



OPERATING INSTRUCTIONS

IMAGE PROCESSING SYSTEM

IS-mini Rack 4K

IMAGE PROCESSING SYSTEM
IS-mini 

HDMI[®]
HIGH-DEFINITION MULTIMEDIA INTERFACE

This device is a Class A information technology device.
Using this device in a consumer environment may cause electromagnetic interference.
In this case, it may be required to take the measures that a user is appropriate.

VCCI-A

WOWOW Entertainment,Inc. does not guarantee the operation of this product used in the network configurations other than those specified in this manual.

- 1** The product and product specifications described in this document are subject to change without notice due to reliability, function, and improvements in design.
- 2** This document, in whole or in part, may not be re-published or copied without direct permission from WOWOW Entertainment,Inc.
- 3** WOWOW Entertainment,Inc. does not assume responsibility for any damage, direct or indirect, caused by the use of this product.
- 4** This document does not authorize the use of patent or any other rights of WOWOW Entertainment,Inc. or any third party.
- 5** Proper names mentioned in this document, such as the name of products, are registered trademarks of each manufacturer.

Introduction

Before using this product, carefully read this manual to thoroughly understand how to set up and use IS-mini RACK 4K. Follow the Safety Precautions during use. After reading this manual, keep it in location where it can be easily accessed when needed.

For Safe Use

This product has been manufactured with special attention to safety. However, since this is an electrical product, misuse may result in fire or electric shock, which may lead to death or severe injury. Please follow the precautions in this manual and use the product as directed.

In Case of Failure, Discontinue Use

In case of a failure with the product, discontinue use, and contact the service center or a sales staff.

In Case of Abnormality

In Case of Smoke, Abnormal Smell, or Abnormal Noise

Immediately unplug the AC adapter and disconnect the AC adapter from the electrical outlet.

Disconnect any other electrical cables connected to the electrical outlet, and contact the service center.

In Case of Fire

Immediately unplug the AC adapter and disconnect the AC adapter from the electrical outlet, or trip the breaker, and quickly extinguish the fire.

Then, contact the service center promptly.

▪ About conformity to harmonics regulation

This product is a product excluding it of the harmonics electric current regulation for an apparatus for business use.

It doesn't correspond to harmonic current regulation.

▪ Warranty of This Product

A written warranty containing information regarding repair service and warranty regulations are attached to this product. Thoroughly read and verify the contents, and keep this warranty in a secure place.

In the event of an accident within the terms of this warranty, repairs will be made according to the warranty regulations.

▪ Application to Radio Frequency Regulation

This product is for business purposes, and is not subject to radio frequency regulations.

Radio frequency regulations do not apply.

Contents

1	Safety Precautions	5
1.1	Meaning of the Warning Signs	5
1.2	Precautions during Use.....	6
1.3	Precautions regarding the Power Supply	7
1.4	Precautions regarding Installation and Transport	8
1.5	Precautions during Cleaning.....	9
2	Installation	10
2.1	Installation Conditions.....	10
2.2	Unpacking	11
2.3	Name and Function of Each Part.....	12
2.4	Connecting and Disconnecting Cables.....	13
2.4.1	Connecting Cables	13
2.4.2	Connecting the Electrical Cable	14
2.4.3	Disconnecting Cables.....	14
3	Using IS-mini RACK 4K	15
3.1	Starting.....	15
3.2	Shutdown	15
4	Maintenance.....	16
4.1	Cleaning.....	16
4.2	Regular Checking	16
5	Specifications.....	17
5.1	Product Specifications.....	17
6	Troubleshooting.....	18

1

Safety Precautions

This user manual uses the following warning and caution signs for the safe use of this product. Please thoroughly understand the signs before reading this manual.

1.1

Meaning of the Warning Signs



Warning

Ignoring this warning or the misuse of this product may result in death or severe injury



Caution

Ignoring this warning or the misuse of this product may result in injury or property damage.



Fire Hazard

Ignoring this warning may result in fire.



Electrical Hazard

Ignoring this warning or the misuse of this product may result in electrical shock.



Do not Disassemble

Disassembly of the product is prohibited in order to avoid electrical shock or failure of the product.



Specific Actions

Actions are specified to ensure safety.



Prohibited Actions

Specific actions are prohibited in order to avoid an electrical shock, failure of the product, or injury.

1.2

Precautions during Use



Do not Disassemble or Modify

Do not disassemble or modify the product, unless directed in this manual. To do so may result in injury, electrical shock, fire, or failure of the product.



Do not insert or drop objects into the ports

Do not insert or drop any metal or flammable objects into the intake or exhaust ports. This may result in electrical shock, fire, or failure of the product.



Use under normal conditions

In the event a foreign object or liquid such as water gets inside the product, or internal condensation builds up, stop using it. This may result in electrical shock, fire, or failure of the product.



Follow the instructions

Only use this product in the manner directed in this manual. Misuse may result in electrical shock, fire, or failure of the product.

1.3

Precautions regarding the Power Supply



Do not use the AC adapter and voltage other than those specified for the product.

Otherwise, an electrical shock, fire, or failure of the product may result.

Do not damage the AC adapter

Avoid the following when handling the AC adapter as they may result in electrical shock, fire, or failure of the product.



- Modify or damage the AC adapter.
 - Place heavy objects on the AC adapter.
 - Forcefully bend, twist, or pull the AC adapter.
 - Heat, or place the AC adapter near a heating source.
 - Handle the AC adapter with wet hands.
 - Use a damaged AC adapter..
-

Do not install under conditions which may result in failure of the product

This product is manufactured with precision electronic components. Do not install or store in the following places, as these may result in malfunction or failure of the product. Also, if the product is not to be used for a long period, store it in the original package after use.



- In direct sunlight
- In a dusty place
- In a place with highly variable temperature or humidity
- Near fires
- In a wet place
- Near volatile materials
- Near an air conditioner or heater
- In a place exposed to shock, vibration, magnets or static electricity

**Install in a stable area**

If the product is installed in an unstable area, it may fall, resulting in injury or failure of the product.

**Natural cooling is performed**

This product does not have a cooling fan. It is necessary to cool air around the product under operating environment temperature.

**If the product is not to be used for a long period, disconnect the electrical plug from the electrical outlet**

If the product is not to be used for a long period, disconnect the electrical plug from the electrical outlet for safety.

**Disconnect all the cables and the electrical plug before moving**

Before moving this product, be sure to turn off the power, and disconnect the electrical plug from the outlet as well as all cables.

Otherwise, the cable may entangle a person's feet, resulting in injury.

**Use care when transporting**

This product is heavy. Carry with great care, firmly holding it from the bottom. Do not carry alone, as this may result in backache or dropping of the product, causing injury.

Also, turning the product upside down or on its side during transport may result in failure.

**Disconnect the AC adapter before wiring or cleaning**

Wiring or cleaning without disconnecting the AC adapter may result in electrical shock.

1.1

Precautions during Cleaning



Regularly disconnect the AC adapter from the outlet and clean

Regularly disconnect the AC adapter from the outlet and clean the base pins and the space between them.

If the AC adapter is left connected to the outlet for a long period, dust may accumulate at the base pins and may result in fire due to short circuit.



Turn off the power before wiring or cleaning

Wiring or cleaning with the power on may result in electrical shock.

**Caution**

Pay special attention to the installation conditions. Installation and long-term use of the product in highly variable temperatures, dusty, or high humidity may result in failure of the product.

① Temperature

Operating Temperature: 0 to 40°C (No condensation)

Storage Temperature: -20 to 70°C (No condensation)

② Humidity

Operating Humidity: 0 to 80% RH (No condensation)

Storage Humidity: 0 to 95% RH (No condensation)

③ Installation Conditions

Install this product on a stable area

Please secure a space of 15 cm or more from the vent on the back.

Air should be well ventilated around the product and temperature should remain within operating temperature range.

Do not jolt the product while in operation.

Especially, do not install under the following conditions.

- In direct sunlight
- In a dusty place
- In a place with highly variable temperature or humidity
- Near fires
- In a location where it is likely to get wet
- Near volatile materials
- Near an air conditioner or heater
- In a place exposed to shock, vibration, magnets, or static electricity

④ Power Cable

Please use the supplied cable for the power cable.

2.2

Unpacking



Specific Actions

Use the packing materials for the product or those with equivalent or higher quality, while transporting.



Warning

Do not put heavy materials on this product, as this may result in failure or damage.

Transport the product still packed, and unpack on a level place near the installation site.

【Check the contents】

Before installation, confirm that a complete set of the following items have been packed. In the event any item is missing, contact a member of the sales staff.

【Contents】

① IS-mini RACK 4K box × 1

Size : 430 × 452 × 43 mm (W × D × H) (not including projections)

Weight : 7Kg (not including cable)

② Power Cable × 2

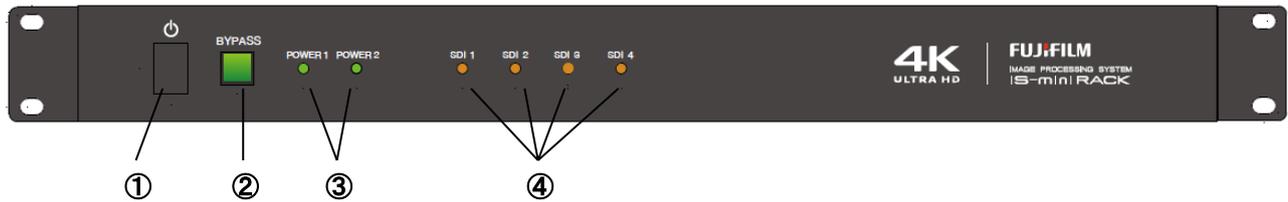
Note: Do not throw away the packing material.

When transporting IS-mini, packing cartons and cushioning materials are required.
Keep the original material for future use.

2.3

Main Unit

Top



【Function of Each Part】

① Main Power Source Switch

② Bypass button

Note: Video Output will be bypassed while button pushed.

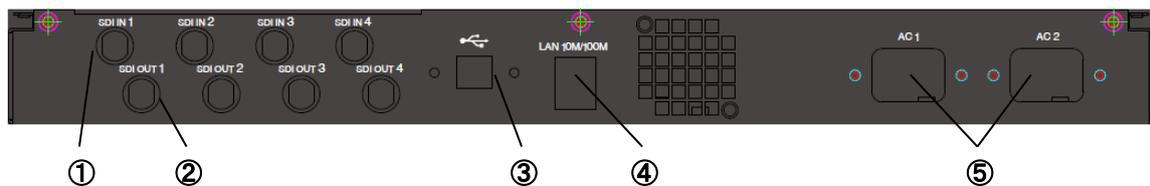
③ Power Supply Indicator

Caution : It lights when the power supply is connected to the inlet.

④ Video Status Indicator

Flashing : Bypassing Lighting : A video signal is input. Lights Off : No video signal input.

Back



【Function of Each Part】

① HD-SDI Input Connector 4ch

② HD-SDI Output Connector 4ch

③ USB Connector (TypeA)

④ LAN Connector RJ45 (10M/100M)

⑤ AC Inlet (AC1 / AC2) (100V~240V)
※Dual Power Supply

2.4

Connecting and Disconnecting Cables

2.4.1 Connecting Cables

**Caution**

Before operation, be sure that the AC adapter is unplugged. Not doing so may result in electrical shock or injury.

**Electrical
Hazard**

Do not operate with wet hands, as this may result in electrical shock or failure of the product.

1 Connecting the HD-SDI Video Output Cable

Connect the HD-SDI Video Output Connector or HD-SDI Supported Monitor with a BNC75Ω coaxial cable.

2 Connecting the HD-SDI Video Input Cable

Connect the HD-SDI Video Output Connector or HD-SDI Supported Monitor with a BNC75Ω coaxial cable.

3 Connecting the USB Cable or the Ethernet Cable (Depends on use)

Connect PC with the USB Cable.

Connect networking devices with an RJ45 type LAN cable.

2.4.2 Connecting the Electrical Cable



Electrical Hazard Never touch the power supply unit with wet hands, as this may result in electric shock.



Fire Hazard Converting the power supply voltage with the electrical plug connected to the outlet may result in fire.

- 1 **Connect the power cable to the AC inlet. To enable dual power, power cables must be connected to both the AC1/AC 2.**

2.4.3 Disconnecting Cables



Warning Before operation, be sure that the main power source switch on the back is OFF. Not doing so may result in electrical shock or injury.



Electrical Hazard Do not operate with wet hands, as this may result in electrical shock or failure of the product.

- 2 **Unplug the power cable.**
- 3 **Disconnect the LAN cables or USB cables, if connected.**
- 4 **Disconnect the HD-SDI Input / Output Cable, if connected.**

3

Using IS-mini RACK 4K

3.1

Starting

- 1 Be sure that power cables are correctly connected.
- 2 Be sure that the video status indicator is lighting.
- 3 Be sure that the all cables are correctly connected.

3.2

Shutdown



Caution

If the product is not to be used for a long period, unplug the AC adapter and disconnect all cables, if connected.

- 1 Turn off the power switch.
- 2 Confirm that the video status indicator is off.
- 3 Unplug the power cables.
- 4 If the video cables are connected, disconnect the cables.

4

Maintenance

4.1

Cleaning

Regularly wipe any dust off the product with a piece of soft cloth.



Caution

Do not use organic solvents (benzene, acetone, etc.), which may deform plastic.

Also, be sure that no liquid such as solvent gets inside the product.

4.2

Regular Checking

Check the following every six months.

- Remove any dirt or dust in the connectors.
- Check for any damage at the connectors.



Caution

Before checking, unplug the AC adapter and confirm that the product is not in operation.

5

Specifications

5.1

Product Specifications

Item	Specifications
Type	Image Processing System IS-mini RACK 4K
Model	IS-10R4K
Interface	USB2.0 (TypeA) LAN 10/100 Base-T
HD-SDI Input	BNC Connector x4 4channel input 1.5G HD-SDI / 3G-SDI(LevelA / LevelB)
HD-SDI Output	BNC Connector x4 4channel output 1.5G HD-SDI / 3G-SDI(LevelA / LevelB)
External Dimensions	430mm(W) x 452mm(D) x 43mm(H)
Device Weight	7Kg (excluding cables)
Power Supply Voltage and Frequency	AC 100-240V
Power Consumption	50W

- **If no image is displayed on the connected monitor, check the followings.**

- 1: Is the IS-mini RACK 4K turned on and operating?
- 2: Is the HD-SDI input/output cable connected to the IS-mini RACK 4K properly?

- **If the IS-mini RACK 4K seems mal-functioning**

- 1: Turn off power supply and remove power cables. After that please connect the cables again and turn on a power supply once again.

- **If the IS-mini RACK 4K cannot be turned on, check the followings.**

- 1: Are the power cables connected properly? You can connect the power cable either AC1 / AC2 or both.
- 2: Please confirm the electricity supply to the power cables.



WOWOW Entertainment