

Instructions for Use

PDS0800-HD

Dual Link DVI splitter

Important

Please read the safety information and all information delivered with the product carefully to familiarize yourself with safe and effective usage.



Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

 DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.
 WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.
 CAUTION
indicates that minor personal injury can result if proper precautions are not taken.
NOTICE
indicates that material damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Use of EIZO products

 WARNING
EIZO products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by EIZO. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of their respective owners. Please refer to the trademarks listed in the appendix. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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1 Introduction

1.1 Contents of this document

This document explains the functionality and the approved use of the Splitter PDS0800-HD. To ensure clarity, it does not contain all detailed information on this product.

The contents of this document are neither part of a previous or existing agreement, commitment or legal relationship, nor does it modify such.

Note

This documentation is available in electronic format only. It can be found on the CD-ROM provided and can be downloaded from www.eizo-or.com .

1.2 Intended use

The Splitter PDS0800-HD is to be used to split one incoming signal into two outgoing signals. It can also be used to downscale two incoming signals in Quad HD format to an outgoing signal in FHD format.

The PDS0800-HD is intended for use inside buildings in a clean industrial environment. It must be installed in a rack.

The user must have knowledge of and practical experience with video distribution.

1.3 User

User

In the following, healthcare personnel such as surgeons or medical technicians are referred to as the "user".

Service / service personnel

"Service" or "Service personnel" identifies authorized personnel with knowledge of medical imaging technology, local standards for image quality requirements, and safety of medical products, for example a hospital technician or manufacturer of medical devices.

Cleaning staff

"Cleaning staff" refers to personnel responsible for cleaning medical devices.

2 Safety information

2.1 General safety instructions

Correct and safe operation of EIZO devices assume professional transport, storage, installation, and connection, as well as careful operation and service.

The devices may only be used for applications for which they are commonly used.

For safety reasons, the following precautions must be observed:

 DANGER
Please observe all warning information present on the device and in the instructions for use There is a danger to life if warnings are not obeyed. Severe personal injury or damage to property may occur.
Connecting the protective ground conductor If the device is connected to the line power, the device must be connected to a protective ground conductor. Use the following measures to ensure that the leakage currents remain below the specified limits: <ul style="list-style-type: none">• Separators for signal input unit or signal output unit• Use of a safety isolating transformer• Use of the additional protective ground terminal
No unauthorized opening of the device / no unauthorized service or maintenance work The device may only be opened by qualified personnel. Likewise, service or maintenance work may only be carried out by qualified personnel. There is a risk of electric shock. No liability is accepted for death and injury to persons or damage to property resulting from work carried out by non-qualified personnel.
Do not touch components in the device If the device is connected to the line power, components in the device are subjected to high voltages. Touching the components may be fatal.

 **DANGER**

Please observe all warning information present on the device and in the instructions for use

There is a danger to life if warnings are not obeyed. Severe personal injury or damage to property may occur.

Never use defective power cables

If a damaged or unsuitable power cable is used, it could result in a fire or electric shock. Only use power cables with PE contacts approved by the manufacturer.

Disconnect the power cable correctly

When disconnecting the power cable, always do so by holding the plug. Ensure that your hands are dry. There is a risk of electric shock.

Do not insert any objects into the housing

Objects inserted into the housing may result in an electric shock or damage to the device.

Do not place any objects on top of the device

If you place objects on top of the device, this can lead to overheating and fire.

Avoid penetration of liquid

Liquids seeping into the device may result in electric shock or device failure.

 **CAUTION**

Extensive damage to property may result if the device is not connected correctly

That is why you should observe the warning information:

Connection must be carried out by specialists

- Only use the video cables specified by the manufacturer for the connection.
- Only use power cables with PE contacts.
- Only use power outlets with PE contacts.
- Do not connect too many devices to a power outlet or extension cable.
- Observe the information provided by the respective manufacturer.

Connection in China

Only use power cables approved for China. These power cables are identified by the labels "CCC" or "CQC".

Observe the country-specific regulations

Observe all regulations of the country in which the device is used.

CAUTION

Extensive damage to property may result if the device is not connected correctly

That is why you should observe the warning information:

- Desktop installation:
Place the device on a solid and level surface. The attached stand, as well as the installation surface, must be suitable for the weight of the device.
- For mounting on a wall or ceiling suspension:
The mount unit must be suitable for the weight of the device.
- For installation in a rack:
Observe the installation sequence, and provide ventilation for the device.

Provide adequate air circulation

When installing the device, ensure that there is adequate air circulation for operation. The permissible ambient temperature range must not be violated. Otherwise, the device could be destroyed by overheating or have its function negatively impacted.

Avoid sources of heat

Do not install the device in the vicinity of sources of heat, such as radiators, heating appliances or other devices that can generate or emit heat.

Do not subject the device to jolting or shocks

The device contains sensitive electronic components that could be damaged by jolting or shocks.

Only switch on a cold device following adaptation to room temperature

If the device is brought into a room with a higher or rising temperature, condensed water will form in and on the device. Do not switch on the device until the condensed water has evaporated. Otherwise, the device could be damaged.

CAUTION

Extensive damage to property may result if the device is not connected correctly

That is why you should observe the warning information:

Transportation only in original packaging

Use the original packaging for transportation, and transport in the correct shipping position.

Care of device / cleaning agents

- Remove water drops immediately; extended contact with water discolors the surface.
- Only clean the surfaces using the cleaning agents referred to in the Instructions for Use.

What to do if the device is faulty

If the following conditions exist, the device must be disconnected from the line power and checked by qualified personnel:

- Damage to the plug or power cable.
- After liquid seeps into the device.
- If the device has been exposed to moisture.
- If the device does not function or if a fault cannot be eliminated using the Instructions for Use.
- If the device has been dropped and/or the housing damaged.
- If the device smells of burning or makes peculiar noises.

3 Description

3.1 Scope of delivery

Product	Order number	Description / components
Splitter PDS0800-HD	6GF60200AA001AA1	<ul style="list-style-type: none">• Splitter with two dual line DVI outputs (for 8MP monitors), a single link DVI output, and a YPbPr output (FHD format).• A power supply unit.• Mini DIN to RGB adapter.

3.2 Features

The Splitter PDS0800-HD is a Dual Link DVI Splitter with the following features:

- Two independent DVI Dual Link inputs are boosted and doubled, so that two monitors or corresponding devices can be connected to a graphics card output.
- If two signals with 1920 x 2160 @ 60 Hz and synchronous clock are connected, the PDS0800-HD also generates a downscaled image in FHD formats from the 3840 x 2160 image.
- Up to two splitters can be switched in series.
- The splitter address is set using rotary controls.
- Software can be used to control the DDC signal path between the two outputs.
- Fixed EDID data of an 8MP monitor can be selected in order to use the HD output without connecting the 8MP monitor.
- A connected receiver or transmitter (optical) is supplied power through the voltage pin of the DVI interface.
- To supply the receiver of a video cable extension with power, to DVI input connectors can be supplied with 350 mA DC.

Additional features in conjunction with an LMM

If an LMM56800 or LMM0802 Large Monitor Manager is used, the following features are available for controlling the PDS0800-HD:

- Reading and writing via DDC either to the primary or secondary output.
- Power supply status.
- Number of connected PDS0800-HD.
- Status of the DVI link connectors.

4 Setup and installation

CAUTION

Changes to device

Do not make any mechanical or electric changes to the device. Otherwise the device warranty becomes invalid.

The manufacturer is not liable for changes made to the device.

4.1 Installation location

NOTICE

Area surrounding the installation location

Protect the device from:

- Dirt
- Dust penetration
- Moisture

Provide adequate ventilation

Ventilation slots are provided on the front and back of the device for the circulation of air. Please note the following safety information.

CAUTION

Overheating of the device

Safe operation is endangered.

- Do not block or cover the device ventilation slots.
- Place the device so that the distance at the rear is at least 10 cm from a wall or 15 cm from other devices.
- Never place the device near a radiator.
- When installing the device in a rack, observe the permissible ambient temperature range.

Change of environment

NOTICE

Condensation

If the device is brought into a warm environment from a cold one, condensation may form in the device. This could result in a short circuit when switching on the device, damaging it.

- Wait until the condensed water has evaporated, including that inside the device, before you switch it on. This can take several hours.

4.2 Installation

The PDS0800-HD is a 19" 1U device for installation in a rack.

Prerequisite

- The 12 V DC power supply unit is not connected to line power.

Procedure

1. Connect the 12 V DC power supply unit to the PDS0800-HD as shown in the following figure.

Note: The PDS0800-HD is delivered with a power supply unit. An additional power supply unit can be connected as a redundant power supply, and is available as an accessory.



2. Use cable ties as strain relief for the power cable:



3. Use four screws to secure the PDS0800-HD in the rack. Following the specifications from the rack manufacturer.

Once the power supply unit is connected to line power, the LED on the power supply unit plug illuminates green.

5 Connecting

5.1 Safety information for connection

 CAUTION
Changes to device Do not make any mechanical or electric changes to the device. Otherwise the device warranty becomes invalid. The manufacturer is not liable for changes made to the device.

 DANGER
Connecting to line power <ul style="list-style-type: none">• The device is designed for line power with a grounded neutral conductor.• To avoid risk of electric shock, this device must only be connected to line power with a protective conductor.• Contact the responsible building technician or a qualified electrician if you are uncertain whether the line power is equipped with a protective conductor.

 CAUTION
Power cable and extension cable Not all power cables have the same rated values. <ul style="list-style-type: none">• Do not use the power cable delivered with the device for other products or purposes.• Do not use a common household extension cable to connect the device. Household extension cables do not have overload protection and are not suitable for use with computer systems.

 CAUTION
Shielding measures Follow all shielding measures in accordance with local EMC directives. If these guidelines are not observed, device malfunction may result.

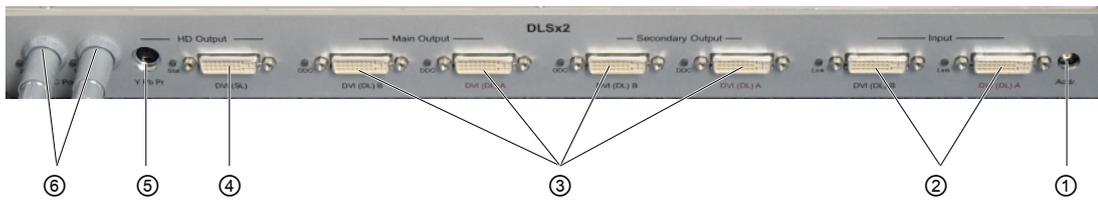
NOTICE

Cable installation

Observe the following instructions:

- Only shielded cables are to be used for all signal connections.
- If the relevant facility is available on the connector, all plug connections must be screwed tight or locked.
- The connecting cables must not be kinked.
- The minimum bending radius of a connecting cable generally equals five times the cable diameter.
- Do not route signal cables and power cables next to one another. Otherwise, line power subject to heavy interference could result in reversible pixel errors.
- The device must not share a line power supply with motors or valves (interference!).
- Externally connected cables can represent a trip hazard. Make sure that all incoming cables are safely routed.
- If the device offers strain relief mechanisms for the cables, use them to prevent unintended loosening of connected cables.

5.2 Device connectors



- ① Address rotary control
- ② DVI Dual Link input
- ③ DVI Dual Link output
- ④ DVI Single Link output
- ⑤ YPbPr Mini DIN output
- ⑥ 12 V DC power supply unit connector (ODU Medi-Snap 3 Pin)

5.2.1 DVI Dual Link interfaces

Signal splitting is the main function of the Splitter PDS0800-HD. The splitter has two DVI-D inputs, "Input A" and "Input B". Each of the incoming single or dual link signals are duplicated into two identical output signals, "Main Output A" and "Main Output B" as well as "Secondary Output A" and "Secondary Output B".

The DVI-D plug is connected to the output.

The splitter works across the entire frequency bandwidth, from 25 MHz to 165 MHz per DVI link.

The two channels, A and B, are independent of one another.

Up to two PDS0800-HD can be connected in series, where "Main Output A" and "Main Output B" are connected to inputs "Input A" and "Input B" of the next splitter. The address has to be increased for the second PDS0800-HD. The address is used by the downstream splitter to switch the DDC connections.

Normally, the DDC signal from "Input A" is connected to "Main Output A" and the DDC signal from "Input B" is connected to "Main Output B". The DDC connection can be switched from "Main Output" to "Secondary Output" through a DDC command in the software.

The LED in the output connectors indicates the status of the DDC line.

Power supply for DVI interfaces

All DVI interfaces have a 5 V DC output voltage as established in the DVI specifications.

The power supply through the PDS0800-HD is established as follows:

- The following are each combined into a group:
 - Input A and Output A connectors
 - Input B and Output B connectors
 - The HD output
- Each group can use a maximum current of 750 mA.
- The power supply for Input A and Input B can be switched on or off.

See also

[Address rotary control \[► 16\]](#)

5.2.2 The HD output connectors

The PDS0800-HD can downscale the signal at Input A and Input B, with a resolution of 3840 x 2160, to FHD format.

The outgoing signal is an analog component signal on the YPbPr or a single link DVI signal on the DVI (SL) output. The horizontal and vertical input resolution is halved using a bilinear filter.

In order to connect Cinch plugs, the scope of delivery for the device contains a 7-Pin Mini-DIN on a Cinch adapter (female)

See also

[HD output signal \[► 23\]](#)

5.3 Connection procedure

 **CAUTION**

Connection procedure

- During the connection procedure, the PDS0800-HD has to be disconnected from the line power when inserting or pulling connectors.
- The work described may only be carried out by service personnel.

Prerequisite

- The PDS0800-HD and the 12 V DC power supply unit are installed in the rack.

Procedure

1. Connect the video source to the DVI Dual Link "Input" interfaces of the splitter.
2. If two splitters are connected in sequence, connect the DVI Dual Link "Secondary Output" interfaces of the first splitter to the DVI Dual Link "Input" interfaces of the second splitter.
Note: Set the address of the second splitter to "1" on the address rotary control.
3. Connect the monitor(s) to the DVI Dual Link "Main Output" and "Secondary Output" interfaces.
Note: If a Large Monitor Manager (LMM) is used and only one monitor is operated, it has to be connected to the "Main Output". Otherwise, the LMM cannot read the monitor EDID data.
4. If needed, connect an FHD monitor to the DVI Single Link or YPbPr "HD Output" connector.
Note: Use the provided Mini-DIN on Cinch adapter to connect the component video to YPbPr.
5. Connect the 12 V DC power supply unit to the line power.

The PDS0800-HD is connected and the LED on each active connector illuminates.

See also

[Operation LED \[▶ 17\]](#)

6 Configuring

6.1 Address rotary control

Note

Ensure that the first Splitter PDS0800-HD used in the video chain has address "0" and the second splitter has address "1".

Use the address rotary control to set the address according to the following table.

Position	Splitter address	EDID data	Power at input
0	0	From main or secondary output	Not connected
1	1	From main or secondary output	Not connected
2	2	From main or secondary output	Not connected
3	Not used	From main or secondary output	Not connected
4	0	Internal EDID data	Not connected
5	1	Internal EDID data	Not connected
6	2	Internal EDID data	Not connected
7	Not used	Internal EDID data	Not connected
8	0	From main or secondary output	Connected
9	1	From main or secondary output	Connected
A	2	From main or secondary output	Connected
B	Not used	From main or secondary output	Connected
C	0	Internal EDID data	Connected
D	1	Internal EDID data	Connected
E	2	Internal EDID data	Connected
F	Not used	Internal EDID data	Connected

Note

- Use one of the positions, 8 through F, to supply 5 V DC to a receiver connected to an "Input".
- If errors occur in communication with the monitors, use rotary control positions 4 through 7 or C through F for troubleshooting. The internal EDID data from the splitter are provided at these positions, and DDC communication with the monitors is switched off. The internal EDID data are compatible with the data of an EIZO 8MP monitor.

7 Operation

After configuring the Splitter PDS0800-HD , operation consists of switching the power on and off.

If the PDS0800-HD is operated with a Large Monitor Manager (LMM), it can be controlled through the LMM user interface. The LMM0802, LMM0804, and LMM56800 are suitable LMM models.

During operation, the LEDs show the respective connection status.

7.1 Operation LED

When the PDS0800-HD is switched on, the LED colors have the following meanings with regard to connection status.

DVI inputs

The LEDs on the DVI inputs show the status of the link connection:

LED	Status of the connection
Red	No link active
Yellow	Single link active
Green	Dual link active
Off	Not used

"Main Output" and "Secondary Output"

The LEDs on the "Main Output" and "Secondary Output" show the status of the DDC connection:

"Main Output" LED	"Secondary Output" LED	Status of the connection
Green	Off	DDC input A/B connected to "Main Output" A/B
Off	Green	DDC input A/B connected to "Secondary Output" A/B
Red	Off	DDC input A/B connected to "Main Output" A/B single link right
Off	Off	DDC is not connected externally, just internally. See also Address rotary control [► 16] .

HD and YPbPr output

The LEDs on the HD and YPbPr output show the status of the HD connection:

HD output LED	Status of the connection
Red	No permissible signal on both inputs.
Yellow	Only one input signal is used and displayed on the HD monitor, because the offset is greater than 512 pixels or an input signal is missing.
Green	Both inputs are displayed. The connected signals are permissible and the offset between "Input A" and "Input B" does not exceed 512 pixels.
Off	Not used.

7.2 Operating with LMM56800

The status window of the LMM56800 user interface contains information based on the number of connected PDS0800-HD and monitors.

PDS0800-HD not connected, monitor connected

If only monitors are connected to the LMM56800, and no PDS0800-HD, then the LMM status window displays the following information:

Status	Description
Monitor output 1A: [Device ID] [Vendor ID] ¹⁾	"Output 1A" is connector "A" of the first graphics card.
Monitor output 1B: [Device ID] [Vendor ID] ¹⁾	"Output 1B" is connector "B" of the first graphics card.

¹⁾"[Device ID] [Vendor ID]" is the character set that was found in the corresponding EDID data of the connected monitor.

One PDS0800-HD, four DVI outputs used

If four outputs of a PDS0800-HD are used, the following information is displayed in the LMM56800 status window:

Status	Description
Monitor output 1A.0MA: [Device ID] [Vendor ID] ¹⁾	"Output 1A.0MA" is connector "A" from the "Main Output" of the PDS0800-HD at address "0", connected to connector "A" of the first graphics card.
Monitor output 1B.0MB: [Device ID] [Vendor ID] ¹⁾	"Output 1B.0MB" is connector "B" from the "Main Output" of the PDS0800-HD at address "0", connected to connector "B" of the first graphics card.
Monitor output 1A.0SA: [Device ID] [Vendor ID] ¹⁾	"Output 1A.0SA" is connector "A" from the "Secondary Output" of the PDS0800-HD at address "0", connected to connector "A" of the first graphics card.
Monitor output 1B.0SB: [Device ID] [Vendor ID] ¹⁾	"Output 1B.0SB" is connector "B" from the "Secondary Output" of the PDS0800-HD at address "0", connected to connector "B" of the first graphics card.

¹⁾"[Device ID] [Vendor ID]" is the character set that was found in the corresponding EDID data of the connected monitor.

Two PDS0800-HD connected in sequence with six video sources

If two PDS0800-HD are connected in sequence and six DVI outputs are used, the following information is displayed in the LMM56800 status window:

Status	Description
Monitor output 1A.0MA: [Device ID] [Vendor ID] ¹⁾	"Output 1A.0MA" is connector "A" from the "Main Output" of the first PDS0800-HD at address "0", connected to connector "A" of the first graphics card.
Monitor output 1B.0MB: [Device ID] [Vendor ID] ¹⁾	"Output 1B.0MB" is connector "B" from the "Main Output" of the first PDS0800-HD at address "0", connected to connector "B" of the first graphics card.
Monitor output 1A.0SA.1MA: [Device ID] [Vendor ID] ¹⁾	"Output 1A.0SA.1MA" is connector "A" from the "Main Output" of the PDS0800-HD at address "1", connected to connector "A" from the "Secondary Output" of the first PDS0800-HD at address "0", connected to connector "A" of the first graphics card.
Monitor output 1B.0SB.1MB: [Device ID] [Vendor ID] ¹⁾	"Output 1B.0SB.1MB" is connector "B" from the "Main Output" of the PDS0800-HD at address "1", connected to connector "B" from the "Secondary Output" of the first PDS0800-HD at address "0", connected to connector "B" of the first graphics card.
Monitor output 1A.0SA.1SA: [Device ID] [Vendor ID] ¹⁾	"Output 1A.0SA.1SA" is connector "A" from the "Secondary Output" of the PDS0800-HD at address "1", connected to connector "A" from the "Secondary Output" of the first PDS0800-HD at address "0", connected to connector "A" of the first graphics card.
Monitor output 1B.0SB.1SB: [Device ID] [Vendor ID] ¹⁾	"Output 1B.0SB.1SB" is connector "B" from the "Secondary Output" of the PDS0800-HD at address "1", connected to connector "B" from the "Secondary Output" of the first PDS0800-HD at address "0", connected to connector "B" of the first graphics card.

¹⁾[Device ID] [Vendor ID]¹⁾ is the character set that was found in the corresponding EDID data of the connected monitor.

7.2.1 Power supply unit status

In addition to the status of the connected monitors, the status window displays the status of the power supply units.

In conjunction with the PDS0800-HD, status "0" means that the power supply unit is active. Status "1" means there is no power supply unit present, it is defective, or it is not connected to line power.

Example

The following status messages are displayed for two PDS0800-HD:

- PDS0800-HD with address "0", power supply unit 1: 0
- PDS0800-HD with address "0", power supply unit 2: 0
- PDS0800-HD with address "1", power supply unit 1: 1
- PDS0800-HD with address "1" power supply unit 2: 0

This means that the first PDS0800-HD has two active power supply units and the second PDS0800-HD has one active power supply unit.

7.2.2 Status of link connections

The status of DVI link connections can also be checked in the LMM56800 status window.

For two Splitter PDS0800-HD, for example, the following status messages can be displayed:

- PDS0800-HD with address "0" link A: 0
- PDS0800-HD with address "0" link B: 0
- PDS0800-HD with address "1" link A: 1
- PDS0800-HD with address "1" link B: 0

For PDS0800-HD devices with link status "0" means that a link connection was established. Link status "1" means no dual link connection was established. This may be because only a single link connection or no link connection was established.

7.3 External software interface to the Large Monitor Manager

The interface to the external software has the same functionality as the browser interface. In addition, it enables communication with the monitor through the DDC interface.

For additional information, also see the document: "External Software for MDM".

8 Technical specifications

8.1 Electrical data

The Splitter PDS0800-HD requires a 12 V DC power supply unit for operation. A second power supply unit can be installed as a redundant power supply.

PDS0800-HD

Input voltage	12 V DC \pm 10 %
Input current	3.0 A max. (approx. 1.5 A internal and 1.5 A external to supply the video connectors)
Input connector	ODU Medi-Snap 3 Pin
Video input connectors	DVI-D Dual Link
Video input voltage	5 V DC ¹⁾ , max. 750 mA ²⁾
Video input frequency	Min. 25 MHz, max. 300 MHz
Main and Secondary Video output connector	DVI-D Dual Link
Main and Secondary Video output frequency	Max. 300 MHz
Main and Secondary Video output voltage	5 V DC, max. 750 mA ²⁾
Video HD output DVI connector	DVI-D Single Link
Video HD output DVI timing	1080 progressive timing at 60 Hz
Video HD output DVI voltage	5 V DC, max. 750 mA ²⁾
Video HD output YPbPr connector	Mini DIN connect with adapter on 3x Cinch
Video HD output YPbPr timing	1080 interlaced timing at 60 Hz

¹⁾ The 5 V DC video input supply can be switched off with the address control.

²⁾ The output power is limited to 750 mA per group. There are three groups, as follows:

- Group "a" contains all output and input connectors of typo "A".
- Group "b" contains all output and input connectors of typo "B".
- Group "c" is the HD DVI output.

Power supply unit

Type	TR45A12
Input voltage	90 - 264 V AC
Input frequency	50 - 60 Hz
Start-up current	60 A max. at 240 V AC
Insulation	Input to output 4.242 kV DC
Conducted EMI	CISPR/FCC Class B
Residual current	3.5 mA max.
Input connector	IEC 320/C14
Output voltage	12 V DC
Output current	3.75 A
Output connector	ODU Medi-Snap 3 Pin
Markings	CE, GS, CCC, FCC, PS E, RoHS, UL (reference number E 17 6177)

8.2 Input signal for HD output

To obtain a valid signal at the HD output, each signal at inputs A and B has to meet the following requirements:

Requirement	Value
H display	1920 pixels
V display	2160 rows
Max. pixel frequency	133 MHz
Display both input channels in the HD output signal	The maximum offset between both inputs is 512 pixels.

8.3 HD output signal

The timings supported on the HD output are based on international video standards defined by the ITU and SMPTE 274M for the high definition resolution of 1920 x 1080.

YPbPr output 1080 interlaced timing

Properties	Value
Pixel clock	74.25 MHz
H display	1920 pixels
H Front Porch	72 pixels
H Sync Width	48 pixels
H Back Porch	160 pixels
H Total	2200 pixels
V display	1080 rows
V Display Field	540 rows
V Blank Field	22/23 rows (Top/Bottom Field, Top Field First)
V Front Porch	2 rows
V Sync Width	5 rows
V Back Porch	15/16 rows
V total	1125 rows
V Field Rate	60 Hz
V Frame Rate	30 Hz
Signal	YPrPb
Signal Level	In accordance with EIA-770.3 (300 mV/700 mV)
Video DACs	3 High Quality 10 Bit with 4x Oversampling
Chroma Subsampling	4:2:2

DVI output 1080 progressive timing

Properties	Value
Pixel clock	148.5
H display	1920 pixels
H Front Porch	72 pixels
H Sync Width	48 pixels
H Back Porch	160 pixels
H Total	2200 pixels
V display	1080 rows
V Back Porch	36 rows
V Front Porch	4 rows
V Sync Width	5 rows
V total	1125 rows

8.4 Mechanical design

Size	<ul style="list-style-type: none"> • 19" wide • 1U high, 23.6 mm • 120 mm deep
Weight	1.4 kg

8.5 Climatic conditions

In operation	
Temperature range	+5 °C to +40 °C ambient temperature according to EN 60068-2-1 and EN 60068-2-2
Humidity	10 % - 80 % non-condensing, at 25 °C according to EN 60068-2-38.
Air pressure	700 - 1060 hPa (525 - 795 mm Hg) or up to 3050 m height (10000 ft)
During transport and storage (packed)	
Temperature range	-40 °C to +70 °C ambient temperature according to EN 60068-2-1 and EN 60068-2-2
Humidity	10 % - 95 % non-condensing, at 25 °C according to EN 60068-2-38.

8.6 Safety regulations



This product has been assigned a CE marking in compliance with the stipulations of EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and the RoHS Directive 2011/65/EU.

Electrical safety	Power supply unit in compliance with IEC 60950/ EN 60950, UL 60950
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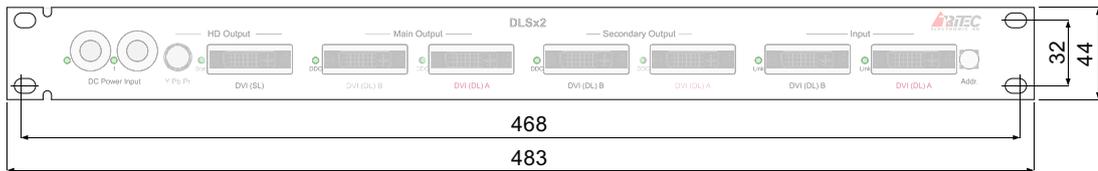
8.7 Electromagnetic compatibility

Declaration of Conformity	EMC Directive 2004/108/EC
EMC	In compliance with EN 55022 and EN 55024
Emitted interference	
• Harmonic currents	IEC 61000-3-2/EN61000-3-2
• Voltage fluctuations	IEC 61000-3-3/EN 61000-3-3
• Line dependent and radiated interference (Level B)	CISPR 22/ EN 55022 or CISPR 11/EN 55011
	FCC Class A
Interference immunity	
• Electrostatic discharge on casing parts (ESD)	IEC 61000-4-2/EN 61000-4-2 Level 2
• EM immunity	IEC 61000-4-3/EN 61000-4-3 Level 2
• Burst on signal line / power cables	IEC 61000-4-4/EN 61000-4-4 Level 2
• Surge on power cables	IEC 61000-4-5/EN 61000-4-5 Level 2
• Conducted interference	IEC 61000-4-6/EN 61000-4-6 Level 2
• Power frequency magnetic fields	IEC 61000-4-8/EN 61000-4-8 Level 2
• Voltage drops, brief power interruptions and voltage fluctuations	IEC 61000-4-11/EN 61000-4-11 Level 3
	FCC Class A

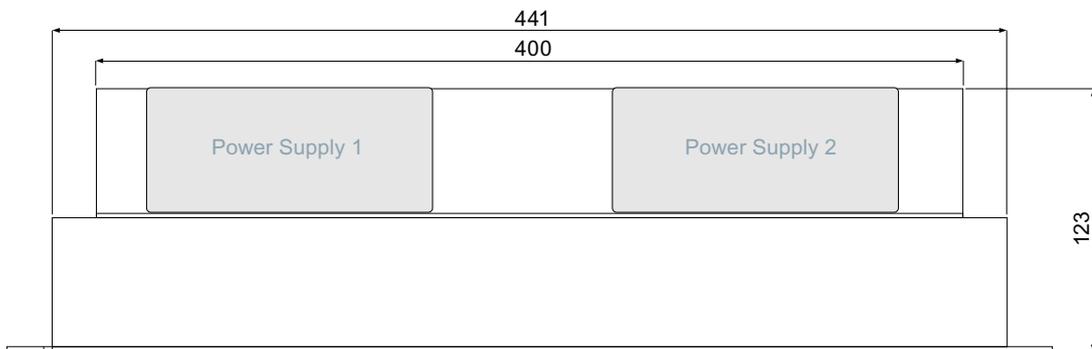
9 Dimensional drawings

All dimensions in mm

9.1 Front view



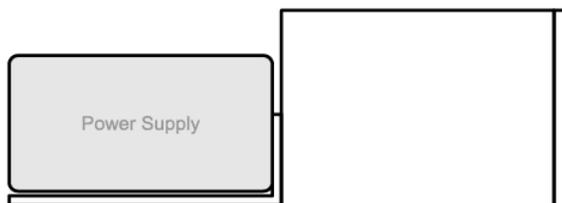
9.2 View from above



Note

Only one power supply unit is included in the scope of delivery A second power supply unit is available as an option.

9.3 View from the side



10 Appendix

10.1 Regulatory Compliance Statements (FCC)

Your EIZO product is marked to indicate its compliance class:

- Federal Communications Commission (FCC) – USA

FCC Class B Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note
<p>This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.</p> <p>These limits are designed to provide reasonable protection against harmful interference in a residential installation.</p> <p>This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.</p> <p>However, there is no guarantee that interference will not occur in a particular installation.</p> <p>If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:</p> <ul style="list-style-type: none">• Reorient or relocate the receiving antenna.• Increase the separation between the equipment and receiver.• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.• Consult the dealer or an experienced radio/television technician for help.

FCC Class A Notice

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Modifications

Any modifications made to this device that are not approved by EIZO GmbH, may void the authority granted to the user by the FCC to operate this equipment.

10.2 Environmental protection

Comply with all local requirements and laws pertaining to the disposal of devices.

The device is in compliance with directive 2011/65/EU for limiting the use of specific hazardous materials in electric and electronic devices.

10.3 Warranty

Opening of the housing, or electrical or mechanical changes on or in the device, result in cancellation of the warranty. For warranty details, please contact the sales partner from whom you purchased the product. These warranty conditions are neither extended nor limited by the contents of this instruction manual.

10.4 Additional devices

Connected devices such as PCs must meet the relevant safety standards.

10.5 Repairs

Please contact the sales partner from whom you purchased the product.

10.6 Contact

Support during installation and for technical questions

www.eizo-or.com

10.7 Trademarks

The EIZO Logo is a registered trademark of EIZO Corporation in Japan and other countries.

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DICOM is a registered trademark of the National Electrical Manufacturers Association for the publication of standards in the area of digital communication of medical information.

TORX is a registered trademark of Acument Intellectual Properties, LLC.

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