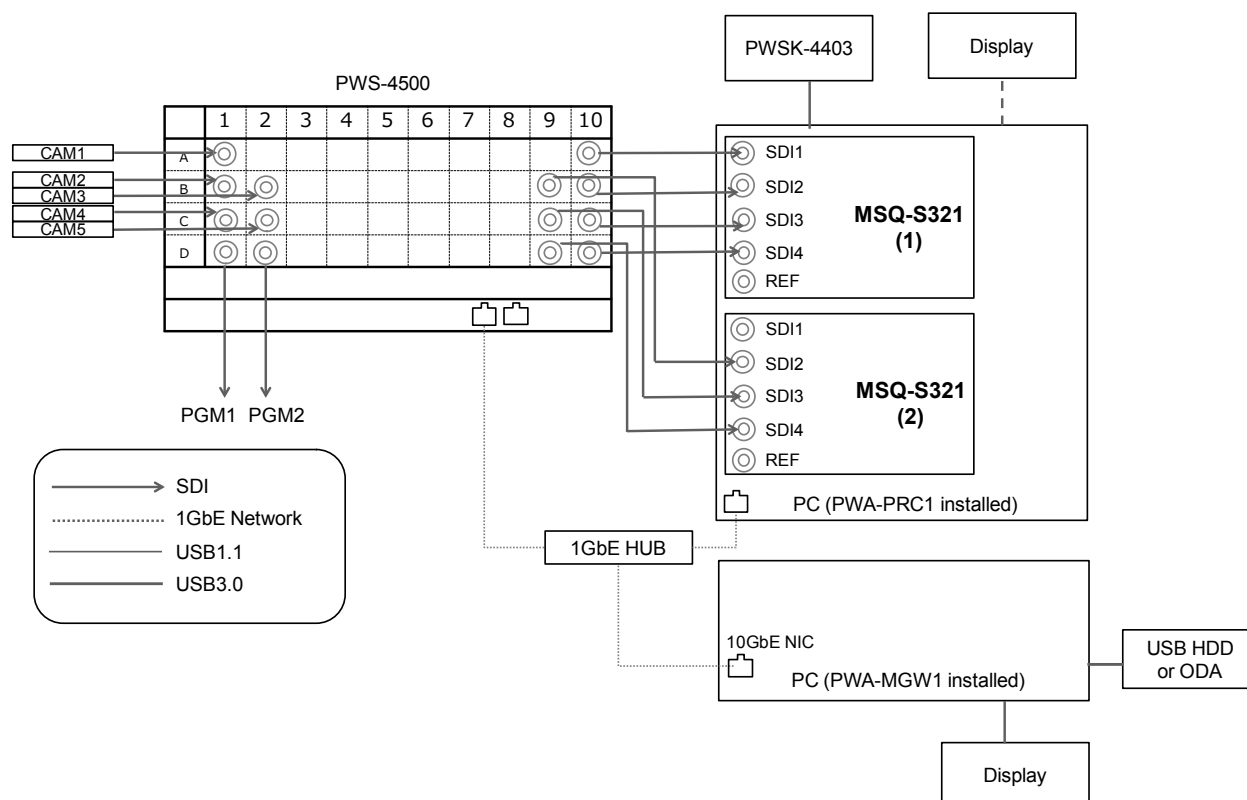
HFR 1IN/2OUT (4K 2x) with 10GbE Network



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

HFR 5IN/2OUT (HD 4x, 3x, 2x) with 1GbE Network (PWS-100PR1 connection only)



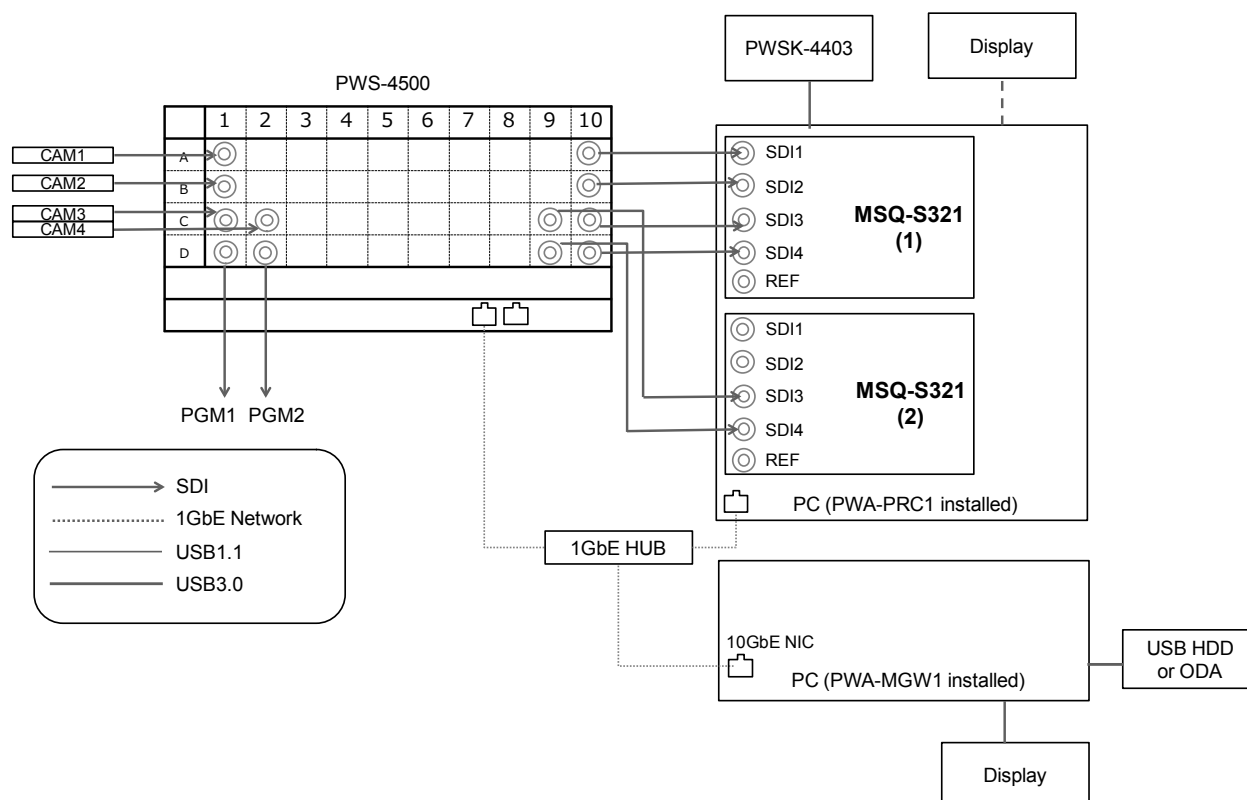
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

HFR 4IN/2OUT (HD 4x, 3x, 2x) with 1GbE Network (PWS-100PR1 connection only)



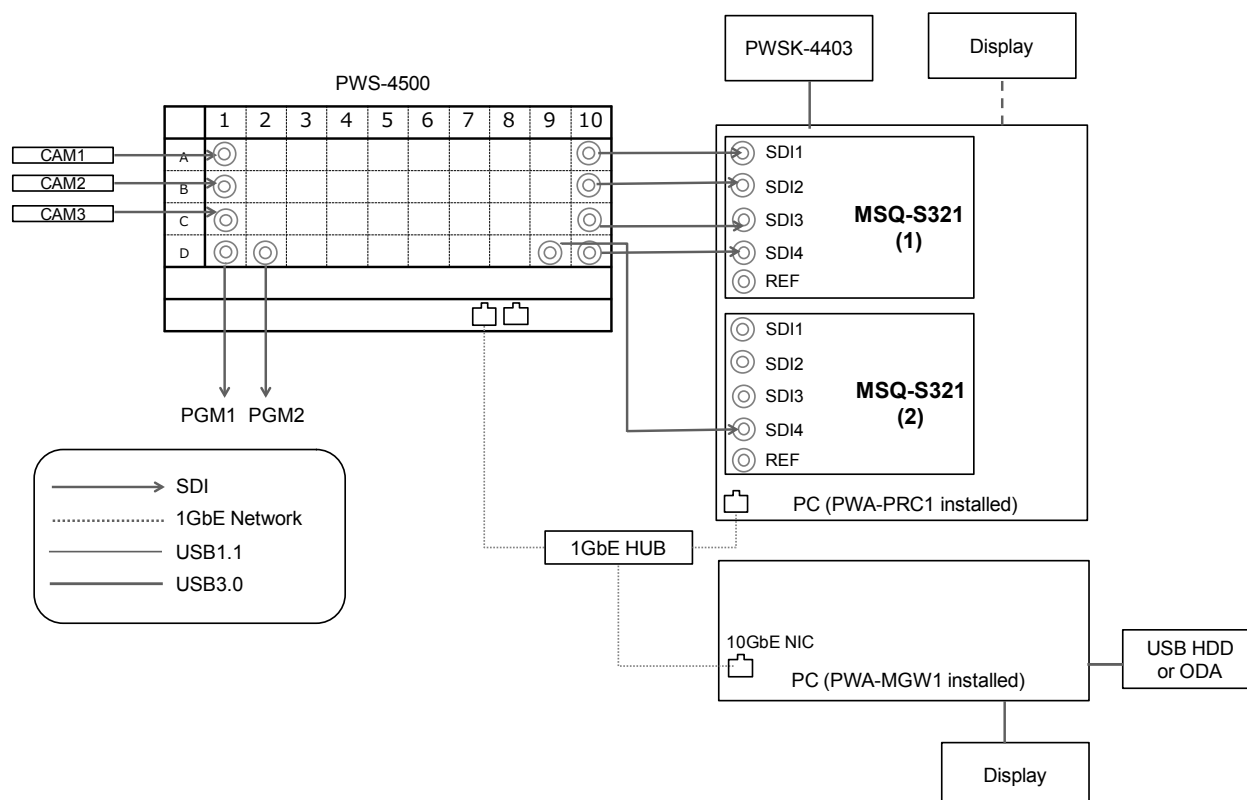
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

HFR 3IN/2OUT (HD 4x, 3x, 2x) with 1GbE Network (PWS-100PR1 connection only)



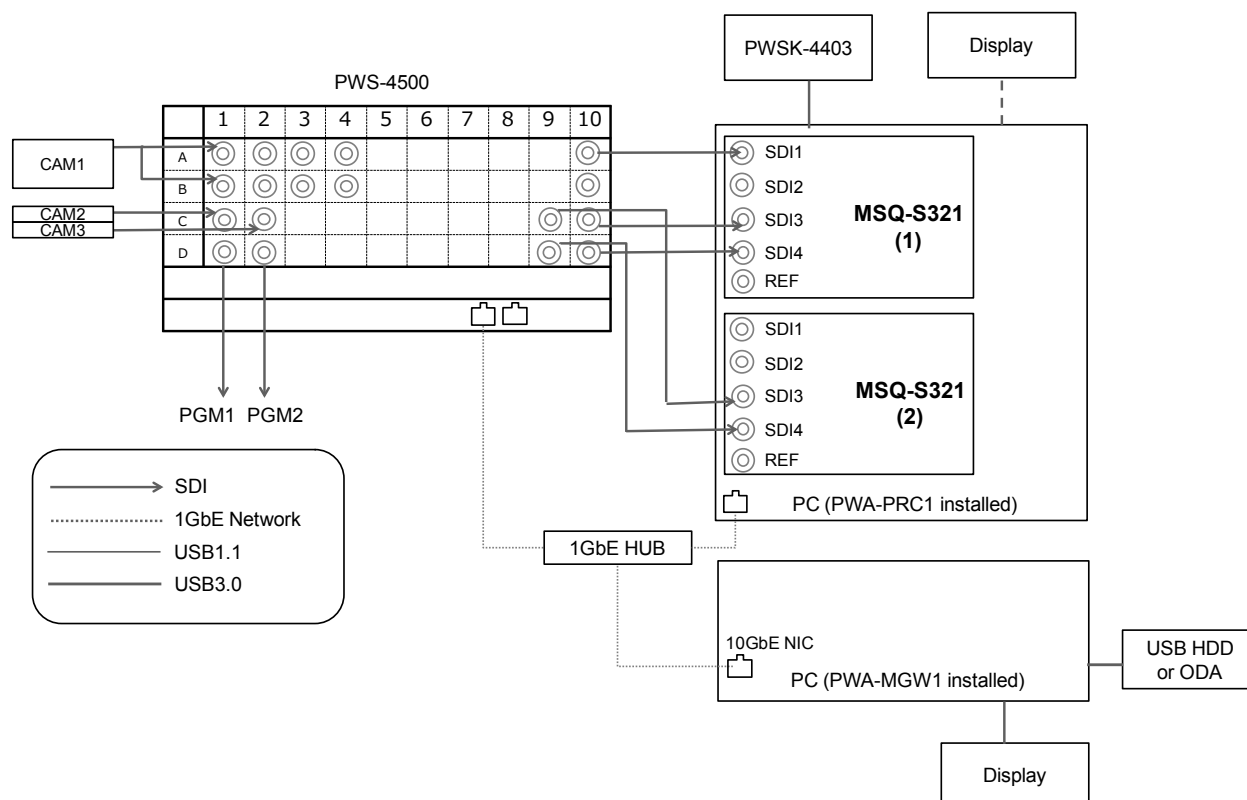
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

HFR 3IN/2OUT (HD 8x, 6x) with 1GbE Network (PWS-100PR1 connection only)



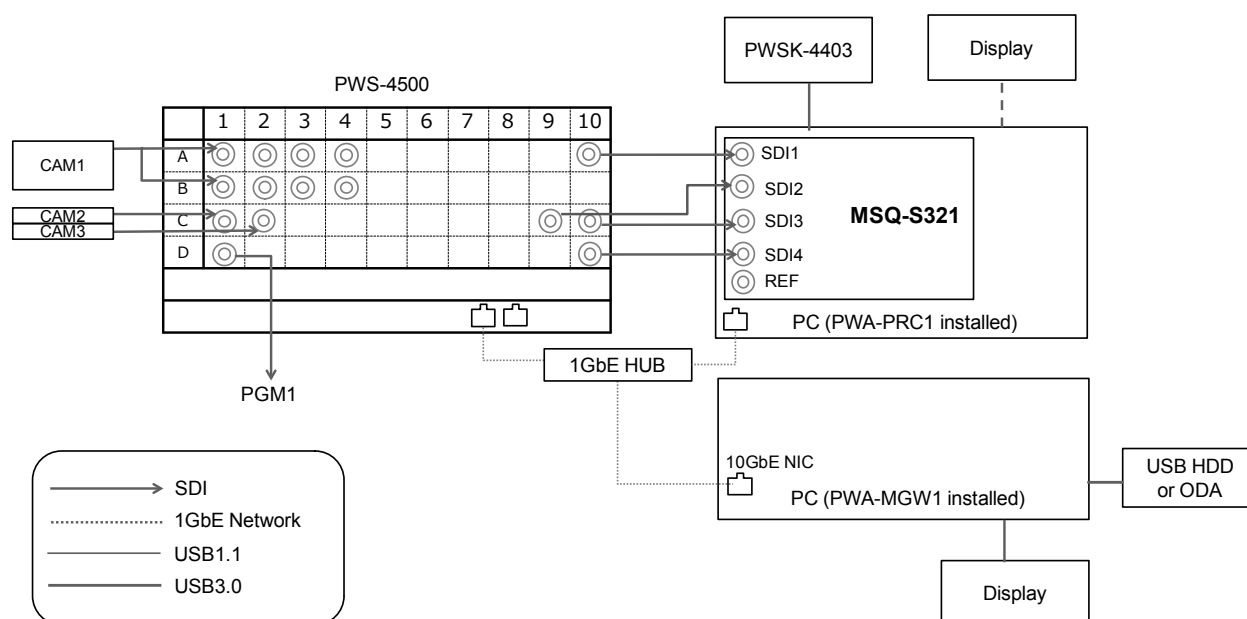
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

HFR 3IN/10OUT (HD 8x, 6x) with 1GbE Network



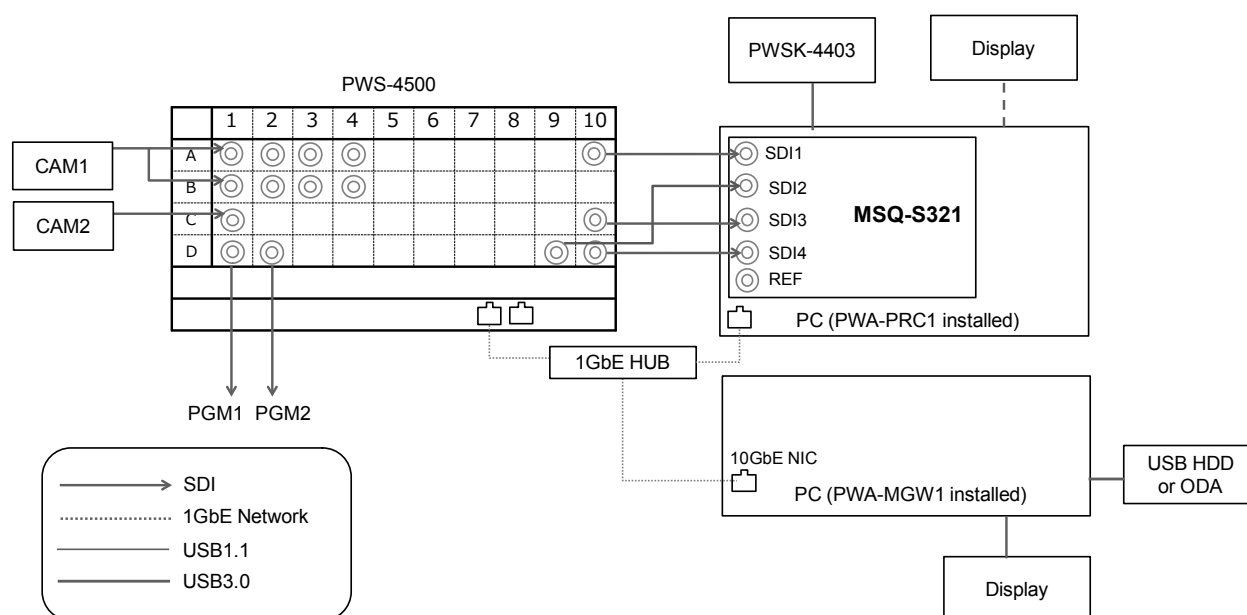
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

HFR 2IN/2OUT (HD 8x, 6x) with 1GbE Network



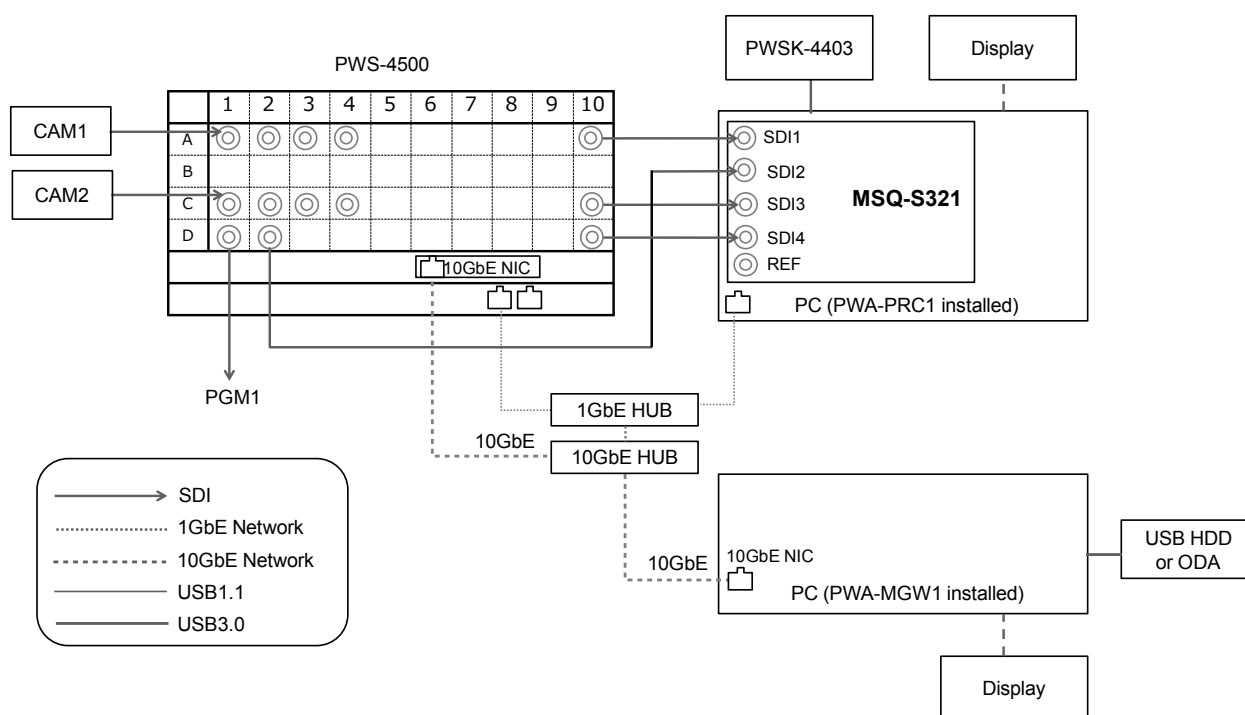
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 1GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Note

For faster high-speed transfer using ISO REC, for example, connect between the server and Media Gateway using a 10GbE network.

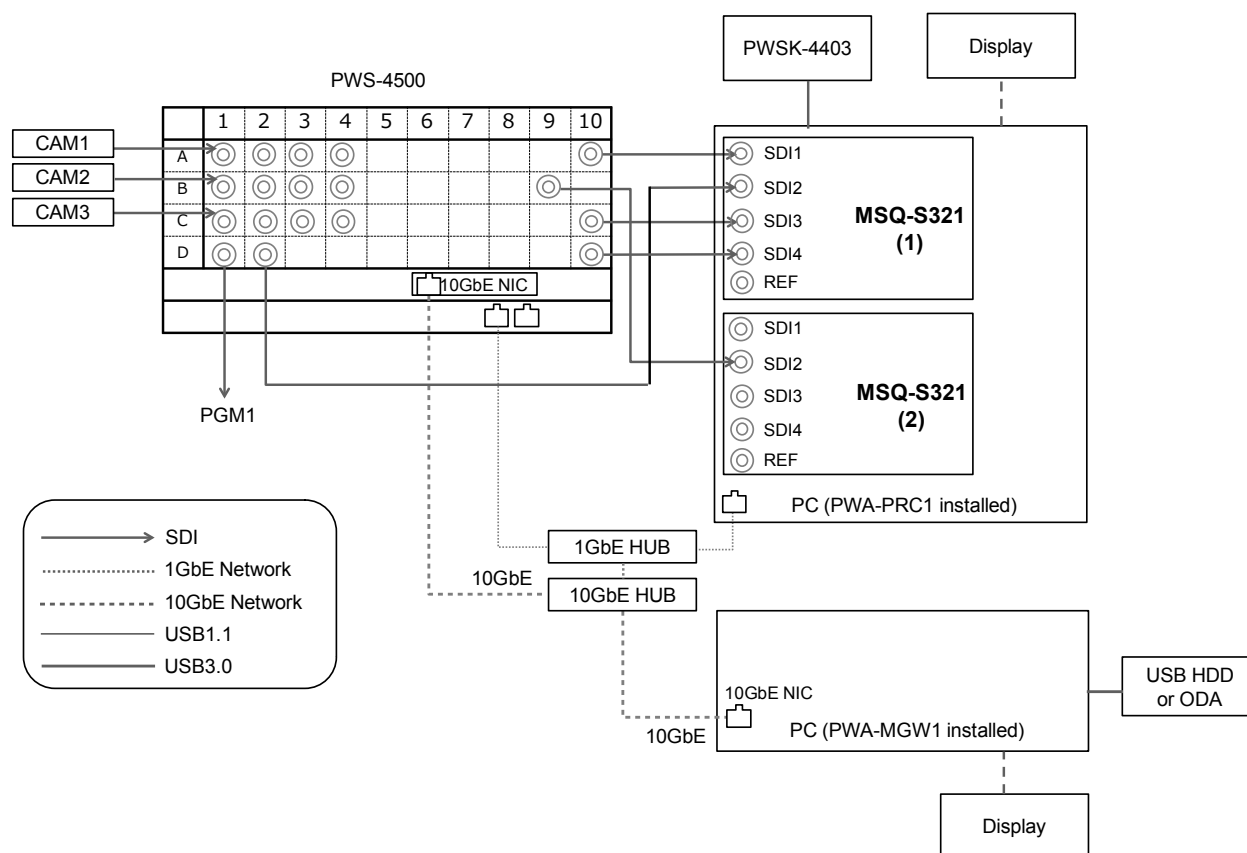
Cut Out with 10GbE Network (for MSQ-S321 1pc)



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

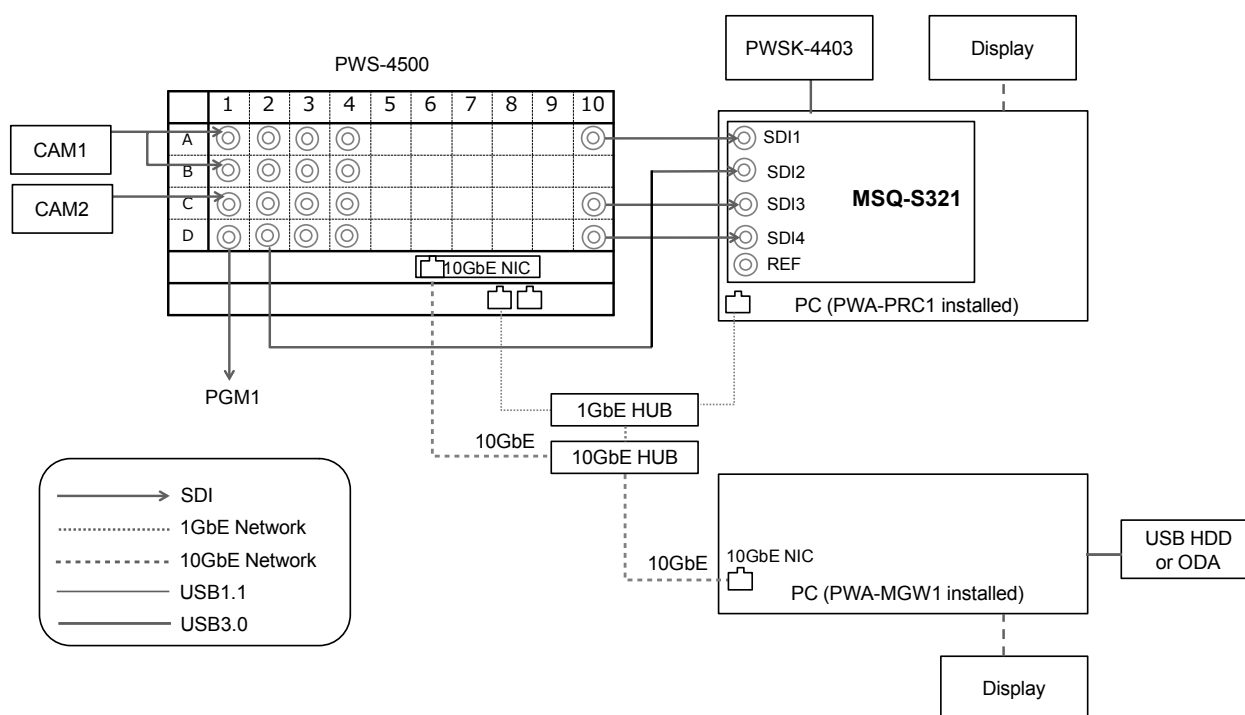
Cut Out with 10GbE Network (for MSQ-S321 2pcs) (PWS-100PR1 connection only)



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

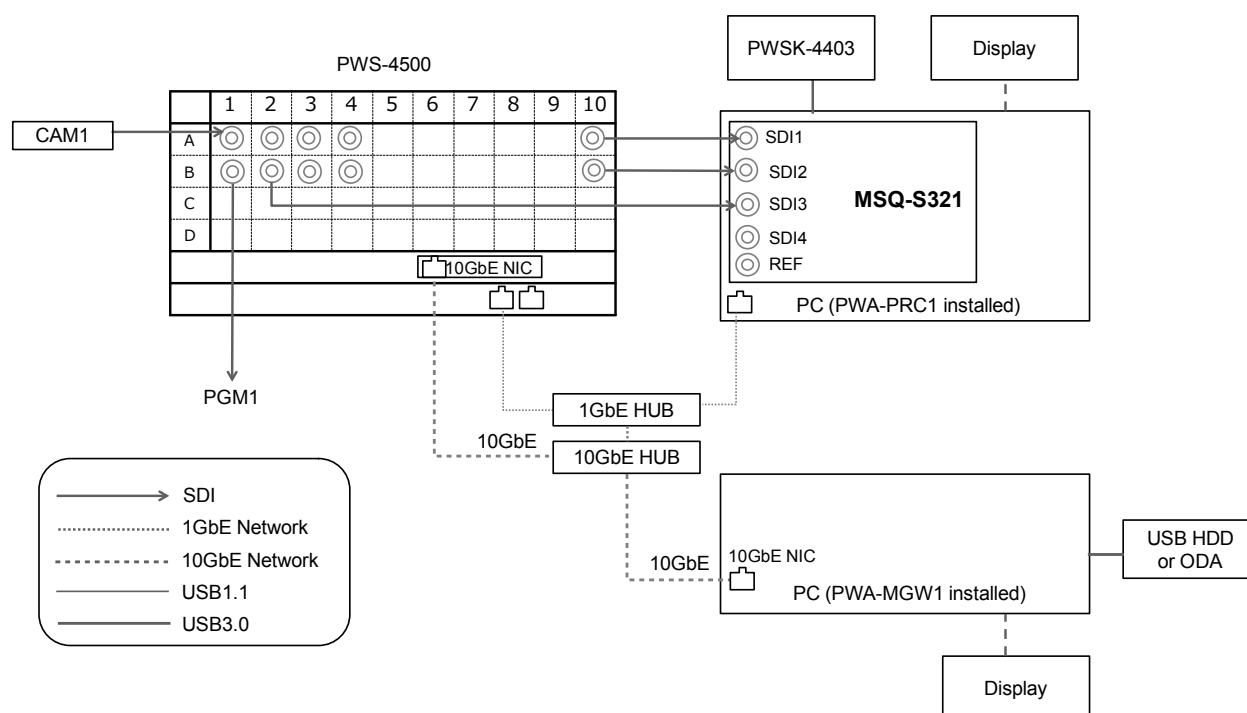
HFR + Cut Out with 10GbE Network (for MSQ-S321 1pc)



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

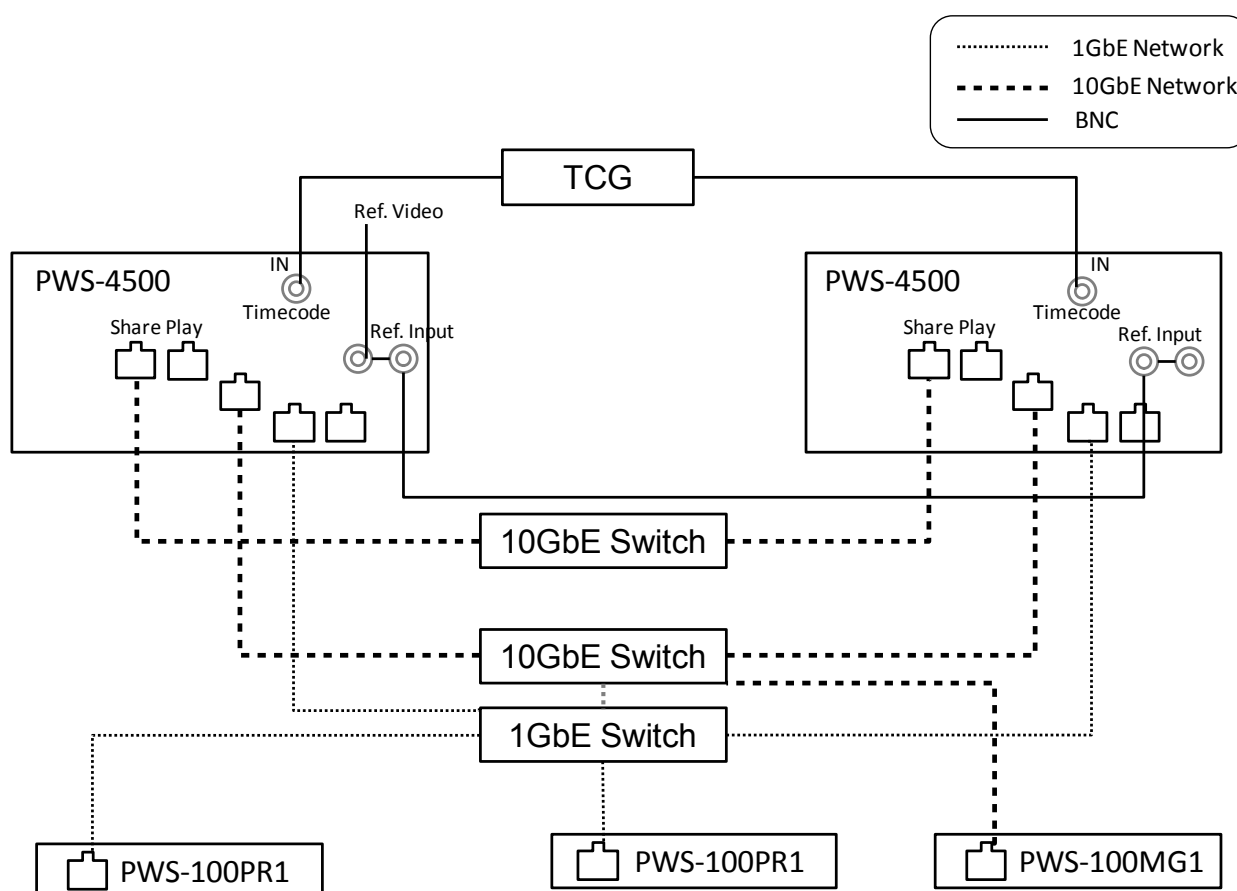
Cut Out with 10GbE Network, without PWSK-4504



PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address
4K server(s)	Transfer IP	Server 10GbE NIC IP Address
Media Gateway	IP Address	MGW 10GbE NIC IP Address

Connection for using Share Play Function



Notes

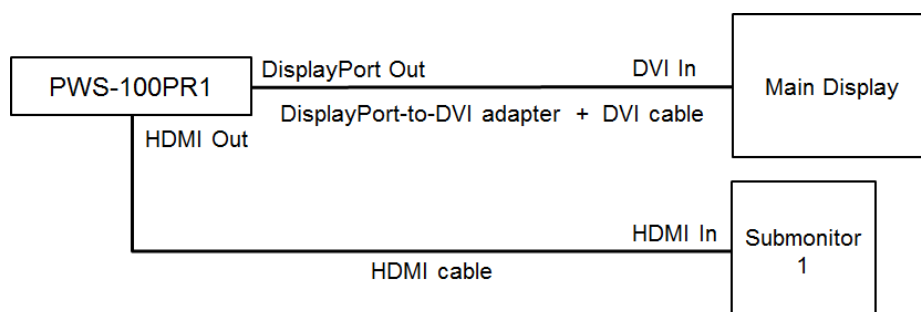
- When using a Share Play connection, the reference signal for all PWS-4500 units must be synchronized. Connect an external reference signal input to all PWS-4500 units.
- When using a Share Play connection, one PWS-4500 unit managed by PRC Manager is assigned as the master to which the other units are synced. Share Play will terminate if the PWS-4500 master unit is turned off during Share Play. Accordingly, during Share Play use, do not turn off any of the PWS-4500 units managed by PRC Manager.

Recommended network switches

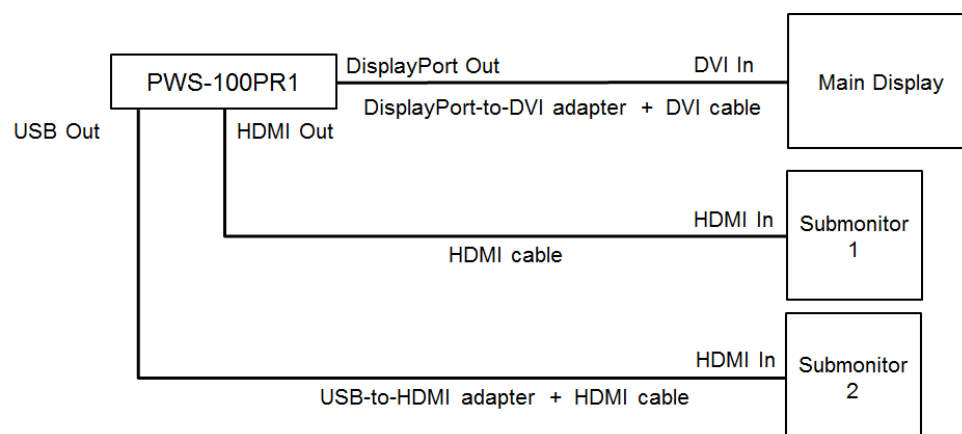
Manufacturer	Model	
Juniper	J-1) EX4550-32T	—
	J-2) EX4550-32F	
	J-3) QFX5100	
CISCO	C-1) CISCO Nexus 9332PQ	QSFP+ 32 port
	C-2) CISCO Nexus 9372PX	QSFP+ 6port, SFP+ 48 port
	C-3) CISCO Nexus 9372TX	QSFP+ 6port, 10G Copper 48 port

Submonitor Connections

- **Connection with one submonitor (PWS-100PR1)**



- **Connection with two submonitors (PWS-100PR1)**



Network Cable

Connect an Ethernet cable between PWS-4500 Network Port 1 and the Network terminal on the PC on which this application software is installed.

Note

PWA-PRC1 does not support the use of the Network Port 2 connector of the PWS-4500.

SDI Input/Output

Connect between PWS-4400 and MSQ-S321 attached to PC with BNC cables.

Note

When using only one MSQ-S321 in the PWS-100PR1, connect the SDI cables to the SDI connectors for the lower slot.

Basic connection (MSQ-S321 × 2)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321(1)_SDI 1
Port A HD IN/OUT SDI 9	MSQ-S321(2)_SDI 1
Port B HD IN/OUT SDI 10	MSQ-S321(1)_SDI 2
Port B HD IN/OUT SDI 9	MSQ-S321(2)_SDI 2
Port C HD IN/OUT SDI 10	MSQ-S321(1)_SDI 3
Port C HD IN/OUT SDI 9	MSQ-S321(2)_SDI 3
Port D HD IN/OUT SDI 10	MSQ-S321(1)_SDI 4
Port D HD IN/OUT SDI 9	MSQ-S321(2)_SDI 4

Basic connection (MSQ-S321 × 1)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321_SD1 1
Port B HD IN/OUT SDI 10	MSQ-S321_SD1 2
Port C HD IN/OUT SDI 10	MSQ-S321_SD1 3
Port D HD IN/OUT SDI 10	MSQ-S321_SD1 4

Note

When making the basic connections, even if changes are made to the PWS-4500 I/O configuration (excluding the configuration patterns on the next page), the connection between the PWS-4500 and MSQ-S321 does not need to change.

HFR 3IN/1OUT (HD 8x, 6x) (MSQ-S321 × 1)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321_SD1 1
Port C HD IN/OUT SDI 9	MSQ-S321_SD1 2
Port C HD IN/OUT SDI 10	MSQ-S321_SD1 3
Port D HD IN/OUT SDI 10	MSQ-S321_SD1 4

HFR 2IN/2OUT (HD 8x, 6x) (MSQ-S321 × 1)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321_SD1 1
Port C HD IN/OUT SDI 10	MSQ-S321_SD1 3
Port D HD IN/OUT SDI 9	MSQ-S321_SD1 2
Port D HD IN/OUT SDI 10	MSQ-S321_SD1 4

Cut Out (MSQ-S321 × 1), HFR + Cut Out (MSQ-S321 × 1)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321_SD1 1
Port C HD IN/OUT SDI 10	MSQ-S321_SD1 3
Port D HD IN/OUT SDI 2	MSQ-S321_SD1 2
Port D HD IN/OUT SDI 10	MSQ-S321_SD1 4

Cut Out (MSQ-S321 × 2)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321(1)_SD1 1
Port B HD IN/OUT SDI 9	MSQ-S321(2)_SD1 2
Port C HD IN/OUT SDI 10	MSQ-S321(1)_SD1 3
Port D HD IN/OUT SDI 2	MSQ-S321(1)_SD1 2
Port D HD IN/OUT SDI 10	MSQ-S321(1)_SD1 4

PWS-4500 (without PWSK-4504) (2IN/2OUT, 2IN/1OUT, 1IN/1OUT)]

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321(1)_SDI 1
Port B HD IN/OUT SDI 10	MSQ-S321(1)_SDI 2
Port A HD IN/OUT SDI 9	MSQ-S321(1)_SDI 3
Port B HD IN/OUT SDI 9	MSQ-S321(1)_SDI 4

PWS-4500 (without PWSK-4504) (Cut Out)]

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321(1)_SDI 1
Port B HD IN/OUT SDI 10	MSQ-S321(1)_SDI 2
Port B HD IN/OUT SDI 2	MSQ-S321(1)_SDI 3

Installation

This section describes the PWA-PRC1 V2.0 installation procedure.

Refer to user's guide for PWA-PRC1 V2.0 operation.

Notes

- Perform installation with administrator privileges.
- When upgrading, uninstall the previous version before installing the new version.

Installing

1. Uninstall PWA-PRC1 V1 installed on the PWS-100PR1.
See "To uninstall" (below) for the uninstall procedure. Do not delete the configuration information.
2. Double-click the installer Sony_PWA-PRC1_(version).exe. Follow the instructions that appear on the screen to complete installation.
To install a shortcut icon of PWA-PRC1 on the desktop, check [Create a desktop shortcut] in the Setup Type screen.

To uninstall

1. Close PWA-PRC1.
2. Select [Programs and Features] in the Windows Control Panel.
3. Select [PWA-PRC1], and then click [Uninstall].

After uninstalling the program, delete settings listed below as necessary. Configuration information is not deleted automatically.

- Settings files: C:\ProgramData\Sony\PWA-PRC1 folder

Note

Destination folder may be changed according to user settings.

Starting and Exiting Program

Starting PRC Manager

PRC Manager must be started beforehand in order to start PWA-PRC1 V2.0.

PRC Manager is software used to manage the PWS4500, PWA-PRC1, and PWA-MGW1 on a network, without using an operation screen. It is included with the PWA-PRC1 V2.0 installer.

Configuring auto startup when the PC boots

1. Create the following shortcut for the executable file.
C:\Program Files\Sony\PWA-PRC1\PRCManage.exe
2. Copy the created shortcut to the following file.
C:\Users\[user_name]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup

If the above procedure is completed successfully, the PRC Manager icon will appear in the task tray when the PC boots.

Notes

- When PRC Manager is launched for the first time, a "Windows Firewall has blocked some features of this app" message appears in the [Windows Security Alert] dialog. Click [Allow access]. Connection with the PWS-4500 is not possible if this step is skipped.
- By default, the copy destination folder above is hidden by the system, and you cannot browse to the folder in Windows Explorer. If this occurs, use the following procedure to enable browsing in Windows Explorer.
 - 1) Display the menu, and click [Folder Options...] in the [Tools] menu.
 - 2) Click the [View] tab.
 - 3) Click [Show hidden files, folders, and drives] in [Hidden files and folders].

To exit PRC Manager

Right-click the PRC Manager icon displayed in the notification area of the task tray, and click [Exit] in the displayed menu.

Starting PWA-PRC1

1. Turn on the computer on which PWA-PRC1V2.0 is installed, the PWSK-4403, and the PWS-4500.
The [F1] to [F10] function buttons and the [ENTER] button on the PWSK-4403 are lit blue.
2. Click/tap "PWA-PRC1" on the Start screen or double-click/double-tap the "PWA-PRC1" icon on the desktop.
When starting PWA-PRC1 V2.0 for the first time:
Authentication using an install key is required.
For details, see "About Authentication" (page 51).
3. When PWA-PRC1 V2.0 starts and the IP input screen appears, enter the [PRCM IP Address] and click/tap [Set].
4. Select the PWS-4500 to be the local server.
The operation screen of PWA-PRC1 V2.0 appears.
When the connection with the PWS-4500 is successful, the information on the PWA-PRC1 V2.0 operation screen is updated and record train recording starts.
The clip registration status is reflected in the [F1] to [F10] function buttons on the PWSK-4403 (button is green if a clip is registered or off if no clip is registered).

Notes

- Under the default settings of the PWA-PRC1 V2.0, loop recording mode is disabled. If the server is set to loop recording mode, be sure to enable [Loop REC] in the settings screen after the PWA-PRC1 starts.
- Do not change the size of text on the screen.

Exiting PWA-PRC1 V2.0

1. Press the [SHIFT] button on the PWSK-4403 and then press the [D] (Settings) soft button.
The settings screen appears.
You can also press the Shift+F2 key combination on the keyboard to display the settings screen.
2. Press the [SHIFT] button and then press the [A] (Exit App) soft button.
A confirmation message appears. Click/tap [OK] to stop record train recording and close all ports, or click/tap [Cancel] to continue recording.
You can also click/tap the "✕" button in the top right corner of the window using a mouse/touch panel to exit PWA-PRC1 V2.0.

About Authentication

When using PWA-PRC1 V2.0 for the first time, an install key is required for authentication. This procedure is not required if using the PWS-100PR1.

Executing Authentication

The following are necessary for authentication.

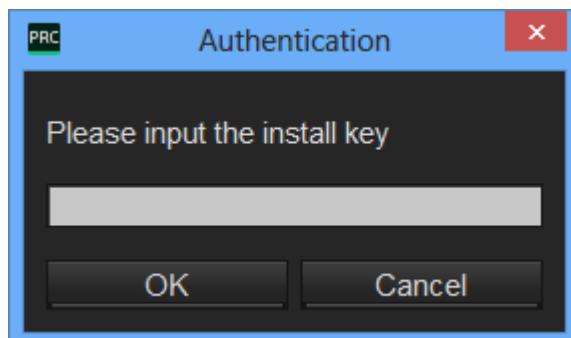
- MAC address of a network interface within the PC
- A software install key for PWA-PRC1 V2.0 (Ask your sales contact for details).

Notes

- A software install key is valid for one PC. If you use PWA-PRC1 on another PC, another software install key is required.
- Whenever a network card is changed, authentication is required. This is because authentication uses MAC address of the network card.

1. Start PWA-PRC1 V2.0.

The Authentication screen appears.



2. Input a software-install-key on the Authentication screen, and then click [OK].

Setting

Make the required settings for PWA-PRC1 V2.0 operation.

Displaying the Settings Screen

1. Start PWA-PRC1 V2.0.
2. Press the [SHIFT] button, and then the [D] (Settings) button of the PWSK-4403.

The Settings screen appears.

On a keyboard, press the Shift+F2 keys to switch between the operation screen and the settings screen.

Using a mouse/touch panel, click/tap the [Settings] button on the operation screen.

Configuration Items

[System] tab

Category	Item	Description	Default value
PRC manager	Primary PRC manager IP/Port	Specify the IP address of PRC Manager and the port used for communications. Note If this setting is changed, restart PWA-PRC1.	IP address: undefined Port No.: 51000
	PTP Domain	Specifies the domain value for Share Play (range: 0 to 127). [Set] button: Resets the Share Play connection in response to edited settings.	100
4K server(s)	—	Registers information about the servers on the network (up to 10 servers).	—
	ID	Displays the connected server ID.	—
	Name	Specifies the server name.	Server ID
	Local	Specifies the local server	(Undefined)
	Push	Specifies the transfer destination server when using the push function.	(Undefined)
	Control IP	Specifies the IP address set for Network 1 on the server.	—
	Transfer IP	Specifies the IP address for transfers.	Same as Control IP address value

Category	Item	Description	Default value
	Share Play	Displays the status of the server's four Share Play ports ("T" for transmitter, "R" for receiver), and indicates whether the ports are in use. <ul style="list-style-type: none"> • When linking is off, nothing is displayed. • When linking is on, "... " is displayed until genlock is achieved. • Each Share Play port is displayed in green when available. • Each Share Play port is displayed in yellow when in use. 	—
	Push receive page	Selects the receive page for clips transferred using the push function.	—
	Edit by network	Enables/disables editing and deleting of clips from the PRC1 for which the corresponding server is a network server.	Yes
Media Gateway	IP address	Registers the IP address of Media Gateway. [Refresh] button: Acquires information about the drives connected to Media Gateway. Note Click/tap the [Refresh] button in the following cases. <ul style="list-style-type: none"> • Archive destination drive connection is changed • Media is exchanged • Server transfer IP is changed or deleted 	(Undefined)
	Drive	Selects the archive destination drive from the list.	(Undefined)
	Push machine	Selects the push function transfer destination from the servers connected to Media Gateway.	(Undefined)
	Folder	Selects the archive destination folder from a list. [Folder] button: Sets the selected folder.	Root folder
Push target	—	Selects the transfer destination server for the push function. [4K server]: Selects the 4K server selected in [Push machine]. [Other server]: Selects a server connected to Media Gateway.	4K server

For details about other PWA-PRC1 V2.0 settings, refer to the User's Guide.

Appendix

Trademarks

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