SONY

4-590-269-17(1)

Production Control Software

Installation Guide

PWA-PRC1

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Overview

PWA-PRC1 Production Control Software is application software to control the PWS-4500 Multiport AV Storage Unit and BPU4800 Broadband Processor Unit, play-out live video at slow speeds, and manage clips/playlists.

This document explains installation of PWA-PRC1, 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, the following equipment is required.

- PWS-100PR1, PWS-110PR1, or PWS-100MG1
- PWS-4500 Multiport AV Storage Unit, or
  BPU4800 Broadband Processor 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/PWS-110PR1)

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

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

- ADTECHNO CL5585H
- ADTECHNO LCD7620S
- Sony CLM-V55 Clip-on LCD Monitor (requires AC-PW10AM AC adapter)
- Sony CLM-FHD5 Clip-on LCD Monitor (requires AC-PW10AM AC adapter)

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/PWS-110PR1.

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

PWA-PRC1 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
- MSQ-S321 Installer
  - (Windows 8/8.1) : Sony MSQ-S321_2BS PWS-100 PWS-300_(version).msi
  - (Windows 10) : Sony MSQ-S321 PWS-100 PWS-300 for Win10_(version).msi
- 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 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/PWS-110PR1)

Attach MSQ-S321 if installing PWA-PRC1 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/PWS-110PR1.

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)

Updating the MSQ-S321 Driver and Firmware

Use the following procedure if you need to update the driver and firmware of the MSQ-S321.

1. Double-click the Sony MSQ-S321 PWS-100 PWS-300_(version).msi installer, and follow the on-screen instructions for installation.
2. Shut down the PC (use "Shutdown," not "Restart").
3. Start the PC.

Installing the PWSK-4403 Driver

(pre-installed in the PWS-100PR1/PWS-110PR1)

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.

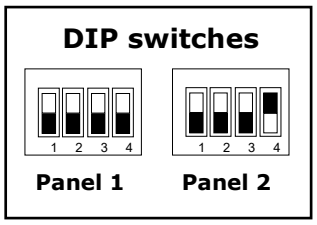
10. On the [Device Manager] window, click [Universal Serial Bus Controller], and check to see "Sony Control Device Panel (version)" is recognized correctly.

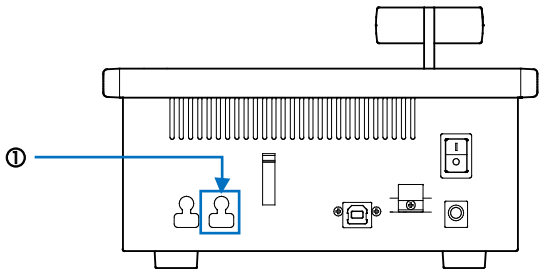
Settings When Using Two PWSK-4403 Panels

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, click [Update] under [GUI and Panel links] on the Settings screen of PWA-PRC1.

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

Configuring PRC Manager

PRC Manager software is included with PWA-PRC1. PRC Manager is software that manages the PWS-4500/BPU4800 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/BPU4800 and PWA-MGW1 must have the following settings.

PWS-4500/BPU4800 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

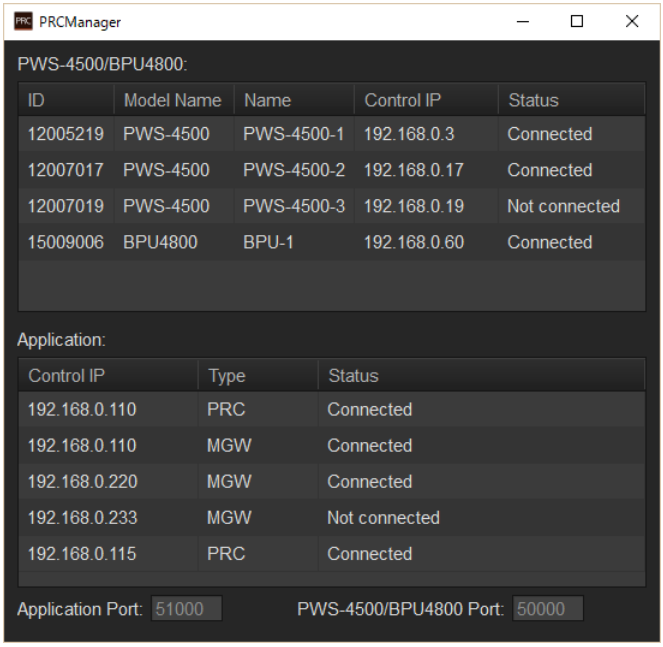
PWA-PRC1 settings

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 1] – [PRC manager].

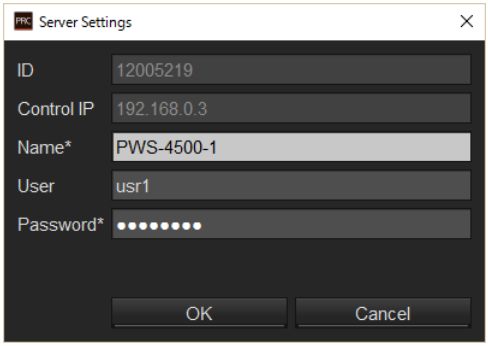
Configuring the server name and password

If the FTP password is changed on the server (PWS-4500 or BPU4800) side, the FTP password must also be changed for PRC Manager using the following procedure. You can also configure the server name that will be displayed in PWA-PRC1 and Media Gateway.

1. Right-click the PRC Manager icon displayed in the notifications area of the task tray, and select [Settings] from the displayed menu.
   The [PRCManager] dialog appears.



2. In the server list, double-click the FTP server whose name and password you want to configure.
   The [Server Settings] dialog appears.



3. Enter the server name in [Name] and the FTP password in [Password].
4. Click [OK].
5. Click the [×] icon at the top right of the [PRCManager] dialog to close the [PRCManager] dialog.

Configuring Share Play Usage

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

PWS-4500/BPU4800 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 [Estimate Share Play Maximum Tx Number] and configure the following settings on the displayed screen.

Item	Setting
Share Play Tx:Rx Setting	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) To play network clips in a playlist directly, the following settings are required. For 1PGM Local server: 2:2 Network server: 2:2 For 2PGM Local server: 1:3 Network server: 3:1

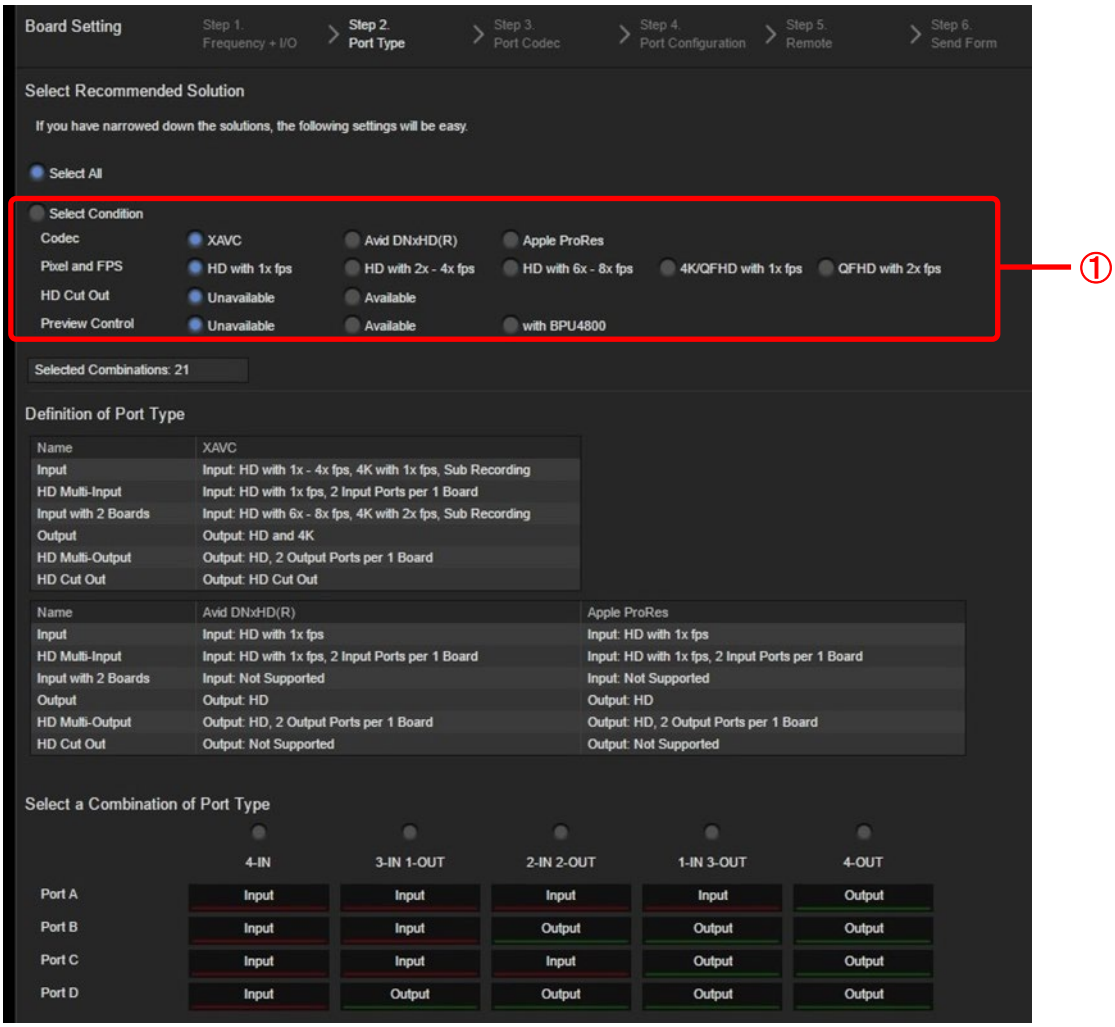
Configuring the PWS-4500

This section describes the web menu of PWS-4500 V2.6 as an example.

1. Configure the PWS-4500 Port A through Port D settings, according to the PGM mode used by PWA-PRC1.
   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 does not support 1-IN, 2-IN, 3-IN, 4-IN, 2-OUT, 3-OUT, 4-OUT, 1-IN 3-OUT, 2-IN 3-OUT, and 8-IN configurations as the local server.

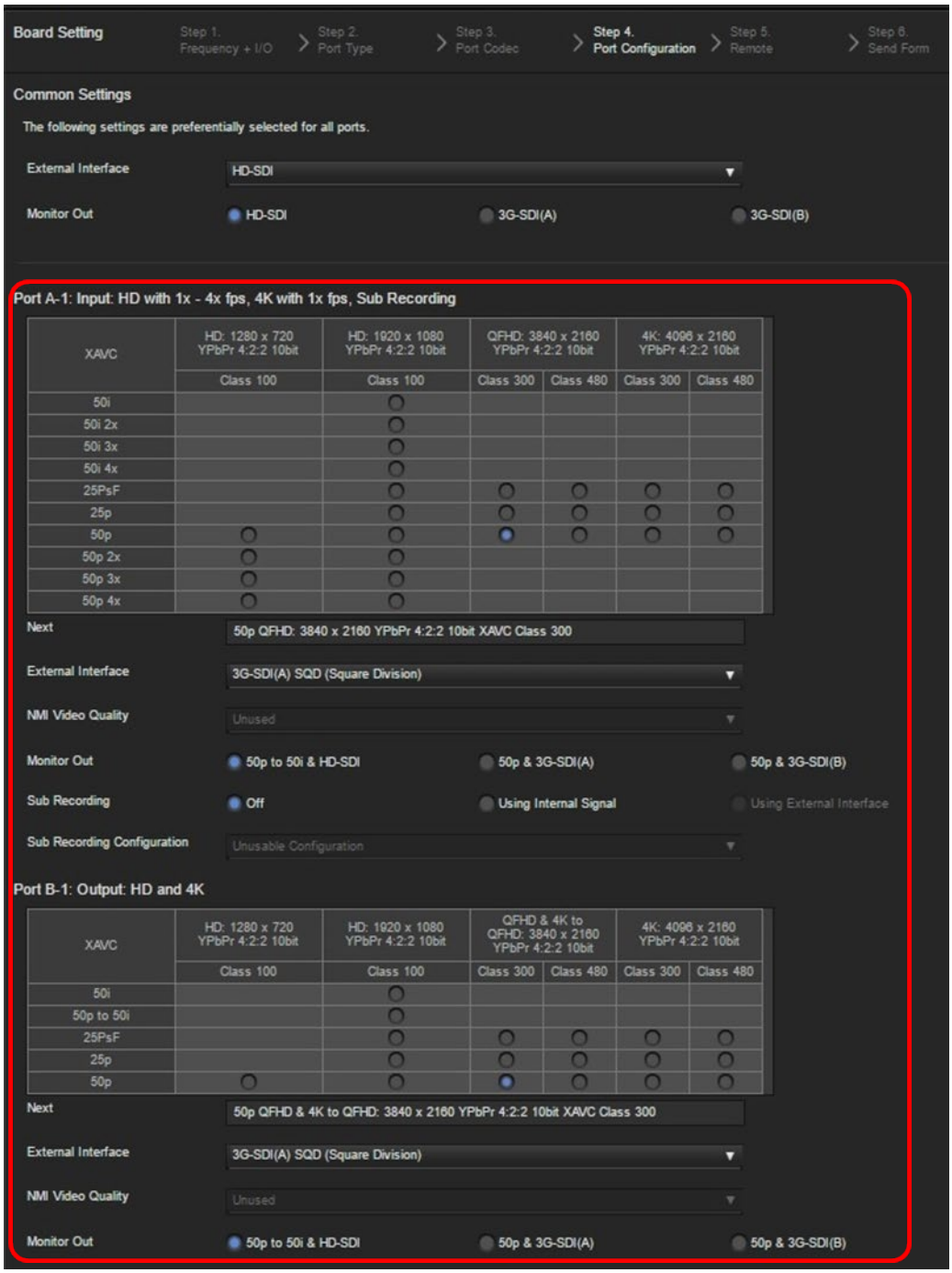


2. Configure each port.

Note

PWA-PRC1 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.

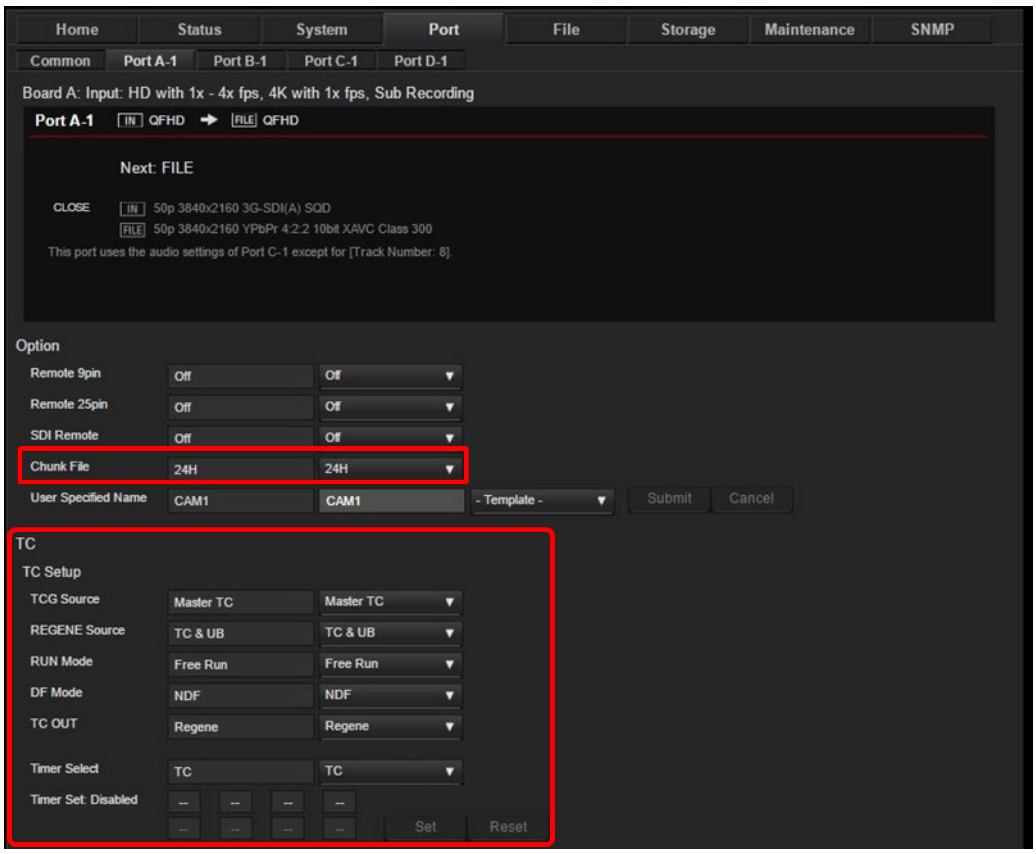


- Set [Chunk File] of the input port to "24H".
- TC to Input shall be in synchronization. Set [TCG Source] of the input port to "Master TC".

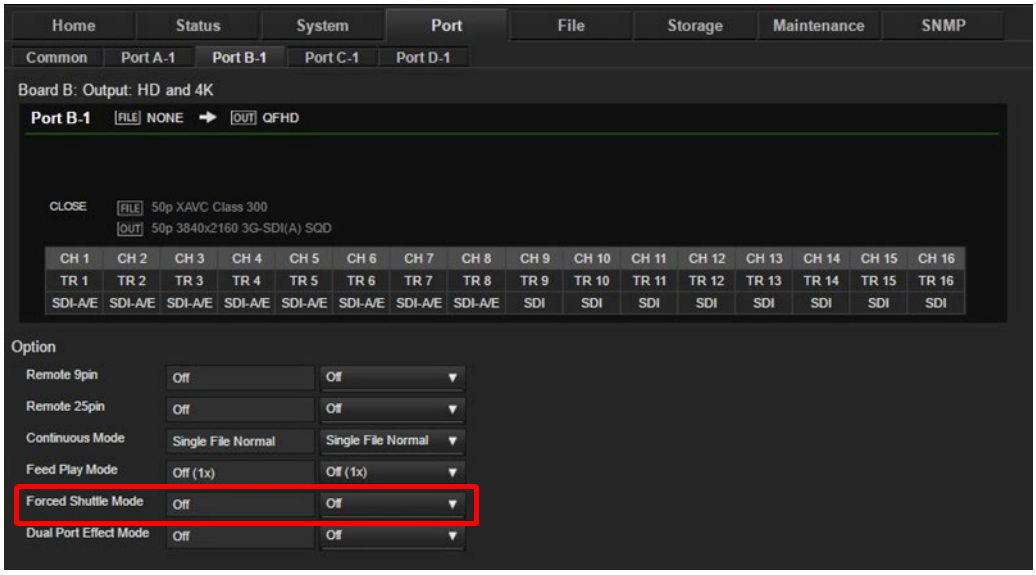
- Configure the correct [DF mode] for each input/output port. Do not mix DF and NDF settings.

Note

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

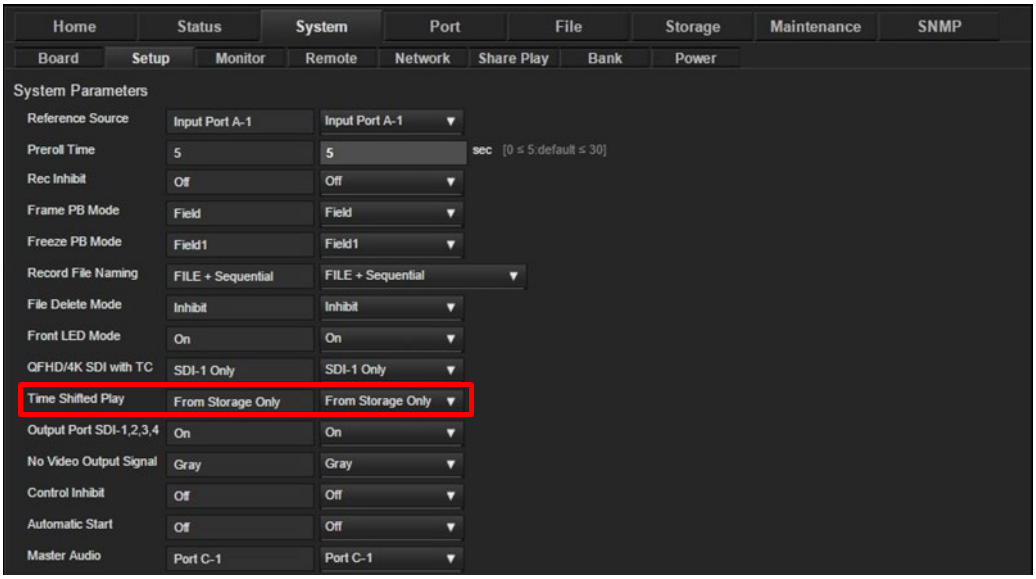


- Set [Forced Shuttle Mode] of the output port to “Off”.



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

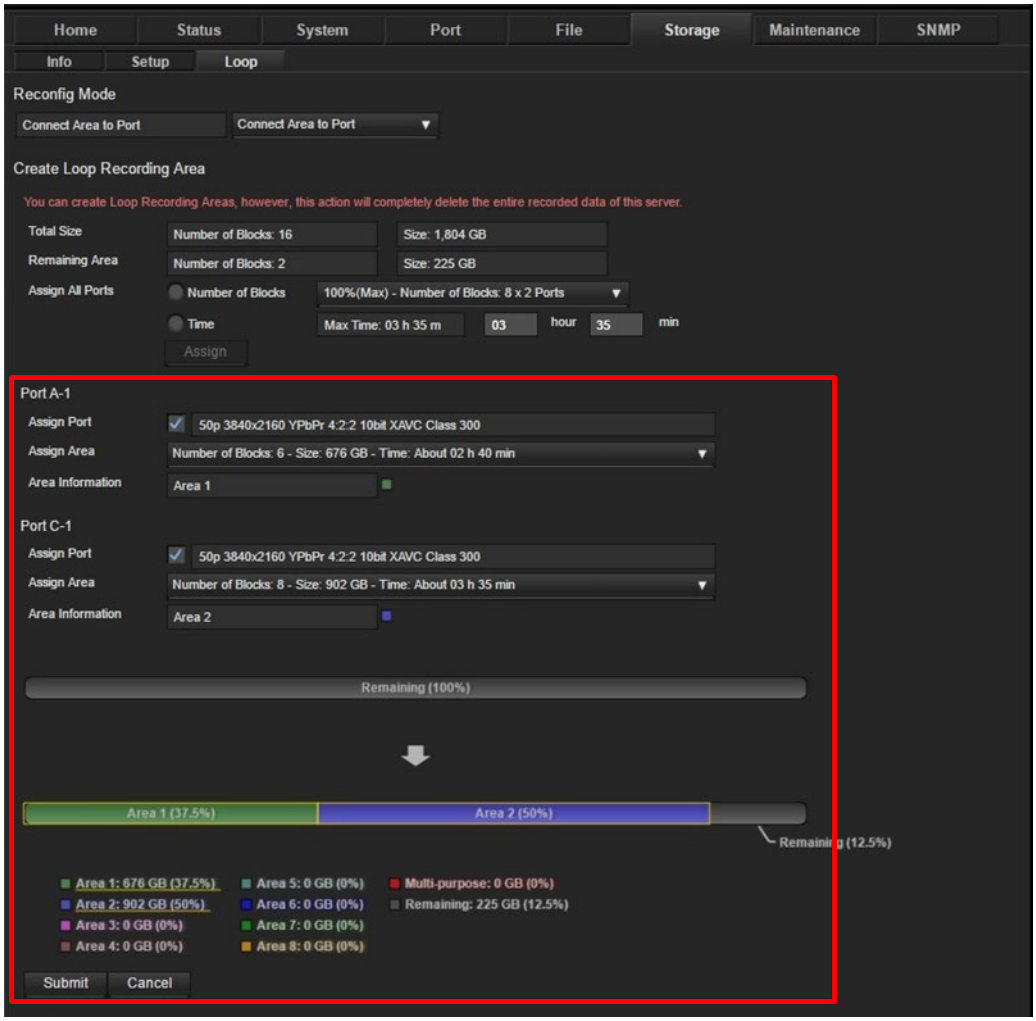
- When using Cut Out mode, set [Time Shifted Play] to “From Storage Only”.



- 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].



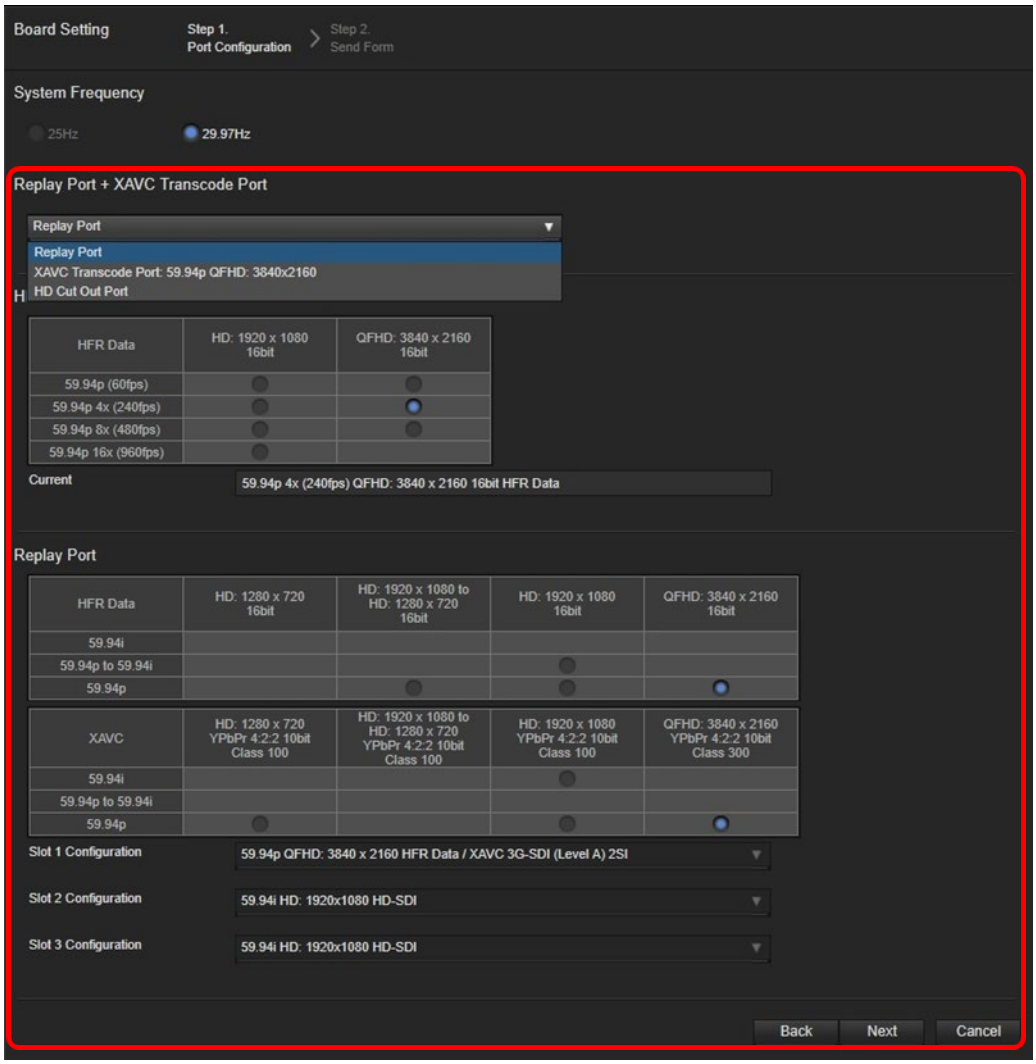
Configuring the BPU4800

Configure the input/output ports of the BPU4800. This section describes the web menu of BPU4800 V1.5 as an example.

The following four methods are supported for using ports.

Port	Description
Replay Port	Set when using as the PWA-PRC1 local server for replay control. It can also be used as a network server for Share Play connection. Clips created on the BPU4800 cannot be transferred to an external device.
XAVC Transcode Port	Set when using as a network server for Share Play connection. Clips created on the BPU4800 can be transferred to an external device. Cannot be used as the local server.
HD Cut Out Port	Set when using as the PWA-PRC1 local server for Cut Out operation. It can also be used as a network server for Share Play connection. Clips created on the BPU4800 cannot be transferred to an external device.
Replay Port + XAVC Transcode Port	This setting is selected automatically if the format is HD. It enables replay control and transcoding to XAVC files.

The playback port method selection is configured using the [Replay Port + XAVC Transcode Port] setting in the web menu of the BPU4800.



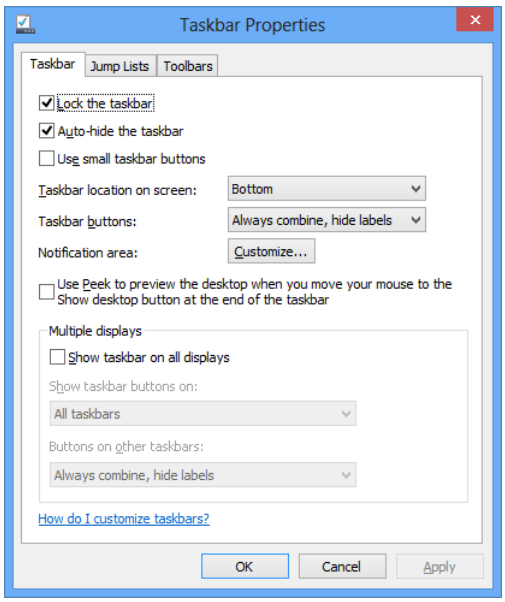
Notes

- When HD Cut Out Port is selected, make sure the Format of the slot used for connection with the PWS-100PR1/PWS-110PR1 is the same as the Format of Slot 1 Replay (Slot 1 is set using the web menu, and the slot used for PWS-100PR1/PWS-110PR1 connection is set using the BPU menu).
- Set each port to the correct [DF Mode] setting. Do not mix DF and NDF settings.
- Set the [Forced Shuttle Mode] setting of the Replay port to [Off].
- When HD Cut Out Port is selected, set [Time Shifted Play] to [From Storage Only].

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

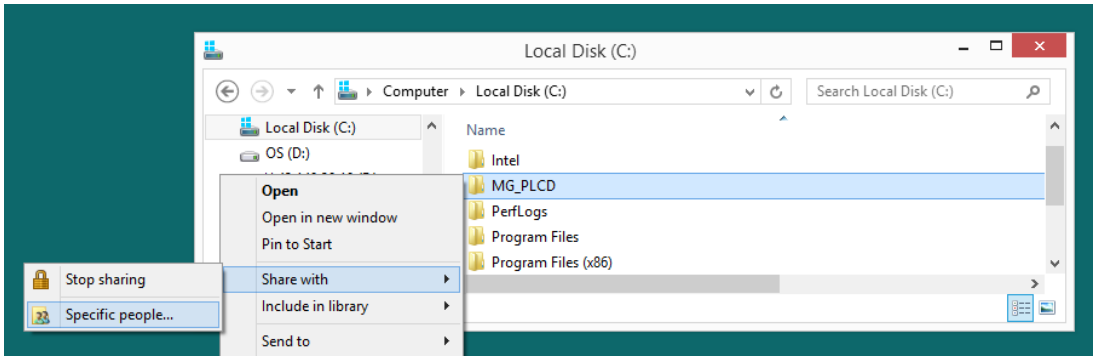
Shared folder settings are required when archiving playlist and cut out data created using PWA-PRC1, and when retrieving from the PWA-MGW1 service.

1. PWA-MGW1 shared folder settings

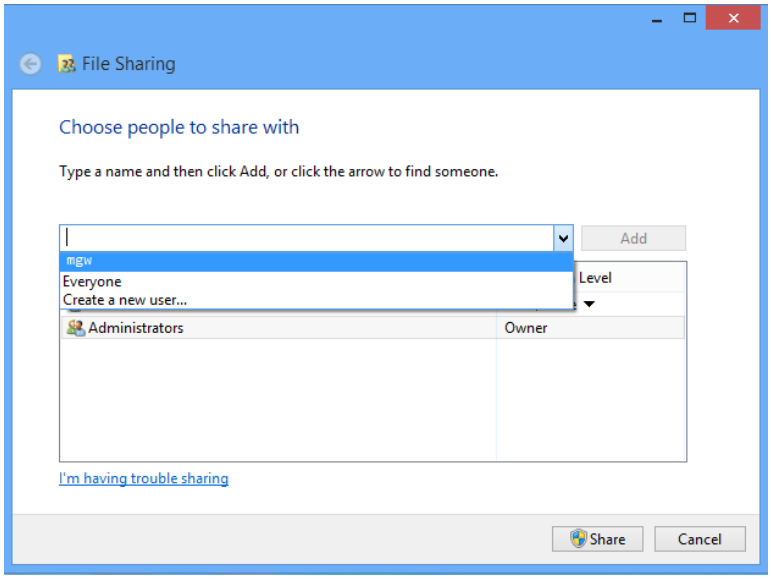
(1) Right-click the C:\MG_PLCD folder on the PC on which PWA-MGW1 is installed, and select [Share with] → [Specific people…].

Note

The "MG_PLCD" folder is created when PWA-MGW1 starts.

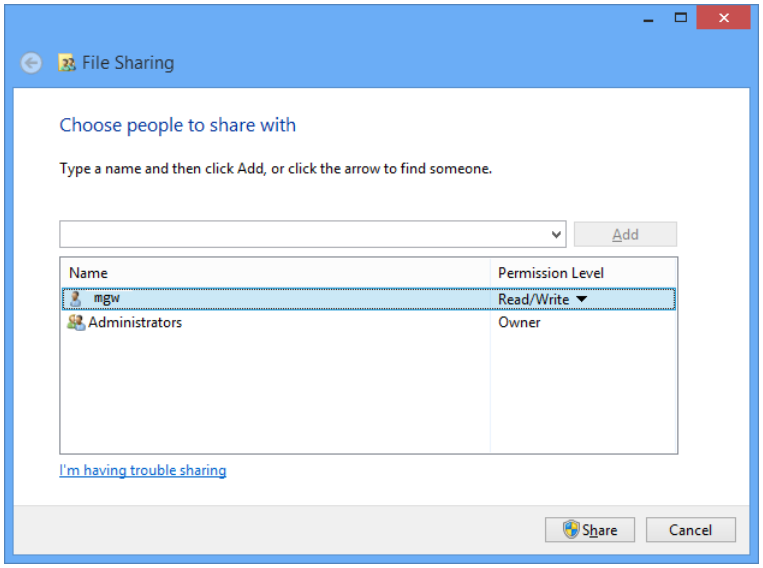


(2) In the [File Sharing] dialog, select the account to permit sharing, and click the [Add] button.



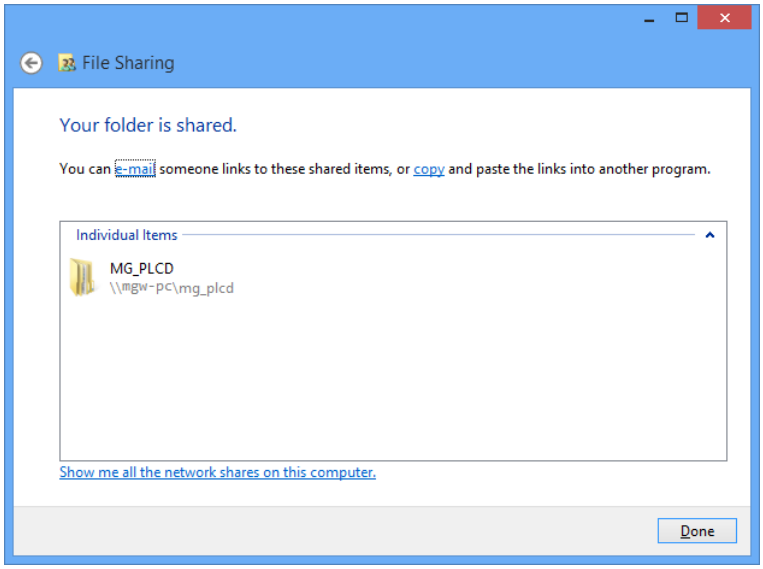
(3) Set [Permission Level] to “Read/Write.”

(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. Access credentials on the PC running PRC Manager

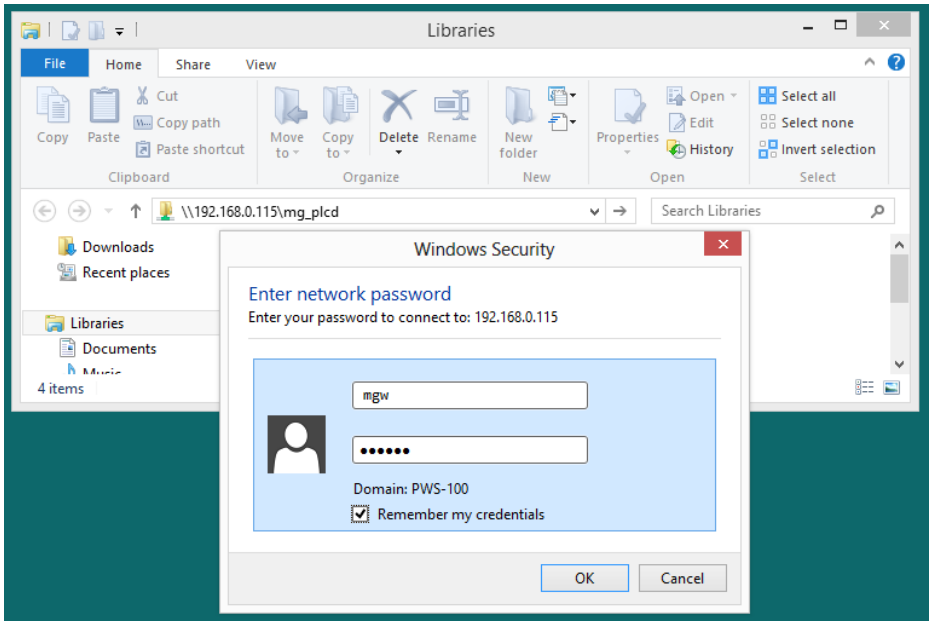
(1) Open Explorer, enter “\\IP address of PC with PWA-MGW1 installed\mg_plcd,” and press the [Enter] key.

The [Windows Security] dialog appears.

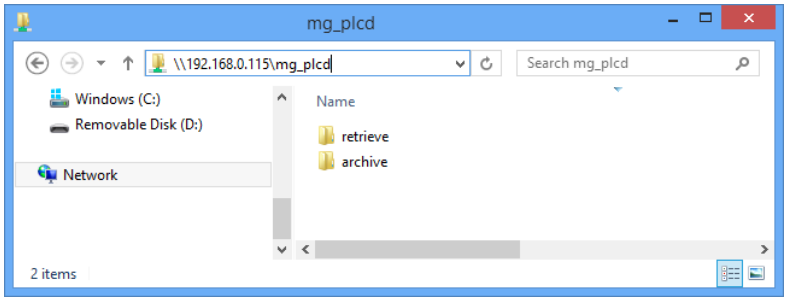
If the contents of the “MG_PLCD” folder are displayed, the folder access credentials have already been configured, and the following configuration is not required.

(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.



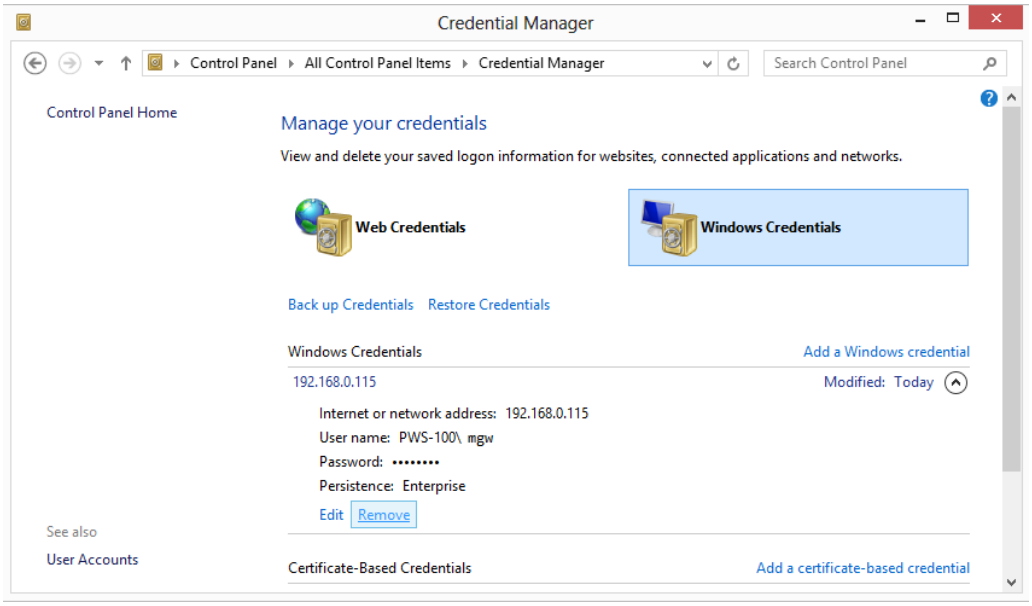
To remove access credentials settings

(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 Submonitors

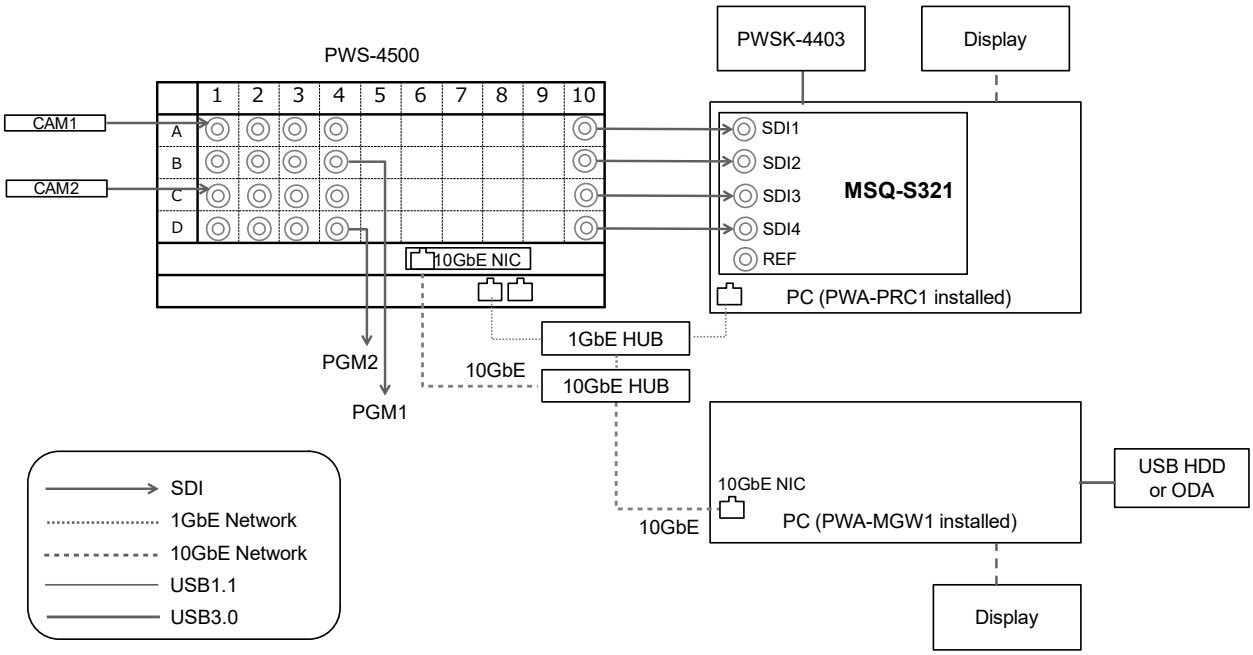
1. Right-click on the desktop and select [Screen Resolution] from the menu displayed.
2. Set [Resolutions] as follows.
   - ADTECHNO CL5585H: 1280x720
   - ADTECHNO LCD7620S: 1280×768
   - Sony CLM-V55 Clip-on LCD Monitor: 1280x768
   - Sony CLM-FHD5 Clip-on LCD Monitor: 1280x768

Connections

Notes

- In configurations that require two MSQ-S321 boards, only PWS-100PR1/PWS-110PR1 connection is supported.
- In the following figures, MSQ-S321 or MSQ-S321(1) refers to the lower slot and MSQ-S321(2) refers to the upper slot.

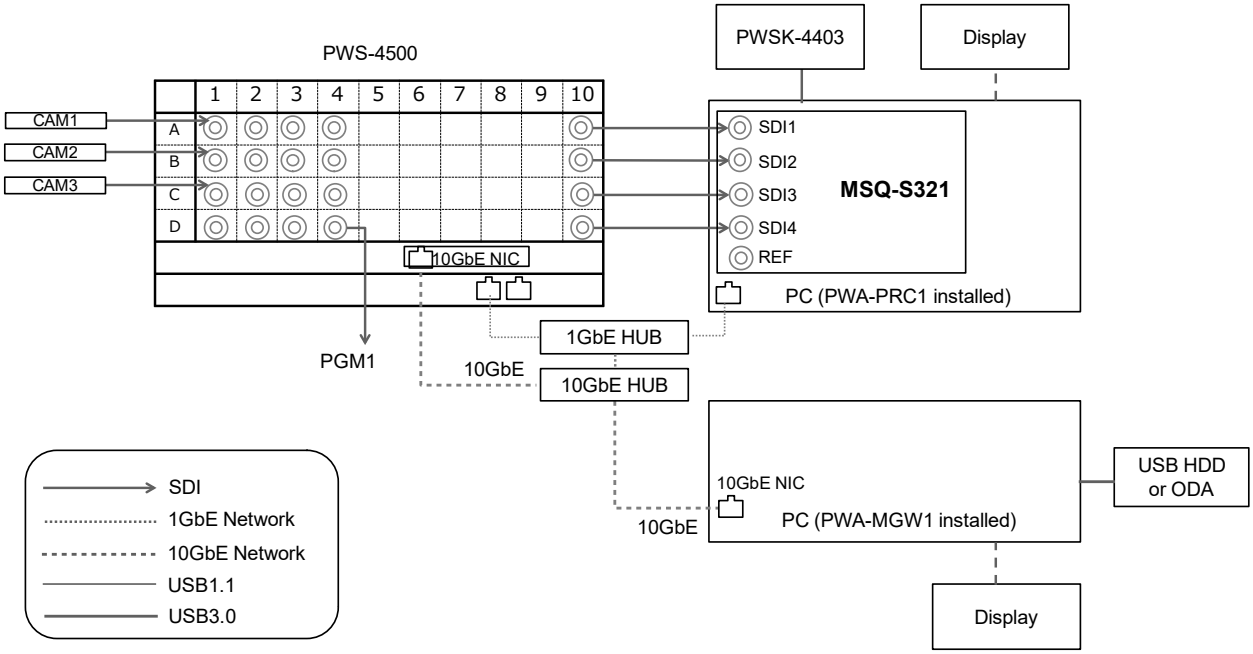
2IN/2OUT (4K) with 10GbE Network



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

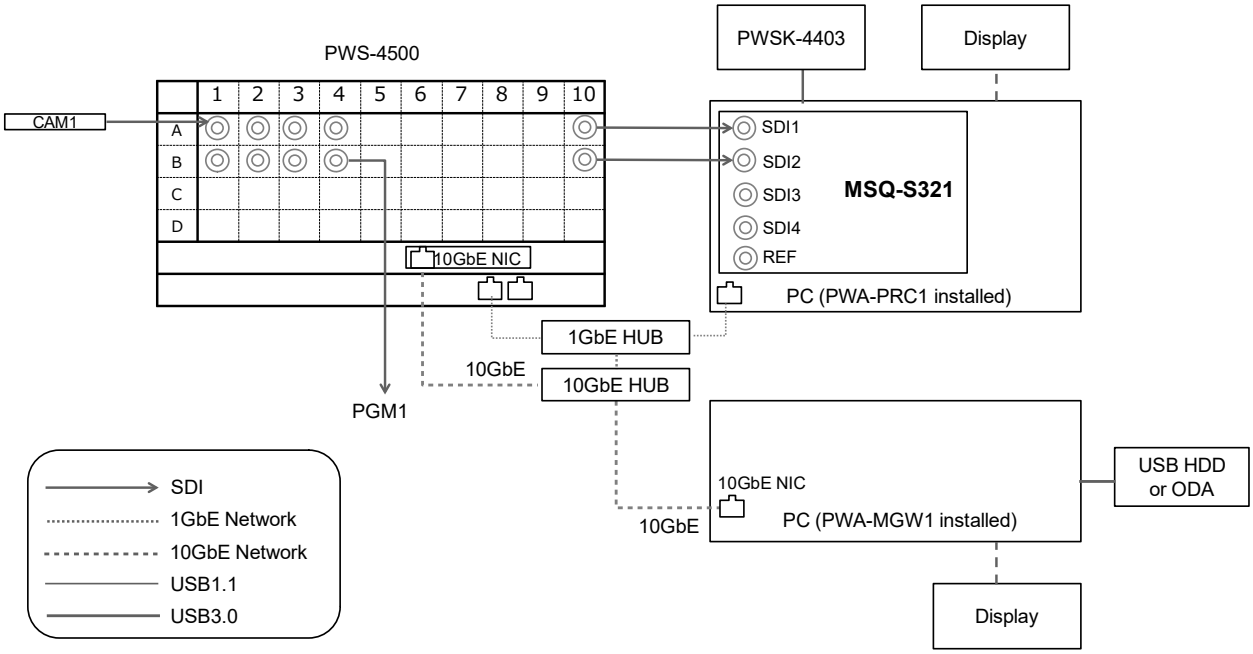
3IN/1OUT (4K) with 10GbE Network



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

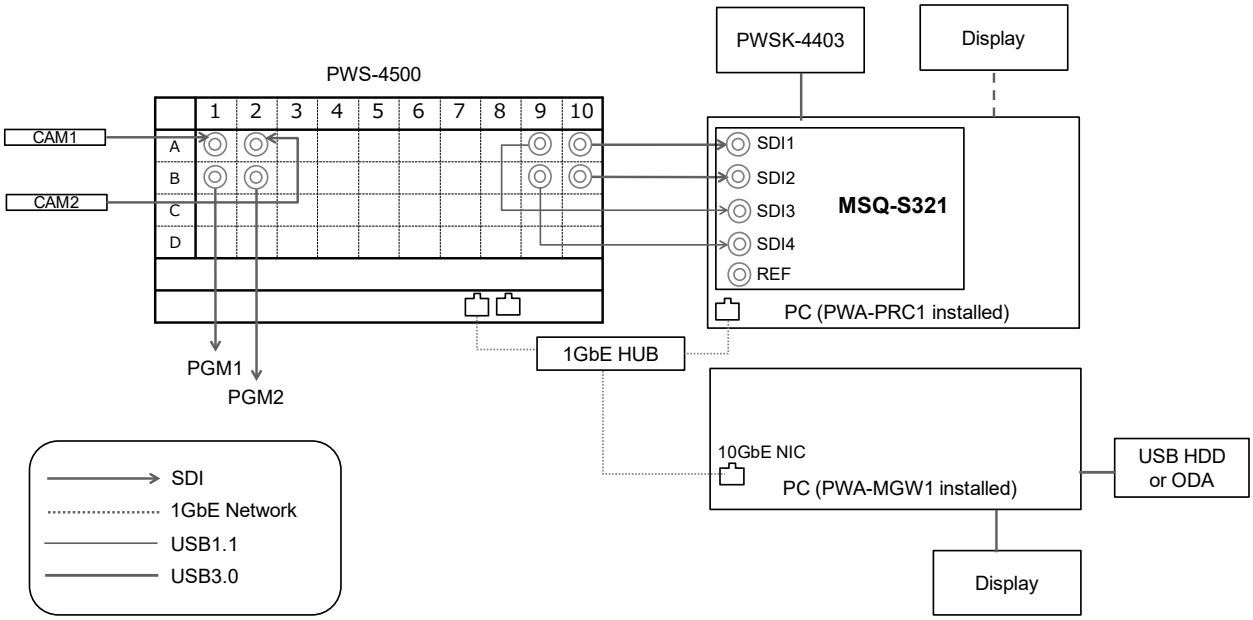
1IN/1OUT (4K) with 10GbE Network, without PWSK-4504



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



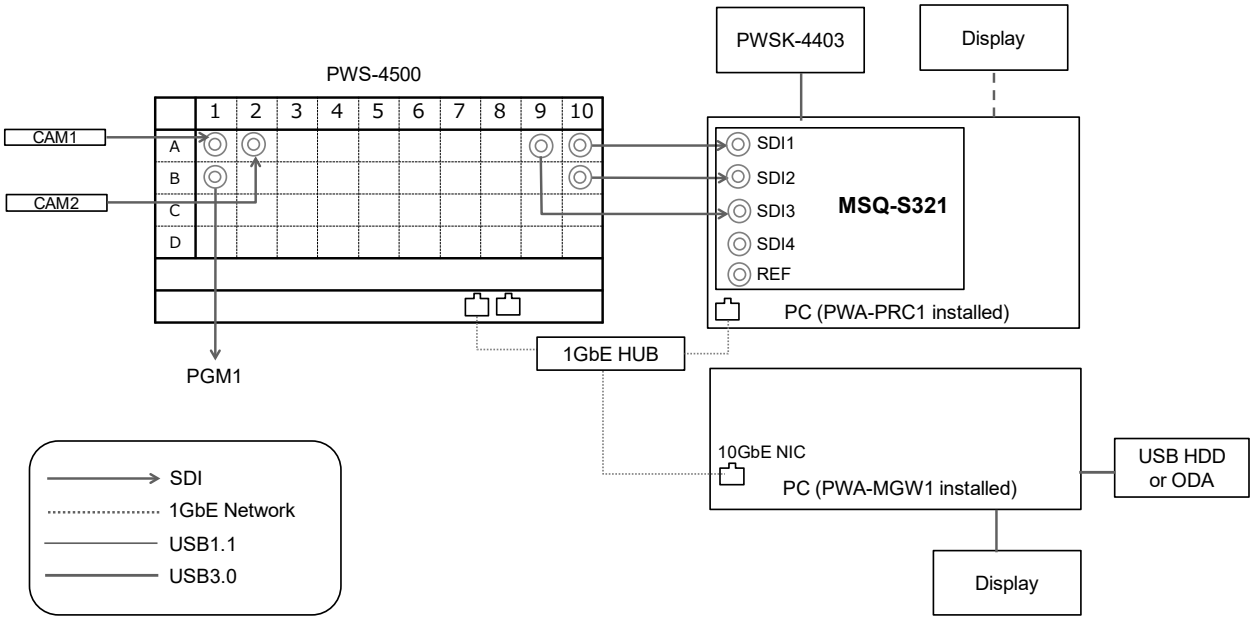
PWA-PRC1 settings

[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.

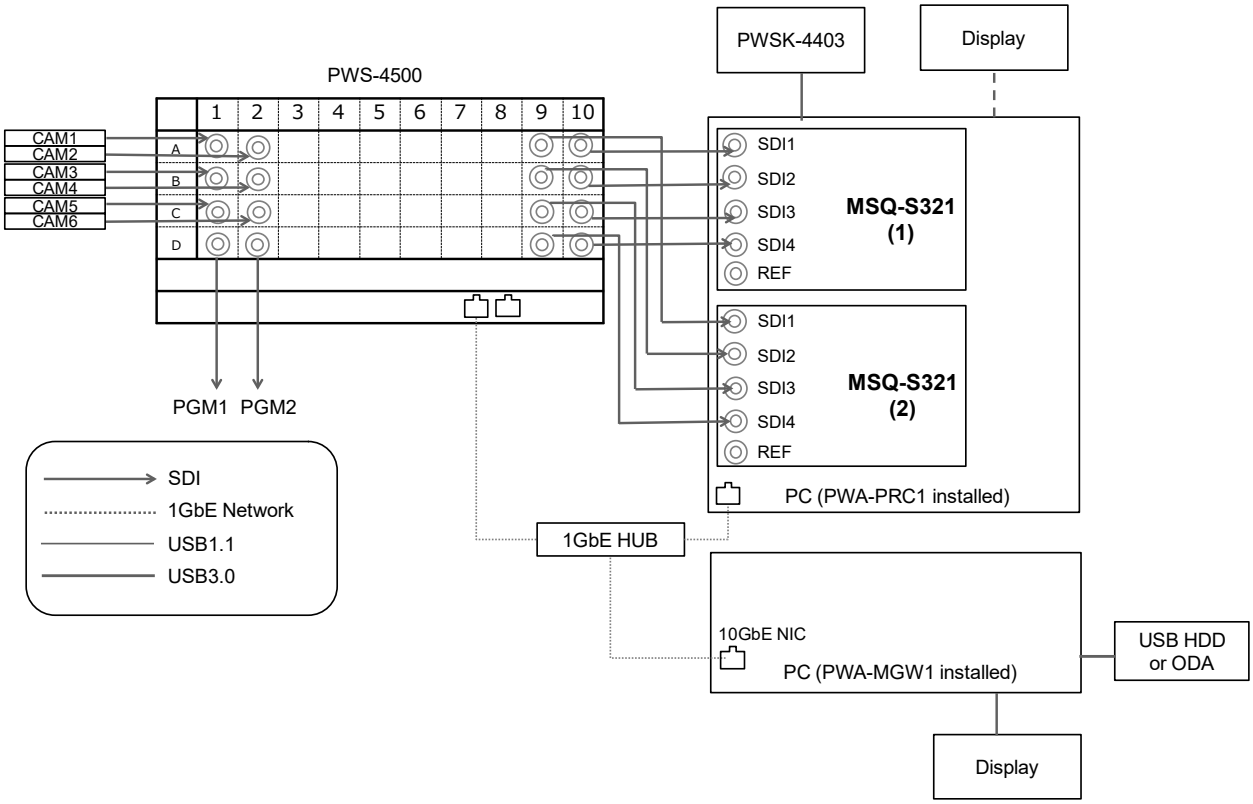
2IN/1OUT (HD) with 1GbE Network, without PWSK-4504



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



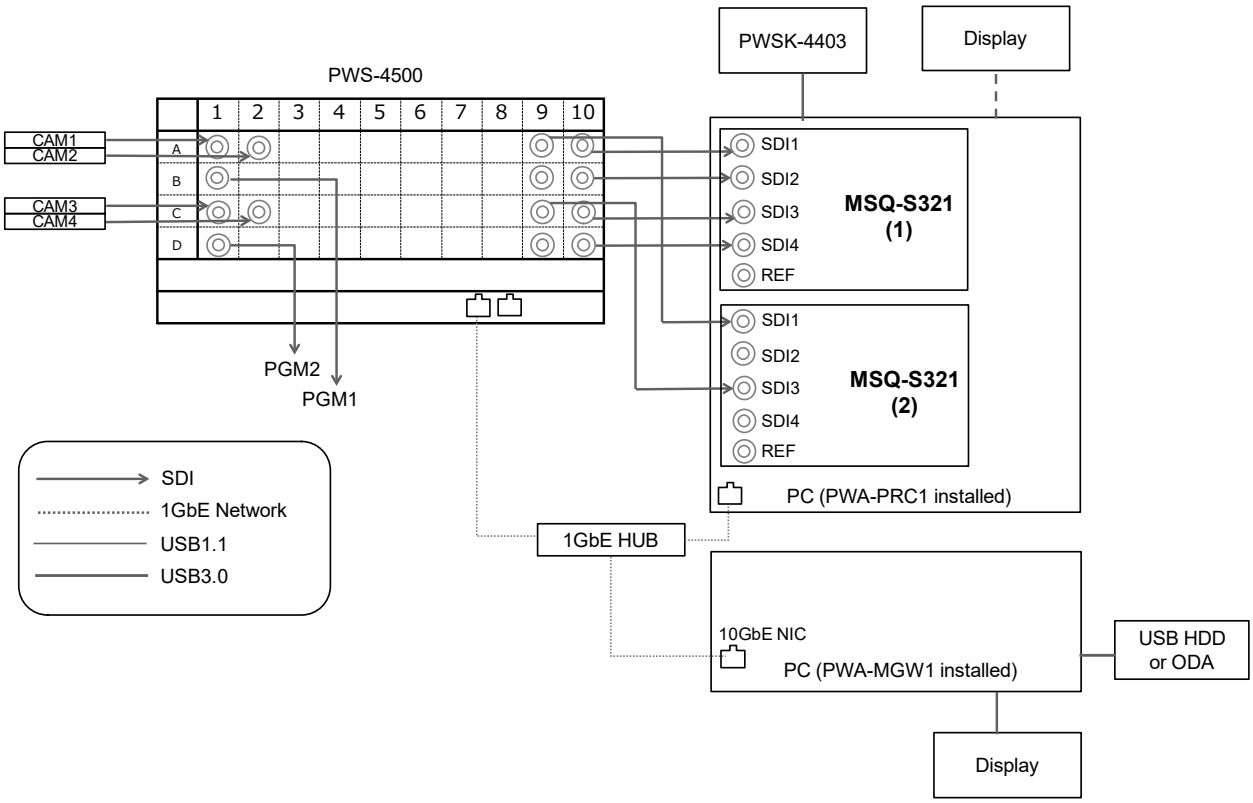
PWA-PRC1 settings

[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



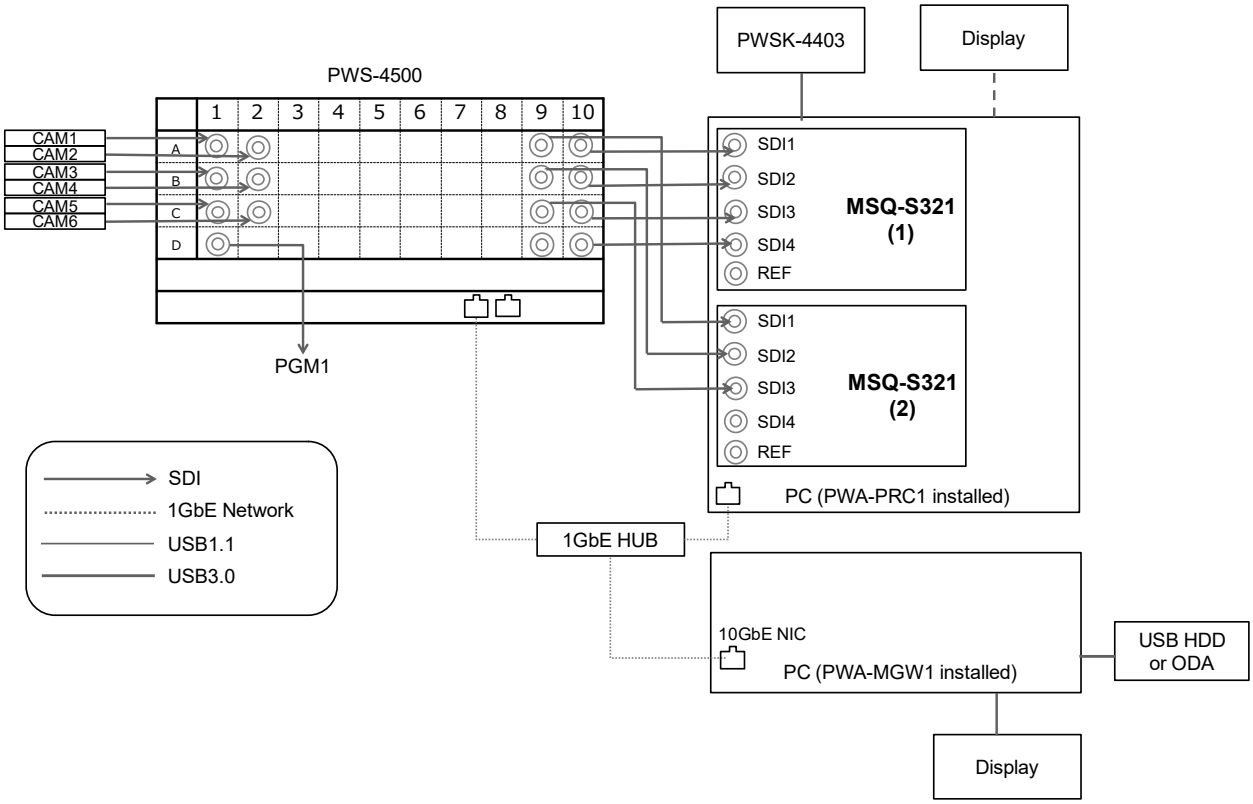
PWA-PRC1 settings

[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



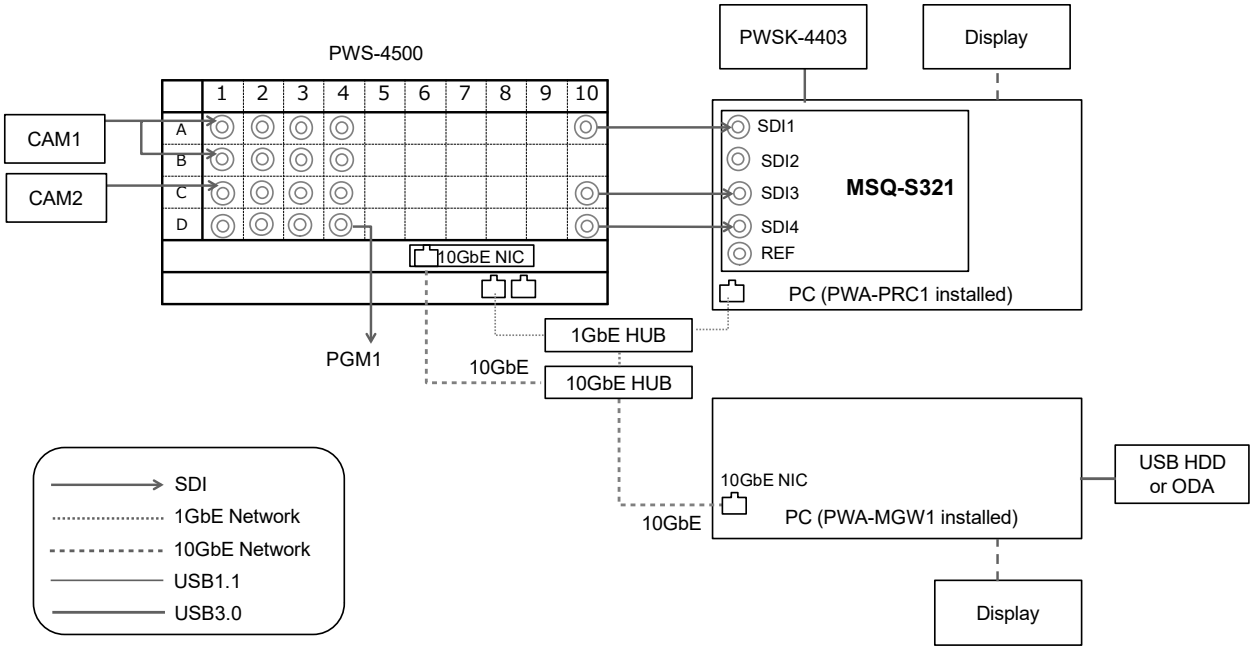
PWA-PRC1 settings

[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.

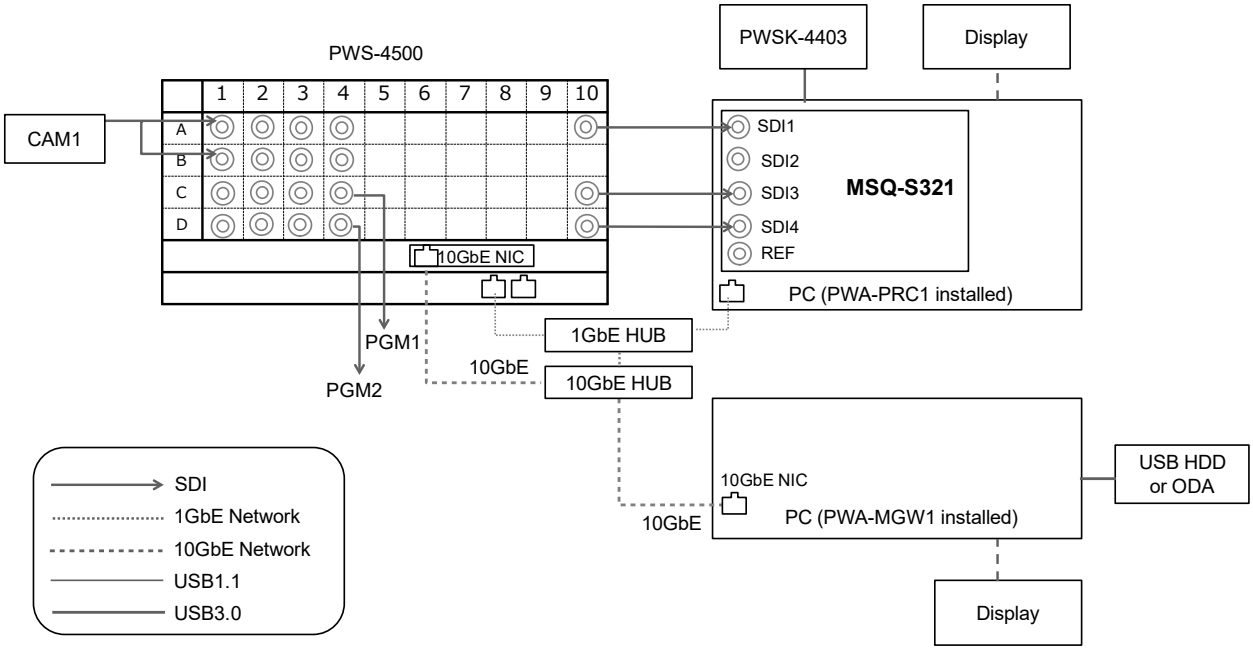
HFR 2IN/1OUT (4K 2x) with 10GbE Network



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

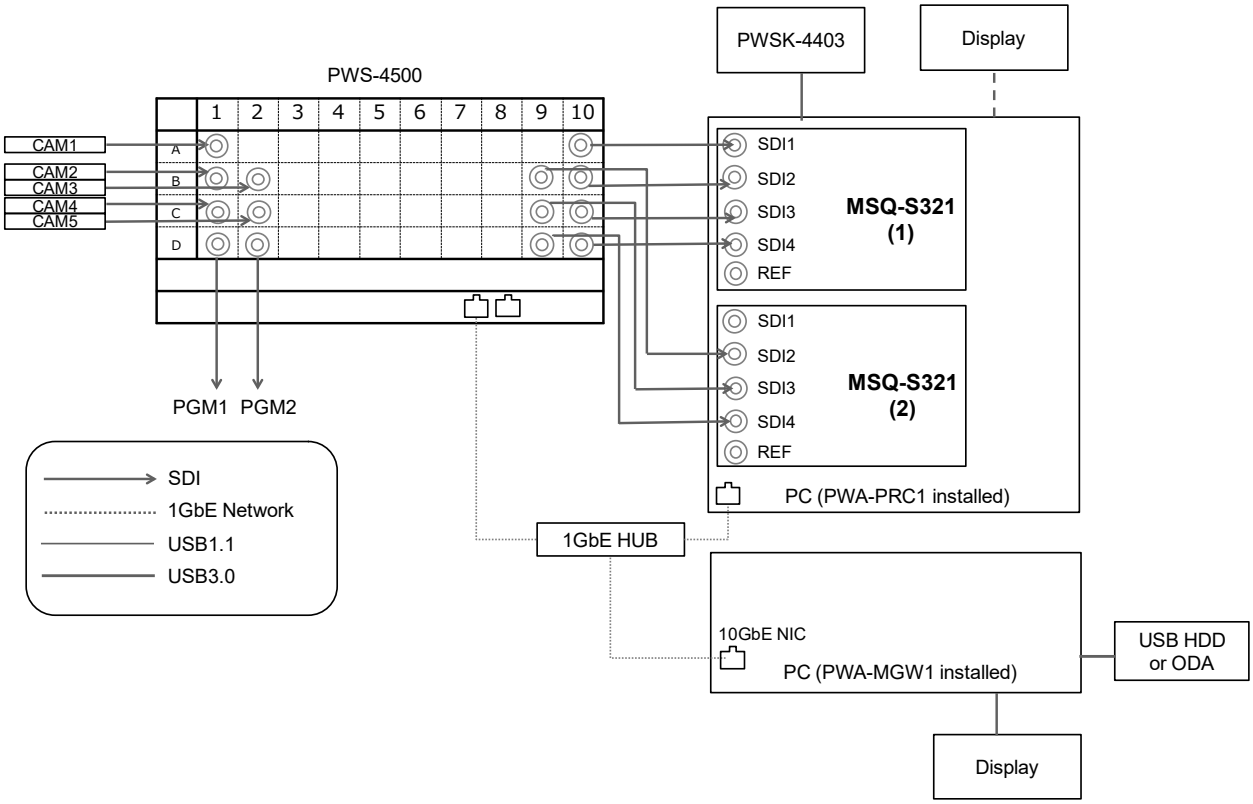
HFR 1IN/2OUT (4K 2x) with 10GbE Network



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



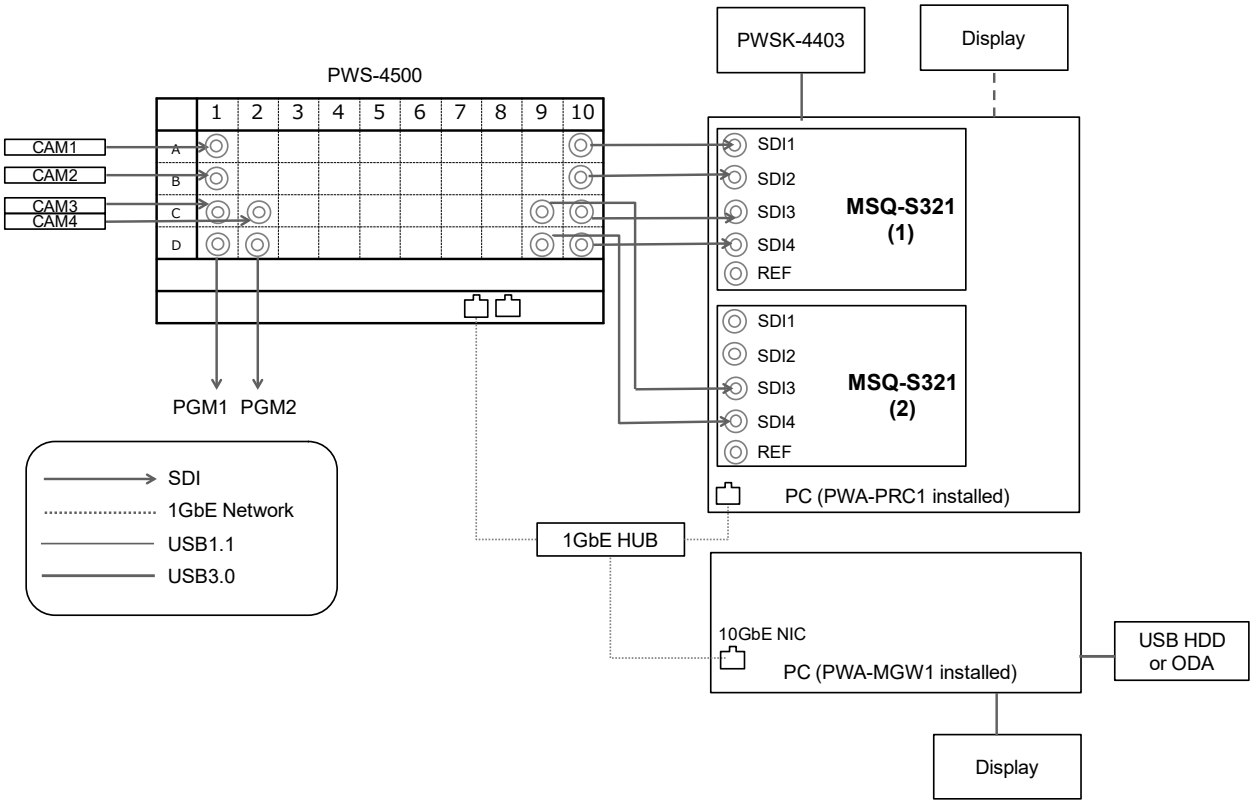
PWA-PRC1 settings

[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



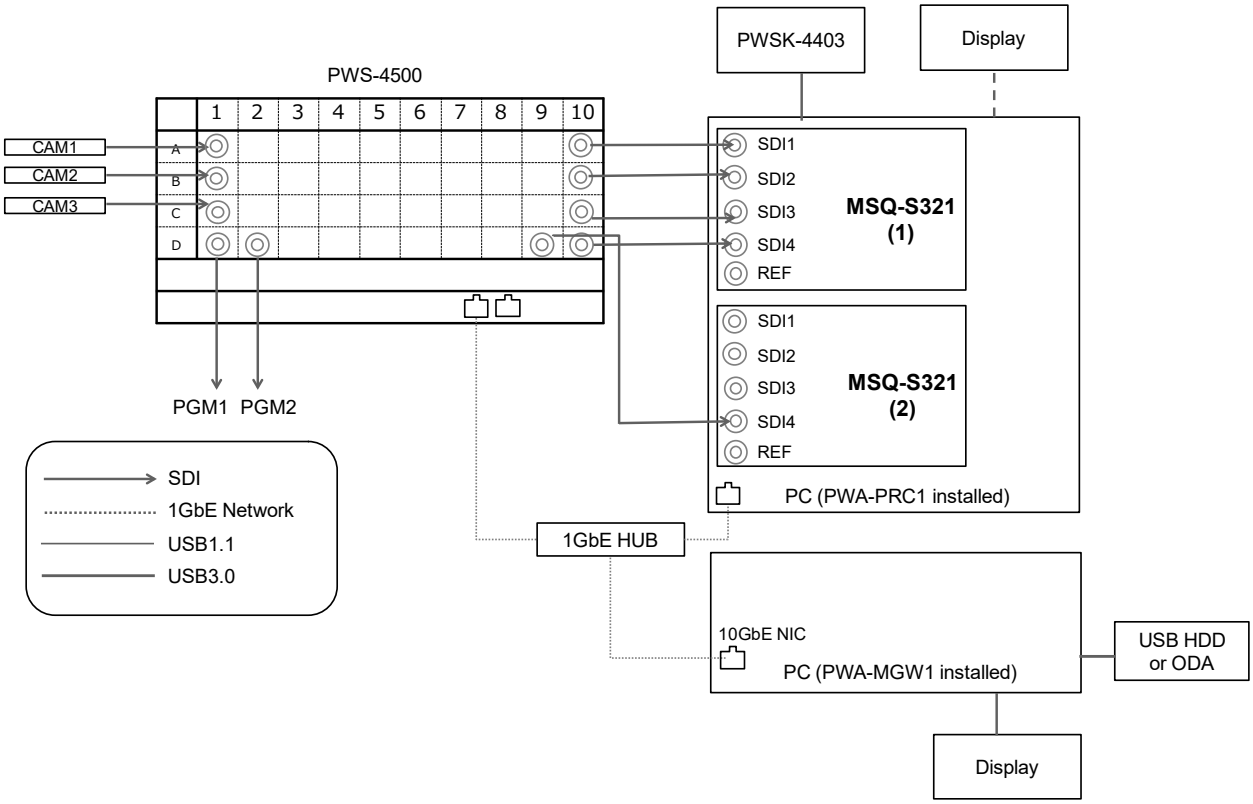
PWA-PRC1 settings

[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



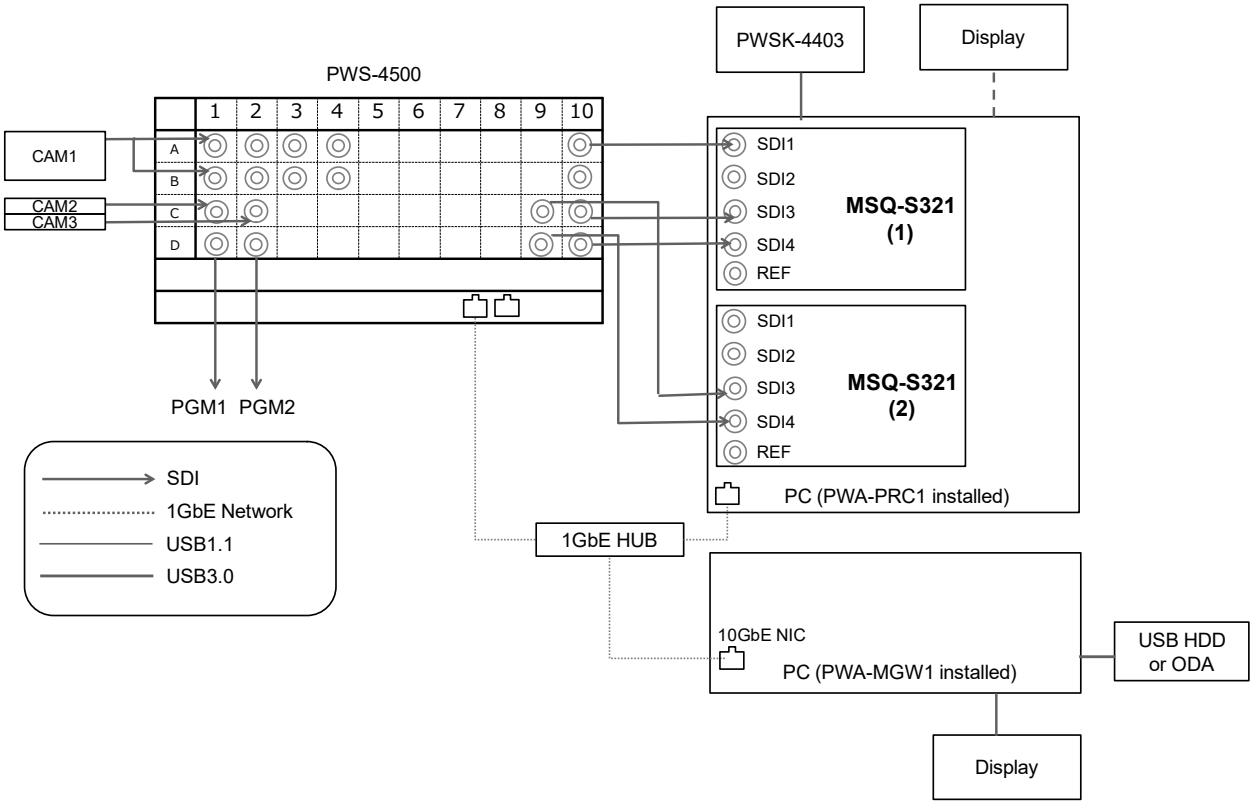
PWA-PRC1 settings

[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



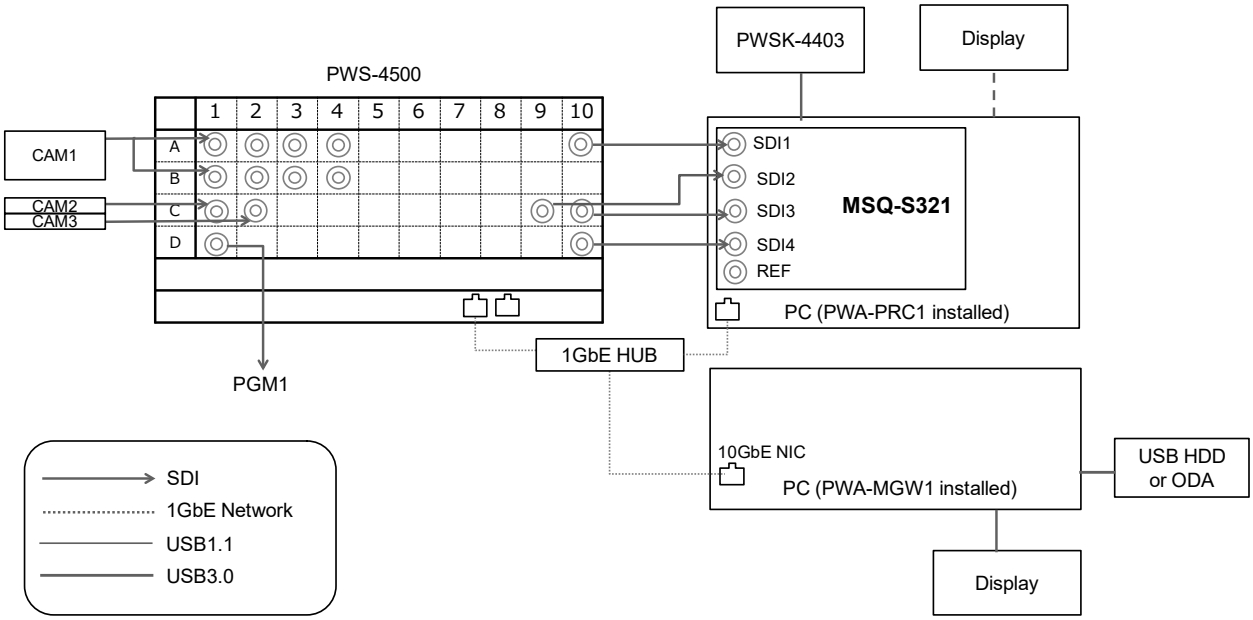
PWA-PRC1 settings

[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/1OUT (HD 8x, 6x) with 1GbE Network



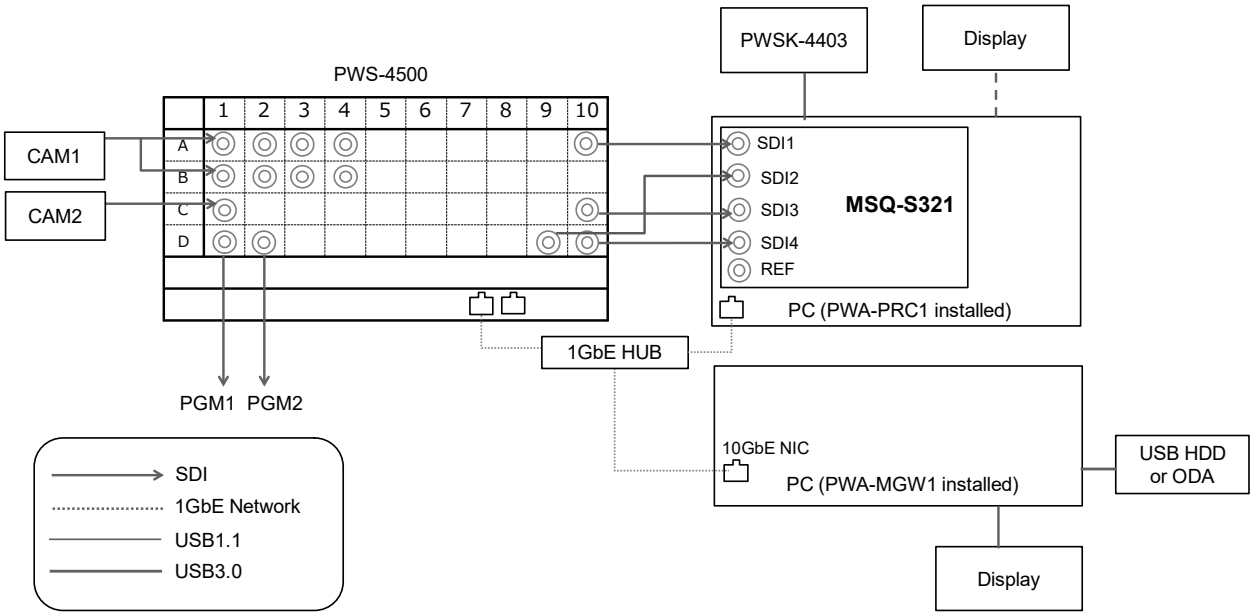
PWA-PRC1 settings

[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



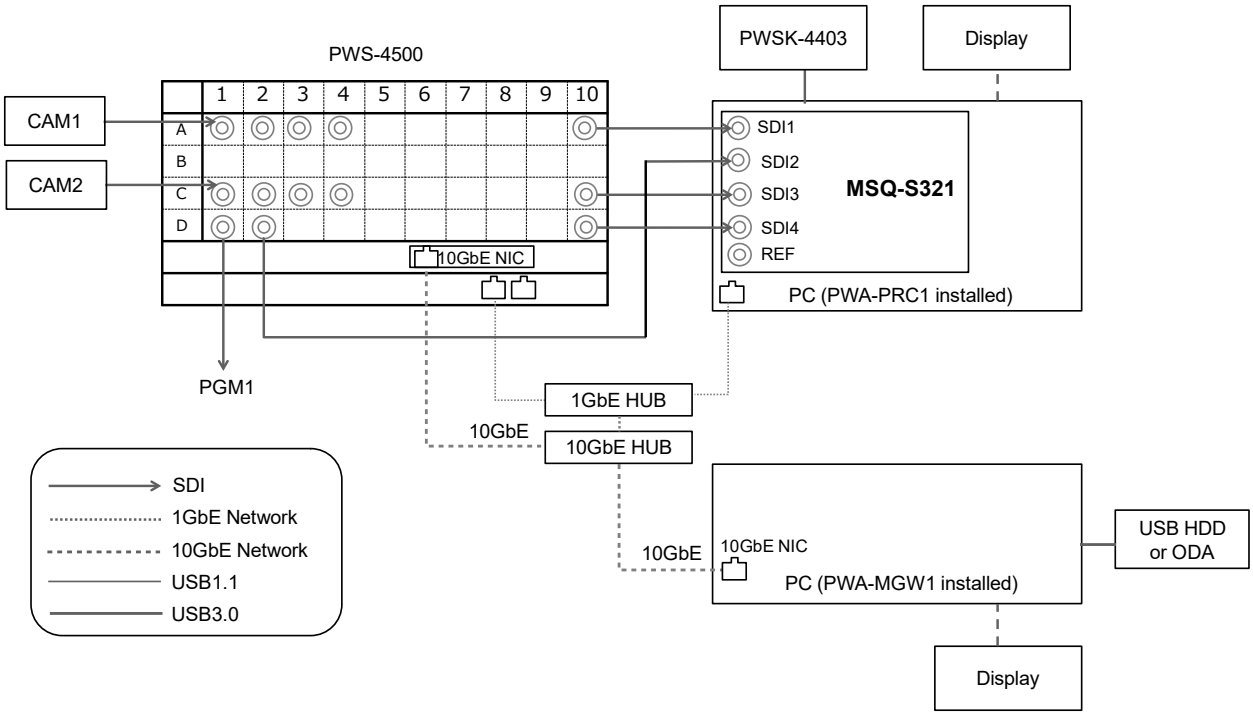
PWA-PRC1 settings

[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.

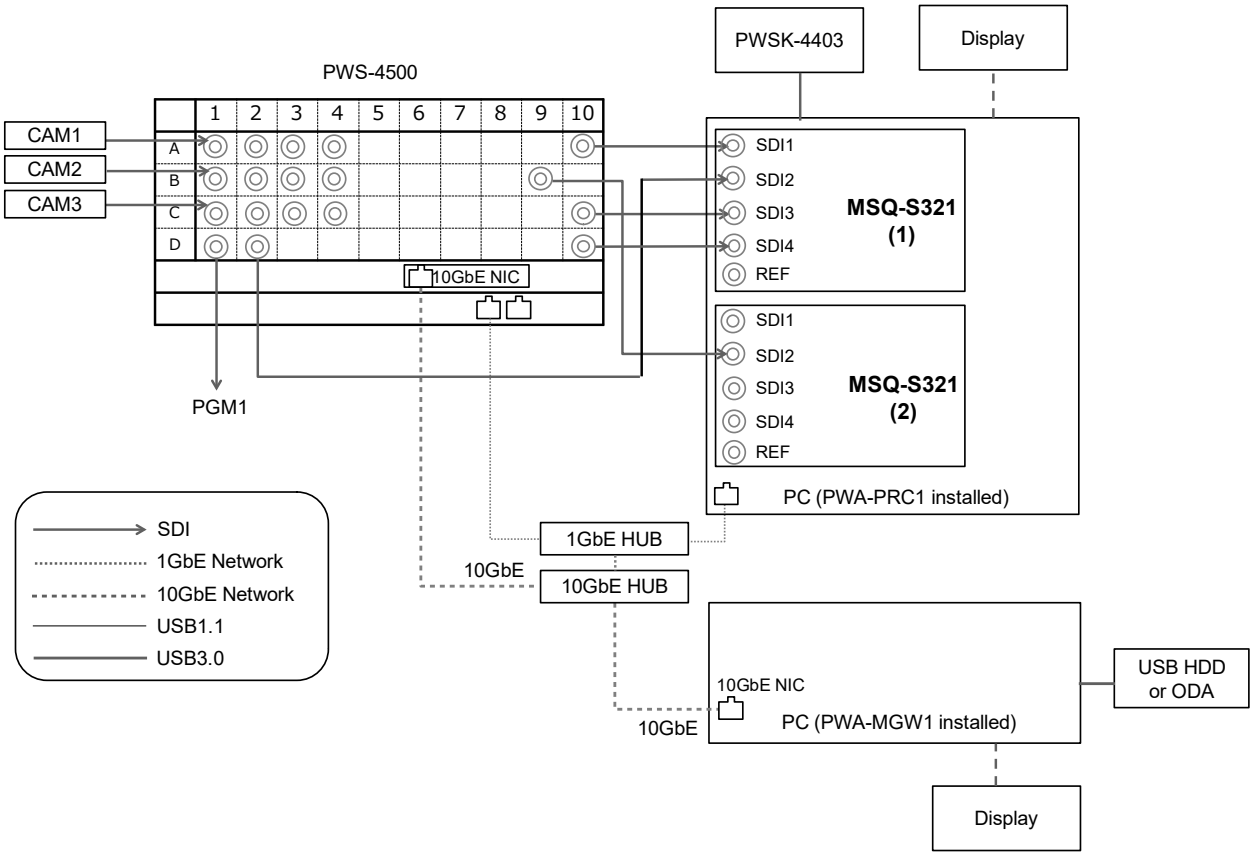
Cut Out with 10GbE Network (for MSQ-S321 1pc)



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

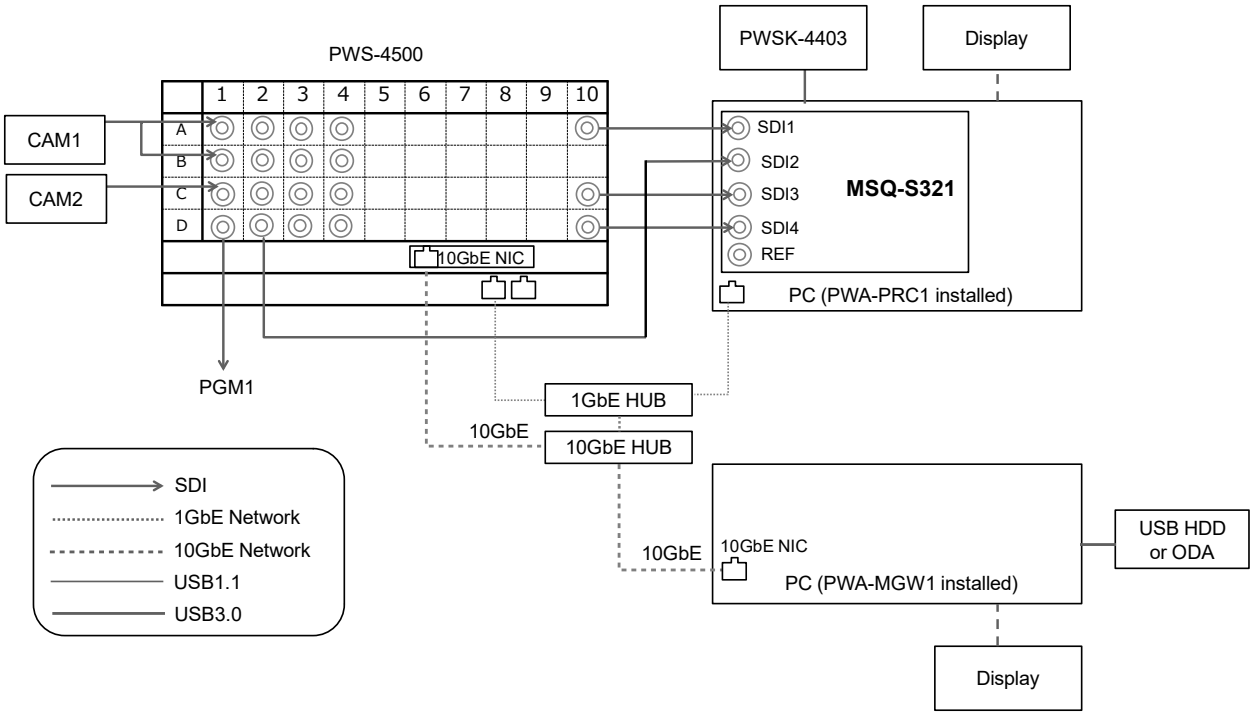
Cut Out with 10GbE Network (for MSQ-S321 2pcs)



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

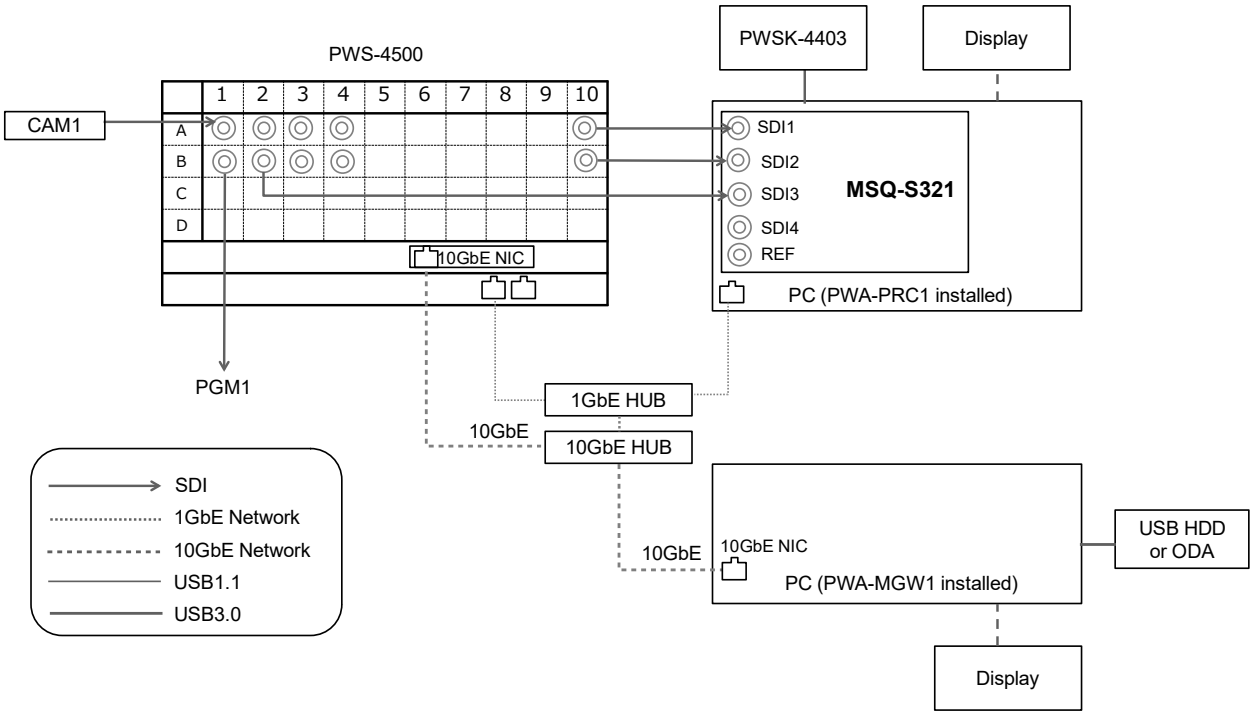
HFR + Cut Out with 10GbE Network (for MSQ-S321 1pc)



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

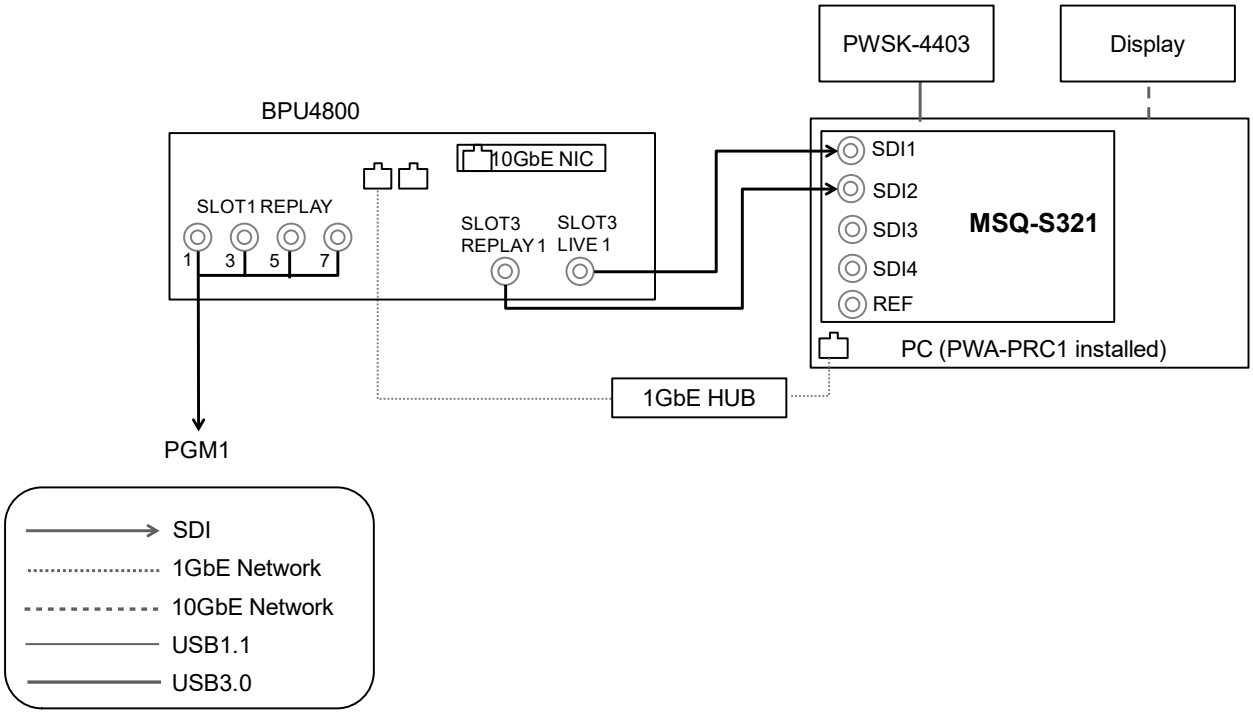
Cut Out with 10GbE Network, without PWSK-4504



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

BPU4800 Replay Port, Replay Port + XAVC Transcode Port



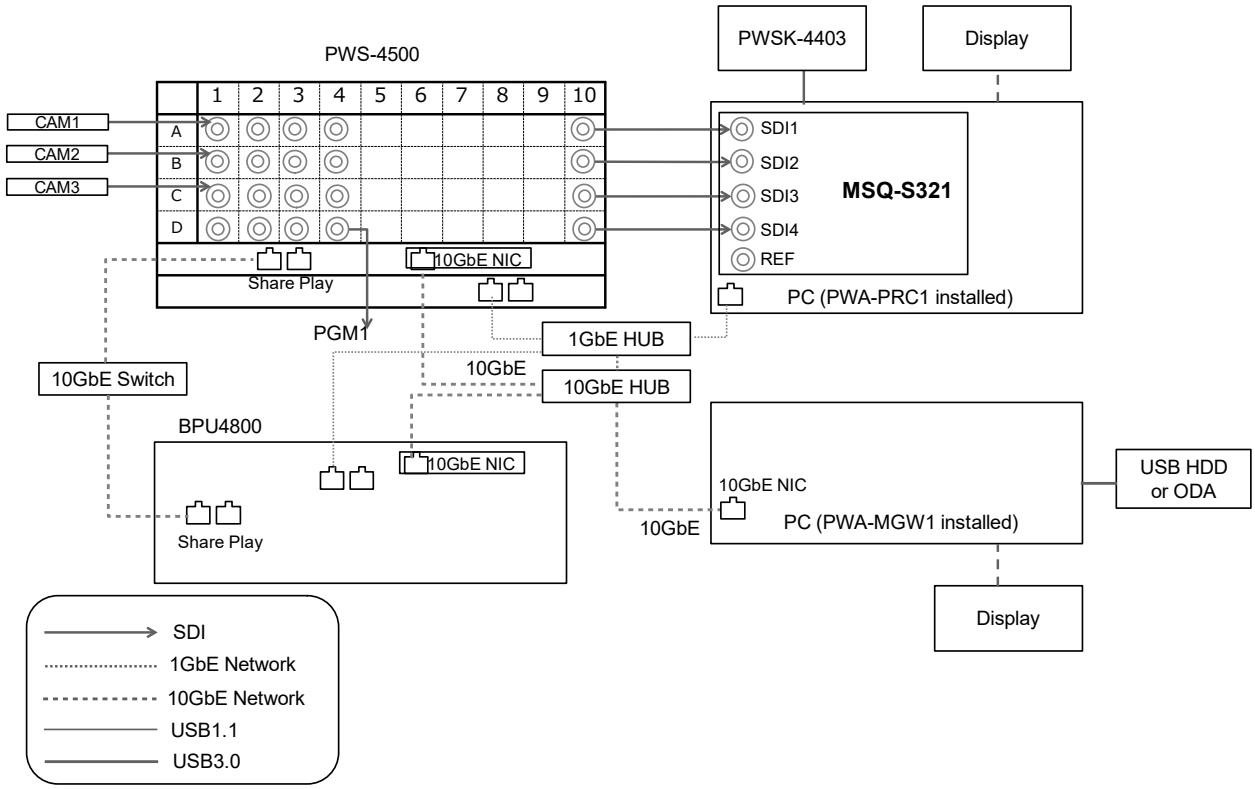
PWA-PRC1 settings

[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address

Notes

- SLOT2 can be used instead of SLOT3 on the BPU4800 for the SDI connection. To use SLOT2, set the same value for the Format setting of SLOT3 and SLOT2.
- If the Character Super setting is used in PWS mode, use SLOT3.

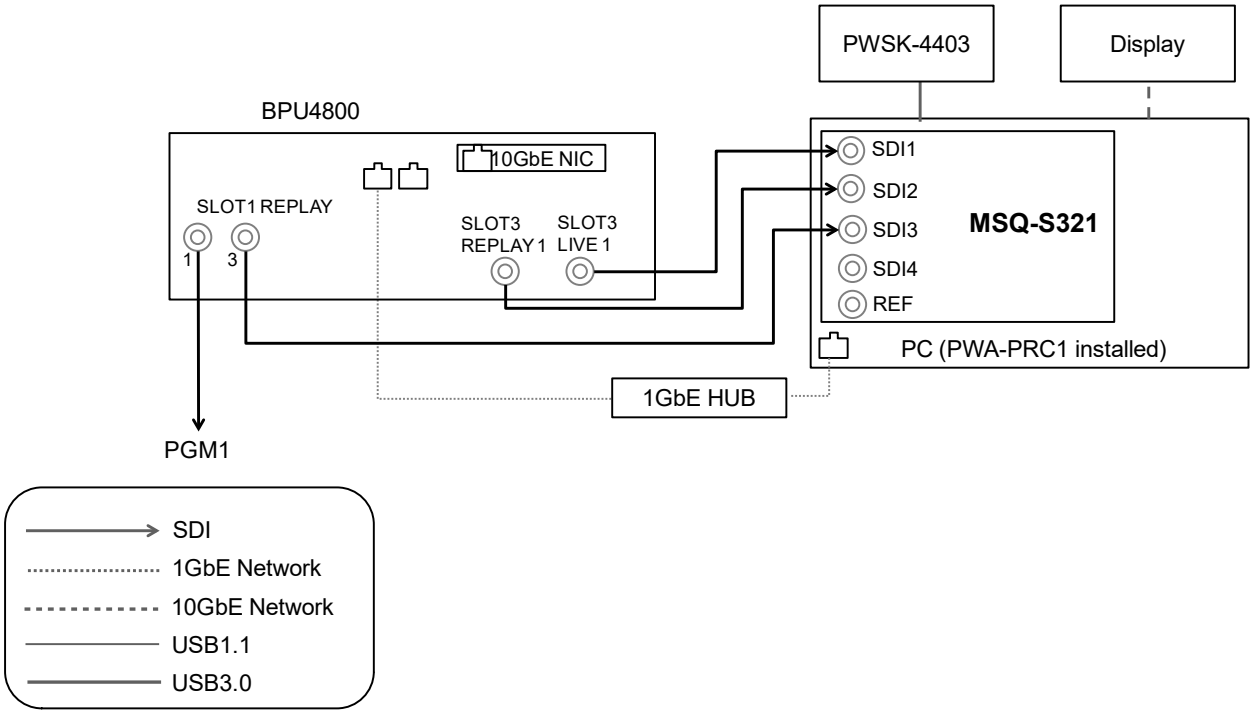
BPU4800 XAVC Transcode Port, Replay Port + XAVC Transcode Port



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

BPU4800 HD Cut Out Port



PWA-PRC1 settings

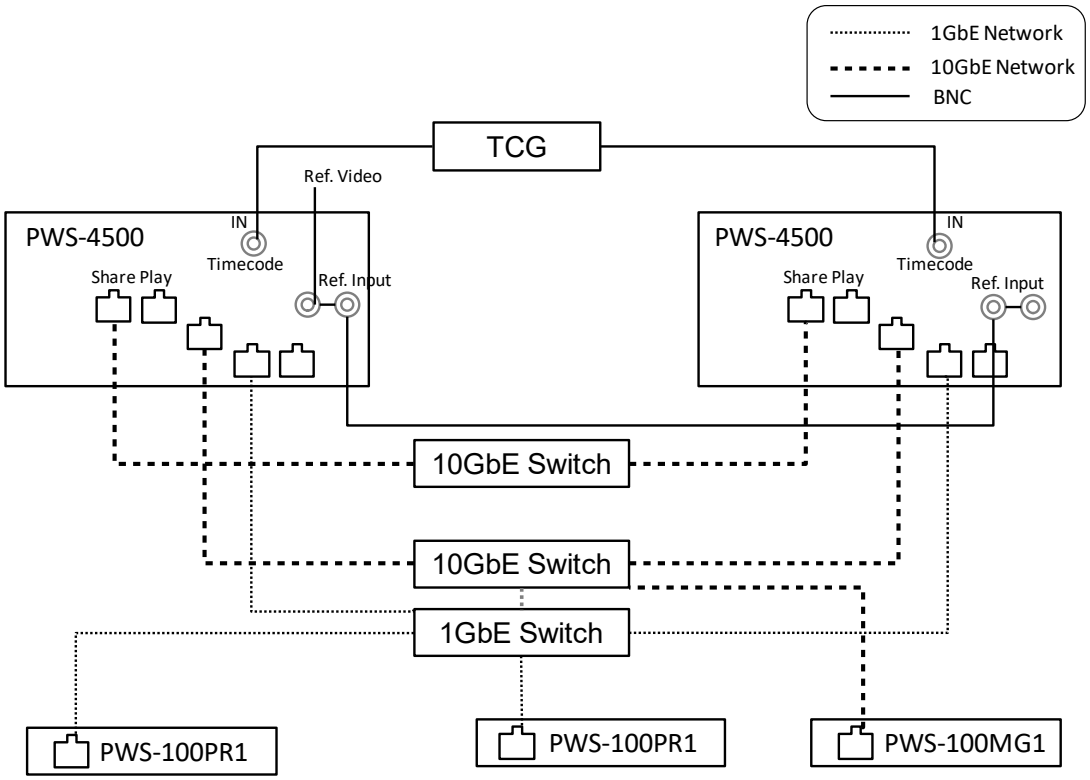
[System Config]	Item	Setting
PRC manager	Primary PRC manager IP/Port	PRC manager IP Address

Notes

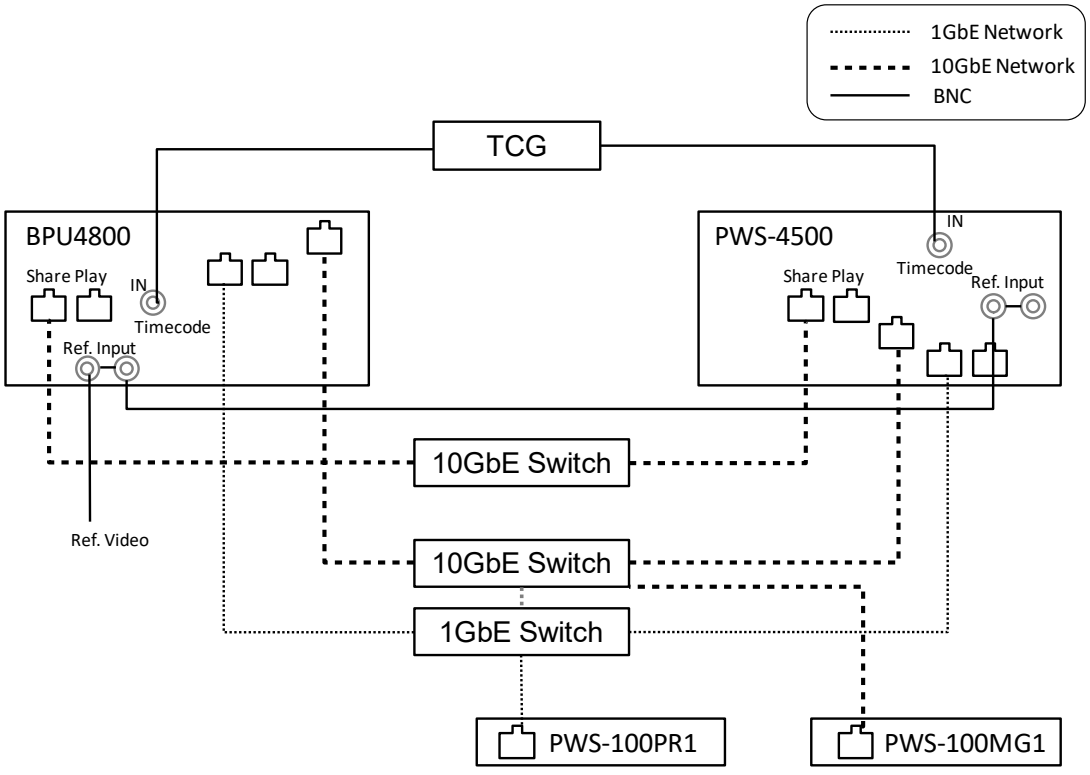
- SLOT2 can be used instead of SLOT3 on the BPU4800 for the SDI connection. To use SLOT2, set the same value for the Format setting of SLOT3 and SLOT2.
- If the Character Super setting is used in PWS mode, use SLOT3.

Connection for using Share Play Function

Configuration with PWS-4500



Configuration with BPU4800 and PWS-4500



Notes

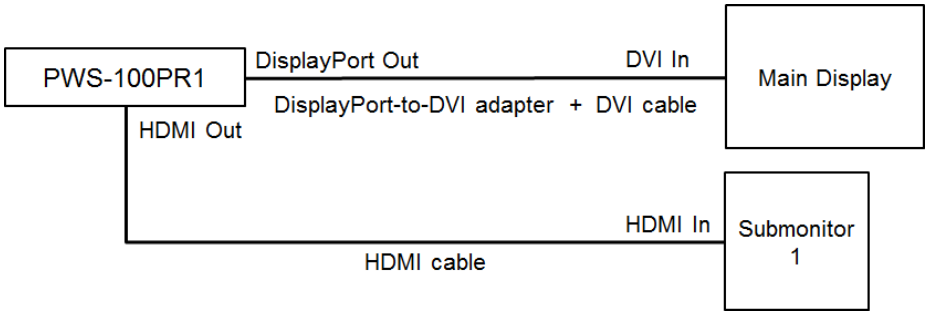
- When using a Share Play connection, the reference signal for all PWS-4500/BPU4800 units must be synchronized. Connect an external reference signal input to all PWS-4500/BPU4800 units.
- When using a Share Play connection, one PWS-4500/BPU4800 unit managed by PRC Manager is assigned as the master to which the other units are synced. Share Play will terminate if the PWS-4500/BPU4800 master unit is turned off during Share Play. Accordingly, during Share Play use, do not turn off any of the PWS-4500/BPU4800 units managed by PRC Manager.
- For Share Play redundancy, configure as follows.
  - Connect both connectors 1 and 2.
  - Separate Share Play 1 and Share Play 2 on different network segments.
    Example:
    Share Play 1: 192.168.11.xx, Share Play 2: 192.168.12.xx
  - If connecting to a single network switch, separate the segments using VLANs.

Recommended network switches

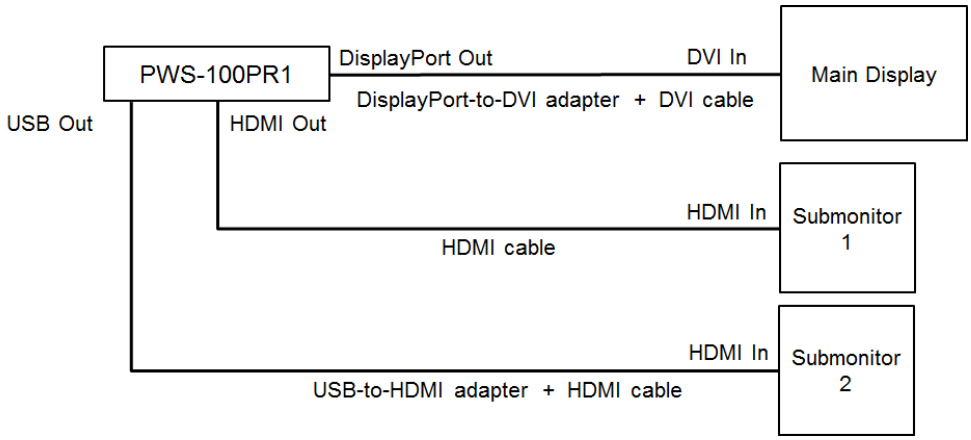
Manufacturer	Model	
Juniper	J-1) EX4550-32T	—
	J-2) EX4550-32F	
	J-3) QFX5100	
CISCO	C-1) CISCO Nexus 9332PQ	QSFP+ 32 port
	C-2) CISCO Nexus 9372PX	QSFP+ 6port, SFP+ 48 port
	C-3) CISCO Nexus 9372TX	QSFP+ 6port, 10G Copper 48 port

Submonitor Connections

- **Connection with one submonitor (PWS-100PR1/PWS-110PR1)**



- **Connection with two submonitors (PWS-100PR1/PWS-110PR1)**



Network Cable

Connect an Ethernet cable between PWS-4500/BPU4800 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/BPU4800.

SDI Input/Output

Connect between PWS-4500 and MSQ-S321 attached to PC with BNC cables.

Note

When using only one MSQ-S321 in the PWS-100PR1/PWS-110PR1, 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_SDI 1
Port B HD IN/OUT SDI 10	MSQ-S321_SDI 2
Port C HD IN/OUT SDI 10	MSQ-S321_SDI 3
Port D HD IN/OUT SDI 10	MSQ-S321_SDI 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_SDI 1
Port C HD IN/OUT SDI 9	MSQ-S321_SDI 2
Port C HD IN/OUT SDI 10	MSQ-S321_SDI 3
Port D HD IN/OUT SDI 10	MSQ-S321_SDI 4

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

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321_SDI 1
Port C HD IN/OUT SDI 10	MSQ-S321_SDI 3
Port D HD IN/OUT SDI 9	MSQ-S321_SDI 2
Port D HD IN/OUT SDI 10	MSQ-S321_SDI 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_SDI 1
Port C HD IN/OUT SDI 10	MSQ-S321_SDI 3
Port D HD IN/OUT SDI 2	MSQ-S321_SDI 2
Port D HD IN/OUT SDI 10	MSQ-S321_SDI 4

Cut Out (MSQ-S321 × 2)

PWS-4500	MSQ-S321
Port A HD IN/OUT SDI 10	MSQ-S321(1)_SDI 1
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 D HD IN/OUT SDI 2	MSQ-S321(1)_SDI 2
Port D HD IN/OUT SDI 10	MSQ-S321(1)_SDI 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 installation procedure.

For details about PWA-PRC1 operation, refer to the User's Guide.

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/PWS-110PR1.
   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.
PRC Manager is software used to manage PWS-4500/BPU4800, PWA-PRC1, and PWA-MGW1 on a network, without using an operation screen. It is included with the PWA-PRC1 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-PRC1 is installed, the PWSK-4403, and the server.
   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 for the first time:
   Authentication using an install key is required.
   For details, see "About Authentication" (page 56).
3. When PWA-PRC1 starts and the IP input screen appears, enter the [PRCM IP Address] and click/tap [Set].
4. Select the PWS-4500 or BPU4800 to be the local server.
   The operation screen of PWA-PRC1 appears.
   When the connection with the PWS-4500 or BPU4800 is successful, the information on the PWA-PRC1 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, 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 PWA-PRC1 starts.
- Do not change the size of text on the screen.

Exiting PWA-PRC1

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.

About Authentication

When using PWA-PRC1 for the first time, an install key is required for authentication.
This procedure is not required if using the PWS-100PR1/PWS-110PR1.

Executing Authentication

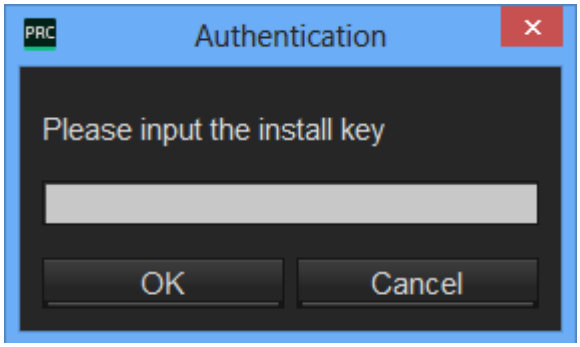
The following are necessary for authentication.

- MAC address of a network interface within the PC
- A software install key for PWA-PRC1 (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.
   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 operation.

Displaying the Settings Screen

1. Start PWA-PRC1.
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 1]

Category	Item	Description	Default value
PRC manager	Primary PRC manager IP/Port	Specifies 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 (Primary, Secondary) for Share Play (range: 0 to 127). • [Set] button: Resets the Share Play connection in response to edited settings.	Primary: 100 Secondary: 101
	ISC Auto maintenance	Specifies whether to enable (On) or disable (Off) automatic PWA-ISC1 maintenance. Configurable only when a PWA-ISC1 is connected.	Off
4K server(s)	—	Registers information about the servers on the network (up to 10 servers).	—
	ID	Displays the connected server ID.	—
	Model Name	Displays the model name.	—
	Name	Specifies the server name.	Server ID
	Local	Specifies the local server.	Follows the initial startup setting

Category	Item	Description	Default value
	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
	Ready Status	Displays the Share Play status of the server.	—
	Genlock Status	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. · When linking is off, nothing is displayed. · When linking is on, "Stopped," "Free Running," "Locking," and "Locked" are displayed in sequence 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. · The server with "*" indicates the GenLock Master.	—
	Rec control	Starts/stops recording on the network server. • [Start] button: Start recording • [Stop] button: Stop recording • The status is displayed on the right side of the [Stop] button when the network server is recording or is stopped. "…" is displayed from when the [Start] button/[Stop] button is clicked/tapped until the recording starts/stops	—
	Edit by network	Enables/disables editing and deleting of clips from the PRC1 for which the corresponding server is a network server.	Yes
	Push receive page	Selects the receive page for clips transferred using the push function (0-9, multiple selection supported).	(Undefined)

Category	Item	Description	Default value
	Network/PL clip save page	Selects the page to register (0 to 9, multiple selection supported), when PRC1 is connected to a network server and a clip is created in the cliplist managed by PRC1 from material on the network server. **Note** • If the specified page is on a local server, this setting is configurable only from the local PWA-PRC1. If the server is not local, this setting can be configured from any PWA-PRC1 instance.	(Undefined)
	Protect pages	Specifies the pages (0 to 9, multiple selection supported) on which clips are protected. **Note** • If the specified page is on a local server, this setting is configurable only from the local PWA-PRC1. If the server is not local, this setting can be configured from any PWA-PRC1 instance.	(Undefined)
Media Gateway	IP address	Selects the IP address of the Media Gateway to use. • [Refresh] button: Acquires information about the drives connected to Media Gateway. **Note** • Click/tap the [Refresh] button in the following cases. · Archive destination drive connection is changed · Media is exchanged · Server transfer IP is changed or deleted	First IP address in list (blank if Media Gateway is not connected)

Category	Item	Description	Default value
	Drive	Selects the archive destination drive from the list.	First drive of Media Gateway selected in [IP address] (blank if Media Gateway is not connected)
	Push machine	Selects the push function transfer destination from the servers connected to Media Gateway.	(Undefined)
	Folder	Selects the archive destination folder. • [Folder] button: Display a list of folders. Select a folder from the list and click/tap the [OK] button to display the path of the selected folder beside the [Folder] button. **Note** • The [Folder] path is restored to the default in the following cases. · When the [Refresh] button is clicked/tapped. · When Media Gateway is changed. · When [Drive] setting is changed.	Root folder of the drive specified in [Drive]
Push target	—	Selects the transfer destination server for the push function. • 4K server: Selects the 4K server selected in [Push]. • Other server: Selects a server connected to Media Gateway.	4K server
	Push page/bank dialog	Sets whether to display a dialog for specifying the page or bank when executing the push function. • Yes: Display dialog • No: Do not display dialog	No

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

Appendix

Usage Precautions

- SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND RESULTING FROM A FAILURE TO IMPLEMENT PROPER SECURITY MEASURES ON TRANSMISSION DEVICES, UNAVOIDABLE DATA LEAKS RESULTING FROM TRANSMISSION SPECIFICATIONS, OR SECURITY PROBLEMS OF ANY KIND.
- Depending on the operating environment, unauthorized third parties on the network may be able to access the unit. When connecting the unit to the network, be sure to confirm that the network is protected securely.

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