

# Optical Transmitter Optical Receiver

## Operating Instructions

Before operating the unit, please read this manual and the supplied Before Using This Unit document thoroughly and retain it for future reference.

ZRA-T1  
ZRA-R1

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- Note that the specifications of the system are subject to change for improvement without prior notice.

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# Please Read This First

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## Manual Structure

This product includes the following manuals to be used according to the situation.

### Before Using This Unit

This includes important safety precautions, specifications, etc.

### Operating Instructions (this document)

Includes information on usage instruction, parts identification, etc. Refer to this manual when performing general operations.

### Service Manual

This is intended for use by service personnel and includes information on diagnosing malfunctions and instructions on repair.

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## Condensation

If the unit is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface of the unit and/or inside of the unit. This is known as condensation. If condensation occurs, turn off the unit and wait until the condensation clears before operating the unit. Operating the unit while condensation is present may damage the unit.

### Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
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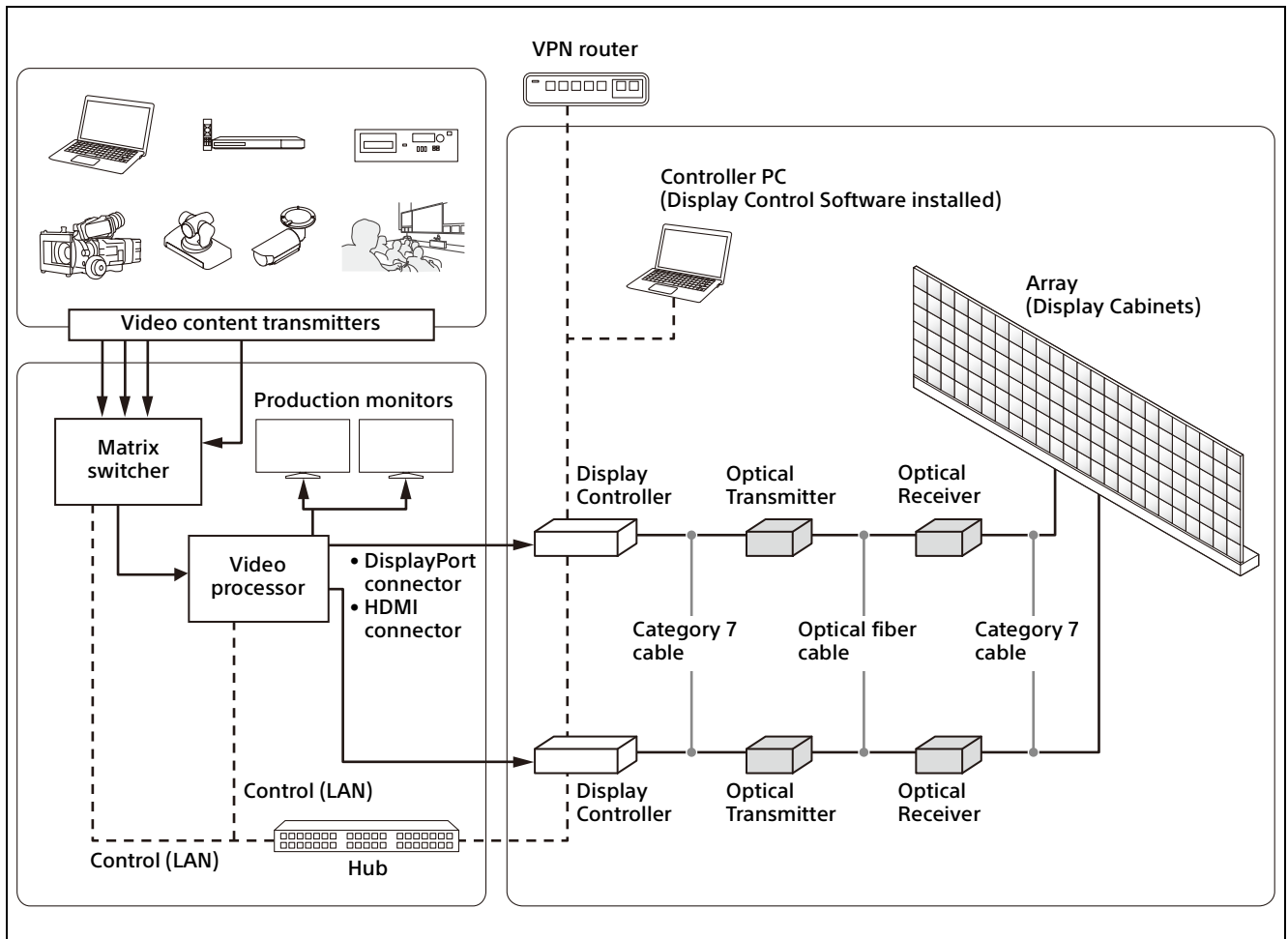
# Overview

This product is a converter used to extend the distance between the Display Controller and Display Cabinet with the optical cable.  
It can be extended up to 300 m by using the SFP+ transceiver module (not supplied) and optical fiber cable (not supplied).

**Caution**  
When connecting the Display Controller to a network, use a network that is built to control and regulate access from the Internet, such as a LAN. Direct connection from the Internet increases security risk.

## System Configuration Diagram

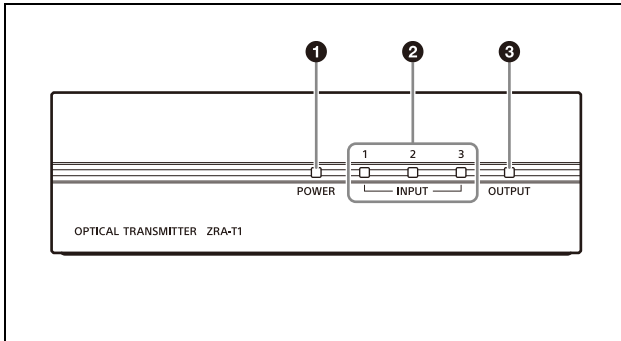
### Configuration example of the entire system



# Parts Identification

## Optical Transmitter ZRA-T1

### Front



#### 1 POWER indicator

Indicates the power status of the product.  
Off: Power is turned off.  
Blinking red: Power error occurred.  
Lit green: Power is turned on (normal operating status).

#### 2 INPUT indicator

Indicates the status of RJ45 input connectors 1 to 3.  
Off: RJ45 input connectors are not connected or not linked with the Display Controller.  
Lit green: RJ45 input connectors work properly.  
Blinking red: An error occurred on RJ45 input connectors\*.

\* If the indicator is blinking every 0.25 seconds, turn off the power and on again. If it is still not improved, contact your local Sony representative.

#### 3 OUTPUT indicator

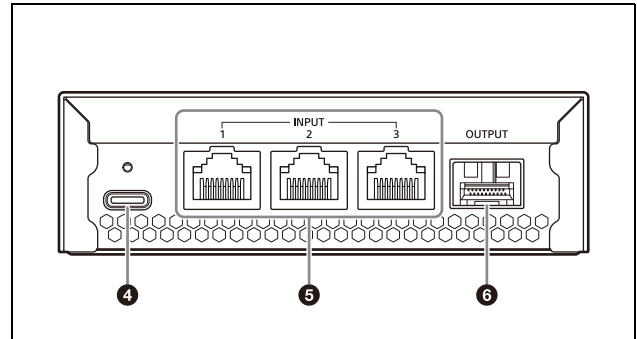
Indicates the status of the SFP+ output connector.  
Off: The SFP+ output connector is not connected or not linked with ZRA-R1.  
Lit green: The SFP+ output connector works properly.  
Blinking red: An error occurred on the SFP+ output connector.

#### Note

The INPUT indicator and OUTPUT indicator blink in red for about 5 seconds shortly after turning

the power on or connecting cables. If blinking in red continues for over 30 seconds, turn off the power and on again or check the cable connection. If it still does not improve, contact your local Sony representative.

### Rear



#### 4 DC power input connector (USB Type-C)

Use a USB Type-C - Type-C cable (not supplied) to connect this connector to the USB Type-C output on the USB AC adapter (not supplied).  
For the USB AC adapter, use a product with a USB Type-C with an output voltage of 5 V or higher and an output current 2 A or higher.  
For the USB Type-C - Type-C cable, use a product with a current 2 A or higher.

#### 5 INPUT connectors 1 to 3 (RJ45)

Use a Category 7 cable (not supplied) to connect this connector to the OUTPUT connector on the Display Controller. The connectors 1 to 3 correspond to the OUTPUT connectors 1 to 3 of ZRA-R1 respectively.  
Up to 3 cables can be connected to these connectors. Connect to connector 1 when you connect 1 cable, connector 1 and 2 when you connect 2 cables, and all connectors when you connect 3 cables.

#### 6 OUTPUT connector (SFP+)

Use an SFP+ transceiver module (not supplied) and optical fiber cable (not supplied) to connect this connector to the INPUT connector on ZRA-R1.

This product is authenticated with safety standards for use in combination with the SFP+ transceiver module.

Contact your local Sony representative for other SFP+ transceiver modules.

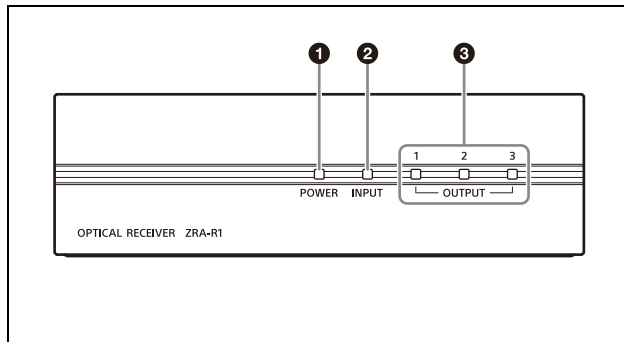
- OTM-10GSR1 (Sony Corporation)

**Note**

Do not connect the INPUT and OUTPUT connectors to a hub. The input/output signals for these connectors are unique to the product and are not Ethernet signals. In particular, be aware that connecting these connectors to a PoE injector hub may result in damage to the product.

## Optical Receiver ZRA-R1

### Front



#### 1 POWER indicator

Indicates the power status of the product.  
 Off: Power is turned off.  
 Blinking red: Power error occurred.  
 Lit green: Power is turned on (normal operating status).

#### 2 INPUT indicator

Indicates the status of the SFP+ input connector.  
 Off: The SFP+ input connector is not connected or not linked with ZRA-T1.  
 Lit green: The SFP+ input connector works properly.  
 Blinking red: An error occurred on the SFP+ input connector.

#### 3 OUTPUT indicator

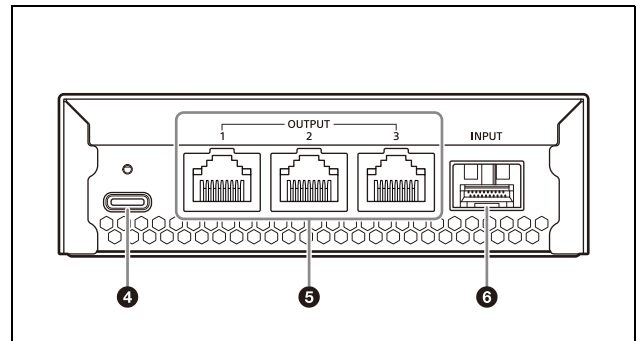
Indicates the status of RJ45 output connectors 1 to 3.  
 Lights up regardless of whether it is connected to the Display Cabinet or not.  
 Off: The RJ45 output connectors are not outputting images.  
 Lit green: RJ45 output connectors work properly.  
 Blinking red: An error occurred on RJ45 output connectors\*.

\* If the indicator is blinking every 0.25 seconds, turn off the power and on again. If it is still not improved, contact your local Sony representative.

**Note**

The INPUT indicator and OUTPUT indicator blink in red for about 5 seconds shortly after turning the power on or connecting cables. If blinking in red continues for over 30 seconds, turn off the power and on again or check the cable connection. If it still does not improve, contact your local Sony representative.

### Rear



#### 4 DC power input connector (USB Type-C)

Use a USB Type-C - Type-C cable (not supplied) to connect this connector to the USB Type-C output on the USB AC adapter (not supplied).

For the USB AC adapter, use a product with a USB Type-C with an output voltage of 5 V or higher and an output current 2 A or higher. For the USB Type-C - Type-C cable, use a product with a current 2 A or higher.

#### 5 OUTPUT connectors 1 to 3 (RJ45)

Use a Category 7 cable (not supplied) to connect this connector to the IN (cabinet input) connector on the Display Cabinet. The connectors 1 to 3 correspond to the INPUT connectors 1 to 3 of ZRA-T1 respectively.

Up to 3 cables can be connected to these connectors. Connect to connector 1 when you connect 1 cable, connector 1 and 2 when you connect 2 cables, and all connectors when you connect 3 cables.

#### 6 INPUT connector (SFP+)

Use an SFP+ transceiver module (not supplied) and optical fiber cable (not

supplied) to connect this connector to the OUTPUT connector on ZRA-T1.

This product is authenticated with safety standards for use in combination with the SFP+ transceiver module.

Contact your local Sony representative for other SFP+ transceiver modules.

- OTM-10GSR1 (Sony Corporation)

#### Note

Do not connect the INPUT and OUTPUT connectors to a hub. The input/output signals for these connectors are unique to the product and are not Ethernet signals. In particular, be aware that connecting these connectors to a PoE injector hub may result in damage to the product.

## Usage of this product

### 1 Connect the RJ45 cable.

#### ZRA-T1:

Connect the Display Controller and ZRA-T1 with a Category 7 cable. (Cable length: within 3 m)

#### Notes

- OUTPUT connectors 1 to 6 and OUTPUT connectors 7 to 12 on the Display Controller cannot be mixed when connecting.
- OUTPUT connectors 1 to 12 on the multiple Display Controllers cannot be mixed when connecting.

#### ZRA-R1:

Connect the Display Cabinet and ZRA-R1 with a Category 7 cable. (Cable length: within 10 m)

### 2 Connect the SFP+/OM3 cable.

Attach the SFP+ transceiver module to the SFP+ output connector on ZRA-T1 and the SFP+ input connector on ZRA-R1.

Connect SFP+ transceiver modules to each other with the optical fiber cable.

### 3 Connect the USB cable.

Connect the USB AC adapter to ZRA-T1/ZRA-R1 with the USB Type-C - Type-C cable.

#### Notes

- Do not use the USB Type-A - Type-C cable. It may cause a malfunction.
- If the USB AC adapter or USB Type-C cable has malfunctioned, this unit may not power on.

The power turns on after connecting the cable and the POWER indicator lights green. If the POWER indicator blinks red, remove the USB Type-C cable from the product.

### 4 Remove the USB cable.

Remove the USB Type-C - Type-C cable from ZRA-T1/ZRA-R1.

The POWER indicator turns off and the power turns off.

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# Error Codes

When a system error or warning occurs, verify the error code as follows.

Under [Controller List] in the main screen, double-click the Display Controller number or right-click it and select [Controller Info.] to display the [Controller Information] screen and the error code.

## Warnings

Warning code	Category	Description	Solution
511	Temperature	Temperature in the device	Check the device installation environment. If the problem persists, contact your local Sony representative.
531	Communication	Communication (Video Input Signal/RS485)	Check that the LAN cable is properly connected. If the problem persists, contact your local Sony representative.
532	Communication	Communication (Optical fiber)	Check that the optical fiber cable and SFP+ transceiver module are properly connected. If the problem persists, contact your local Sony representative.

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# Cleaning and Storage

## Daily cleaning

Use a cloth that has been dampened with a neutral detergent and thoroughly wrung out to wipe the device clean. Never use solvents, such as benzene and thinners.

## Storage

Do not store in environments where condensation may occur inside the device.



