



Accessory

Breakout Box II

Installation Guide

Breakout Box II Installation Guide

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Installation Guide Version 1.0 for Breakout Box II Version 1.0

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Registration Form

Dear customer,

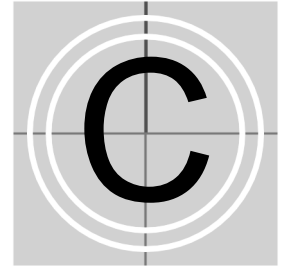
this product was developed and tested thoroughly. Unfortunately, the possibility of problems and errors can never be ruled out. To support us in helping you as fast as possible if such a case occurs, please fill in this registration form and send or fax it to the address on the right.

You may also use our online registration form which can be accessed from the following internet page: <http://www.dvs.de/english/support/support.html>

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Customer	
Name:	_____
Company:	_____
Contact:	_____
Address:	_____ _____ _____
Phone:	_____
Fax:	_____
Vendor:	_____
Breakout Box II	
Serial No.:	_____
Remarks:	_____ _____
Connected to DVS device	
Brand: _____	Type: _____
Operating System: _____	Version: _____
Connected devices (Brand and type of edit controller, VTR, color grading system, etc.)	
_____ _____ _____	



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Introduction



This documentation describes the installation of the Breakout Box II. The Breakout Box II (BoB II) is a modular device that offers most connection possibilities of a DVS video system or video board on one half 19" rack-mount panel. Due to its modular design it can be extended by another half 19" breakout box that will then hold the connections for audio. The BoB II is available as an accessory equipment for various DVS products, for example, the OEM-product 'Centaurus'.

The OEM-product Centaurus is centered around the Iris board, a half-length PCI-X bus single board for real-time input and output of uncompressed HDTV, SDTV and AES/EBU audio signals. Due to its complexity and various many functions, it offers a lot of connection possibilities, for example, input/output connections and communication connections to external devices such as a VTR or digital disk recorder. To install all of them on the rear of a computer system is sometimes not possible. Therefore, DVS offers as an accessory the Breakout Box II that provides most connection possibilities in one place.

Overall, the Breakout Box II consists of three breakout box modules: one main breakout box and two audio breakout boxes. The Main BoB of the Breakout Box II holds the most important connections such as GPI or the RS-422 connectors. It can be extended by another half 19" breakout box for audio connections. The following two audio breakout boxes are available among the optionally available items:

Balanced Audio BoB (BABoB)	The Balanced Audio BoB in- and outputs the audio signals of the connected DVS video device symmetrical.
Unbalanced Audio BoB (UABoB)	The Unbalanced Audio BoB in- and outputs the audio signals of the connected DVS video device unsymmetrical.
BoB Rackshelf	For the save keeping of the Main BoB and the additional audio breakout box in a rack, DVS offers a 19" rack-shelf in which the breakout boxes can be installed and afterwards put into a rack.



1.1 Overview

This guide informs you about the installation of the Breakout Box II as well as all connection possibilities. The chapters contain the following information:

Chapter 1	Begins with a short introduction to the Breakout Box II, followed by a note regarding the audience this manual is written for and an explanation of the conventions used in this manual. Furthermore, it provides safety instructions that you must read carefully and adhere to and the scope of delivery for the Breakout Box II.
Chapter 2	This chapter provides a front and a rear overview of the Breakout Box II modules detailing all items, connectors and interfaces. Additionally, it contains an overview of the BoB interface slot panel.
Chapter 3	Describes the hardware installation of the Breakout Box II.
Appendix	Provides technical details and general information about the Breakout Box II.
Index	This chapter facilitates the search for specific terms.

1.2 Target Group

To use this guide and the Breakout Box II you should be familiar with the respective DVS product where the breakout box should be connected to. For information about this device, please refer to its respective user guide.

Furthermore, you should be familiar with the hardware structure and interior of a computer system.

1.3 Conventions Used in this User Guide

The following typographical conventions will be used in this documentation:

- Texts preceded by this symbol are parts of a list.
- Texts preceded by this symbol describe activities that you must perform in the order indicated.



Texts preceded by this symbol are general notes intended to facilitate work and help avoid errors.



You must pay particular attention to text that follows this symbol to avoid errors and possible resulting damages thereof.



Texts following this symbol you must pay particular attention to to avoid dangers and personal injuries.

“ ” Texts enclosed by quotation marks are references to other manuals, guides, chapters, or sections.



1.4 Safety Instructions

To use the Breakout Box II correctly please heed the following:



Please read the following safety instructions very carefully before attempting any installation and/or performing any work on the Breakout Box II.

If the Breakout Box II is not used in compliance with the safety instructions, the warranty and all resulting liability claims will be void.

General

The Breakout Box II has been built according to the applying safety regulations. To minimize the possibility of a faulty operation of the device all manuals and guides must be available at all times at the operation site. Before installing and/or using the Breakout Box II the manuals and guides delivered with the Breakout Box II must be read and observed.

- Use the Breakout Box II only in apparent good technical order.
- The system you are trying to connect the Breakout Box II to usually works with voltages that can be hazardous to your health. Never work on the system or access its interior with the power cable(s) being plugged in. Make sure the power supply is disconnected from the components you are working on.
- Computer hardware contains components that are sensitive to electrostatic discharge. If you touch them without precautionary measures, they can be destroyed. Use a wrist strap connected to ground when accessing electronic parts and take care of grounding the respective system. Avoid touching the internal components of the computer and the electronic components of the Breakout Box II whenever possible.
- Computer hardware contains components that are very sensitive to changing voltages. Connecting or disconnecting the Breakout Box II to or from peripheral hardware while any of them is switched on may damage the hardware. Switch off the computer system and all peripheral hardware before connecting or disconnecting anything.
- Use the Breakout Box II only in compliance with the technical data laid out in section “Technical Data” on page A-1.
- If fluids or solid objects get inside the casings, all connected components must be disconnected from their power supplies immediately and the Breakout Box II must to be checked by authorized service personnel afterwards.
- Only use a damp tissue without any cleaning agents to clean the casings.

- The Breakout Box II may not be misused, abused, physically damaged, neglected, exposed to fire, water or excessive changes in the climate or temperature, or operated outside maximum rating.
- Do not perform any changes or extensions to the Breakout Box II whatsoever.

Transportation

During transportation of the Breakout Box II please observe the following:

- Always use the original packing or a similar structured packing for transportation.
- Keep the Breakout Box II as a transportation good dry.
- In the warranty period you have to keep the original packing and use it in case of transportation.

Environmental Conditions

For error-free working and a long service life, the Breakout Box II needs some basic environmental conditions:

- If your Breakout Box II comes with a rack-shelf, it must be properly installed into a high-frequency-proofed rack.
- Do not expose the Breakout Box II to sources of heat, such as direct sunlight or a radiator.
- Avoid areas with high humidity or dust. Best operating conditions are given in an air-conditioned site.
- Do not expose the Breakout Box II to strong electric or magnetic fields.



1.5 Important Notes

The following provides information about warranty.

Warranty Information

This product is warranted to be free of defects in materials and workmanship for a period of one year from the date of purchase. DVS extends this Limited Warranty to the original purchaser.



You have to keep the original packing and use it in case of transportation. Otherwise this warranty will be void.

In the event of a defect or failure to confirm to this Limited Warranty, DVS will repair or replace the product without charge. In order to make a claim under this Limited Warranty, the purchaser must notify DVS or their representative in writing of the product failure. In this Limited Warranty the customer must upon DVS' request, return the product to the place of purchase or send the defective device to a given address for the necessary repairs to be performed. In the warranty period the customer must keep the original packing and pack the DVS product in it in case of a product return. If the customer is not satisfied with the repair, DVS will have the option to either attempt a further repair, exchange the product, or refund the purchase price.

This warranty does not cover:

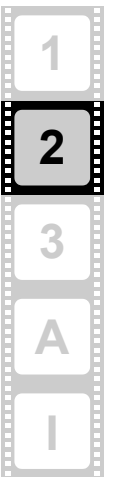
- Products not developed by DVS GmbH.
- Products which have been subject to misuse, abuse, accident, physical damage, neglect, exposure to fire, water or excessive changes in the climate or temperature, or operation outside maximum rating.
- Products on which warranty stickers or product serial numbers have been removed, altered or rendered illegible.
- The cost of installations, removal, transportation, or reinstallation.
- Costs for transportation damages.
- Damages caused to any other items.



Breakout Box II Overview

The Breakout Box II is a modular device that offers a total of three breakout box modules: it consists of a main breakout box (Main BoB) and two audio breakout boxes, the Balanced Audio BoB and the Unbalanced Audio BoB. Each breakout box provides a half 19" connector panel. The Main BoB of the Breakout Box II holds the most important connections such as GPI or the RS-422 connectors. Usually, it will be extended by another half 19" breakout box for audio connections, thus offering an overall connector panel area of 19" in width.

This chapter provides a detailed overview of the Breakout Box II and all its modules. The individual breakout boxes will be shown in a front and a rear view and all their connectors will be listed.



2.1 Overview of the Main BoB

This section provides an overview of the main breakout box (Main BoB). Here you can find the items and connectors as they are present on the front and on the rear panel.



The connections for digital video can be found on the BoB interface slot panel and on the DVS video board.

2.1.1 Front Panel

The following figure shows a detailed overview of the front panel of the Main BoB:

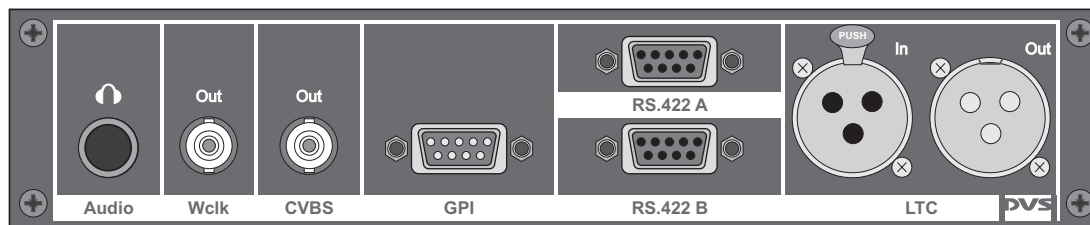


Figure 2-1: Front panel of main breakout box



The connections for digital video can be found on the BoB interface slot panel and on the DVS video board.

Connector Name	Description
Audio	6.3 mm/1/4" unsymmetrical stereo jack headphone output to monitor the audio output
Wclk Out	BNC connector, wordclock signal for synchronization of an external audio device
CVBS Out	BNC connector for composite video burst signal: either analog output of SD video or used for synchronization digital video
GPI	DB 9 connector (male), general purpose interface
RS.422 A	DB 9 connector (female), first serial RS-422 interface for master/slave control
RS.422 B	DB 9 connector (female), second serial RS-422 interface for master/slave control

Connector Name	Description
LTC IN	XLR connector (female) for the input of longitudinal timecode
LTC OUT	XLR connector (male) for the output of longitudinal timecode

2.1.2 Rear Panel

The following figure shows a detailed overview of the rear panel of the Main BoB:

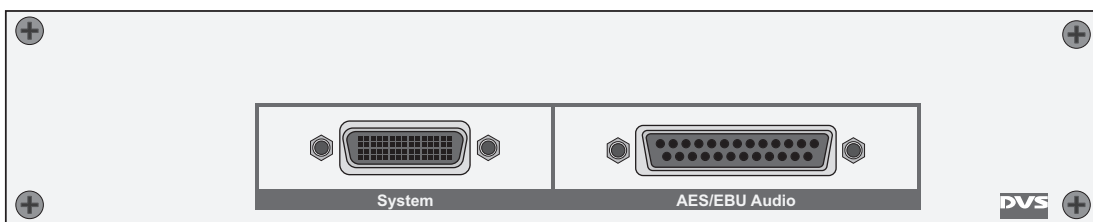
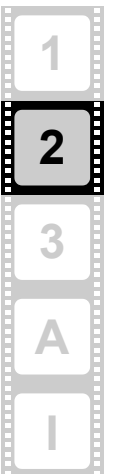


Figure 2-2: Rear panel of main breakout box

Connector Name	Description
System	DB 60 connector (female), to be connected to BoB interface slot panel (see section “Overview of the BoB Interface Slot Panel” on page 2-8)
AES/EBU Audio	DB 25 connector (female) for audio signal in-and output, to be connected to an audio breakout box if available



2.2 Overview of the Balanced Audio BoB

This section provides an overview of the balanced audio breakout box (Balanced Audio BoB). In a standard configuration in connection with the Main BoB you will either have this breakout box or the Unbalanced Audio BoB which is described in section “Overview of the Unbalanced Audio BoB” on page 2-6. The Balanced Audio BoB will be shown in a front and a rear view, and all items and connectors will be described.

2.2.1 Front Panel

The following figure shows a detailed overview of the front panel of the Balanced Audio BoB:

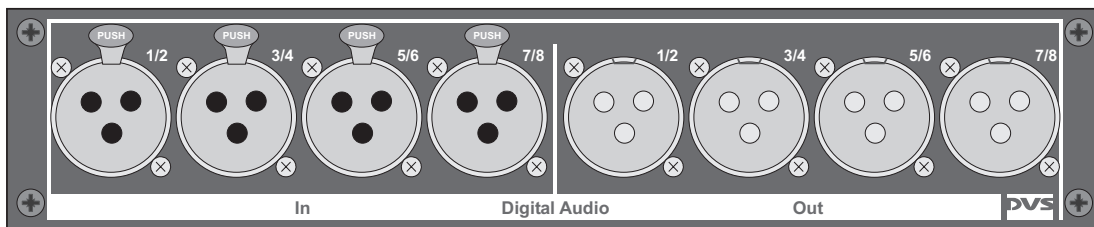


Figure 2-3: Front panel of balanced audio breakout box

Group Name	Connector Name	Description
Digital Audio In	1/2	XLR connector (female) for a symmetrical audio signal input of channels 1 and 2
	3/4	XLR connector (female) for a symmetrical audio signal input of channels 3 and 4
	5/6	XLR connector (female) for a symmetrical audio signal input of channels 5 and 6
	7/8	XLR connector (female) for a symmetrical audio signal input of channels 7 and 8

Group Name	Connector Name	Description
Digital Audio Out	1/2	XLR connector (male) for a symmetrical audio signal output of channels 1 and 2
	3/4	XLR connector (male) for a symmetrical audio signal output of channels 3 and 4
	5/6	XLR connector (male) for a symmetrical audio signal output of channels 5 and 6
	7/8	XLR connector (male) for a symmetrical audio signal output of channels 7 and 8

2.2.2 Rear Panel

The following figure shows a detailed overview of the rear panel of the Balanced Audio BoB:

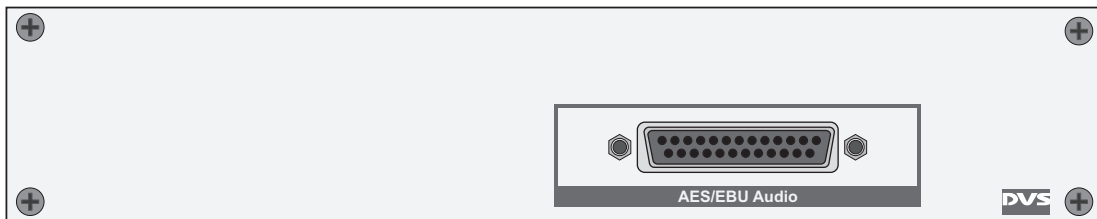
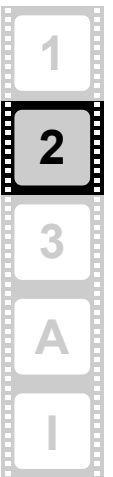


Figure 2-4: Rear panel of balanced audio breakout box

Connector Name	Description
AES/EBU Audio	DB 25 connector (female) for audio signal in- and output to be connected to Main BoB



2.3 Overview of the Unbalanced Audio BoB

This section provides an overview of the unbalanced audio breakout box (Unbalanced Audio BoB). In a standard configuration in connection with the Main BoB you will either have this breakout box or the Balanced Audio BoB which is described in section “Overview of the Balanced Audio BoB” on page 2-4. The Unbalanced Audio BoB will be shown in a front and a rear view, and all items and connectors will be described.

2.3.1 Front Panel

The following figure shows a detailed overview of the front panel of the Unbalanced Audio BoB:

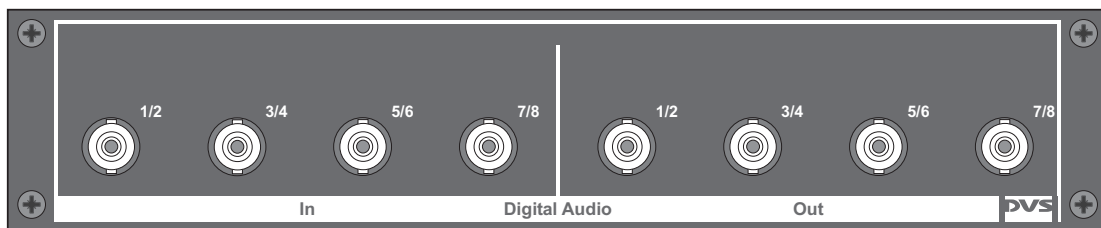


Figure 2-5: Front panel of unbalanced audio breakout box

Group Name	Connector Name	Description
Digital Audio In	1/2	BNC connector for an unsymmetrical audio signal input of channels 1 and 2
	3/4	BNC connector for an unsymmetrical audio signal input of channels 3 and 4
	5/6	BNC connector for an unsymmetrical audio signal input of channels 5 and 6
	7/8	BNC connector for an unsymmetrical audio signal input of channels 7 and 8

Group Name	Connector Name	Description
Digital Audio Out	1/2	BNC connector for an unsymmetrical audio signal output of channels 1 and 2
	3/4	BNC connector for an unsymmetrical audio signal output of channels 3 and 4
	5/6	BNC connector for an unsymmetrical audio signal output of channels 5 and 6
	7/8	BNC connector for an unsymmetrical audio signal output of channels 7 and 8

2.3.2 Rear Panel

The following figure shows a detailed overview of the rear panel of the Unbalanced Audio BoB:

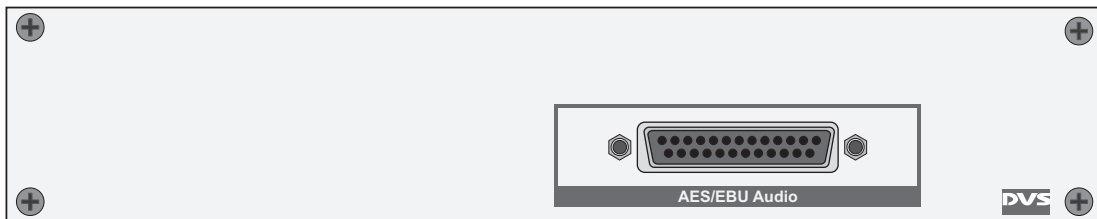
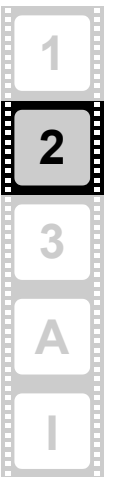


Figure 2-6: Rear panel of unbalanced audio breakout box

Connector Name	Description
AES/EBU Audio	DB 25 connector (female) for audio signal in- and output to be connected to Main BoB



2.4 Overview of the BoB Interface Slot Panel

If your delivery of the Breakout Box II includes a Main BoB, you will also have received an additional connection slot panel, the BoB interface slot panel. Then the BoB interface slot panel has to be installed in the computer system where the DVS video board is installed. In most DVS video board configurations it will replace all additional slot panels that were originally delivered with the board.



The BoB interface slot panel is necessary only if you have received a Main BoB as well. In a stand-alone setup of an audio breakout box it is not needed.

On the BoB interface slot panel you can find besides a connector to interface with the Main BoB, digital video connectors which will supplement the already present video connectors on the DVS video board.

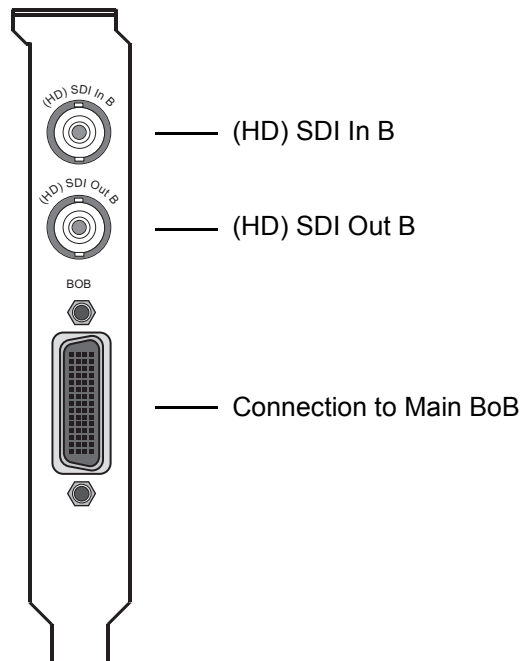


Figure 2-7: Breakout box interface slot panel

Connector Name	Description
(HD) SDI In B	BNC connector for key and/or RGB input in dual-link mode (serial digital interface)
(HD) SDI OUT B	BNC connector for key and/or RGB output in dual-link mode (serial digital interface)
Main Breakout Box	DB 60 connector (female), to be connected to Main BoB (see section "Overview of the Main BoB" on page 2-2)



Installation and Setup

This chapter details all the information necessary to install the Breakout Box II and connect it to a DVS video board.

Due to the modular design of the Breakout Box II there are several possible setup combinations for an installation of the breakout box modules:

- You can setup and install the main breakout box (Main BoB) alone,
- you can install and setup the Main BoB together with an audio breakout box (either the Balanced Audio BoB or the Unbalanced Audio BoB), or
- you can install one of the audio breakout boxes alone (either the Balanced Audio BoB or the Unbalanced Audio BoB).



The installation of all possible setup combinations will be described in this chapter. The table below indicates the sections that have to be observed for the respective setup and installation. Identify your setup combination and refer to the given sections in the order indicated:



Additionally, the optionally available rack-shelf for the Breakout Box II may have been delivered to you to mount the breakout boxes into a 19" rack. Prior to an installation of the Breakout Box II you have to mount the delivered breakout box(es) into the rack-shelf. For this please refer to section "Rack-shelf Installation" on page 3-12.

Setup and installation of ...	Described in
main breakout box (Main BoB) alone	– section "Installation and Setup of the Main BoB" on page 3-3
Main BoB together with an audio breakout box	– section "Installation and Setup of the Main BoB" on page 3-3 – section "Installation of the Audio BoB" on page 3-9
an audio breakout box alone	– section "Installation of the Audio BoB" on page 3-9



Because the BoB II is available as an accessory equipment for various DVS products, some of the design and connector layouts of the DVS video board and its slot panels where the Breakout Box II has to be connected to may differ.

3.1 Installation and Setup of the Main BoB

There are three steps necessary to install the main breakout box of the Breakout Box II:

1. You have to prepare the computer system equipped with DVS video board for the installation of the BoB interface slot panel,
2. you have to install the BoB interface slot panel in the computer system and setup the internal connections, and
3. you have to finish the installation and setup the external connections from the computer system to the breakout box.

All the steps necessary will be described in the following.



Additionally, the optionally available rack-shelf for the Breakout Box II may have been delivered to you. Prior to an installation of the Breakout Box II you have to mount the delivered breakout box(es) into the rack-shelf. For this please refer to section "Rack-shelf Installation" on page 3-12.

3.1.1 Preparation

To prepare the main breakout box and the computer system equipped with a DVS video board for the installation procedure perform the following:

- Place the breakout box on a firm, flat surface within reach of the computer where the DVS video board is installed, or install it into the 19" rack-shelf optionally available (see section "Rack-shelf Installation" on page 3-12).
- Turn off the computer where the DVS video board is installed and disconnect its power cable(s).



The computer system works with voltages that can be hazardous to your health. Never work on the system or access its interior with the power cable(s) being plugged in. Make sure the power supply is disconnected before opening its casing.

- Open the computer casing (for details on how to open the casing, please refer to the computer's user guide).



Computer hardware contains components that are sensitive to electrostatic discharge. If you touch them without precautionary measures, they can be destroyed. Use a wrist strap connected to ground when accessing electronic parts and take care of grounding the computer system. Avoid touching the components of the system and the DVS video board as well as the interface slot panel whenever possible.



- Disconnect any cables that are connected to the DVS video board (internally as well as externally).
- If applicable, remove all additional slot panels that were connected to the DVS video board from the computer. You will not need them anymore because all interfaces will be either on the Breakout Box II or on the two remaining slot panels of the computer system, i.e. the slot panels of the DVS video board and the BoB interface slot panel.

With this the preparation of the computer system for the breakout box is complete and you can now install the internal connections.

3.1.2 Installing the Internal Connections

In this step the internal connections have to be installed. For this perform the following:

- Install the BoB interface slot panel in a free panel slot: Insert the panel into an empty slot and fasten it with a screw.
- If applicable, fill the remaining empty slots with blind panels again and fasten them with screws.
- Connect the cables delivered with the Breakout Box II to the correct DVS video board interfaces like shown in the illustration and table below.



Perform this step carefully. When connecting anything wrong, you will get wrong signals at the breakout box front connectors or no signal at all.

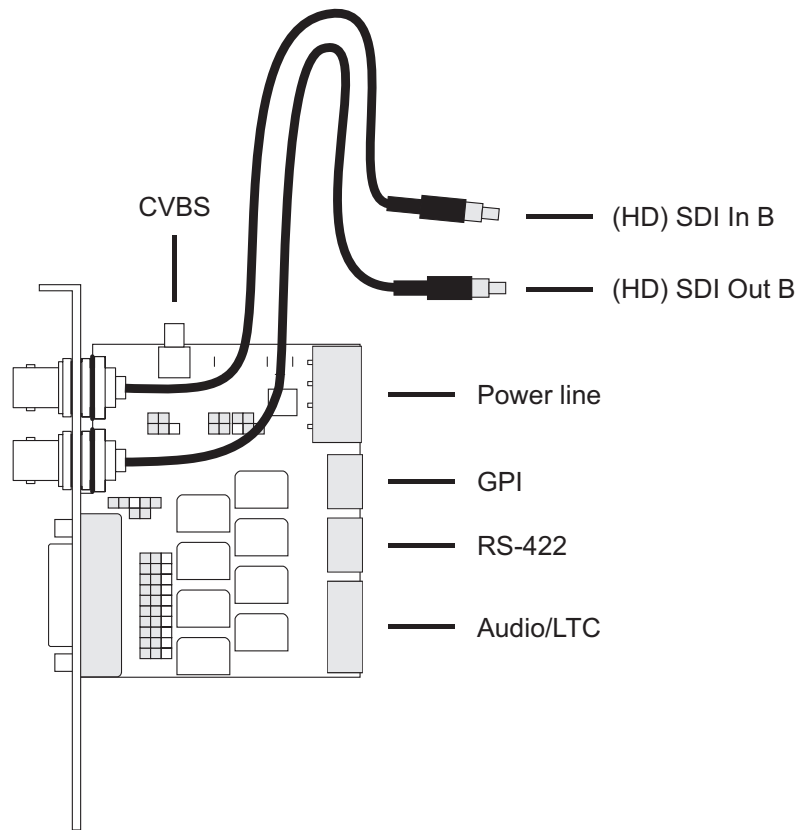



Figure 3-1: Overview of the printed circuit board (BoB interface slot panel)



Item	Description
CVBS	MCX connector for composite video burst signal; connect it with a MCX-to-MCX cable to the CVBS OUT connector on the DVS video board
(HD) SDI In B	MCX connector for key and/or RGB input in dual-link mode; connect it with a MCX-to-MCX cable either to the SD IN or the HD SDI IN B connector (if key channel and/or HDTV option is enabled for your board) on the DVS video board
(HD) SDI OUT B	MCX connector for key and/or RGB output in dual-link mode; connect it with a MCX-to-MCX cable either to the SD OUT or the HD SDI OUT B connector (if key channel and/or HDTV option is enabled for your board) on the DVS video board

Item	Description
Power line	<p>The power line connector has to be connected to the a standard power distribution line of your computer system; it should be of the same type as, for example, used to power your CD-ROM (for specifications see section “Pin-out of Power Line Connector” on page A-2)</p> <p> The connected extra power line makes the GPI signal provided by the BoB interface slot panel stronger and clearer. However, if you do not have a power line available, the GPI will still be functional.</p>
GPI	Flat cable connector for GPI; connect it with a 12-pin flat cable to the GPI connector on the DVS video board
RS-422	Flat cable connector for the RS-422 connection; connect it with a 12-pin flat cable to the RS-422 connector on the DVS video board
Audio/LTC	Flat cable connector for the audio and/or LTC connection; connect it with a 26-pin flat cable to the AUDIO/LTC connector on the DVS video board

The following figure shows an example connection. It details the connection of the BoB interface slot panel to the Iris board of the OEM-product Centaurus by DVS:

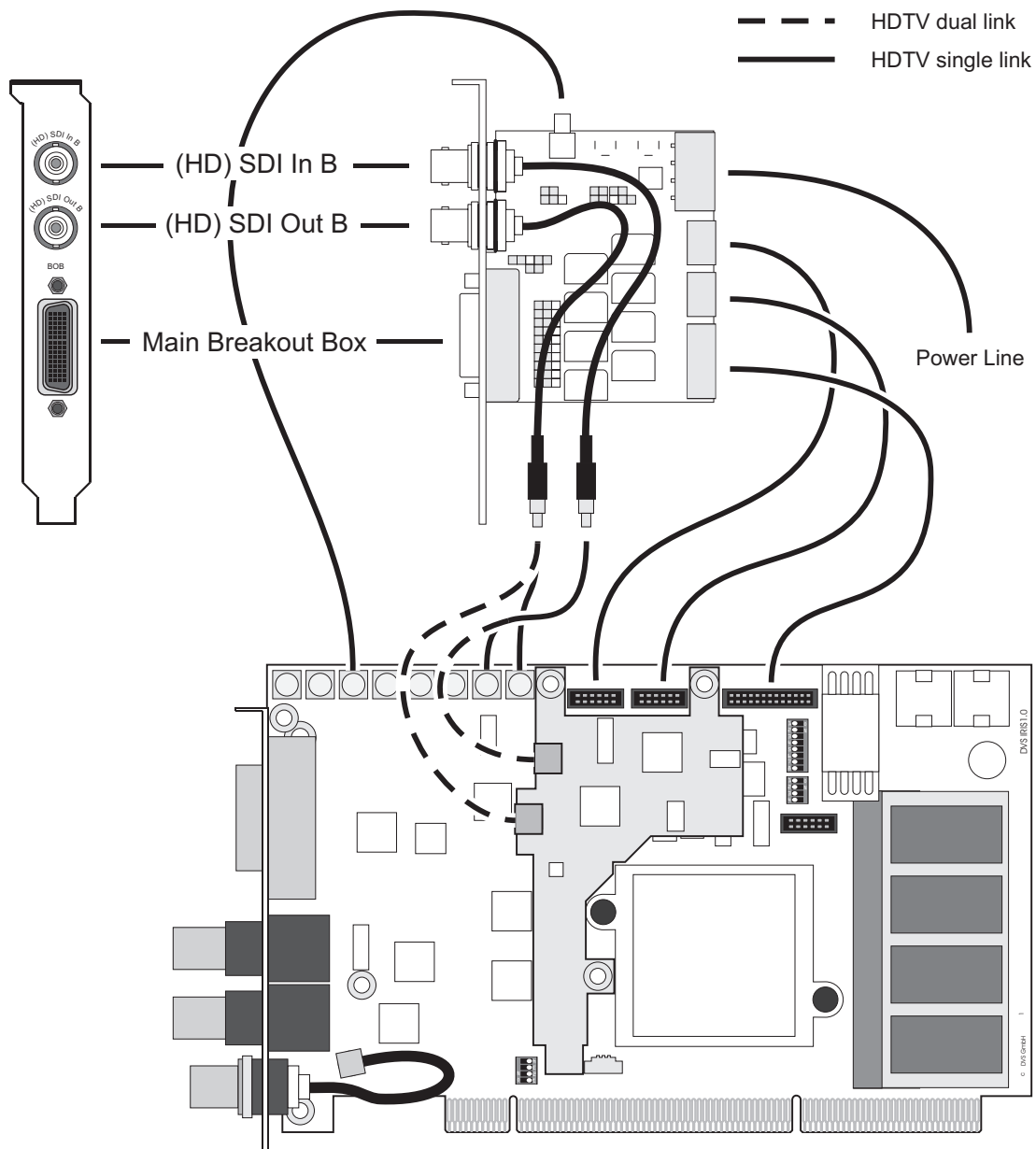


Figure 3-2: Example of internal connections with Iris board (Centaurus)

- Once the connections are complete, close the computer casing. You have now completed the internal connections. With the next step you can finish the installation.

3.1.3 Finishing the Installation

To finish the installation the external connections from the slot panels to the main breakout box have to be installed as well as the peripheral connections.

- Connect the connector 'System' on the rear of the Main BoB to the 'Main Breakout Box' connector on the BoB interface slot panel with the DB 60-to-DB 60 cable as indicated in the illustration below:

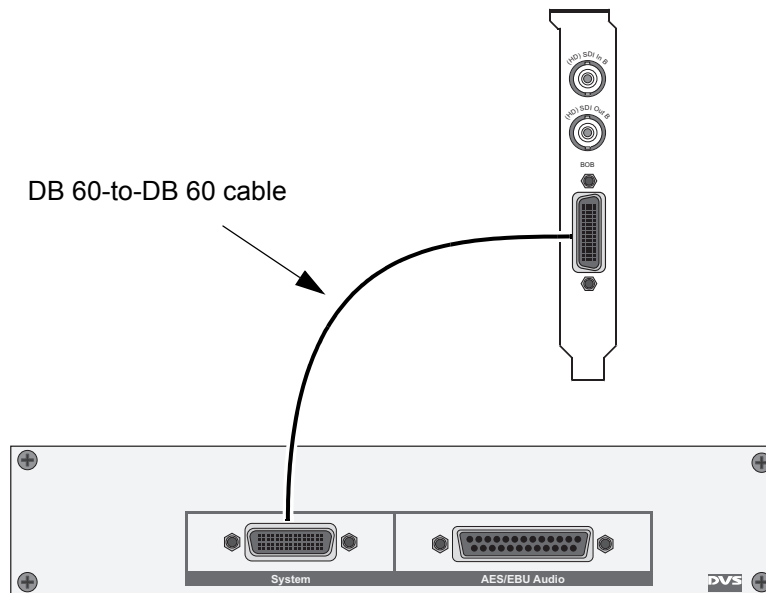


Figure 3-3: Connection of Main BoB to computer system

- After setting up the external connection connect all other cables to the computer system again.



If an audio breakout box has been delivered to you as well, you have to install it at this point of the installation procedure according to section “Installing the Audio BoB in Connection with a Main BoB” on page 3-9.

The steps to install the main breakout box are complete and it is installed properly. You can now connect your audio and video equipment to the front connectors of the Main BoB and/or to connectors on the slot panels of the DVS video board and the BoB interface.



For a short description of the different connectors see chapter “Breakout Box II Overview” on page 2-1.

3.2 Installation of the Audio BoB

For an installation of an audio breakout box (either the Balanced Audio BoB or the Unbalanced Audio BoB) two possibilities exist:

1. You may want to install the audio breakout box together with the main breakout box (Main BoB), or
2. you may want to install the audio breakout box in a stand-alone setup.

Both procedures are described in this section.



If you have received the audio breakout box together with the Main BoB you must install the main breakout box first. For this procedure please refer to section “Installation and Setup of the Main BoB” on page 3-3. After this return to this section and conclude the installation with section “Installing the Audio BoB in Connection with a Main BoB” on page 3-9.

Additionally, the optionally available rack-shelf for the Breakout Box II may have been delivered to you. Prior to an installation of the Breakout Box II you have to mount the delivered breakout box(es) into the rack-shelf. For this please refer to section “Rack-shelf Installation” on page 3-12.

3.2.1 Installing the Audio BoB in Connection with a Main BoB

The Breakout Box II with audio provides an additional audio breakout box beside the main breakout box. You may have received either the Balanced Audio BoB or the Unbalanced Audio BoB.

To install and setup the breakout boxes you have to perform the following:

- First you have to install the Main BoB and the BoB interface slot panel in the computer system and setup the internal connections as described in section “Installation and Setup of the Main BoB” on page 3-3.
- After that set up the external connections from the Main BoB to the audio breakout box. For this connect the ‘AES/EBU Audio’ connector on the rear of the Main BoB to the ‘AES/EBU Audio’ connector on the rear of the audio breakout box with an DB 25-to-DB 25 cable as indicated in the illustration below:



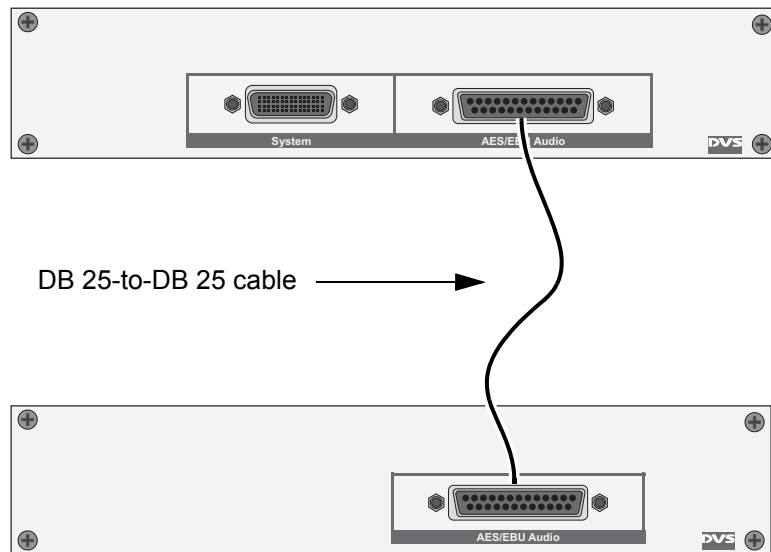


Figure 3-4: Connection of Main BoB to audio breakout box

- After setting up the external connection of the audio breakout box connect all other cables to the computer system again.

You have finished the installation of the audio breakout box. It is installed properly. You can now connect your audio and video equipment to the front connectors of the breakout boxes (Main BoB and audio BoB) and/or to the connectors on the slot panels of the DVS video board and the BoB interface.



For a short description of the different connectors see chapter “Breakout Box II Overview” on page 2-1.

3.2.2 Installing the Audio BoB in a Stand-alone Setup

The audio breakout boxes of the Breakout Box II (either the Balanced Audio BoB or the Unbalanced Audio BoB) can be used in a stand-alone setup without the Main BoB. Then you do not have to install a BoB interface slot panel or a Main BoB. The delivered audio breakout box will be directly connected to the DVS video board externally.

If you want to install the audio breakout box alone, please perform the following:

- Place the breakout box on a firm, flat surface within reach of the computer where the DVS video board is installed, or install it into the 19" rack-shelf optionally available (see section “Rack-shelf Installation” on page 3-12).

- Turn off the computer where the DVS video board is installed.



Computer hardware contains components that are very sensitive to changing voltages. Connecting or disconnecting the Breakout Box II to or from peripheral hardware while any of them is switched on may damage the hardware. Switch off the computer system and all peripheral hardware before connecting or disconnecting anything.

- Connect the 'AES/EBU Audio' connector on the rear of the audio breakout box with a DB 25-to-DB 25 cable to the digital audio connector of the DVS video board as indicated in the illustration and table below:



The following figure shows an example connection. It details the connection of the audio breakout box to the Iris board of the OEM-product Centaurus by DVS. If you have another DVS product please act accordingly.

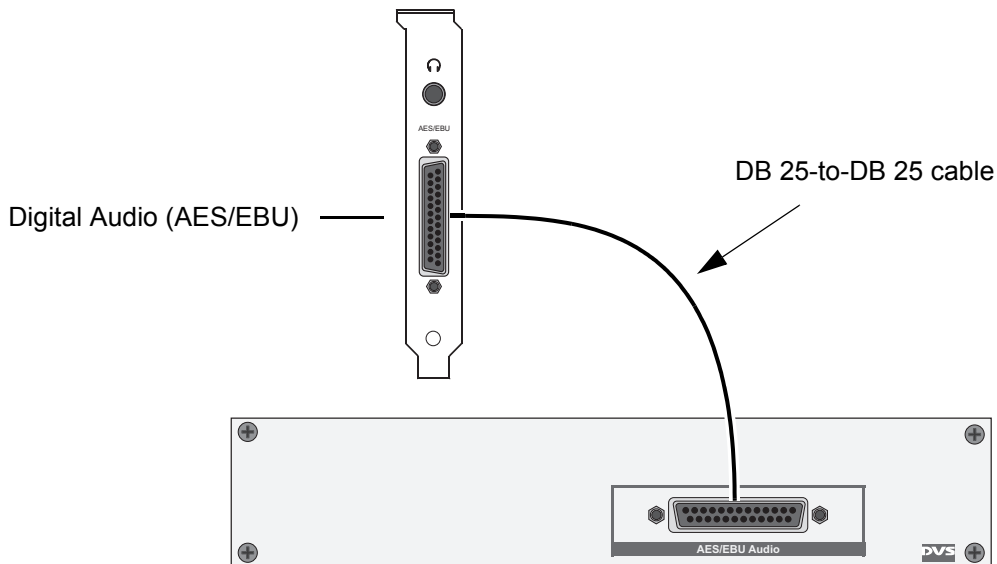


Figure 3-5: Connection of audio breakout box in a stand-alone setup

Item	Description
AES/EBU Audio	DB 25 connector for digital audio; connect it with a DB 25-to-DB 25 cable to the digital audio connector of the DVS video board

After setting up the external connection of the audio breakout box the installation of the audio breakout box is finished. You can now con-

nect your audio equipment to the front connectors of the breakout box.



For a short description of the different connectors see chapter “Breakout Box II Overview” on page 2-1.

3.3 Rack-shelf Installation

For the save keeping of the main breakout box and the additional audio breakout box in a rack, DVS offers a 19" rack-shelf in which the breakout boxes can be installed and afterwards put into a rack.



The 19" rack-shelf for the Breakout Box II is an optionally available equipment. Prior to an installation and setup of the breakout box(es) to the computer system you have to mount them into the rack-shelf.

To mount the breakout box(es) into the rack-shelf perform the following:

- Fasten the breakout box(es) with the screws to the rack-shelf as shown in the following figure:

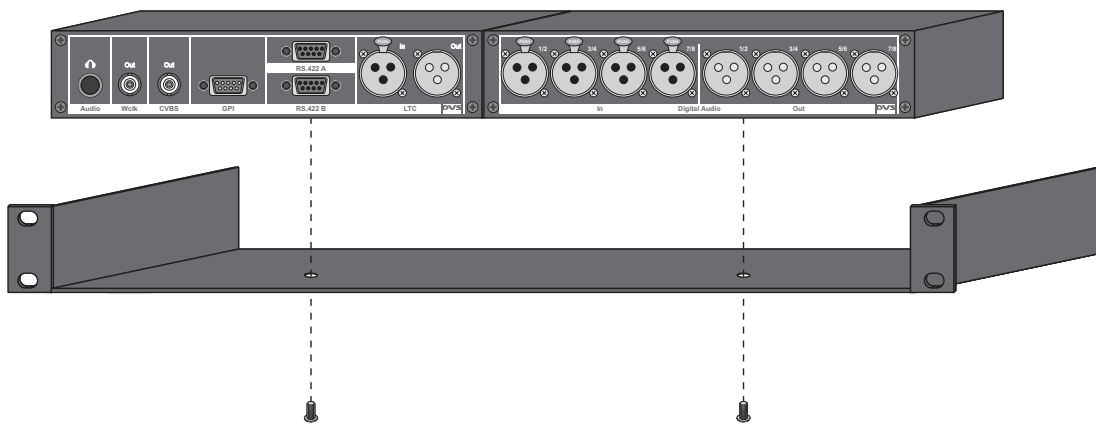
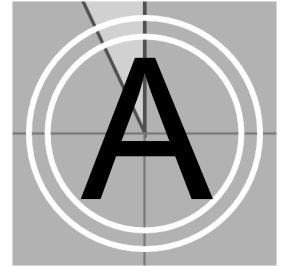


Figure 3-6: Mounting of breakout boxes into rack-shelf

- After this mount the assembled rack-shelf into a 19" rack near the location of the computer system that contains the DVS video board.

The installation of the breakout box(es) into the rack-shelf is finished and you can now set them up as described in the respective sections of chapter “Installation and Setup” on page 3-1.



Appendix

This chapter provides technical data and general information about the Breakout Box II.

A.1 Technical Data

The following shows the technical data of the Breakout Box II.

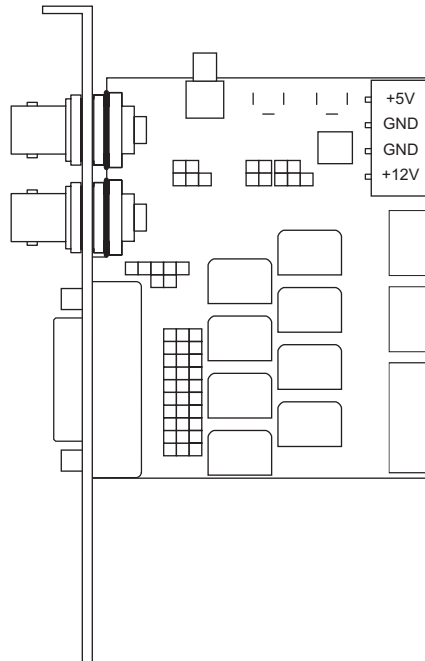


If your BoB II comes with a rack-shelf, it must be properly installed into a high-frequency-proofed rack.

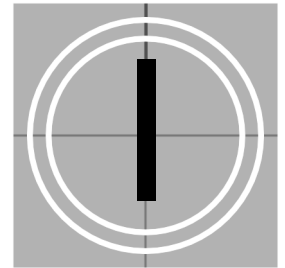
Dimensions of BoB II modules	height: 44 mm width: 219 mm depth: 125 mm (max.)
Dimensions of rack-shelf	height: 45 mm width: 483 mm depth: 250 mm
Weight of one BoB II module	620 g
Weight of rack-shelf	1650 g
Environment	No exposure to heat No exposure to strong electric or magnetic fields
Operating temperature	Maximum: 10 - 30 °C Optimum: 15 - 25 °C
Storage temperature	0 - 50 °C
Humidity	10 - 80%, non-condensing at all times
Air	Dust-free



A.2 Pin-out of Power Line Connector



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