SONY

MULTI FORMAT SWITCHER

XVS-G1

ADDITIONAL I/O BOARD
XKS-G1110

GPU PACK
XKS-G1600

LEGACY INTERFACE BOARD
XKS-G1700

4K UPGRADE LICENSE
XZS-G1500

3D DME LICENSE
XZS-G1610

SL KEY LICENSE
XZS-G1620

HDR CONVERTER LICENSE
XZS-G1750

AUTOMATION INTERFACE LICENSE
XZS-G1770

CLIP PLAYER LICENSE
XZS-G1800

RACK MOUNT KIT
RMM-1100

INSTALLATION MANUAL
1st Edition (Revised 1)

⚠ 警告
このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠ WARNING
This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠ WARNUNG
Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT
Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

警告

本機は電源スイッチを備えていません。
万一，異常が起きた際に，お客様が電源を切ることができるように，設置の際には，機器近くの固定配線内に専用遮断装置を設けるか，機器使用中に，容易に抜き差しできるコンセントに電源プラグを接続してください。

WARNING
This unit has no power switch.
When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to a socket-outlet which must be provided near the unit and easily accessible, so that the user can turn off the power in case a fault should occur.

WARNUNG
Dieses Gerät hat keinen Netzschalter.
Beim Einbau des Geräts ist daher im Festkabel ein leicht zugänglicher Unterbrecher einzufügen, oder das Netzkabel muß mit einer in der Nähe des Geräts befindlichen, leicht zugänglichen Wandsteckdose verbunden werden, damit sich bei einer Funktionsstörung die Stromversorgung zum Gerät jederzeit unterbrechen läßt.

安全のために，周辺機器を接続する際は，過大電圧を持つ可能性があるコネクターを以下のポートに接続しないでください。
: LAN 1 端子
: LAN 1 Sub 端子
: LAN 2 端子
: LAN 2 Sub 端子
: LAN 3 端子
: LAN 3 Sub 端子
上記のポートについては本書の指示に従ってください。

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to the following port(s).
: LAN 1 connector
: LAN 1 Sub connector
: LAN 2 connector
: LAN 2 Sub connector
: LAN 3 connector
: LAN 3 Sub connector
Follow the instructions for the above port(s).

For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

Attention-when the product is installed in Rack:

1. **Prevention against overloading of branch circuit**
   When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

2. **Providing protective earth**
   When this product is installed in a rack and is supplied power from an outlet on the rack, please confirm that the outlet is provided with a suitable protective earth connection.

3. **Internal air ambient temperature of the rack**
   When this product is installed in a rack, please make sure that the internal air ambient temperature of the rack is within the specified limit of this product.

4. **Prevention against achieving hazardous condition due to uneven mechanical loading**
   When this product is installed in a rack, please make sure that the rack does not achieve hazardous condition due to uneven mechanical loading.

5. **Install the equipment while taking the operating temperature of the equipment into consideration**
   For the operating temperature of the equipment, refer to the specifications of the User's Guide.

注意

感電の危険があります。

本製品の一次回路のヒューズが，中性線側に接続される可能性があります。
修理時の感電を防ぐため，本機を主電源から切り離してください。

CAUTION

RISK OF ELECTRIC SHOCK

The fuse of the primary circuit of this product may be connected on the neutral wire side.
Disconnect the unit from the power supply to prevent electric shock when repairing.

ATTENTION

RISQUE D'ÉLECTROCUTION

Le fusible du circuit primaire de ce produit peut être connecté sur le côté de fil neutre.
Déconnectez l'appareil de l'alimentation pour éviter un choc électrique lors de la réparation.

- 本体および XKS-G1110 の SDI OUTPUT 端子において，ケーブルを接続せずに出力を有効のままにした場合，電波障害を引き起こす可能性があります。
  ケーブルを接続しない出力端子に対しては，メニューで出力を無効に設定してください。
  設定方法は，XVS-G1 のユーザーズガイドをご覧ください。

- If outputs of the main unit and SDI OUTPUT connector on the XKS-G1110 are enabled without connecting a cable, this may cause radio disturbance.
  Disable unconnected output pins using the menu.
  For how to set outputs, refer to the XVS-G1 User's Guide.

- Si les sorties de la sortie du connecteur de sortie SDI du XKS-G1110 et unité principale sont activées sans raccorder de câble, cela peut provoquer des perturbations radioélectriques.
  Désactivez les broches de sortie non raccordées à l'aide du menu.
  Pour savoir comment configurer les sorties, reportez-vous au Guide de l'utilisateur du XVS-G1.

- Wenn Ausgangs des SDI-Anschlusses des XKS-G1110 und der Hauptgerätausgang ohne aktiviert sind, ohne dass ein Kabel angeschlossen ist, kann dies Funkstörungen verursachen.
  Deaktivieren Sie nicht angeschlossene Ausgangsstifte über das Menü.
  Informationen zum Einstellen von Ausgängen finden Sie im Benutzerhandbuch zum XVS-G1.

Table of Contents

Section 1
Installation

1-1. Operating Environment

Operating guaranteed temperature: +5 ℃ to +40 ℃

Performance guaranteed temperature: +10 ℃ to +35 ℃

Operating humidity: 10 % to 90 % (relative humidity)

Storage temperature: -20 ℃ to +60 ℃

Mass: 20.7 kg (standard), 22.0 kg (when all options are installed)

Prohibited locations for installation

- Areas where the unit will be exposed do direct sunlight or any other strong lights.
- Dusty areas
- Areas subject to vibration.
- Areas with strong electric or magnetic fields.
- Areas near heat sources.
- Areas subject to electrical noise.
- Areas subject where is subjected to static electricity.

Ventilation

This unit is cooled by a fan (right side).

The power supply can be damaged if the exhaust vent (right side) and air intake (front panel and rear panel) are blocked or the fan is stopped.

Therefore, leave a blank space of more than 10 cm in the front and both sides of the unit.

1-2. Power Supply

1-2-1. Power Specifications

A switching regulator is used for the power supply of this unit. The voltage within the range of 100 V to 240 V can be used without changing the supply voltage.

Power requirements: AC 100 V to 240 V ± 10 %

Power frequency: 50/60 Hz

Current consumption (when all options are installed): 7.9 A to 2.6 A

1-2-2. Power Cord

WARNING

- Use the approved Power Cord (3-core mains lead)/Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
- Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

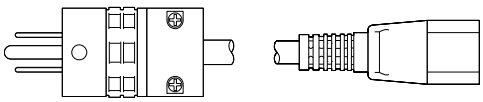
If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please contact your local Sony Sales Office/Service Center.

WARNING

- Never use an injured power cord.
- Plugging the power cord in the AC inlet, push as far as it will go.

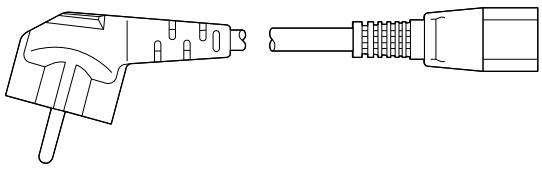
For customers in the U.S.A.

Power cord, 125 V 13 A (2.4 m): ⚠1-556-813-33



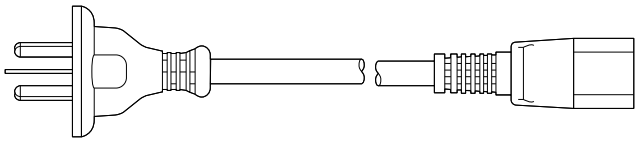
For customers in the all European countries

Power cord, 250 V 10 A (2 m): ⚠1-551-631-16



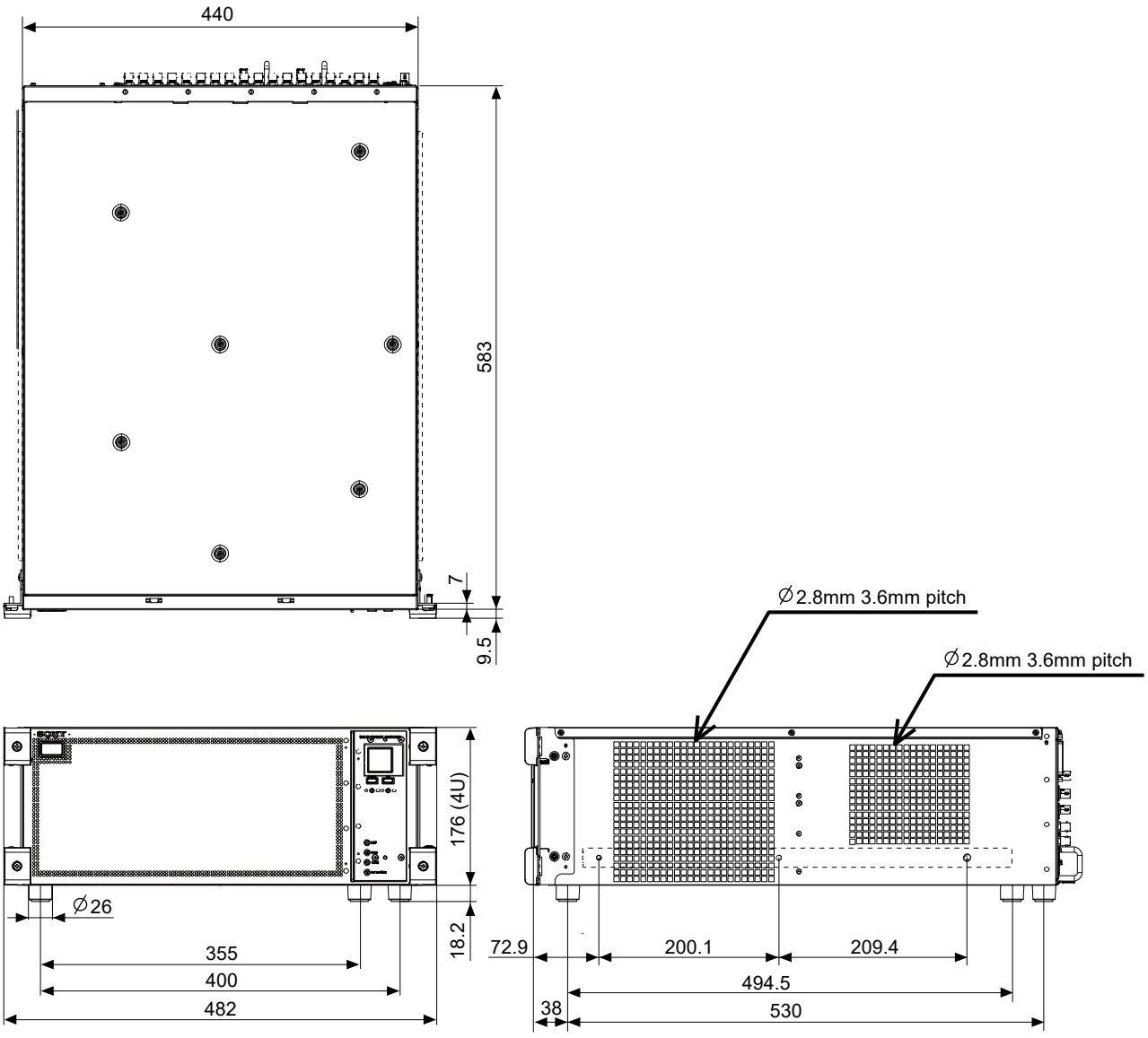
For customers in the China

Power cord, 250 V 10 A (1.83 m): ⚠1-830-860-12



1-3. Installation Space

1-3-1. External Dimensions



Unit : mm

1-4. Installation of the Optional Board

CAUTION

Be sure to turn off the POWER switch before starting installation work.

If installation work is started with the POWER switch left on, it may cause electrical shock or damage to printed circuit boards.

1-4-1. Installation of XKS-G1110

Parts packed in XKS-G1110

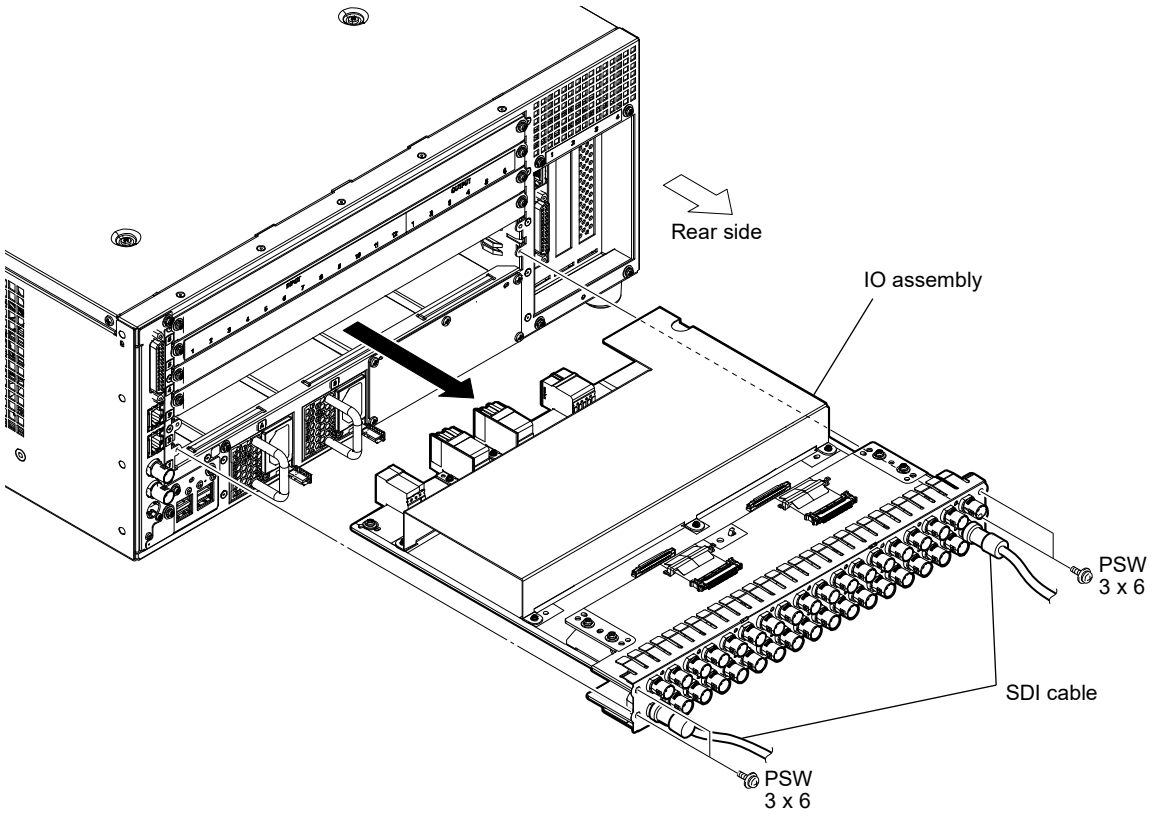
- SDI bracket: 2 pcs
- Double locking spacer: 1 pc
- SDI-133 board: 1 pc
- FPC with connector: 2 pcs
- FFC clamp: 2 pcs
- Screw (PSW3 x 6): 8 pcs

  Tip

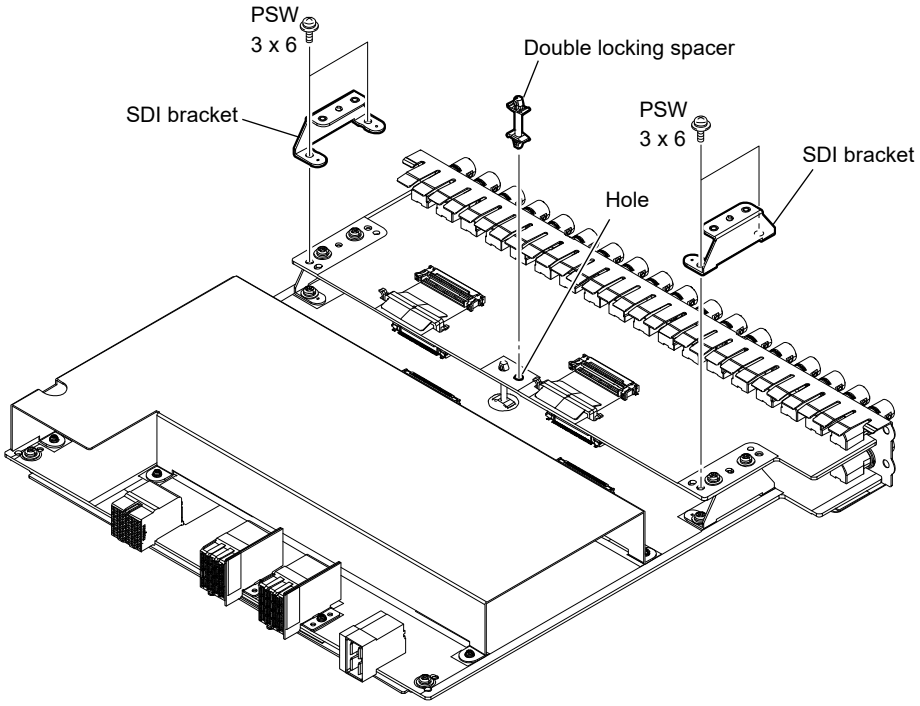
  Prepare two SDI cables in advance.

Procedure

1. Remove the four screws.
2. Connect the two SDI cables to the lower SDI connectors at both ends as shown below.
3. Hold the SDI cables and pull out the IO assembly. (After the IO assembly has been removed, disconnect the SDI cables.)



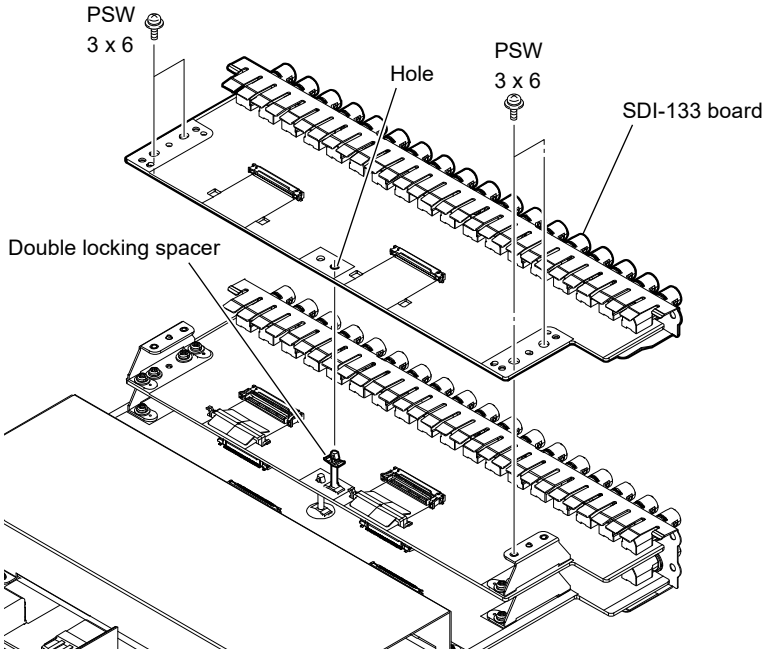
4. Install the SDI bracket and secure it with the two screws. (Also install and secure the SDI bracket at the opposite position in the same way.)
5. Install the double locking spacer to the hole as shown below.

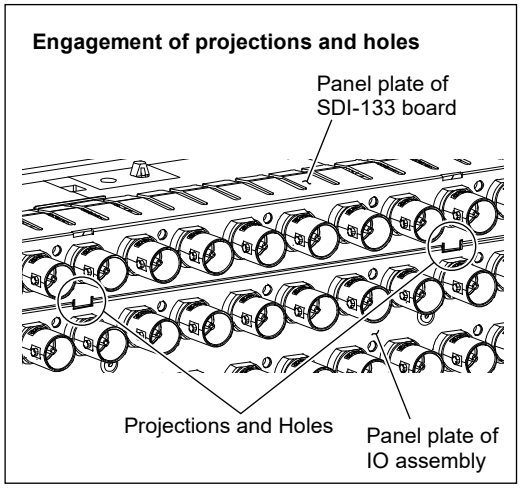


6. Attach the hole of the SDI-133 board to double locking spacer, and then tighten the four screws.

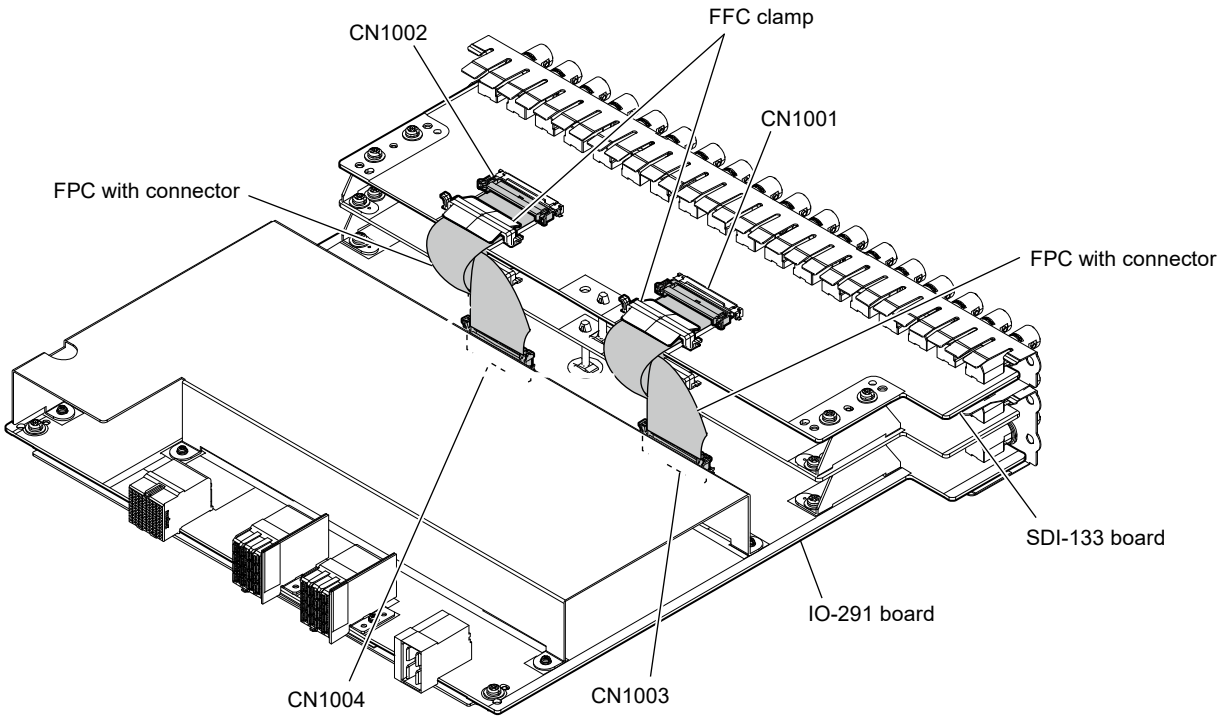
   Note

   Confirm that the projections on the rear of the panel plate are engaged with the holes.





7. Connect the two FPCs with connector to the connectors (CN1003, CN1004) on the IO-291 board and the connectors (CN1001, CN1002) on the SDI-133 board.
8. Install the two FFC clamps.



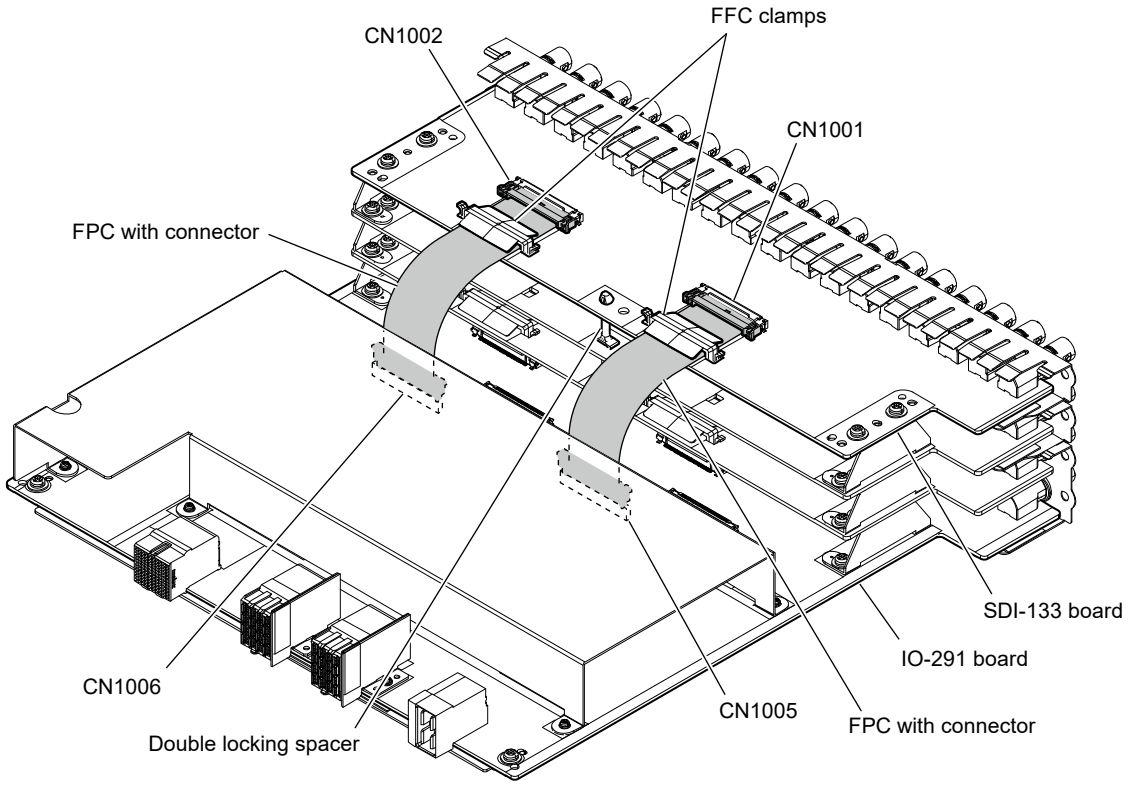
[Installing another XKS-G1110]

9. In the same way as steps 4 to 6, install two SDI brackets, a double-locking spacer, and an SDI-133 board.
10. Connect the two FPCs with connector to the connectors (CN1005, CN1006) on the IO-291 board and the connectors (CN1001, CN1002) on the SDI-133 board.

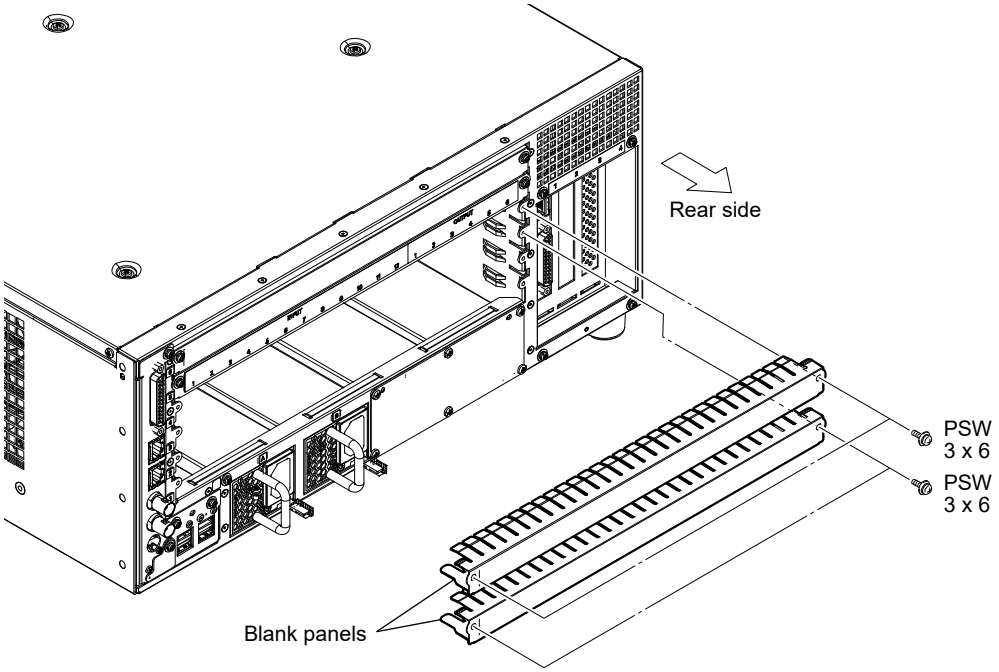
    Tip

    Correct the fold of the FPCs with connector, and then connect them.

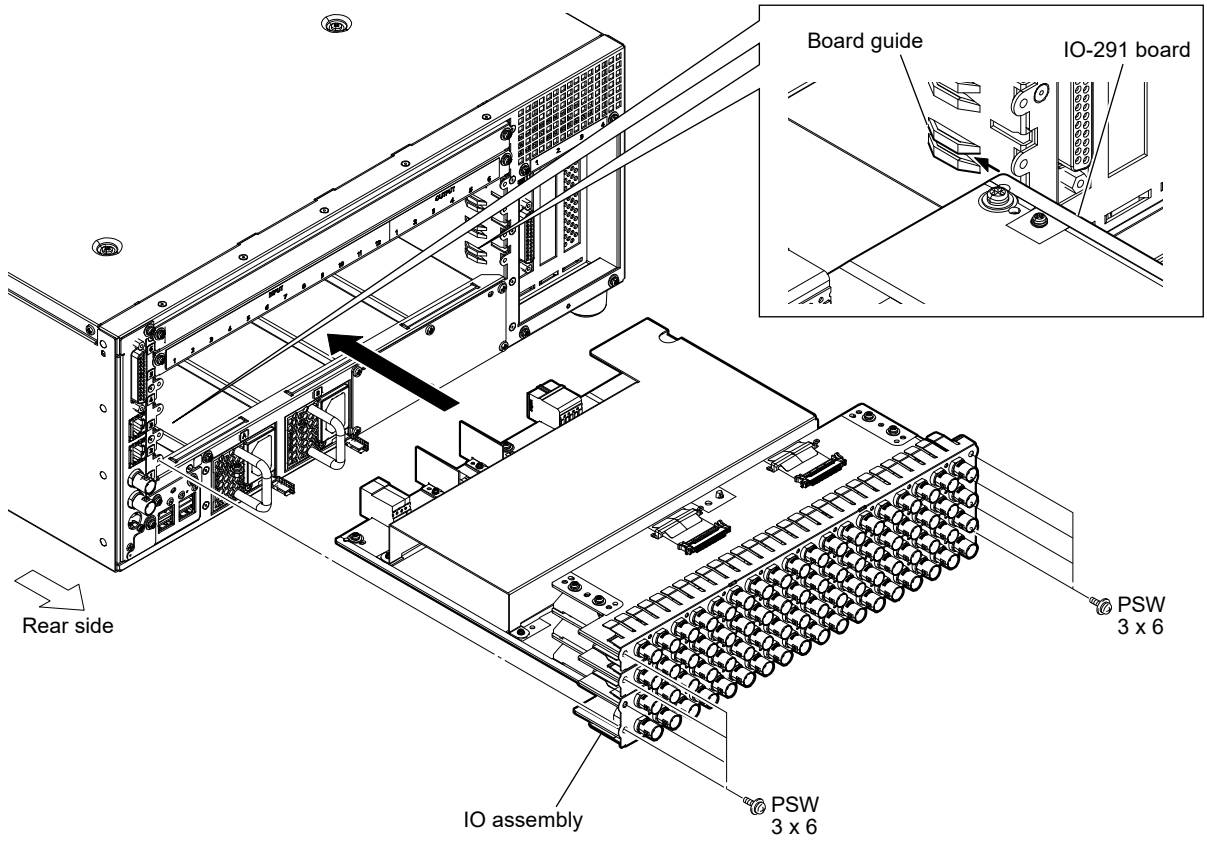
11. Install the two FFC clamps.



12. Remove the blank panels as many as the installed XKS-G1110 units from the unit.



13. Insert the IO-291 board of the IO assembly in the direction of the arrow along the board guide.
14. Push the IO assembly and secure it with the screws removed in steps 1 and 12.



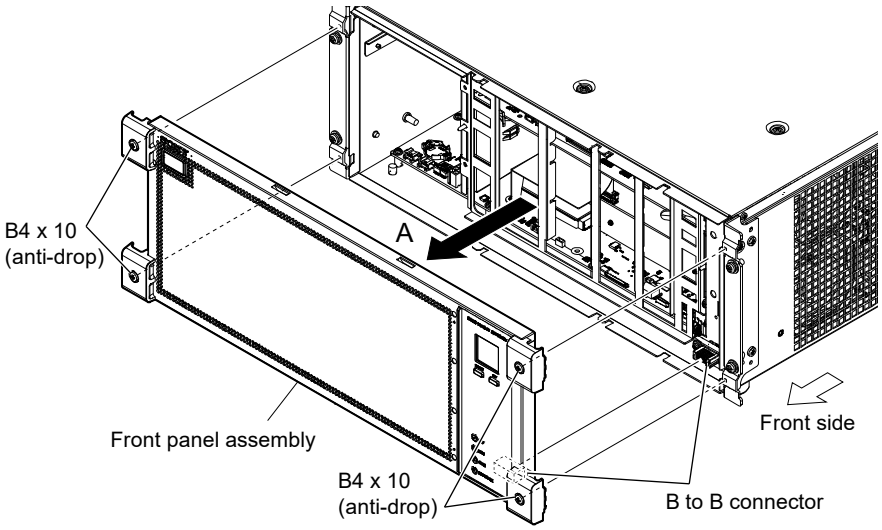
1-4-2. Installation of XKS-G1600

Parts packed in XKS-G1600

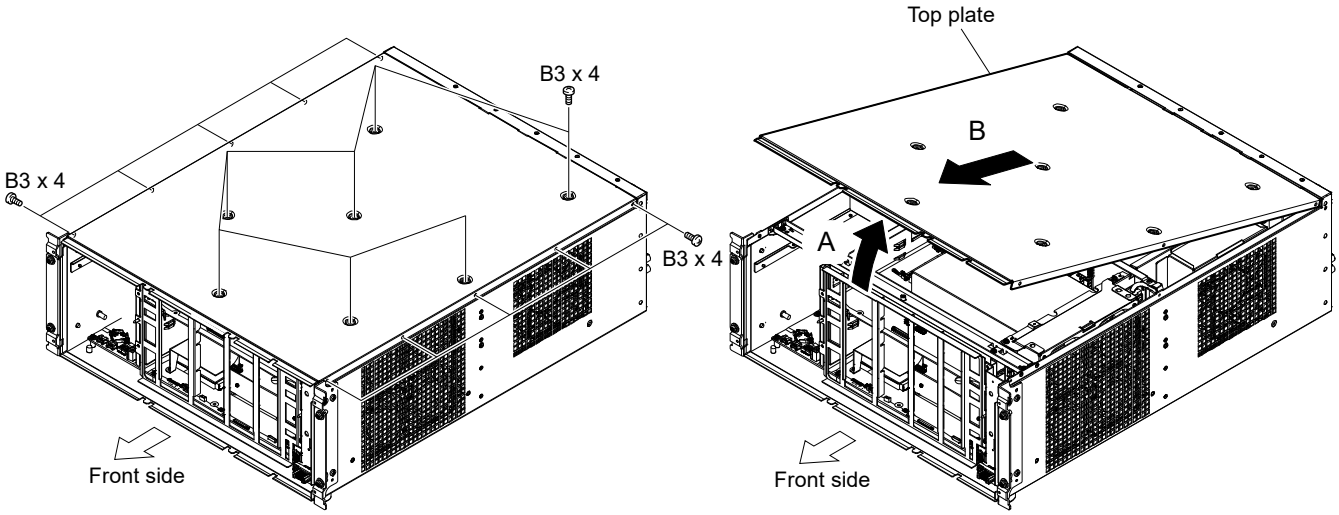
- GPU bracket: 1 pc
- Saddle wire: 1 pc
- GPU board: 1 pc
- Harness: 1 pc
- Screw (PSW3 x 6): 4 pcs

Procedure

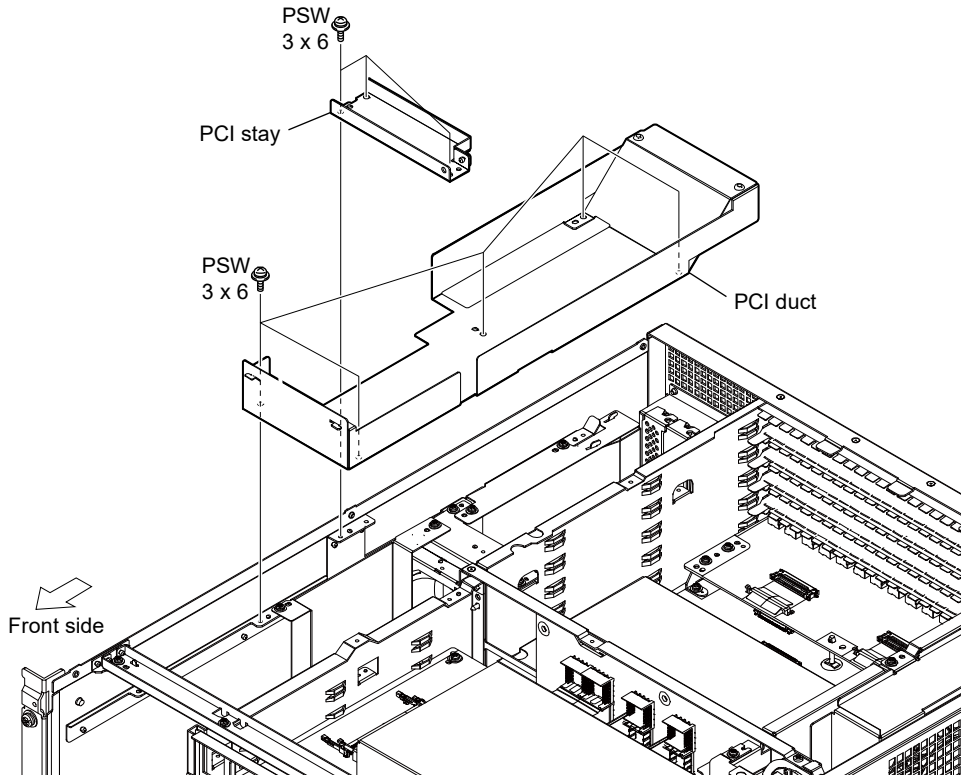
1. Loosen the four screws (anti-drop), and then remove the front panel assembly straight in the direction of arrow A.



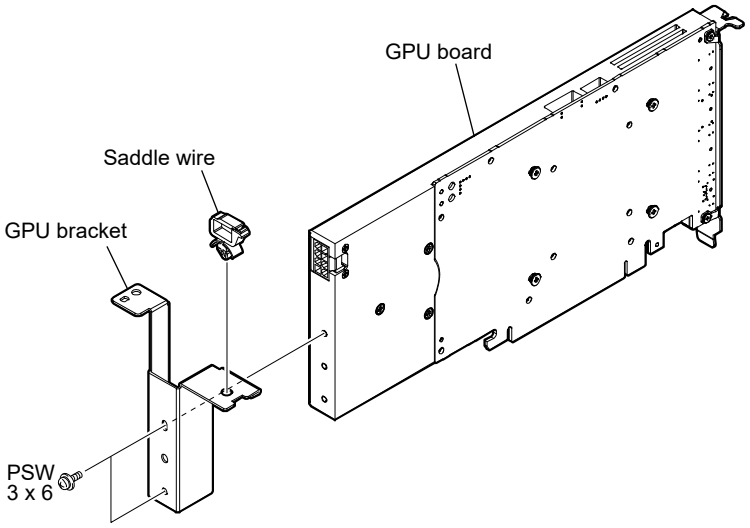
2. Remove the 17 screws.
3. Lift the front side of the top plate in the direction of arrow A and remove it in the direction of arrow B.



4. Remove the three screws, and then remove the PCI stay.
5. Remove the five screws, and then remove the PCI duct.



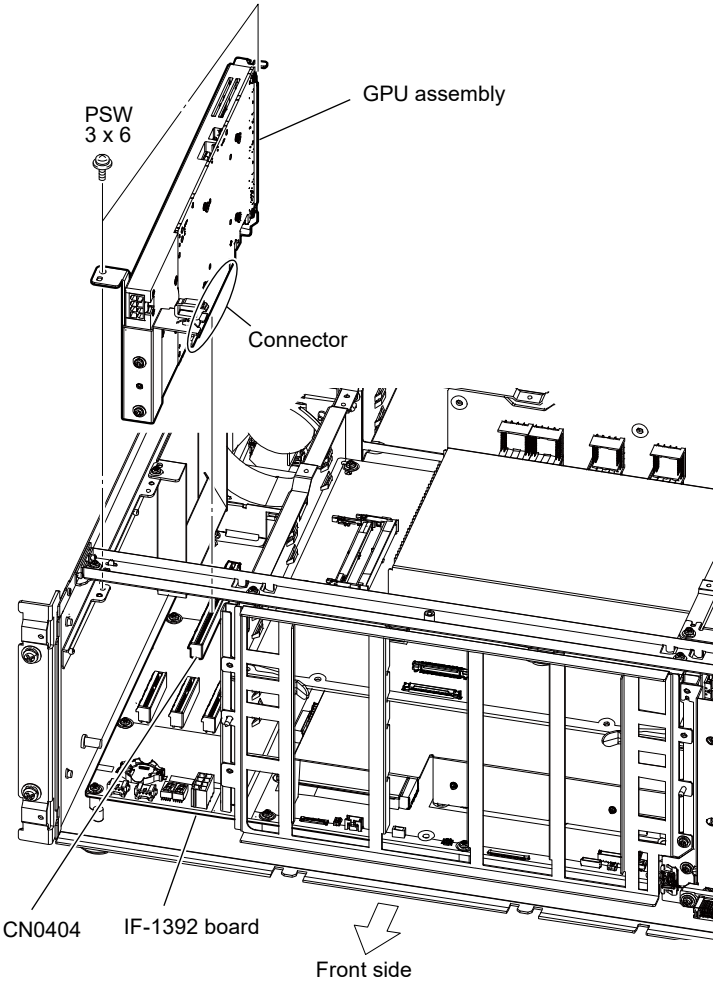
6. Attach the GPU bracket to the GPU board, and then fix it with the two screws.
7. Install the saddle wire.

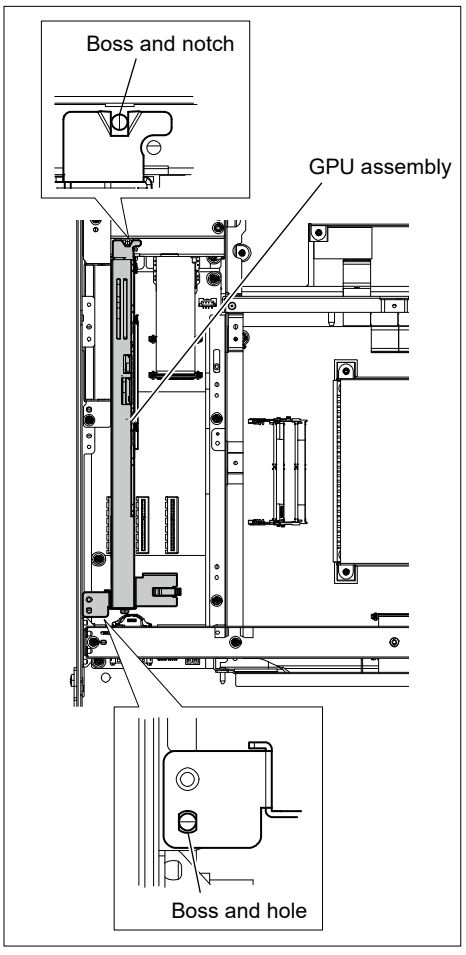


8. Connect the connector on the GPU assembly to the connector (CN0404) on the IF-1392 board, and then fix it with the two screws.

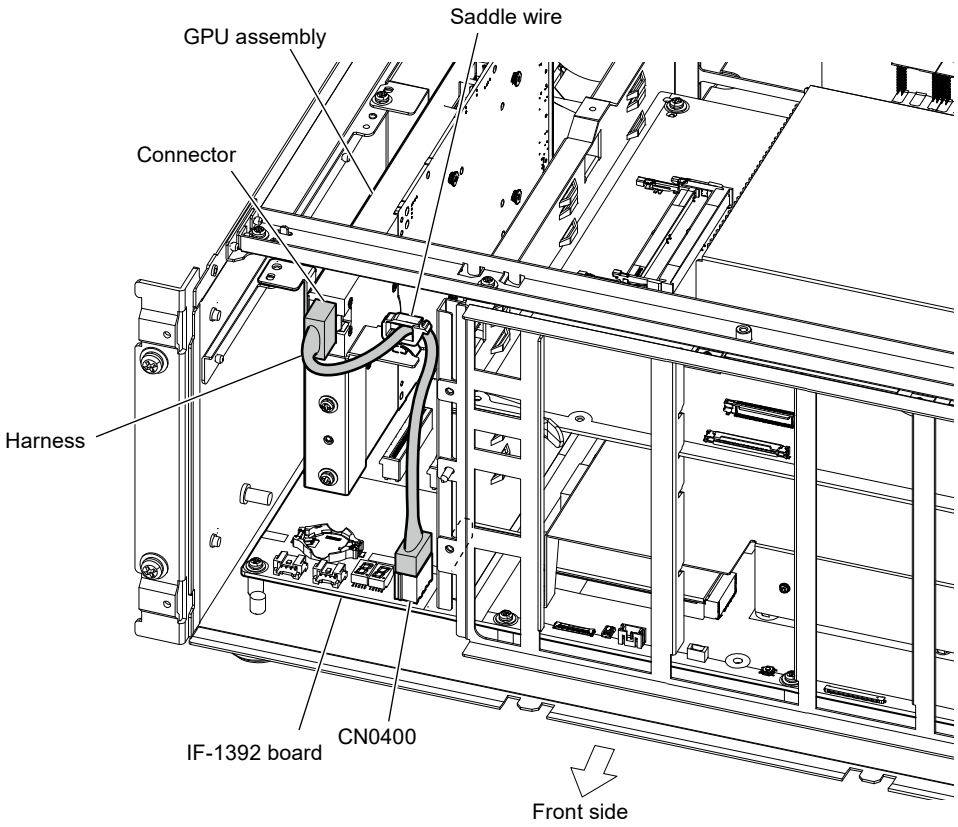
   Note

   Confirm that the two bosses do not overlap the notches and the holes as shown below.





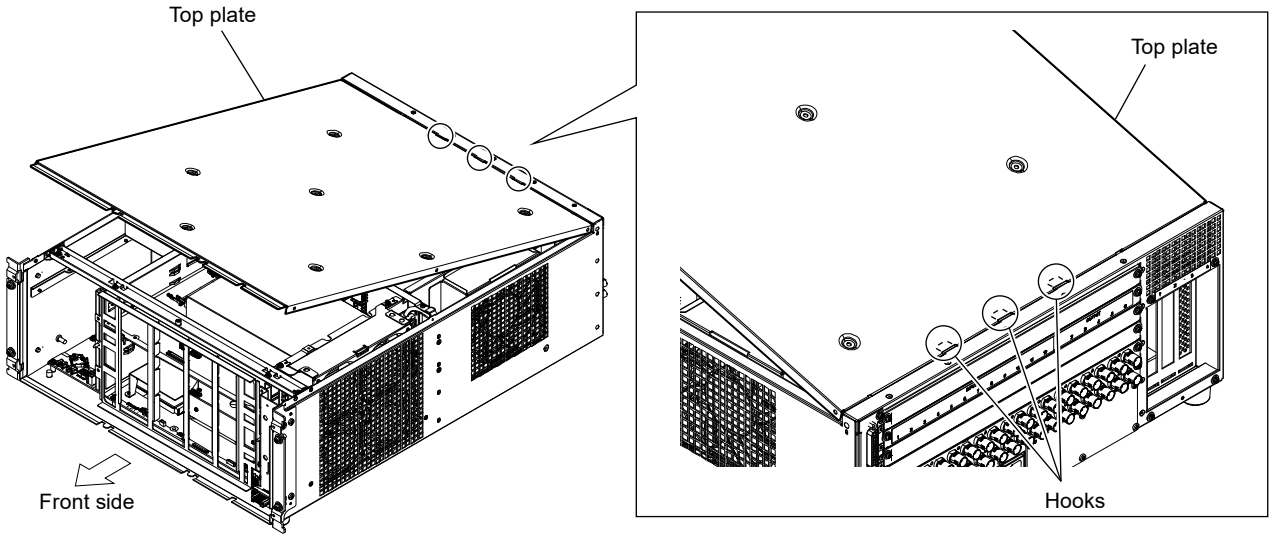
9. Connect the harness to the connector on the GPU assembly.
10. Pass the harness through the saddle wire, and then connect it to the connector (CN0400) on the IF-1392 board.



11. Install the removed PCI duct, PCI stay, top plate, and front panel in the reverse procedure of steps 1 to 5.

Note

Carefully install the top plate so that the three hooks do not overlap the top plate as shown below.



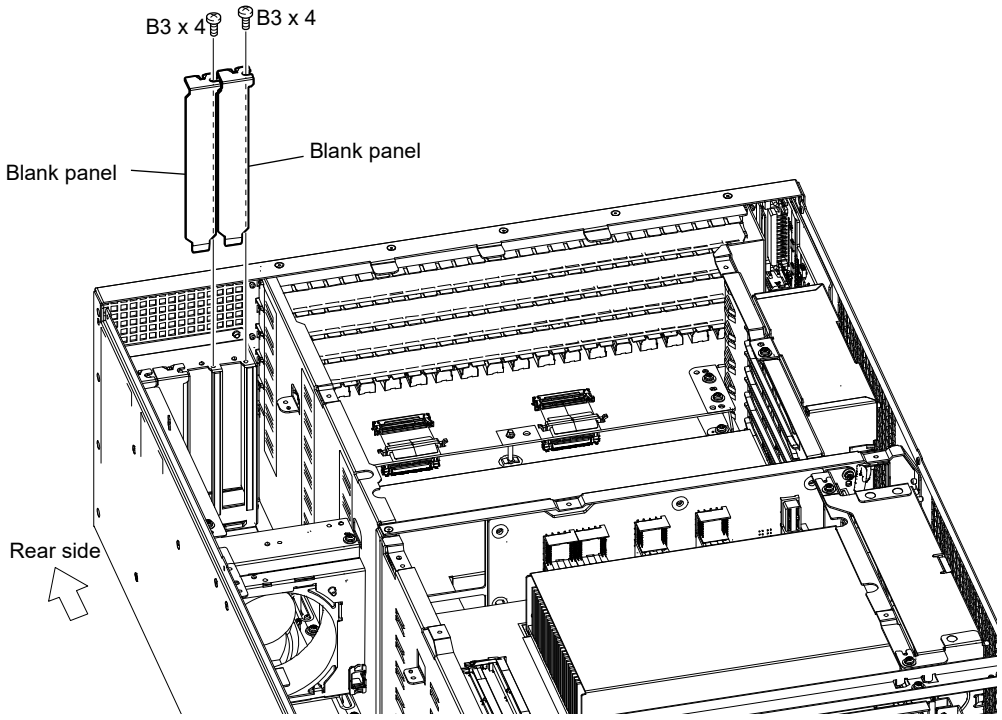
1-4-3. Installation of XKS-G1700

Procedure

1. Remove the front panel, top plate, PCI stay, and PCI duct according to steps 1 to 5 in “1-4-2. Installation of XKS-G1600”.
2. Remove the two screws, and then remove the two blank panels.

   Note

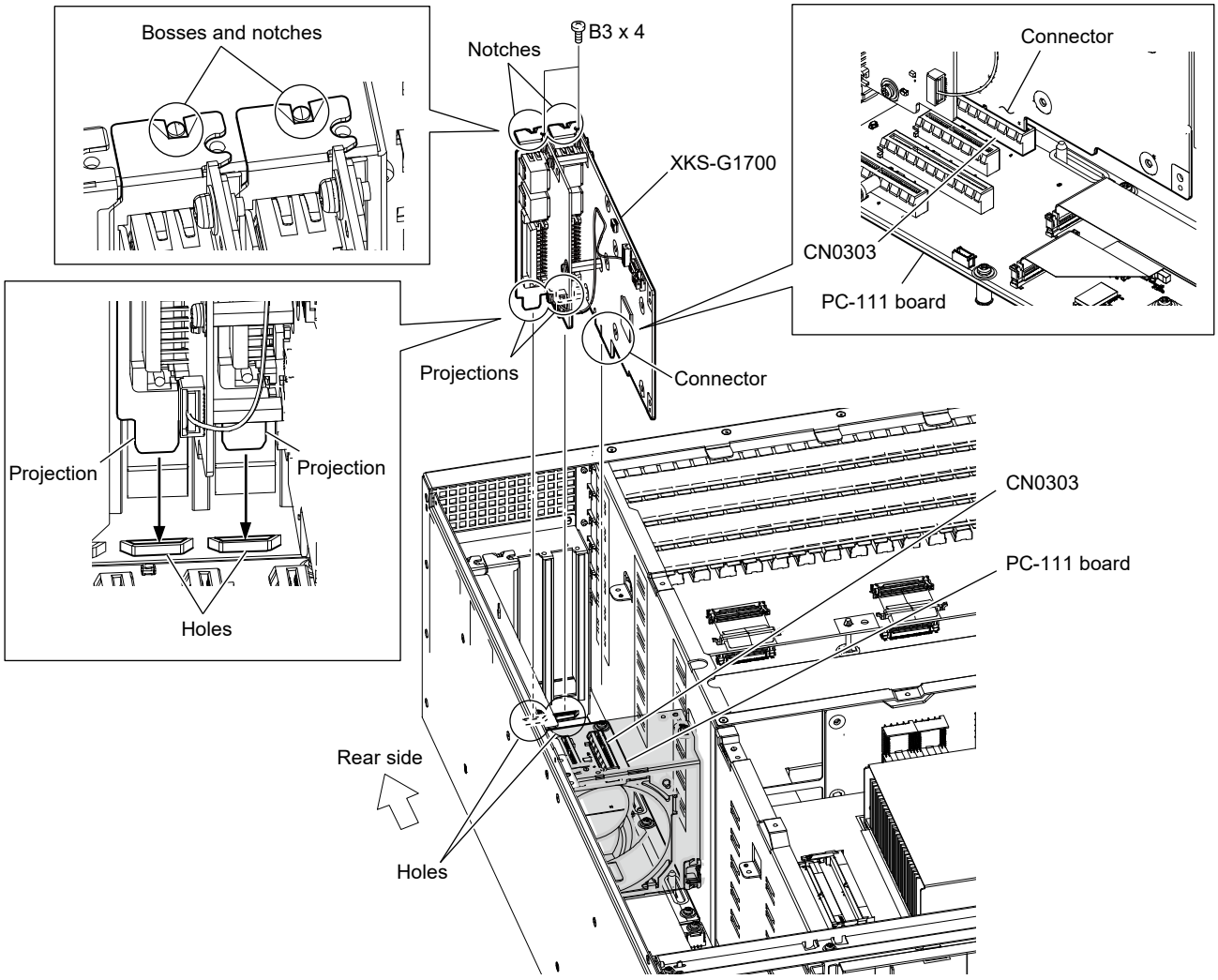
   Keep the removed blank panels safe.



3. Insert the two projections into the holes of XKS-G1700.
4. Insert the connector of XKS-G1700 into the connector (CN0303) on the PC-111 board, and then install the screws removed in step 2.

Note

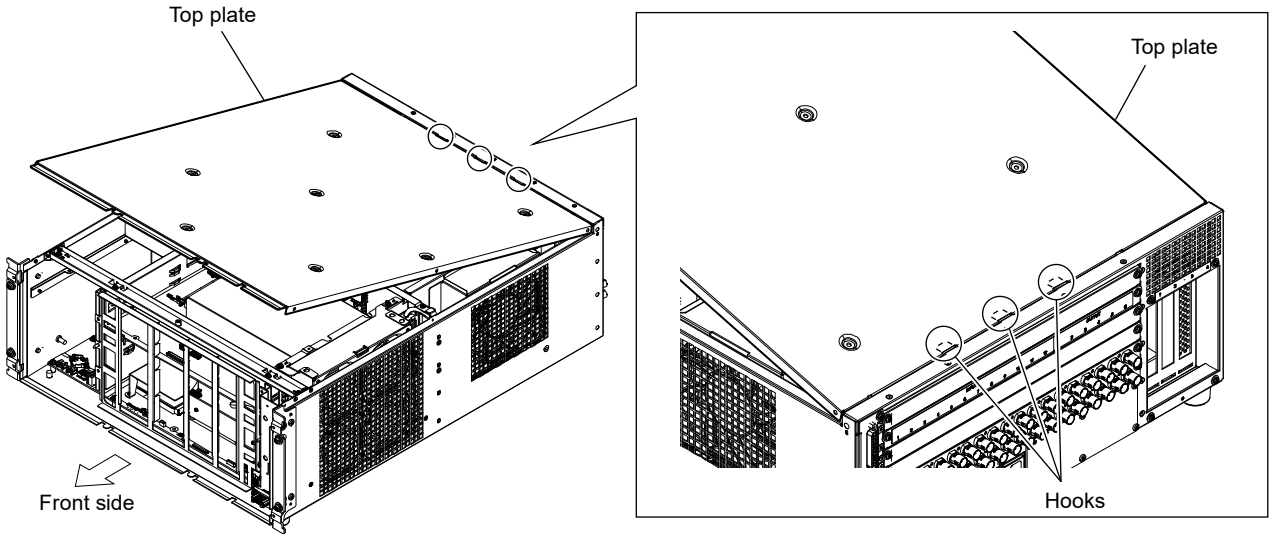
Confirm that the two bosses do not overlap the notches as shown below.



5. Install the removed PCI duct, PCI stay, top plate, and front panel in the reverse procedure of steps 1 to 5 in “1-4-2. Installation of XKS-G1600”.

Note

Carefully install the top plate so that the three hooks do not overlap the top plate as shown below.



1-5. Rack Mounting

This series is used in a 19-inch standard rack. This series can be installed on a VTR rack and a server rack.

Be sure to mount this unit into a rack accurately following the procedure and notes mentioned below.

Precautions for rack mounting

WARNING

- To prevent the rack from falling or moving, fix the rack on a flat and steady floor and the like using bolts or others.
  If the rack falls due to the weight of the equipment, it may cause death or serious injury.
- Be sure to use the specified rack mount kit.
  If not, injury may result and the equipment may fall due to insufficient strength.
- After rack mounting, be sure to tighten the screws on the rack angle and fix the unit in the rack.
  If the screws on the rack angle are not tightened, the unit may slip from the rack and fall, causing injury.

CAUTION

When mounting the unit in the rack, note the following:

- Be sure to mount in the rack with two persons or more.
- Be careful not to catch your fingers or hands in the rack mount rail or others.
- Mount in the rack in a stable position.

Note

If several units are mounted in a rack, it is recommended to install a ventilation fan to prevent temperature rise inside the rack.

1-5-1. Installation of the Main Unit to the VTR Rack

Using parts list

Specified Rack Mount Kit

RMM-1100 (Optional accessory)

Note

When you use any other rack mount kit than the specified one, you may fail to mount the unit to the specified 19 inch rack.

Parts packed in RMM-1100

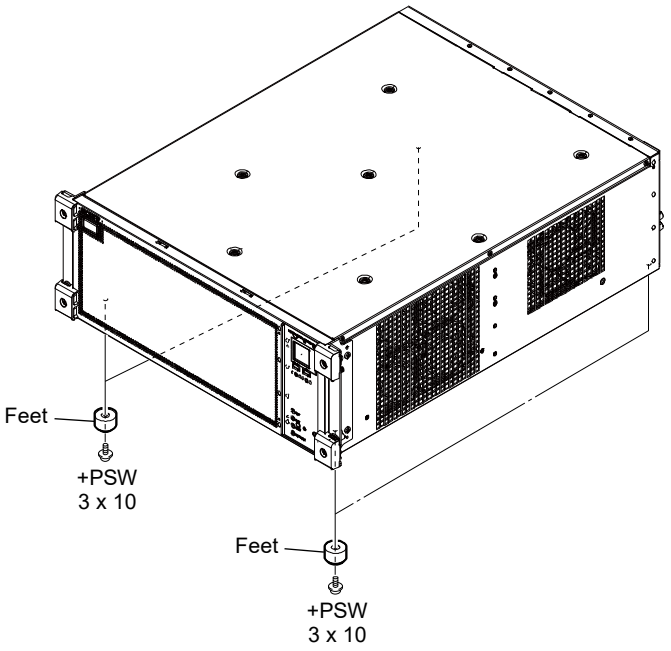
- Rack bracket: 2 pcs
- Support angle: 2 pcs
- Bracket: 4 pcs
- Support angle attachment screw (+PSW4 x 10: 7-682-962-01): 8 pcs
- Bracket attachment screw (+B4 x 10: 7-682-562-04): 6 pcs
- Rack bracket attachment screw (+B4 x 6: 7-682-560-09): 6 pcs

Other required parts

- Screw for rack mounting (+PSW5 x 12: 2-580-607-01): 4 pcs

Rack Mounting Procedure

1. Loosen the four screws, and then remove the four feet.



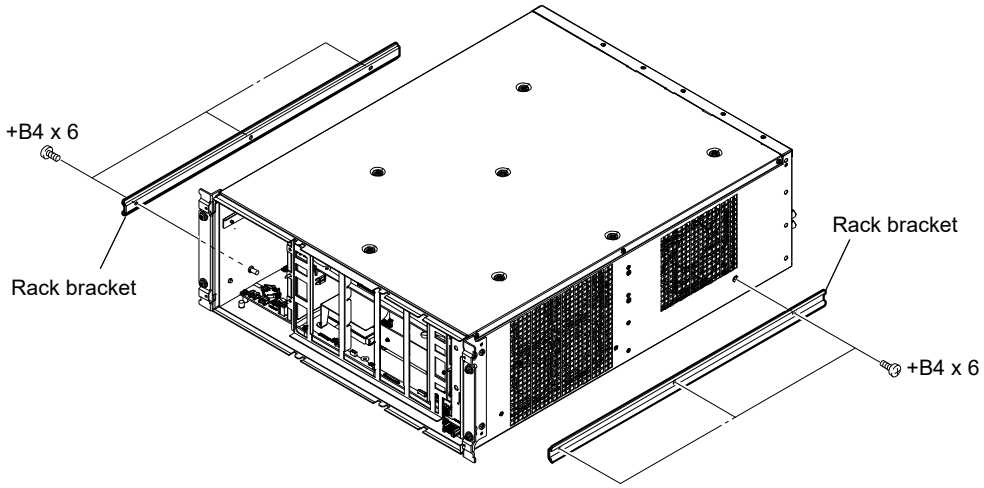
2. Remove the front panel of the unit. (Refer to “1-4-2. Installation of XKS-G1600”.)

3. Attach the rack brackets to the unit using the specified six rack bracket attachment screws.

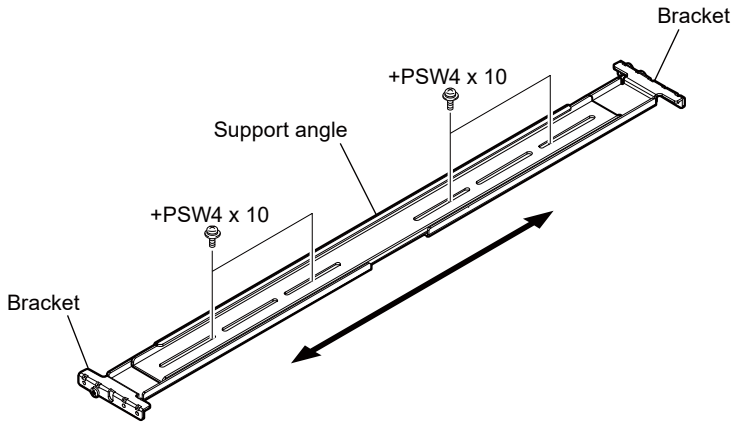
Note

Tighten the screws to the following torque.

Tightening torque: 1.40±0.2 N·m {14.3 kgf·cm}



4. Attach the four brackets to the two support angles by inserting the eight support angle attachment screws and loosely tightening.
5. Loosen the screws on the rear of the right and left brackets and adjust the length of the bracket according to the depth of the rack.

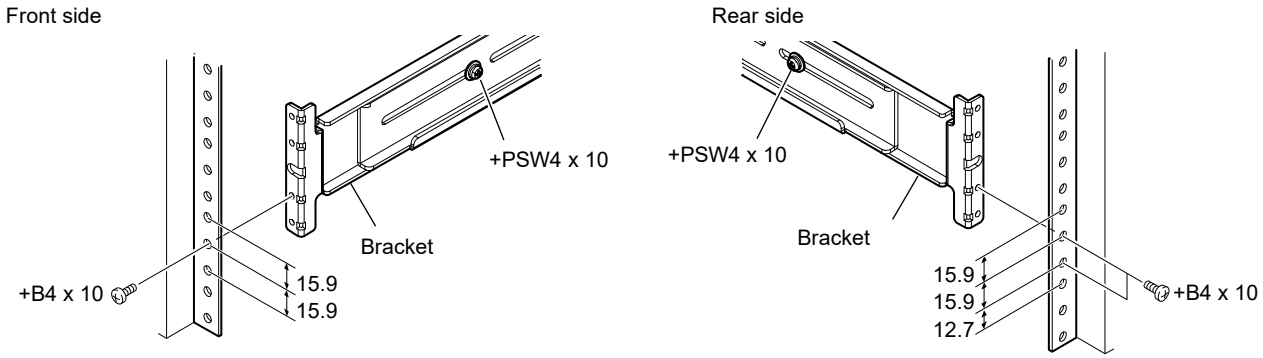


Tip

Maximum depth of bracket: 760 mm

Minimum depth of bracket: 582 mm

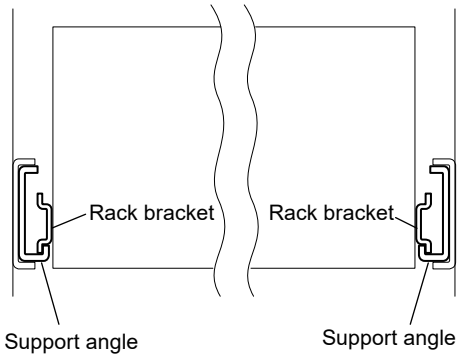
6. Attach the right and left brackets to the rack completely using the six bracket attachment screws. (The illustration below shows the left bracket.)
7. Tighten the screws (+PSW4 x 10: four screws each on the right and left) for adjusting the length of the bracket completely (the screws that were loosened in step 5).



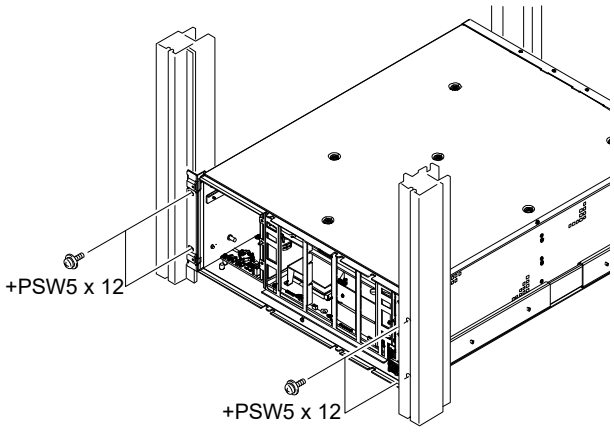
8. Align the groove of the rack bracket at the side of the unit with the rail, and slide the unit to the rear.

   Tip

   The rack brackets are hooked on the rails as shown below.



9. Fix the unit in the rack using the four screws for rack mounting.



10. Attach the front panel to the unit. (Refer to “1-4-2. Installation of XKS-G1600”.)

1-5-2. Installation of the Main Unit to the Server Rack

Using parts list

Specified Rack Mount Kit

RMM-1100 (Optional accessory)

Note

When you use any other rack mount kit than the specified one, you may fail to mount the unit to the specified 19 inch rack.

Parts packed in RMM-1100

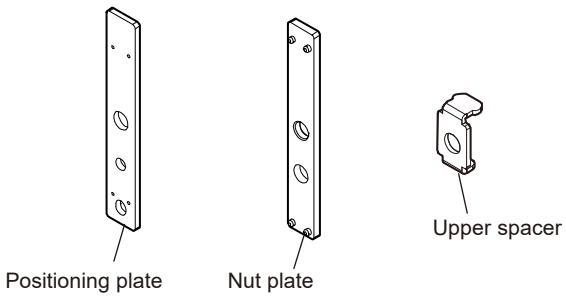
- Rack bracket: 2 pcs
- Support angle: 2 pcs
- Bracket: 4 pcs
- Support angle attachment screw (+PSW4 x 10: 7-682-962-01): 8 pcs
- Bracket attachment screw (+B4 x 10: 7-682-562-04): 6 pcs
- Rack bracket attachment screw (+B4 x 6: 7-682-560-09): 6 pcs

Other required parts

- Screw for rack mounting (+PSW5 x 12: 2-580-607-01): 4pcs

Specific Parts for the Server Rack

- Positioning plate (5-024-771-01): 4 pcs
- Nut plate (5-024-772-01): 2 pcs
- Upper spacer (4-690-040-01): 2 pcs

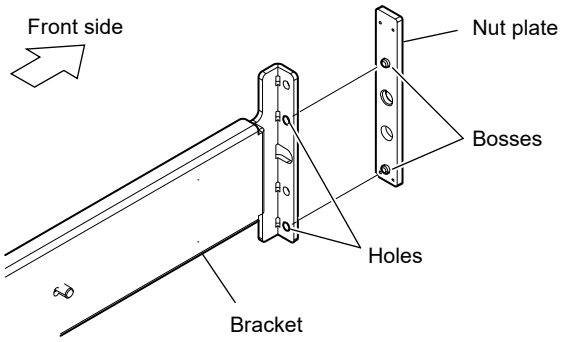


Rack Mounting Procedure

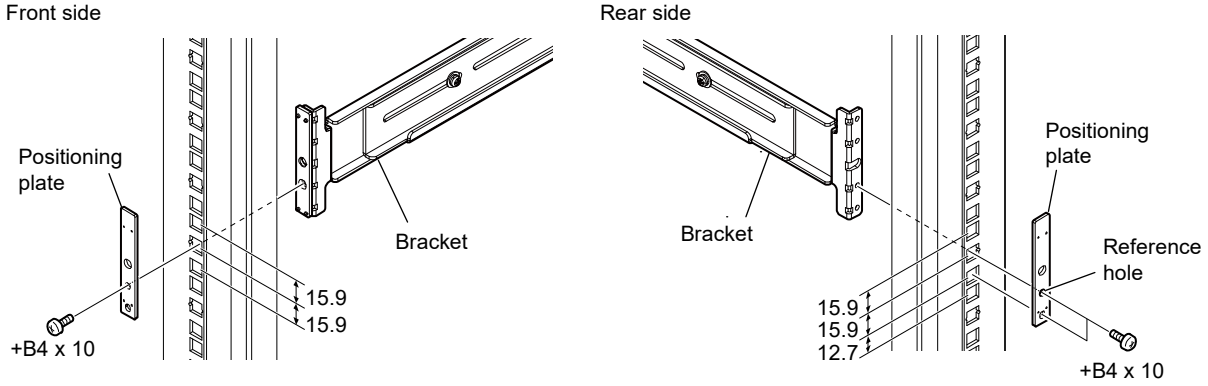
1. Perform steps 1 to 6 in “1-5-1. Installation of the Main Unit to the VTR Rack”.
2. Remove the release paper from each plate nut.
3. Attach the plate nuts to the right and left support brackets. (The illustration below shows the left bracket.)

   Note

   Set the boss positions as shown below.



4. Secure the right and left brackets to the rack with the six bracket attachment screws. (The illustration below shows the left bracket.)

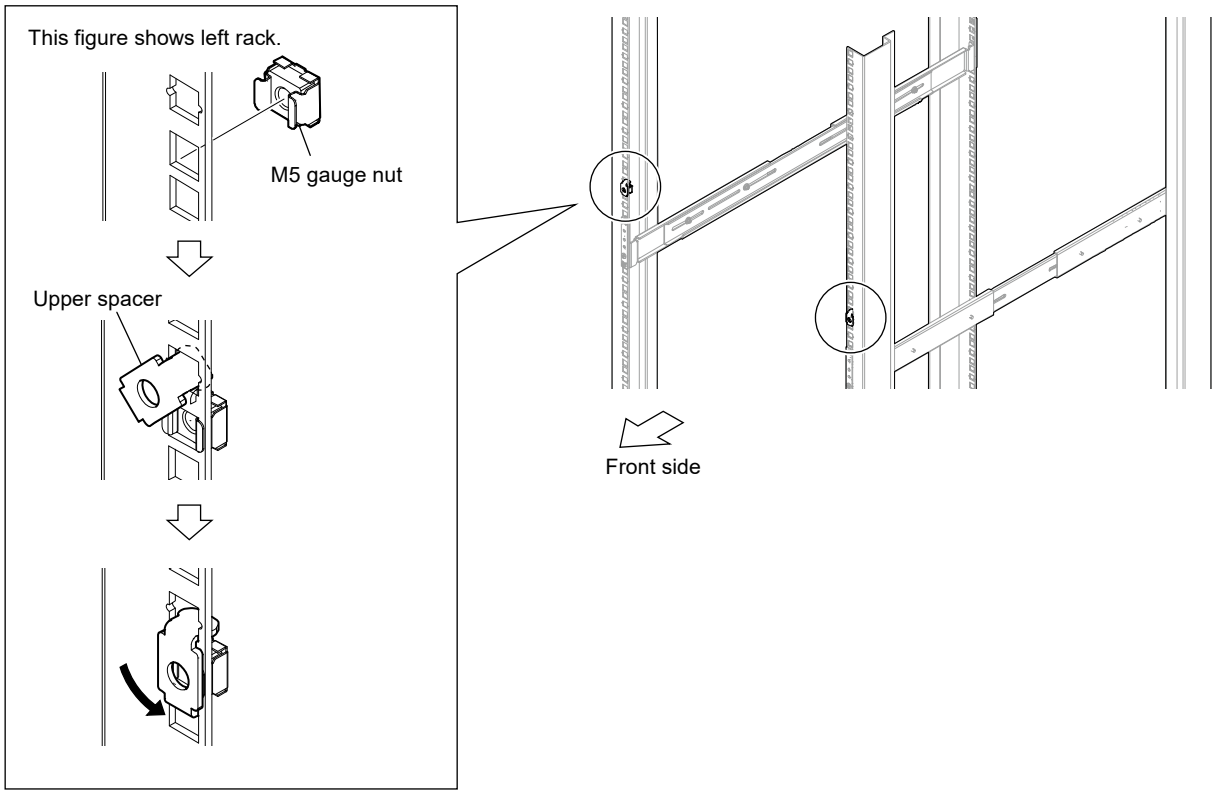


5. Install two M5 gauge nuts at the specified locations of the rack.

   Tip

   M5 gauge nuts are supplied with the rack.

6. Insert the upper spacer obliquely into the rectangular hole above the mounted M5 gauge nut.
7. Turn the upper spacer.
8. Install the upper spacer to the rack on the other side in the same way.



9. Perform steps 8 and 9 in “1-5-1. Installation of the Main Unit to the VTR Rack”.
10. Attach the front panel to the unit. (Refer to “1-4-2. Installation of XKS-G1600”.)

1-6. Matching Connectors and Cables

Use the following connectors, cables or equivalents when connecting cables to the unit.

Model name	Panel indication	Connector name	Matching connector and cable
XVS-G1	REF	BNC, 75 Ω	Belden 1694 coaxial cable*1
	REF OUT	BNC, 75 Ω	Belden 1694 coaxial cable*1
	GPI	D-sub 25-pin, Female	D-sub 25-pin, Male Connector 25-pin, Male 1-560-904-11*2 Junction Shell 25-pin 1-563-377-11
	LAN-1 LAN-2	RJ-45 modular jack	CAT5e or equivalent*3
	INPUT 1-12, 13-24 OUTPUT 1-6, 7-12	BNC, 75 Ω	Belden 4794R coaxial cable
XKS-G1110	INPUT 1-12 OUTPUT 1-6	BNC, 75 Ω	Belden 1694 coaxial cable*1
XKS-G1700	REMOTE 1/2, 3/4	RJ-45 modular jack	RJ-45 D-sub cable*4 1-011-871-11
	GPI	D-sub 25-pin, Female	D-sub 25-pin, Male Connector 25-pin, Male 1-560-904-11*2 Junction Shell 25-pin 1-563-377-11

*1: Conforms to the IEEE 802.3 Ethernet 1000BASE-T standards.

*2: The following crimp contact is required for the plug.

AWG#18 to #22: 1-566-493-21

AWG#22 to #24: 1-564-774-11

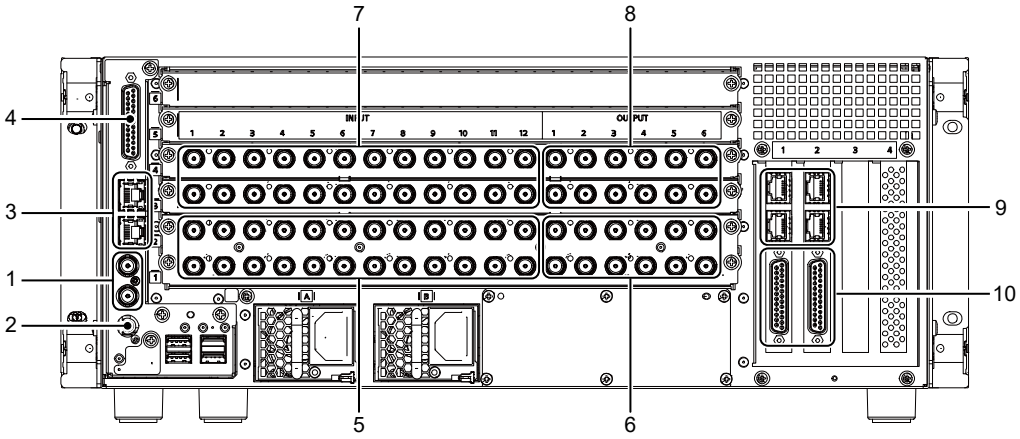
AWG#24 to #30: 1-564-775-11

*3: Use the IEEE 802.3 Ethernet 1000BASE-T standards.

*4: Use the RJ-45 D-Sub conversion cable (supplied with this unit).

EIA RS-422A compliant

1-7. Input/Output Signals of Connectors



1-7-1. XVS-G1

1. REF IN/THRU

BNC x 2, loop through, 75 Ω

NTSC, PAL black burst and sync signal or HD tri-level sync signal

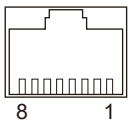
2. REF OUT

BNC x 1, loop through, 75 Ω

NTSC, PAL black burst or HD tri-level sync signal

3. LAN 1/LAN 2

1000BASE-T, RJ-45 (8-pin)



- External View -

Pin No.	Signal Name	Function
1	TRX1+	Transmitted/Received data (+)
2	TRX1-	Transmitted/Received data (-)
3	TRX2+	Transmitted/Received data (+)
4	TRX3+	Transmitted/Received data (+)
5	TRX3-	Transmitted/Received data (-)
6	TRX2-	Transmitted/Received data (-)
7	TRX4+	Transmitted/Received data (+)
8	TRX4-	Transmitted/Received data (-)

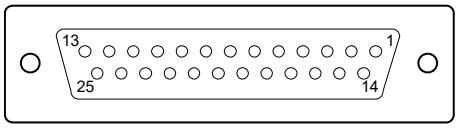
4. GPI

D-sub 25-pin, Female

INPUT x 6, TTL (resistive load)

OUTPUT x 16, open collector 30 V rated voltage

D-sub 25-pin, Female



- External View -

Pin No.	Signal Name	Function
1	GND	Ground
2	GPI IN 2	General-purpose input
3	GPI IN 4	
4	GPI IN 6	
5	GPI OUT 2	General-purpose open collector output*1
6	GPI OUT 4	
7	GPI OUT 6	
8	GPI OUT 8	
9	GPI OUT 10	
10	GPI OUT 12	
11	GPI OUT 14	
12	GPI OUT 16	
13	GPI OUT COM	Ground for open collector output
14	GPI IN 1	General-purpose input
15	GPI IN 3	
16	GPI IN 5	
17	GPI OUT 1	General-purpose open collector output*1
18	GPI OUT 3	
19	GPI OUT 5	
20	GPI OUT 7	
21	GPI OUT 9	
22	GPI OUT 11	
23	GPI OUT 13	
24	GPI OUT 15	
25	GPI OUT COM	Ground for open collector output

*1: Open collector output

5. INPUT 1-12, 13-24

BNC x 24, 75 Ω

SDI input: SMPTE ST259-C, SMPTE ST292, SMPTE ST424, SMPTE ST425-1, SMPTE ST425-5, SMPTE ST2082-1

6. OUTPUT 1-6, 7-12

BNC x 12, 75 Ω

SDI output: SMPTE ST259-C, SMPTE ST292, SMPTE ST424, SMPTE ST425-1, SMPTE ST425-5, SMPTE ST2082-1

1-7-2. XKS-G1110

7. INPUT 25-36, 37-48

BNC x 12, 75 Ω

SDI input: SMPTE ST259-C, SMPTE ST292, SMPTE ST424, SMPTE ST425-1, SMPTE ST425-5

8. OUTPUT 13-18, 19-24

BNC x 6, 75 Ω

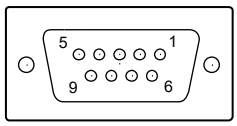
SDI output: SMPTE ST259-C, SMPTE ST292, SMPTE ST424, SMPTE ST425-1, SMPTE ST425-5

1-7-3. XKS-G1700

9. REMOTE 1/2, 3/4, 5/6, 7/8

RJ-45 8-pin x 4 (Use the RJ-45 D-Sub conversion cable supplied with this unit.)

D-sub 9-pin, Female, RS-232C



- External View -

Pin No.	Function
1	GND
2	RM TX (-)
3	RM RX (+)
4	GND
5	NC
6	GND
7	RM TX (+)
8	RM RX (-)
9	GND

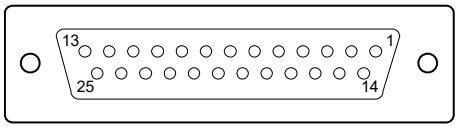
10. GPI 1, 2

D-sub 25-pin, Female

INPUT x 6, TTL (resistive load)

OUTPUT x 16, open collector 30 V rated voltage

D-sub 25-pin, Female



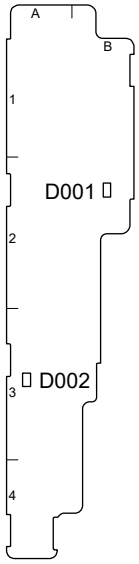
- External View -

Pin No.	Signal Name	Function
1	GND	Ground
2	GPI IN 2	General-purpose input
3	GPI IN 4	
4	GPI IN 6	
5	GPI OUT 2	General-purpose open collector output*1
6	GPI OUT 4	
7	GPI OUT 6	
8	GPI OUT 8	
9	GPI OUT 10	
10	GPI OUT 12	
11	GPI OUT 14	
12	GPI OUT 16	
13	GPI OUT COM	Ground for open collector output
14	GPI IN 1	General-purpose input
15	GPI IN 3	
16	GPI IN 5	
17	GPI OUT 1	General-purpose open collector output*1
18	GPI OUT 3	
19	GPI OUT 5	
20	GPI OUT 7	
21	GPI OUT 9	
22	GPI OUT 11	
23	GPI OUT 13	
24	GPI OUT 15	
25	GPI OUT COM	Ground for open collector output

*1: Open collector output

1-8. Description of On-board Switches and LEDs

1-8-1. CN-4166 Board

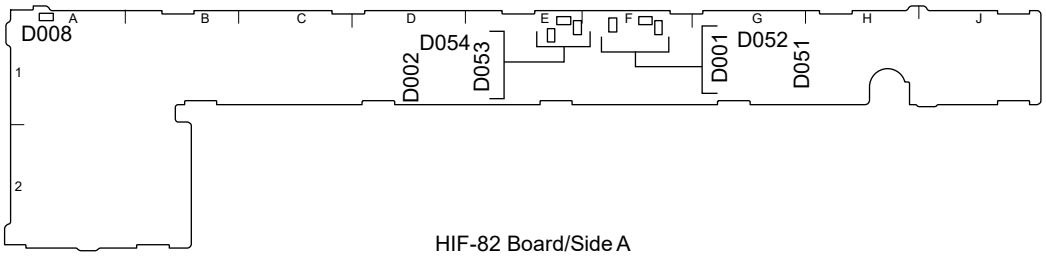


CN-4166 Board/Side A

LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D001	+3.3V_STB	Orange	Lit when the standby power +3.3V_STB is normally supplied.	On
D002	+12V	Yellow green	Lit when the main power +12V_STB is normally supplied.	On

1-8-2. HIF-82 Board



HIF-82 Board/Side A

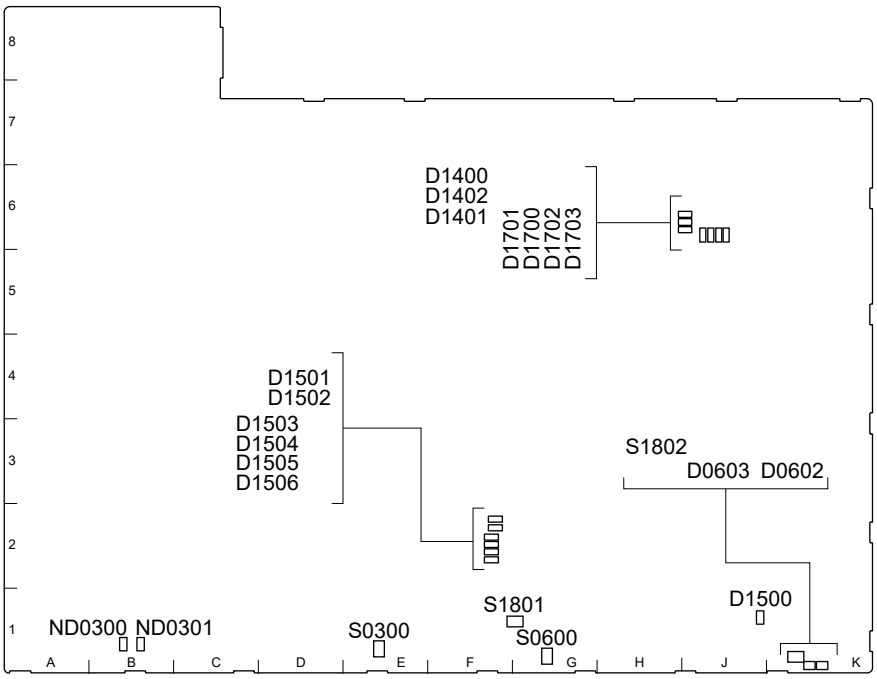
LED

Note

D051 to D054 are not mounted on the HIF-82 board with a suffix of "-13".

Ref. No.	Name	Color	Function	Normal state (Power on)
D001	+12V	Yellow green	Lit when the main power +12V_STB is normally supplied.	On
D002	+3.3V_STB	Orange	Lit when the standby power +3.3V_STB is normally supplied.	On
D008	+1.25V_PS	Yellow green	Lit when the main power +1.25_PS is normally supplied.	On
D051	+12V_FLT	Orange	Lights when an error occurs in the e fuse on the +12 V side.	Off
D052	+12V_PG	Yellow green	Lit in the Power Good state of the e fuse on the +12 V side.	On
D053	+3.3V_STB_FLT	Orange	Lights when an error occurs in the e fuse on the +3.3V_SB side.	Off
D054	+3.3V_STB_PG	Yellow green	Lit in the Power Good state of the e fuse on the +3.3V_STB side.	On

1-8-3. IF-1392 Board



IF-1392 Board/Side A

Switch

Note

Do not change the settings of the switches described as “Factory use”.

Ref. No.	Bit	Function	Factory default setting
S0300	-	Power ON SW (ON with push)	-
S0600	-	System Reset (Reset with push)	-
S1801	-	Factory use	All OFF
S1802	-	Auto Power SW ON: enable OFF: disable	OFF

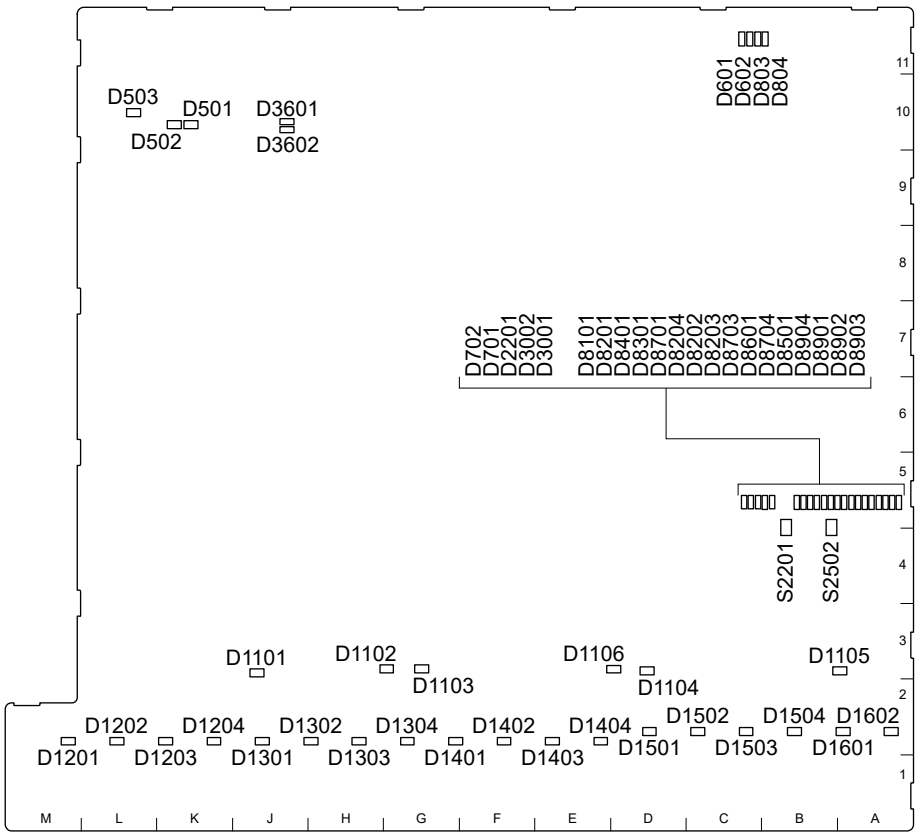
LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D0602	Sub power status	Orange	Lit when the sub power is turned on.	On
D0603	Main power status	Yellow green	Lit when the main power is turned on.	On
D1400	REF status (1)	Yellow green	Lit in the REF NO LOCK status.	Off
D1401	REF status (2)	Yellow green	Lit in the NO REF status.	Off
D1402	REF status (3)	Yellow green	Lit in the REF NO ALIGN status.	Off
D1500	COME+12 overcurrent	Red	Lit when COME +12 V is overloaded.	Off
D1501	-	Yellow green	Factory use	Inconstant

Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D1502	-	Yellow green	Factory use	Inconstant
D1503	Intel LAN status (1)	Yellow green	Lit when Intel LAN is active.	Inconstant
D1504	Intel LAN status (2)	Yellow green	Lit when Intel LAN is link.	Inconstant
D1505	Intel LAN status (3)	Yellow green	Lit when Intel LAN is 100base.	Inconstant
D1506	Intel LAN status (4)	Yellow green	Lit when Intel LAN is 1000base.	Inconstant
D1700	-	Yellow green	Factory use	Inconstant
D1701	-	Yellow green	Factory use	Inconstant
D1702	-	Yellow green	Factory use	Inconstant
D1703	-	Yellow green	Factory use	Inconstant
ND0300	Status LED1	Green	The board startup status is displayed. (Refer to the service manual of the unit.)	Inconstant
ND0301	Status LED0	Green	The board startup status is displayed. (Refer to the service manual of the unit.)	Inconstant

1-8-4. IO-291 Board



IO-291 Board/Side A

Switch

Ref. No.	Bit	Function	Factory default setting
S2201	-	Reboot-switch of the board	-
S2502	-	Factory use	-

LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D501	+12V-A	Green	Lit when the +12V-A power is normally supplied. If this LED does not light, the fuse (F501) may be blown.	On
D502	+12V-B	Green	Lit when the +12V-B power is normally supplied. If this LED does not light, the fuse (F502) may be blown.	On

Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D503	+12V-C	Green	Lit when the +12V-C power is normally supplied. If this LED does not light, the fuse (F503) may be blown.	On
D601	Clock Generator (IC602) STATUS1	Green	Lights when PLL1 of the clock generator is locked.	On
D602	Clock Generator (IC602) STATUS0	Green	Lights when PLL2 of the clock generator is locked.	On
D701	Clock Generator (IC701) STATUS1	Green	Lights when PLL1 of the clock generator is locked.	On
D702	Clock Generator (IC701) STATUS0	Green	Lights when PLL2 of the clock generator is locked.	On
D803	Clock Generator (IC802) STATUS0	Green	For future expansion.	Off
D804	Clock Generator (IC802) STATUS1	Green	For future expansion.	Off
D1101	+1.8V_SDI1	Green	Lit when the +1.8V_SDI1 power is supplied normally.	On
D1102	+2.5V_SDI1	Green	Lit when the +2.5V_SDI1 power is supplied normally.	On
D1103	+1.8V_SDI2	Green	Lit when the +1.8V_SDI2 power is supplied normally.	On
D1104	+2.5V_SDI2	Green	Lit when the +2.5V_SDI2 power is supplied normally.	On
D1105	+1.8V_SDI3	Green	Lit when the +1.8V_SDI3 power is supplied normally.	On
D1106	+2.5V_SDI3	Green	Lit when the +2.5V_SDI3 power is supplied normally.	On
D1201 to D1204, D1301 to D1304, D1401 to D1404	For checking SDI input	Green	These LEDs indicate the lock state of the reclockers of each channel SDI-IN CH1 to CH12. These LEDs are lit when normal SDI signals are input. Tip When no SDI signal is input, these LEDs light at random due to operation of ICs. This is not a failure.	Inconstant

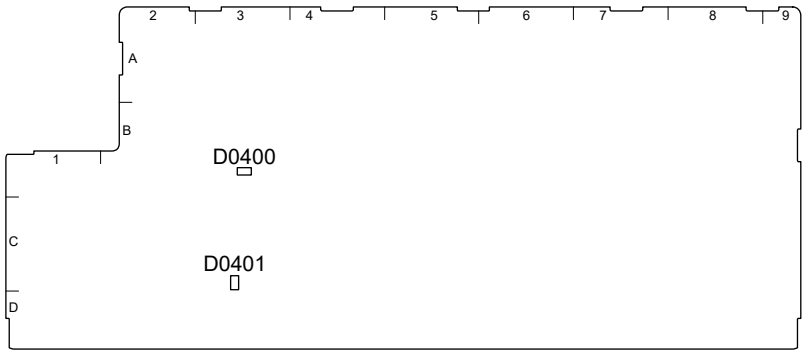
Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D1501 to D1504, D1601, D1602	For checking SDI output	Green	These LEDs indicate the lock state of the reclockers of each channel SDI-OUT CH1 to CH6. These LEDs are lit when normal SDI signals are output. Tip When no SDI signal is input, these LEDs light at random due to operation of ICs. This is not a failure.	Inconstant
D2201	CADEC Configuration STATUS	Red	Indicates the CADEC (IC001) configuration status. Goes out when the configuration is complete. If this LED does not go out, the configuration does not finish due to abnormal operation.	Off
D2501	-	Green	For future expansion.	Off
D2502	Format 59.94	Green	Blinks when the system format is set to 59.94 Hz.	Inconstant
D2503	-	Green	For future expansion.	Off
D2504	Format 50	Green	Blinks when the system format is set to 50 Hz.	Inconstant
D2505	-	Green	For future expansion.	Off
D3001	S-CFG	Red	Indicates the FPGA (IC002) master SPI configuration status. Goes out when the configuration is complete. If this LED does not go out, the configuration does not finish due to abnormal operation.	Off
D3002	S-CvP	Red	Indicates the FPGA (IC002) CvP (tandem) SPI configuration status. Goes out when the configuration is complete. If this LED does not go out, the configuration does not finish due to abnormal operation.	Off
D3601	LED-SDI1	Green	Blinks when the configuration of the FPGA (IC002) is complete while the control clock oscillator (X902) operates correctly. Otherwise, this LED does not light and the oscillator does not operate correctly.	Blinks
D3602	LED-SDI2	Red	Blinks when the configuration of the FPGA is complete while the control clock PLL (IC002) operates correctly. Otherwise, this LED does not light and the oscillator does not operate correctly.	Blinks
D8101	+0.85V_S1	Green	Lit when the +0.85V_S1 power is supplied normally.	On
D8201	+0.85V_S2	Green	Lit when the +0.85V_S2 power is supplied normally.	On
D8202	+1.8V_S1	Green	Lit when the +1.8V_S1 power is supplied normally.	On

Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D8203	+1.8V_S2	Green	Lit when the +1.8V_S2 power is supplied normally.	On
D8204	+2.5V_S1	Green	Lit when the +2.5V_S1 power is supplied normally.	On
D8301	+0.9V_S1_L	Green	Lit when the +0.9V_S1_L power is supplied normally.	On
D8401	+0.9V_S1_R	Green	Lit when the +0.9V_S1_R power is supplied normally.	On
D8501	+1.2V_S1_L	Green	Lit when the +1.2V_S1_L power is supplied normally.	On
D8601	+1.2V_S1_R	Green	Lit when the +1.2V_S1_R power is supplied normally.	On
D8701	+1.2V_S2	Green	Lit when the +1.2V_S2 power is supplied normally.	On
D8703	+1.2V_S3	Green	Lit when the +1.2V_S3 power is supplied normally.	On
D8704	+1.8V_S3	Green	Lit when the +1.8V_S3 power is supplied normally.	On
D8901	+3.3V	Green	Lit when the +3.3V power is supplied normally.	On
D8902	+1.8V	Green	Lit when the +1.8V power is supplied normally.	On
D8903	+2.5V	Green	Lit when the +2.5V power is supplied normally.	On
D8904	+1.2V	Green	Lit when the +1.2V power is supplied normally.	On

1-8-5. PC-111 Board

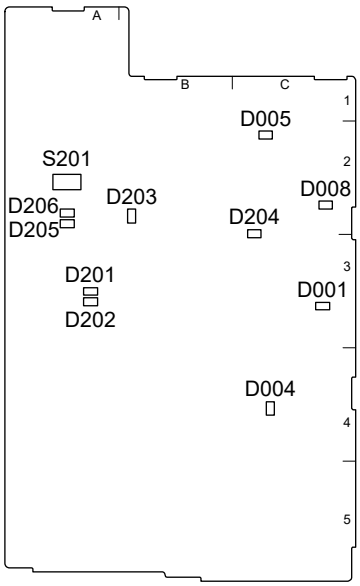


PC-111 Board/Side A

LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D0400	-	Red	Lit when +12 V of CN0301 is overloaded.	Off
D0401	-	Orange	Lit when +3.3 V of CN0301 is overloaded.	Off

1-8-6. PIF-67 Board



PIF-67 Board/Side A

Switch

Ref. No.	Bit	Function	Factory default setting
S201	-	Factory use	-

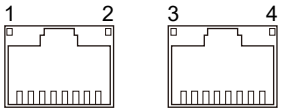
LED (On the board)

Ref. No.	Name	Color	Function	Normal state (Power on)
D001	+12V	Yellow green	Lit when the main power +12V is normally supplied.	On
D004	+3.3V_STB	Orange	Lit when the standby power +3.3V_STB is normally supplied.	On
D005	+3.3VDD	Yellow green	Lit when the main power +3.3VDD is normally supplied.	On
D008	+5V_EXT	Yellow green	Lit when the main power +5V_EXT is normally supplied.	On
D201	LAN1_LINK	Yellow	Lit when the LAN 1 (J003) connector is connected to the hub with a network cable. Unlit in other cases.	Inconstant
D202	LAN1_ACT	Yellow green	Blinks when data transfer takes place while D201 is lit.	Inconstant
D203	GbE-Hub_INT	Yellow	Lights when an interrupt of IC201 is generated.	Off
D204	+1.8VA_STB	Orange	Lit when the standby power +1.8VA_STB is normally supplied.	On

Continued

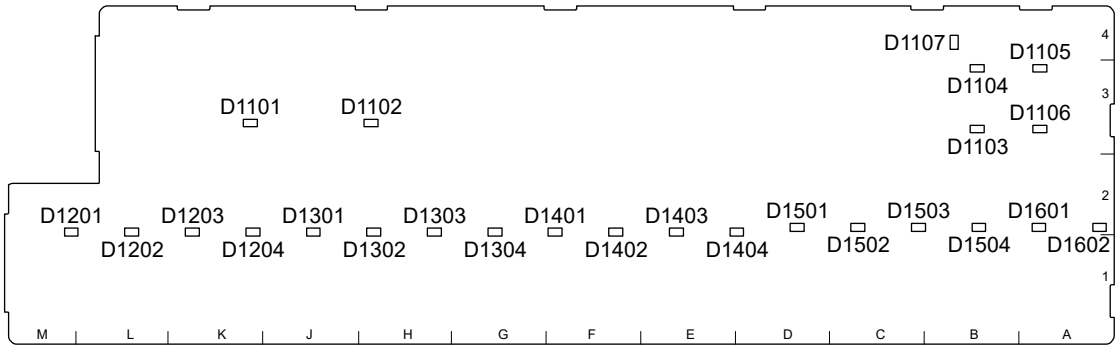
Ref. No.	Name	Color	Function	Normal state (Power on)
D205	GbE-Hub-P4_ACT	Yellow	Lit when the LAN 1 (J003) connector is connected to the hub with a network cable. Unlit in other cases.	Inconstant
D206	-GbE-Hub_P4_LINK	Yellow green	Blinks when data transfer takes place while D205 is lit.	Inconstant

LED (Connector)



No.	Connector Name (Ref. No.)	Color	Function	Normal state (Power on)
1	LAN 1 (J003)	Green	Lit when the LAN 1 (J003) connector is connected to the hub with a network cable. Unlit in other cases.	Inconstant
2		Yellow	Lit when data transfer takes place.	Inconstant
3	LAN 2 (J004)	Green	Lit when the LAN 2 (J004) connector is connected to the hub with a network cable.	Inconstant
4		Yellow	Lit when data transfer takes place.	Inconstant

1-8-7. SDI-133 Board (XVS-G1/XKS-G1110)

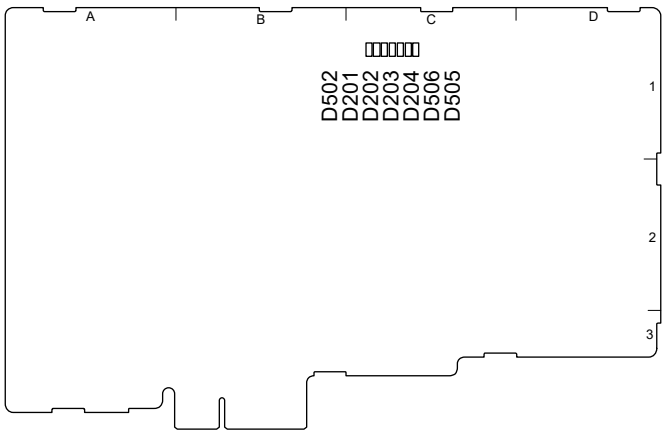


SDI-133 Board/Side A

LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D1101	+1.8V-S1	Green	Lit when the +1.8V-S1 power is supplied normally.	On
D1102	+2.5V-S1	Green	Lit when the +2.5V-S1 power is supplied normally.	On
D1103	+1.8V-S2	Green	Lit when the +1.8V-S2 power is supplied normally.	On
D1104	+1.8V-S3	Green	Lit when the +1.8V-S3 power is supplied normally.	On
D1105	+2.5V-S3	Green	Lit when the +2.5V-S3 power is supplied normally.	On
D1106	+2.5V-S2	Green	Lit when the +2.5V-S2 power is supplied normally.	On
D1107	Power monitoring	Green	Lit when all power is supplied normally.	On
D1201 to D1204, D1301 to D1304, D1401 to D1404	For checking SDI input	Green	These LEDs indicate the lock state of the reclockers of each channel SDI-IN CH1 to CH12. These LEDs are lit when normal SDI signals are input. Tip When no SDI signal is input, these LEDs light at random due to operation of ICs. This is not a failure.	Inconstant
D1501 to D1504, D1601, D1602	For checking SDI output	Green	These LEDs indicate the lock state of the reclockers of each channel SDI-OUT CH1 to CH6. These LEDs are lit when normal SDI signals are output. Tip When no SDI signal is input, these LEDs light at random due to operation of ICs. This is not a failure.	Inconstant

1-8-8. SIO-39 Board (XKS-G1700)

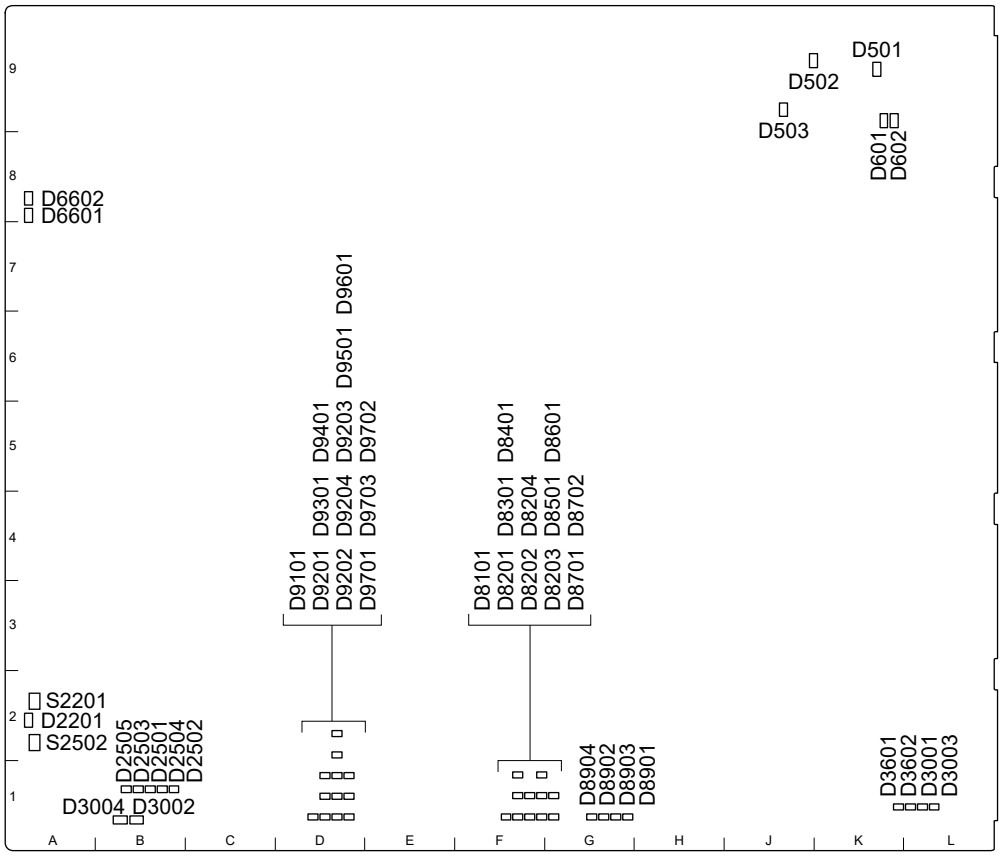


SIO-39 Board/Side A

LED

Ref. No.	Name	Color	Function	Normal state (Power on)
D201	LED-0	Yellow green	Blinks while IC001 is operating normally.	Blinks
D202	LED-1	Yellow green	Blinks while IC001 is operating normally.	Blinks
D203	LED-2	Yellow green	Blinks while IC001 is operating normally.	Blinks
D204	LED-3	Yellow green	Blinks while IC001 is operating normally.	Blinks
D502	+1.1V	Yellow green	Lit when the main power +1.1V is supplied normally.	On
D505	+3.3V	Yellow green	Lit when the main power +3.3V is supplied normally.	On
D506	+2.5V	Yellow green	Lit when the main power +2.5V is supplied normally.	On

1-8-9. VIF-81 Board



VIF-81 Board/Side A

Switch

Ref. No.	Bit	Function	Factory default setting
S2201	-	Reboot-switch of the board	-
S2502	-	Factory use	-

LED

Hardware status

Ref. No.	Name	Color	Function	Normal state (Power on)
D601	LMK_VCLK0_ STS1	Green	Indicates the clock cleaner (IC602) status. Lights when PLL1 of the clock cleaner is locked.	On
D602	LMK_VCLK0_ STS0	Green	Indicates the clock cleaner (IC602) status. Lights when PLL2 of the clock cleaner is locked.	On
D2201	CADEC	Red	Indicates the configuration status of the CADEC (IC001). Goes out when the CADEC (IC001) has been correctly configured after initialization. If this LED does not go out, the CADEC (IC001) has not been configured correctly.	Off
D2501	C_LED0	Green	For future expansion.	Off
D2502	C_LED1	Green	Blinks when the system format is set to 59.94 Hz.	Inconstant
D2503	C_LED2	Yellow	For future expansion.	Off
D2504	C_LED3	Orange	Blinks when the system format is set to 50 Hz.	Inconstant
D2505	C_LED4	Red	For future expansion.	Off
D3001	S-CFG	Red	Indicates the master SPI configuration status of the SWR FPGA (IC002). Goes out when the SWR FPGA (IC002) has been correctly configured after initialization. If this LED does not go out, the SWR FPGA (IC002) has not been configured correctly.	Off
D3002	G-CFG	Red	Indicates the master SPI configuration status of the GIF FPGA (IC003). Goes out when the GIF FPGA (IC003) has been correctly configured after initialization. If this LED does not go out, the SWR FPGA (IC002) has not been configured correctly.	Off
D3003	S-CvP	Red	Indicates the CvP (tandem) configuration status of the SWR FPGA (IC002). Goes out when the CvP configuration is correctly completed after initialization. If this LED does not go out, the SWR FPGA (IC002) has not been configured correctly.	Off

Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D3004	G-CvP	Red	Indicates the CvP (tandem) configuration status of the GIF FPGA (IC003). Goes out when the CvP configuration is correctly completed after initialization. If this LED does not go out, the GIF FPGA (IC003) has not been configured correctly.	Off
D3601	LED-S1	Green	Blinks when the FPGA configuration is complete while the control clock oscillator (X902) on the board is normally operating.	Inconstant
D3602	LED-S2	Green	Blinks when the FPGA configuration is complete while the control clock PLL in the FPGA on the board is normally operating.	Inconstant
D6601	LED-G1	Green	Blinks when the FPGA configuration is complete while the control clock oscillator (X902) on the board is normally operating.	Inconstant
D6602	LED-G2	Red	Blinks when the FPGA configuration is complete while the control clock PLL in the FPGA on the board is normally operating.	Inconstant

Power status

Ref. No.	Name	Color	Function	Normal state (Power on)
D501	12V-A	Green	Lit when power is normally supplied from the motherboard to channel A of 12 V. If this LED does not light, the fuse (F501) may be blown.	On
D502	12V-B	Green	Lit when power is normally supplied from the motherboard to channel B of 12 V. If this LED does not light, the fuse (F502) may be blown.	On
D503	12V-C	Green	Lit when power is normally supplied from the motherboard to channel C of 12 V. If this LED does not light, the fuse (F503) may be blown.	On
D8101	0.85V_S1	Green	Lit when the 0.85 V core power (Vccint) of the SWR FPGA (IC002) is normally supplied.	On
D8201	0.85V_S2	Green	Lit when the 0.85 V core power (Vccint) of the SWR FPGA (IC002) is normally supplied.	On
D8202	1.8V_S1	Green	Lit when the Vccaux/Vccaux_io powere of the SWR FPGA (IC002) is normally supplied.	On
D8203	1.8V_S2	Green	Lit when the MGTY Vccaux power of the SWR FPGA (IC002) is normally supplied.	On
D8204	2.5V_S1	Green	Lit when the Vccaux_hbm power of the SWR FPGA (IC002) is normally supplied.	On

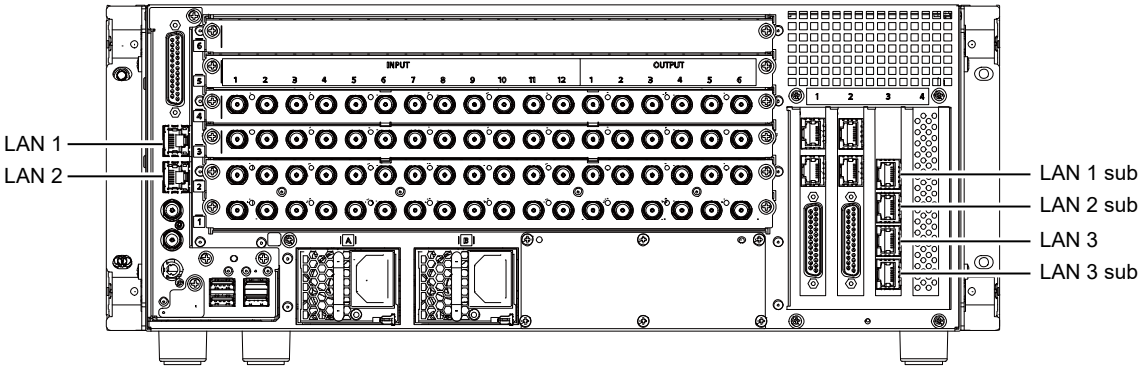
Continued

Ref. No.	Name	Color	Function	Normal state (Power on)
D8301	0.9V_S1_L	Green	Lit when the MGTAVCC_L power of the SWR FPGA (IC002) is normally supplied.	On
D8401	0.9V_S1_R	Green	Lit when the MGTAVCC_R power of the SWR FPGA (IC002) is normally supplied.	On
D8501	1.2V_S1_L	Green	Lit when the MGTAVTT_L power of the SWR FPGA (IC002) is normally supplied.	On
D8601	1.2V_S1_R	Green	Lit when the MGTAVCC_R power of the SWR FPGA (IC002) is normally supplied.	On
D8701	1.2V_S2	Green	Lit when the Vcc_hbm/Vcc_io_hbm power of the SWR FPGA (IC002) is normally supplied.	On
D8702	1.8V_S3	Green	Lit when the Vccio_18 power of the SWR FPGA (IC002) is normally supplied.	On
D8901	3.3V	Green	Lit when the 3.3 V power in the board is normally supplied.	On
D8902	1.8V	Green	Lit when the 1.8 V power in the board is normally supplied.	On
D8903	2.5V	Green	Lit when the 2.5 V power in the board is normally supplied.	On
D8904	1.2V	Green	Lit when the 1.2 V power in the board is normally supplied.	On
D9101	0.85V_G1	Green	Lit when the 0.85 V core power (Vccint) of the GIF FPGA (IC003) is normally supplied.	On
D9201	0.85V_G2	Green	Lit when the 0.85 V core power (Vccint_io/Vccbramt) of the GIF FPGA (IC003) is normally supplied.	On
D9202	1.8V_G1	Green	Lit when the Vccaux/Vccaux_io power of the GIF FPGA (IC003) is normally supplied.	On
D9203	1.8V_G2	Green	Lit when the MGTY Vccaux power of the GIF FPGA (IC003) is normally supplied.	On
D9204	2.5V_G1	Green	Lit when the Vccaux_hbm power of the GIF FPGA (IC003) is normally supplied.	On
D9301	0.9V_G1_L	Green	Lit when the MGTAVCC_L power of the GIF FPGA (IC003) is normally supplied.	On
D9401	0.9V_G1_R	Green	Lit when the MGTAVCC_R power of the GIF FPGA (IC003) is normally supplied.	On
D9501	1.2V_G1_L	Green	Lit when the MGTAVTT_L power of the GIF FPGA (IC003) is normally supplied.	On
D9601	1.2V_G1_R	Green	Lit when the MGTAVTT_R power of the GIF FPGA (IC003) is normally supplied.	On
D9701	1.2V_G2	Green	Lit when theVcc_hbm/Vcc_io_hbm power of the GIF FPGA (IC003) is normally supplied.	On
D9702	1.2V_G3	Green	Lit when the Vccio_12 power of the GIF FPGA (IC003) is normally supplied.	On
D9703	1.8V_G3	Green	Lit when the Vccio_18 power of the GIF FPGA (IC003) is normally supplied.	On

1-9. System Connection

Configure the system connections referring to the connection example as shown below.

1-9-1. Network Connector



Connector Name	Network I/F	Configurable LAN
LAN 1	STD1	Ctrl LAN
LAN 2	STD2	Util LAN1
LAN 1 sub	OPT1	Ctrl LAN Redundant
LAN 2 sub	OPT2	Util LAN2 Util LAN1 Redundant
LAN 3	OPT3	User LAN1
LAN 3 sub	OPT4	User LAN2 User LAN1 Redundant

1-9-2. Connecting the Web Menu

Equipment required

- Personal computer (PC)
  Recommended OS: Windows 10 or later
  Recommended web browsers: Google Chrome 89 or later

Procedure

1. Connect the unit, PC and control panel according to each connection example.
2. Run the web browser on the PC and access the following URL.
   - For using encrypted communication: https://192.168.100.1/
     To use encrypted communication, you need to install the root certificate. For details on how to install the root certificate, refer to “Installing a Root Certificate” in the User’s Guide.
   - For using unencrypted communication: http://192.168.100.1/
     Communication data is not encrypted with the “http://” connection. If you use this connection, accept security risks.

   Note

   If a URL beginning with https://192.168.111.1 (shown above) is accessed, a warning message “Your connection is not private”, for example, is output.

Tip

- The IP address can be changed to any value. For details, refer to “Configuring Network Settings” in the User’s Guide.
- A wireless connection to the PC is enabled for the Ctrl LAN between the PC and the control panel by replacing it with a Wi-Fi environment.

1-9-3. Minimum Configuration Connection

The following figure illustrates an example of connection between the unit and the compact control panel (ICP-X1224/X1216/X1124/X1116) with one-to-one minimum configuration.

Tip

LAN A1 and LAN A2 on the compact control panel are connected by an internal switch, and operate as the same network.

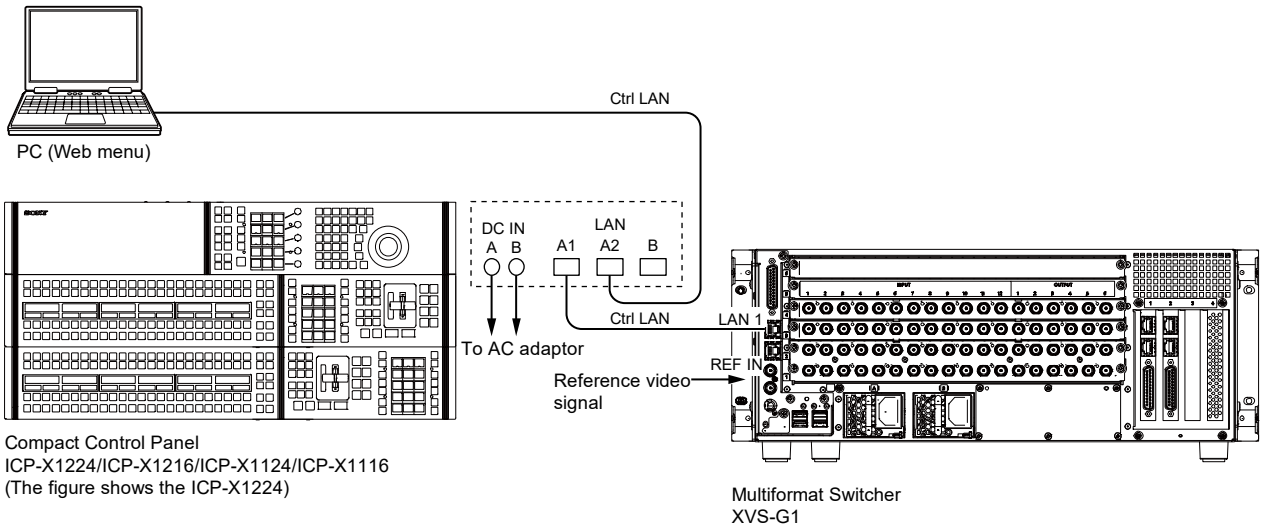
The unit, compact control panel, and the network (Ctrl LAN) for connection to a PC are configured with "192.168.100.0/24". The IP addresses of each port are as follows:

XVS-G1: LAN1 192.168.100.1 (default)

Compact control panel: LAN A1/A2 192.168.100.65 (default)

PC: 192.168.100.129 (Recommended)

Connection example



1-9-4. Redundant Connection of Network

The following figure illustrates an example of redundant connection of the network (including network switch) for the unit and the compact control panel (ICP-X1224/X1216/X1124/X1116).
Even in case a point in the network becomes defective, continuous switcher operation is possible.
To use this mode, refer to “Configuring Network Settings” in the User’s Guide.

Tip

- To set up a redundant network configuration, insert the recommended NIC into the PCI slot 3 of the unit. Contact your local Sony Sales Office/Service Center for information on recommended NIC.
- When the network route is switched at an occurrence of a failure, communication between the unit and the control panel may be interrupted, but it is automatically restored in more than ten seconds.

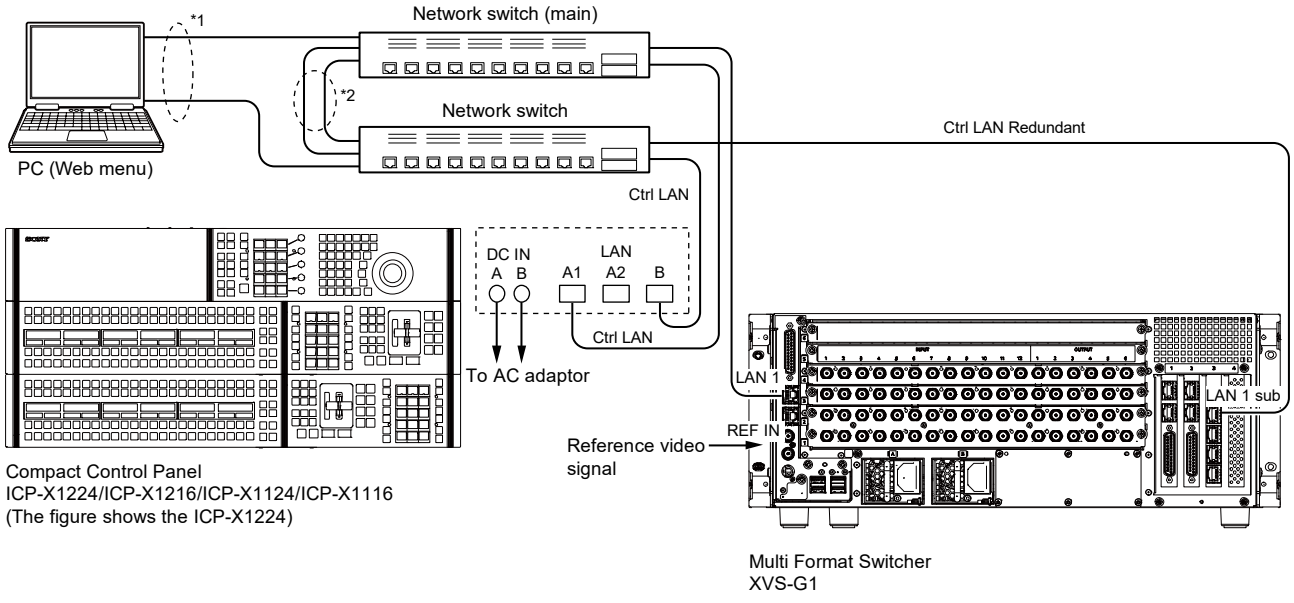
Measures for redundant configuration of the processor and the control panel

The active-backup method is used for ports to be used for redundancy. The same IP address is set for two ports. Usually, either port is linked up during operation. When a link-down state is detected, one port is automatically activated to be linked up.

Note

One of the two ports, which was linked up earlier during startup, is automatically activated.

Connection example



*1: A redundant configuration can be achieved by installing two network interface cards (NIC) in the PC for the Web menu and making a teaming setting. For how to make teaming setting, contact the PC (OS) or NIC manufacturer.

*2: A redundant configuration between network switches can be set by connecting the network switches with two LAN cables and making the 802.3ad (LACP) mode setting for the two ports respectively. For how to make the setting, contact the network switch manufacturer.

LACP setting example of network switch (Cisco C9200 series)

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface range gigabitEthernet 1/0/1-2
Switch(config-if-range)#channel-group 1 mode active
Switch(config-if-range)#exit
Switch(config)#exit
Switch#show etherchannel summary
Flags: D - down P - bundled in port-channel
       I - stand-alone s - suspended
       H - Hot-standby (LACP only)
       R - Layer3 S - Layer2
       U - in use f - failed to allocate aggregator
       M - not in use, minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port
Number of channel-groups in use: 1
Number of aggregators: 1

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-------------------------------
1      Po1(SU)       LACP        Gi1/0/1(P) Gi1/0/2(P)
```

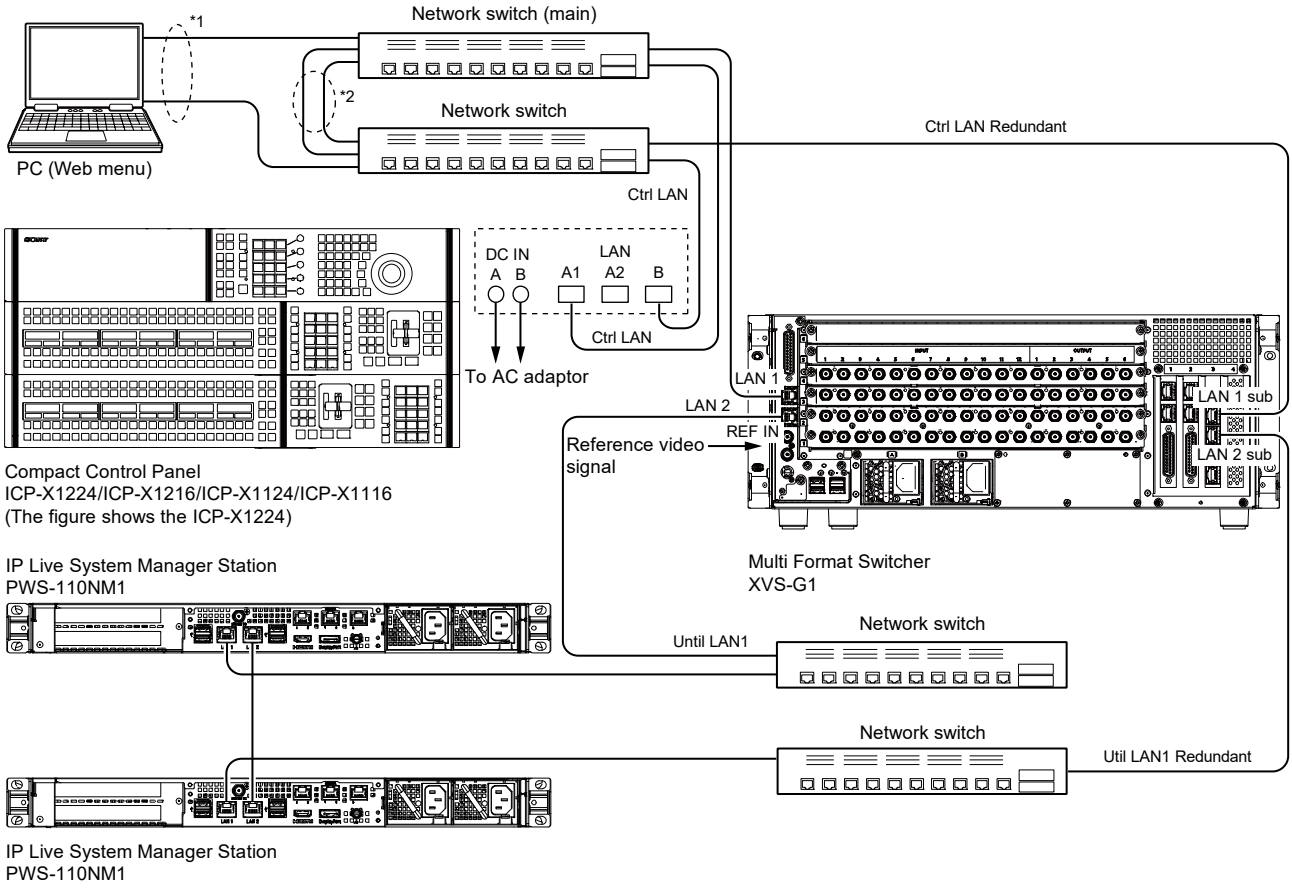
1-9-5. Connection to NS-BUS

The following figure illustrates an example of connection to the LSM (PWS-110NM1) redundancy system to use the remote control panel (MKS-R series).
LAN2 and LAN2 Sub settings are required for connection to the LSM system. (Refer to “Setting the Network Interface” in the User’s Guide.)

Tip

- For the LSM and remote control panel settings, refer to the Operation Guide of the PWS-110NM1 or MKS-R series.
- For the NS-BUS settings, refer to “Setting the NS-Bus Matrix” in the User’s Guide.
- Contact your local Sony Sales Office/Service Center for recommended network switches.

Connection example



*1: A redundant configuration can be achieved by installing two network interface cards (NIC) in the PC for the Web menu and making a teaming setting. For how to make teaming setting, contact the PC (OS) or NIC manufacturer.

*2: A redundant configuration between network switches can be set by connecting the network switches with two LAN cables and making the 802.3ad (LACP) mode setting for the two ports respectively. For how to make the setting, contact the network switch manufacturer.

1-9-6. Connection to External Control Devices

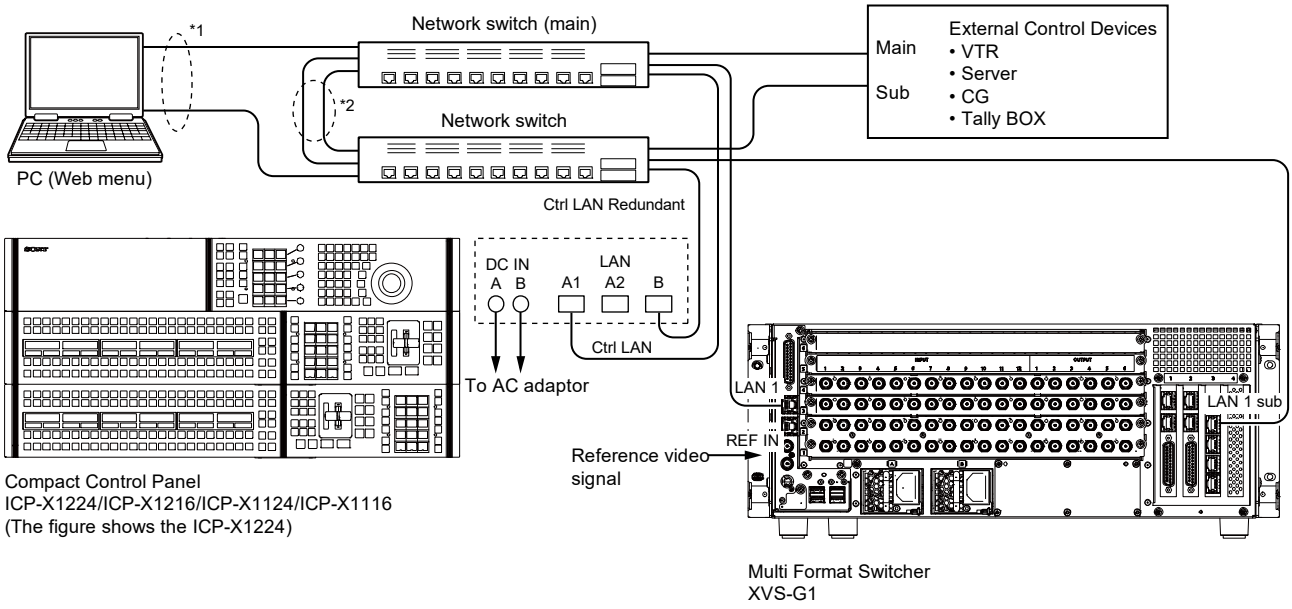
Connect the unit to the Ctrl LAN to control devices or transfer tally data through connection to external devices.

For connection port settings and protocol settings, refer to “Setting the Connection Port of External Devices” or “Setting a Serial Tally” in the User’s Guide.

Tip

- For the LSM and remote control panel settings, refer to the Operation Guide of the PWS-110NM1 or MKS-R series.
- Contact your local Sony Sales Office/Service Center for recommended network switches.

Connection example



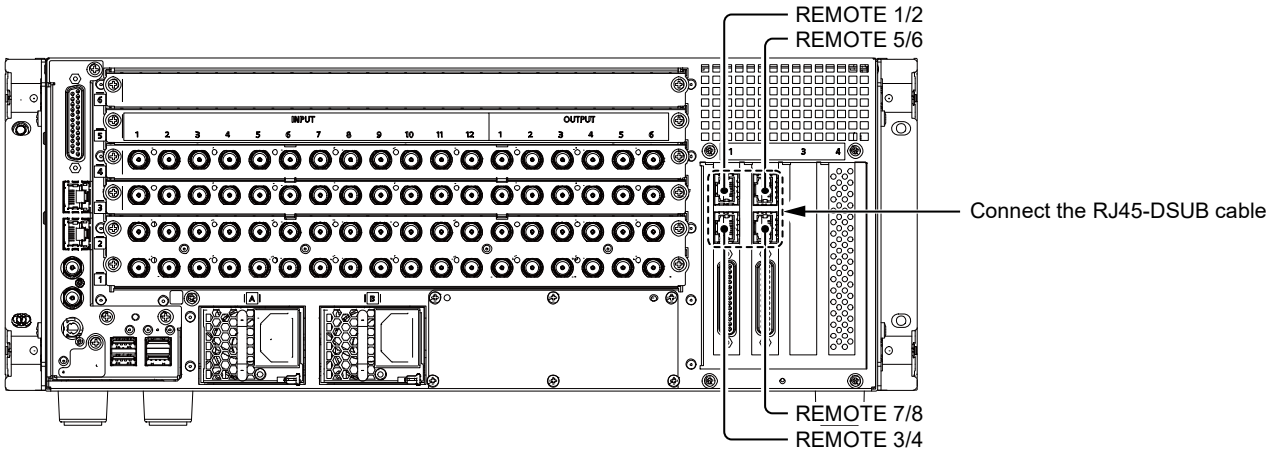
*1: A redundant configuration can be achieved by installing two network interface cards (NIC) in the PC for the Web menu and making a teaming setting. For how to make teaming setting, contact the PC (OS) or NIC manufacturer.

*2: A redundant configuration between network switches can be set by connecting the network switches with two LAN cables and making the 802.3ad (LACP) mode setting for the two ports respectively. For how to make the setting, contact the network switch manufacturer.

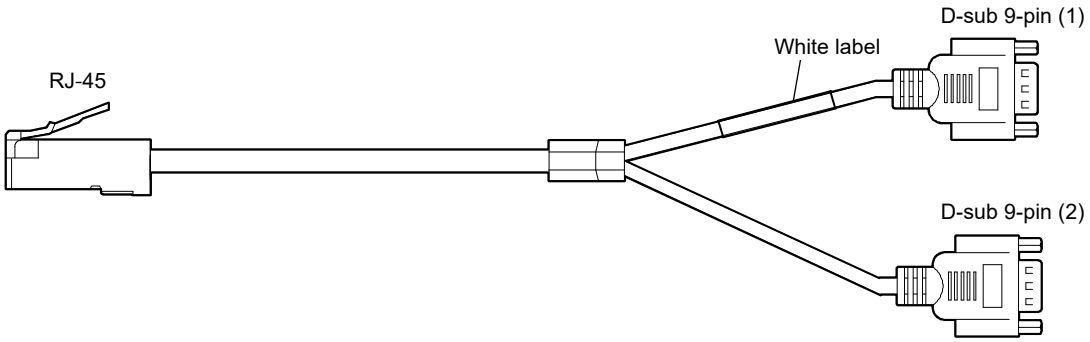
1-9-7. Connection to External Devices by RS-422 (9-pin)

This unit can connect devices that support various protocols to the serial port.

For details, refer to “Setting the Connection Port of External Devices” in the User’s Guide.



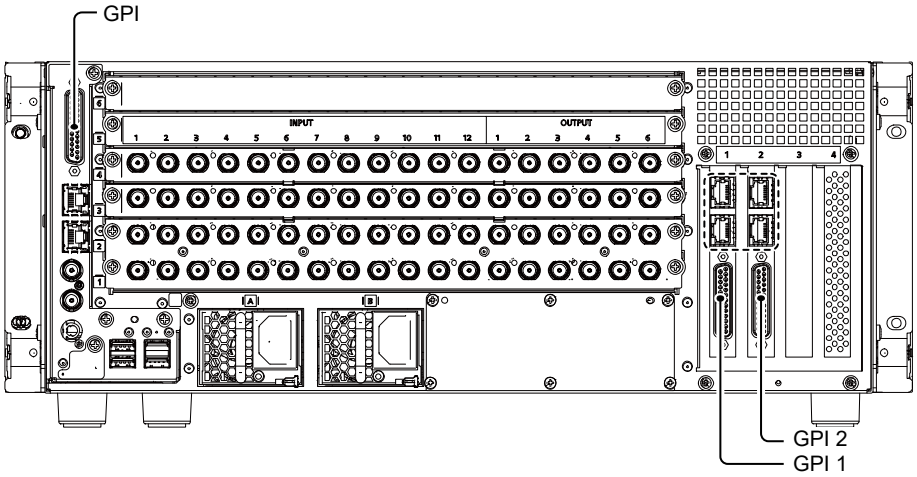
RJ45-DSUB cable (supplied with XKS-G1700)



RJ-45	D-sub 9-pin (1)	D-sub 9-pin (2)
REMOTE 1/2	Serial port 1	Serial port 2
REMOTE 3/4	Serial port 3	Serial port 4
REMOTE 5/6	Serial port 5	Serial port 6
REMOTE 7/8	Serial port 7	Serial port 8

1-9-8. Connection to External Devices by GPI

For parallel port settings, refer to “Setting Parallel Input Ports” or “Setting Parallel Output Ports” in the User’s Guide.



Connector name	Input port	Output port
GPI	1-1 to 1-6	1-1 to 1-16
GPI 1	2-1 to 2-6	2-1 to 2-16
GPI 2	3-1 to 3-6	3-1 to 3-16

1-9-9. Connection of Remote Cameras

The following shows an example of connection between the unit and Sony remote cameras that can be controlled by VISCA over IP.

Up to 32 cameras can be connected to the unit.

Use the remote controller of each camera for camera settings, manual PTZ operation, and preset storing.

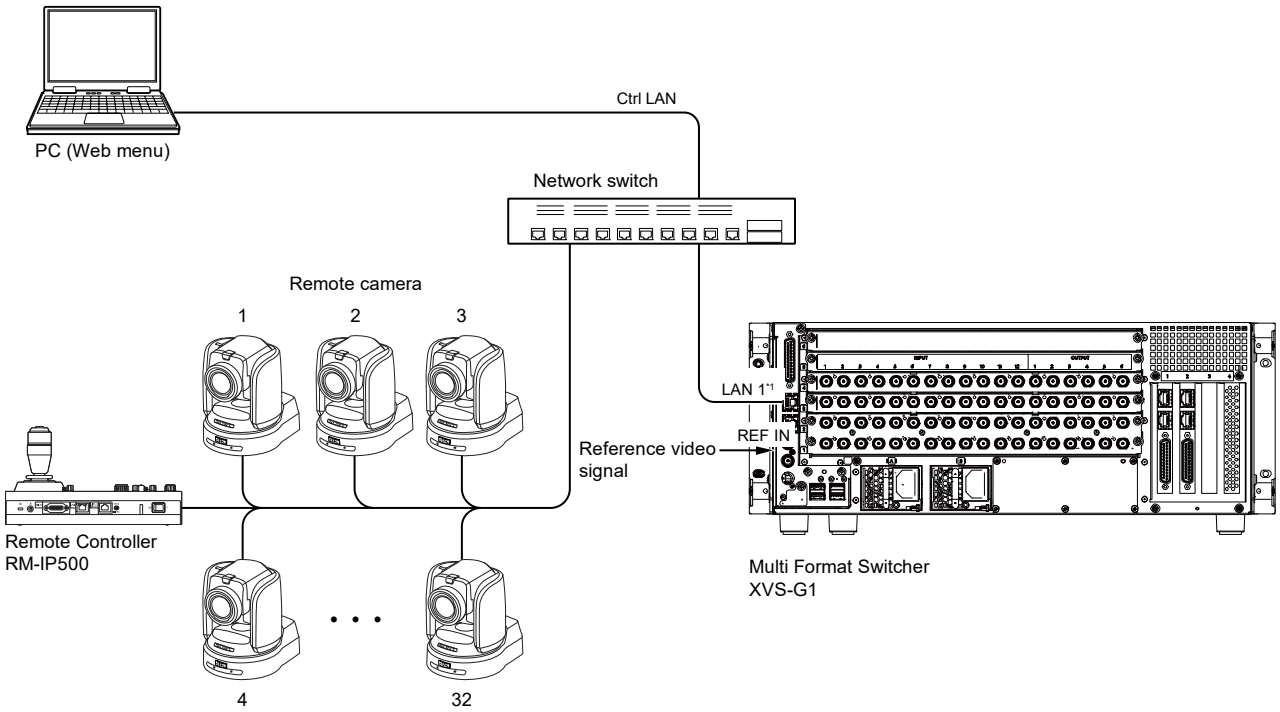
For camera assignment and preset call setting method, refer to the User's Guide.

Connection example

Note

This connection is enabled in XVS-G1 V1.20 and later systems.

Connections using the RS-422 interface are not supported.



*1: Remote cameras can also be connected to the Util LAN or User LAN. For how to make network settings, refer to the User's Guide.

1-9-10. Connection to ICP-X7000/MKS-X7075

The following shows an example of connection between the unit and the Integrated Control Panel ICP-X7000 and the Extension Adaptor MKS-X7075.

All LANs of ICP-X7000 and MKS-X7075 are connected to the LAN1 (Ctrl LAN) connector on the unit.

The IP address of each port can be changed by the Web menu of XVS-G1. For details, refer to the XVS-G1 User's Guide.

Note

- The following models cannot be used together with this unit.
  - MKS-X2700
  - MKS-X7011
  - MKS-X7700
  - PWS-110SC1
- Connect the unit to only ICP-X7000 or MKS-X7075 ordered as a panel only for the unit.
- ICP-X7000 and MKS-X7075 can be connected in XVS-G1 V1.20 and later systems.
- ICP-X7000 and MKS-7075 are not suitable for network redundancy.

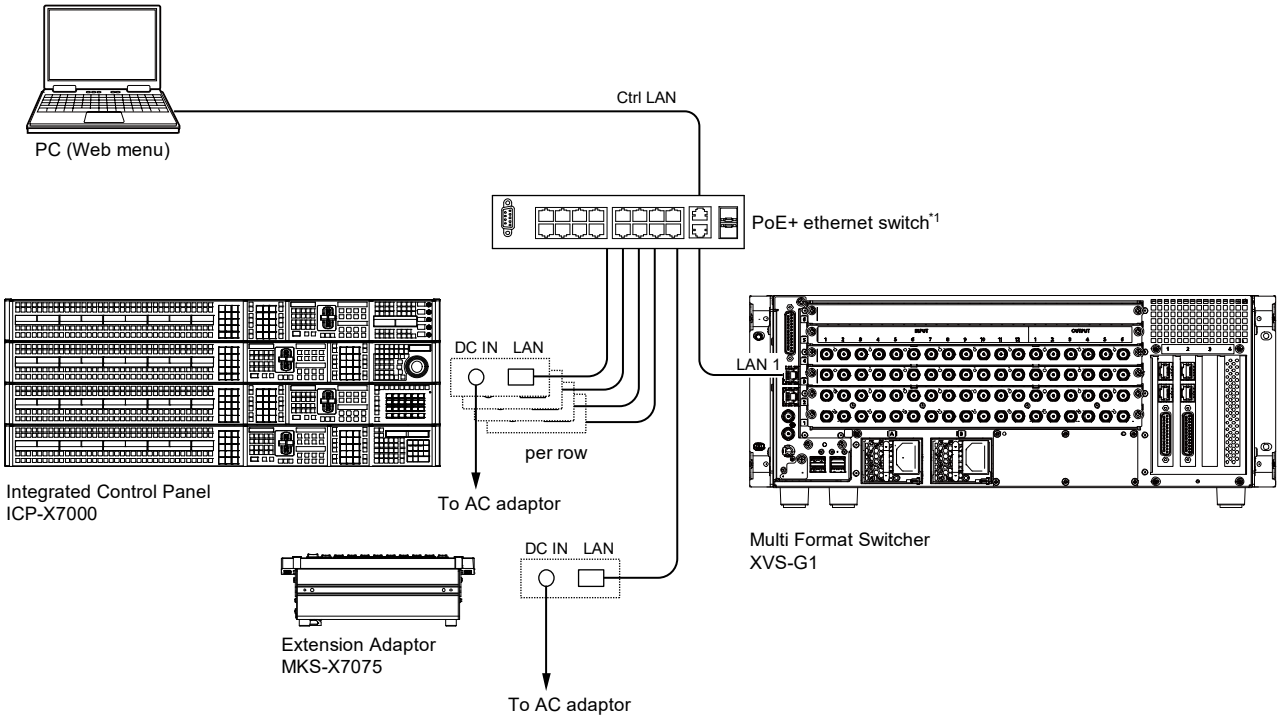
The network (Ctrl LAN) connected to XVS-G1, Integrated Control Panel, and a PC consists of "192.168.100.0/24". The IP address of each port is shown below.

XVS-G1: LAN1 192.168.100.1 (default)

ICP-X7000, MKS-X7075: LAN 192.168.100.65 to 78 (IP addresses unique to each port are set.)

PC: 192.168.100.129 (Recommended)

Connection example



1: The PoE+ Ethernet switch is available for power supply to ICP-X7000 and MKS-X7075.
For recommended models and setting method, contact your local Sony Sales Office/Service Center.

1-10. Front Panel Display

The following operations are enabled by using the display, [Select] button, and [Set] button on the front panel.

- Checking IP address, serial number, and MAC address
- Initializing password of administrator
- Resetting to the factory shipping method (Some settings are not reset.)

Operation

1. Press the [Select] button to select an operation item.
2. Press the [Set] button to execute the selected item.

Section 2
Service Overview

2-1. Periodic Inspection and Maintenance

2-1-1. Periodic Inspection

The following parts require periodic maintenance.

Refer to the period indicated in the following list for maintenance.

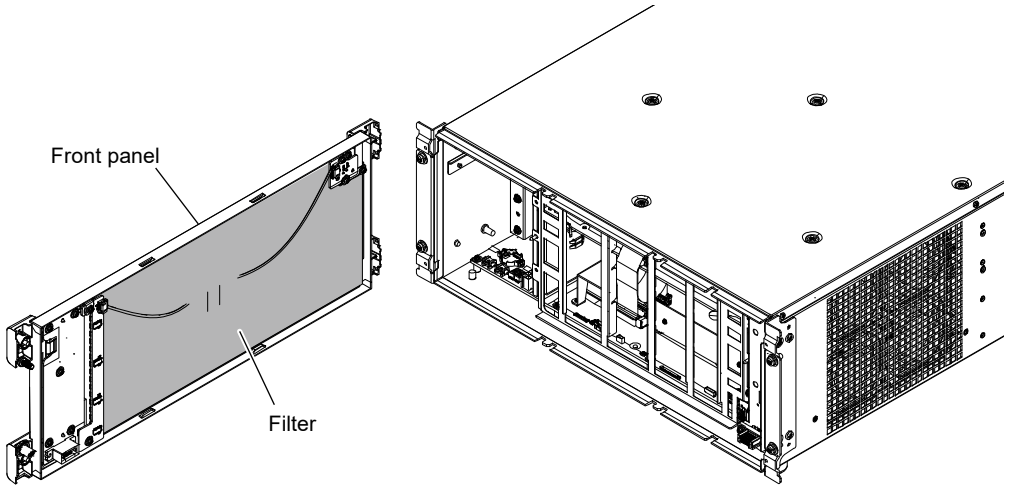
Part	Where used	Maintenance	Suggested period
Filter	Front panel	Cleaning	Cleaning: Once in two months
DC fan (120 square)	Side near rear side	Cleaning / Replacement	Cleaning: Once in a month Replacement: Once every 6 years.
DC fan (80 square)	Side near front side Option block	Cleaning / Replacement	Cleaning: Once in a month Replacement: Once every 6 years.
Power supply unit	Rear side	Replacement	Replacement: Once every 3 years.
Lithium battery	IF-1392 board	Replacement	Replacement: Once every 3 years.

2-1-2. Cleaning

Front panel

The filter on the rear of the front panel can easily accumulate the dust. Be sure to remove dust by cleaning as follows.

1. Remove the front panel. (Refer to “1-4-2. Installation of XKS-G1600”.)
2. Remove the dust accumulated on the filter with a vacuum cleaner.
   Be sure to dry the filter completely after it has been washed.
   Tip
   Cleaning the filter by washing in water is recommended when there is a heavy accumulation of dust.



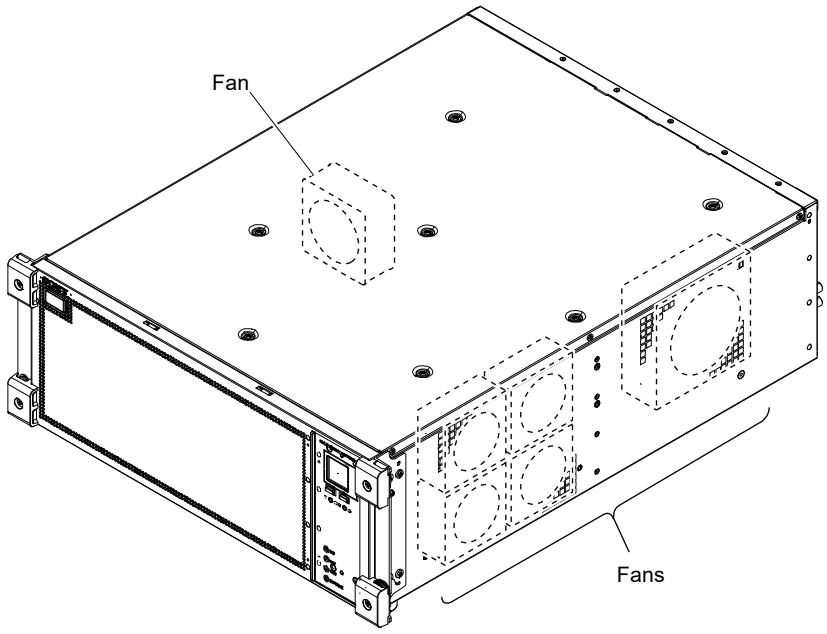
Fan

This unit is air-cooled by the fans.

If dust has accumulated in the intake of the fan, air is prevented from flowing smoothly and this may result in a temperature rise inside the unit. This may have an adverse effect on performance and the life of the machine.

Cleaning of the fan every month is recommended.

Contact your local Sony Sales Office/Service Center for information on cleaning the fan.



Revision History

Date	History	Contents
2021. 7	1st Edition 9-932-793-01	—
2022. 6	Revised-1 9-932-793-02	• **Modifications:** 1-8-2. HIF-82 Board, 1-9-3. Minimum Configuration Connection, 1-9-4. Redundant Connection of Network • **Additions:** 1-9-9. Connection of Remote Cameras, 1-9-10. Connection to ICP-X7000/MKS-X7075

XVS-G1 (SY)
XVS-G1 (WW)
XVS-G1 (CN) J,E
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