



**CONTRIK**  
SWISS CONNECTIVITY SOLUTIONS

# HDMI & DVI SOLUTIONS

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# EDITORIAL

Dear customer

The rapid development in the field of media technology is an essential characteristic of our time. This applies to both private and professional use. Especially HDMI is coming more and more into focus thanks to the simultaneous transmission of video and audio. Furthermore, copy protection (HDCP), which can only be found in HDMI cables, is an additional benefit for providers of digital media.

Contrik AG offers professional and innovative quality products for your DVI and HDMI applications. We are specialised in the most important fields of application and offer perfectly tailored solutions from one single source.

Key is the combination of advanced products, know-how and expertise. This puts us in the advantageous position of being able to professionally advise you. Distances considered longer than standard can be bridged or HDMI and DVI can be optimally distributed and converted.

You are probably aware of the fact that technology in this field is constantly subject to change. This is why only a small selection from our comprehensive product range is shown here.

Please visit our website or contact us in order for us to support and help you in realising your state-of-the-art projects. We will find a solution that meets your needs.

Sincerely,

**Contrik AG**





## ASSEMBLED CABLES

One of the most important elements for reliable transmission of HDMI and DVI signals is the cable. This is why our cables feature optimised conductor cross sections as well as shields to protect them from outside interferences. The different signal pairs (Twisted Pairs) are matched. Both characteristics are indispensable for an error-free transmission. Why? Because the source requests information from the image display device via EDID (Extended Display Identifi-

cation Data) as soon as it is started up. The image display device shows for example which resolution is needed or if the source should transmit audio (via HDMI connection) as well.

The screen remains dark if this information cannot be unambiguously retrieved by the source. The same thing happens regarding copy protection (HDCP = High-bandwidth Digital Content Protection), provided that this is requested by the medium.

Other important elements for reliable transmission are active components.

To ensure an interference-free transmission between two active components, only high-quality cables should be used.

We optimise and continuously test our assortment with devices featuring high reliability in the professional field.

We will be happy to advise you on finding the cable that is suitable for your needs!

## LIFETIME GUARANTEE

### What is Lifetime Guarantee?

It is a life-long warranty against product defects which were not caused by the consumer.

### When is the customer entitled to the guarantee?

In the event of defective connectors which were not damaged due to external force.  
In the event of short-circuit in the cable and cable break, not caused by improper handling.

### When is the guarantee not applicable?

When cable cores are snapped and cables are disrupted due to improper handling.  
When connectors are deformed due to external force.

When short-circuits occur, caused by excessive pinching of the cable.

Pinched cables will not be replaced. It goes without saying that products which are not produced by Contrik are excluded from the guarantee.





**NX-HDMI/HDMI\*K**

Black HDMI cable with nylon jacket and foil and braided shield, for digital connections of audio and video devices with HDMI interface (type HDMI high-speed with ethernet). The cable has an outer diameter of 7.2 mm and is assembled with 2x HDMI male connectors with gold-plated contacts and slim plastic housing, incl. protection cap. Available lengths: 0.5, 0.75, 1, 2, 3, 5 and 10 meters.



**ASSEMBLED HDMI CABLES**



**NX-HDMI/DP-\***

This adapter cable is designated for the integration of sources with DisplayPort outputs in HDMI transmission systems. The cables have an active component (IC) in the HDMI connector, generating a full DisplayPort receiver and a full HDMI transmission section in order to transmit both audio as well as video streams. Please note: the cable has a signal direction.

Lengths: 1, 2 and 3 meters.



**NX-HDMI-SLIM-\***

Black, ultra-thin HDMI cable in PVC jacket, ideal for connections in narrow environments. The cables with built-in active modules (NX-HDMI-SLIM-\*A) have a defined signal direction and are specified according to HDMI 1.4 standard, with a max. resolution of 2160p/30Hz. The data rate is 8.16 GBit/s and the symbol rate is 10.2 GBit/s. Available lengths: 2 and 3 meters.

The passive cables have the specification HDMI 2.0 and are suitable for 3D and Ethernet, with a max. resolution of 2160p/60Hz. The data rate is 14.4 GBit/s and the symbol rate 18 GBit/s. Available lengths: 0.5, 1 and 1.5 meters.



**NX-HDMI/HDMI\*E**

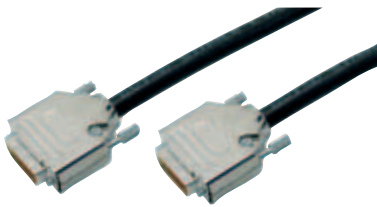
Black HDMI cable with nylon jacket and foil and braided shield, for digital connections of audio and video devices with HDMI interface (Type HDMI high-speed with ethernet). The cable has an outer diameter of 7.2 mm and is assembled with 2x HDMI male connectors with gold-plated contacts and metal housing, incl. protection cap.

The housing can be disassembled for installation purposes and the cable has a Lifetime Guarantee.

Lengths: 0.5, 0.75, 1, 2, 3, 5, 7.5, 10, 12.5, 15 and 20 meters.



## ASSEMBLED DVI CABLES



### **NX-DVI-D-SL-\***

Black DVI-D single-link cable (ZNK CC7610001) with FRNC jacket and an outer diameter of 10 mm, assembled with DVI-D male connectors (24+1) on both sides, with gold-plated contacts and metal housing.

For resolutions up to HD 1920x1200 with 60 Hz (165 MHz).

This high-quality single link cable bridges longer distances (e.g. XGA up to 50 m with 60 Hz). The DVI-Extender-SL extends the range up to 100 m. We also offer one-sided pre-assembled solutions for cable insertions.

Available lengths: 1.5, 3, 5, 7.5, 10, 15, 20, 30, 40, 80 and 100 meters.



### **NXE-DVI-D-DL-\***

Black DVI-D dual-link cable with foil and braided shield, PVC jacket and an outer diameter of 12 mm, assembled with DVI-D male connectors (24+1) on both sides, with gold-plated contacts and metal housing.

Using the DVI-D dual-link cable, it is possible to transmit resolutions >HD up to max. WQXGA (2560x1600). However, the transmission range is shorter than with our DVI-D single-link cables.

Available lengths: 1, 3, 5, 7.5, 10, 15, 20 and 30 meters.

### **MAXIMUM TRANSMISSION LENGTH**

The maximum transmission length depends on two factors:

- 1) The maximum possible data throughput (resolution)
- 2) The sensitivity of the input section of the image display device and the output power of the source

- A transmission over distances of 80 m and more is only possible with a DVI extender single-link and a power supply unit.

Are you confused by all the different HDMI standards?

We provide an overview:  
Please find a list of various standards of the past years below.

Hardly any transmission errors such as flickering pixels or display failure will occur when using only high-quality cables for distances over 10 m.



## WHICH CABLE IS SUITABLE FOR MY TRANSMISSION?

New Standard	Old Standard	Contrik Product	Max. Data Rates	Resolution	Sound Formats	Colour Space	Cable Length without Extender
HDMI Standard	HDMI 1.0	NX-HDMI/HDMI*K	Type A: 3.96 GBit/s	1080p/60 Hz	8 PCM, Dolby Digital, DTS, MPEG	24 Bit RGB 36 Bit YUV	10-15 m
	HDMI 1.1	NX-HDMI/HDMI*K	Type A: 3.96 GBit/s Type B: 7.92 GBit/s	1080p/60 Hz	8 PCM, Dolby Digital, DTS, MPEG	24 Bit RGB 36 Bit YUV	10-15 m
	HDMI 1.2	NX-HDMI/HDMI*K	Type A: 3.96 GBit/s Type B: 7.92 GBit/s	1080p/60 Hz	8 PCM, Dolby Digital, DTS, MPEG, DVD-Audio, SACD	24 Bit RGB 36 Bit YUV	10-15 m
	HDMI 1.2a	NX-HDMI/HDMI*K	Type A: 3.96 GBit/s Type B: 7.92 GBit/s	1080p/60 Hz	8 PCM, Dolby Digital, DTS, MPEG, DVD-Audio, SACD	24 Bit RGB 36 Bit YUV	10-15 m
HDMI High Speed	HDMI 1.3	NX-HDMI/HDMI*K/*E	Type A & B: 8.16 GBit/s	1440p/60 Hz	8 PCM, DolbyDigital, DTS, MPEG, DVD-Audio, SACD, DolbyDigital Plus, TrueHD and dts-HD	24 bit RGB / 36 Bit YUV, Deep Color 30, 36 and 48 Bit RGB / YUV, xvYCC-Colour Space	ca. 10 m
	HDMI 1.3a HDMI 1.3b HDMI 1.3c	NX-HDMI/HDMI*K/*E	Type A & B: 8.16 GBit/s	1440p/60 Hz	8 PCM, DolbyDigital, DTS, MPEG, DVD-Audio, SACD, DolbyDigital Plus, TrueHD and dts-HD	24 bit RGB / 36 Bit YUV, Deep Color 30, 36 and 48 Bit RGB / YUV, xvYCC-Colour Space	ca. 10 m
	HDMI 1.4	NX-HDMI/HDMI*E	Type A & B: 8.16 GBit/s data rate, 10.2 GBit/s symbol rate	2160p/24 Hz	8 PCM, DolbyDigital, DTS, MPEG, DVD-Audio, SACD, DolbyDigital Plus, TrueHD and dts-HD	24 bit RGB / 36 Bit YUV, Deep Color 30, 36 and 48 Bit RGB / YUV, xvYCC-Colour Space, sYCC601, Adobe RGB, Adobe YCC601	ca. 10 m
HDMI High Speed with Ethernet		NX-HDMI/HDMI*E	Type A & B: 8.16 GBit/s data rate, 10.2 GBit/s symbol rate	2160p/24 Hz	8 PCM, DolbyDigital, DTS, MPEG, DVD-Audio, SACD, DolbyDigital Plus, TrueHD and dts-HD	24 bit RGB / 36 Bit YUV, Deep Color 30, 36 and 48 Bit RGB / YUV, xvYCC-Colour Space, sYCC601, Adobe RGB, Adobe YCC601	ca. 10 m
	HDMI 2.0		Type A/C/D: 14.4 GBit/s data rate, 18 GBit/s symbol rate	2160p/GHz 1080p/48 Hz (3D)	8 PCM, DolbyDigital, DTS, MPEG, DVD-Audio, SACD, DolbyDigital Plus, TrueHD and dts-HD + 32 Audio Channel 1536 kHz Sampling Rate	24 bit RGB / 36 Bit YUV, Deep Color 30, 36 and 48 Bit RGB / YUV, xvYCC-Colour Space, sYCC601, Adobe RGB, Adobe YCC601	ca. 10 m



## FEED-THROUGH CABLES AND ADAPTERS



### NX-HDMI-W-KBSF

HDMI 1.4 female chassis connector in nickel D-series housing, with cable (20 cm) and assembled HDMI female cable connector.

Variation of the NDHDMI-W for installation purposes with limited mounting depth. This HDMI solution for the transmission of any digital TV and PC video format including high-definition video (HDTV) can easily be integrated in networks.



### NKHDMI-\*

Black HDMI 1.4 patch cable with overmolded bushing and rugged metal connector housing, fits and locks with female chassis connectors NAHDMI-W-\*

The cable transmits data rates up to 10 GBit/s.

The shielded connection protects from EMI. This robust HDMI patch cable features a removable diecast connector housing and is available in 0.6, 1, 3, 5 and 10 m lengths.



### NAHDMI-W

HDMI 1.3 feed-through with 19-pole HDMI female receptacles on both ends and nickel D-series housing.

This HDMI-HDMI adapter with sealing washer, optionally available with grounding, serves the transmission of all digital TV and PC video formats including high-definition video (HDTV). The HDMI 1.3 feed-through features 19-pole HDMI female connectors on both sides and is in combination with NKHDMI-\* protected against dust and water according to IP65.

Also optionally available in black D-series housing (NAHDMI-W-B).





**NX-HDMI-M/DVI-FPRO**

Adapter with HDMI male connector to DVI female connector, for professional applications.

**NX-HDMI-F/DVI-MPRO**

Adapter with DVI male connector to HDMI female connector, for professional applications.



**FEED-THROUGHS, GENDER CHANGERS & ADAPTERS**



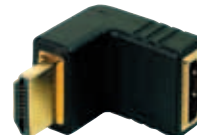
**91900688**

HDMI gender changer female/female with gold-plated contacts and black housing. (Old order number: NX-HDMU-GEN-FF).



**NX-DVI-I-GEN-FF**

DVI-I feed-through female/female in grey plastic housing, with 24+5 pins and inductively and capacitively optimized.



**NX-HDMI-M/F-R**

Right-angled adapter with HDMI male connector to HDMI female connector, with gold-plated contacts and black housing.



**NX-HDMI-M/DVI-F**

Adapter with HDMI male connector to DVI female connector, with gold-plated contacts and black housing.



**NX-HDMI-F/DVI-M**

Adapter with HDMI female connector to DVI male connector, with gold-plated contacts and black housing.



**NX-DVI-I-GEN-MF**

DVI-I adapter male/female, with gold-plated contacts and black housing. Suitable as port saver of original device ports.



## EXTENDERS



### SP-MINIDOCK

The SP-MINIDOCK switches between one HDMI input and one VGA input and transmits the input signal via HD-BaseT up to 100 m to the receiver. The transmitter is being fed with operating voltage by the receiver. In addition to the VGA signal, a separate stereo audio signal can be transmitted. The equipment has no scaler that could cause a quality loss and it is compatible with 3D and HDCP.



### SP-CATONE

The SP-CATONE is a special version of an extender for HDMI 1.4 which only needs a Cat.5e/6/7 cable (solid inner conductors, AWG 24) for the transmission of audio and video. The device is 3D-capable and can transmit RS-232 as well as IR. It is also EDID-transparent.



### SP-HDMIGIGALAN-TX SP-HDMIGIGALAN-RXA

With the TX it is possible to feed HDMI signals up to 1080p into an existing network and retrieve it with the RXA!

You have the choice of setting up a point-to-point or a point-to-multipoint configuration. With the multipoint, in- and outputs can be controlled by a manageable switch. USB 1.0 can also be transmitted and an infrared return channel is included as well.

The devices presented here provide a small insight into our extensive product range.

We will be happy to advise you on choosing active components suitable for your specific needs.



## EXTENDERS



### SP-HDMIMAX

The SP-HDMIMAX is a cable equalizer and repeater. Distances of >15 m can be bridged, with full resolution (1080p) up to 60 m.

The SP-HDMIMAX cable extender eliminates restrictions regarding conventional DVI/HDMI cable lengths. The device has to be placed at the end of the cable run and the maximum cable length to connect it with the display or projector is 5 m.



### SP-HDMISDI SP-SDIHDMI

The SP-HDMISDI is a converter and extender, which can transmit signals via SDI up to 100 m (tested with coaxial cables by DRAKA). The device allows a resolution of up to 1080p and is equipped with 2x simultaneous outputs.

The SP-HDMISDI is a converter and repeater, which can transmit signals via SDI up to 100 m (tested with coaxial cables by DRAKA). The device allows a resolution of up to 1080p and is equipped with one SDI input and 2x SDI outputs, whereby another 100 m can be bridged.



### SP-DPSCALE

The SP-DPSCALE is a universal scaler and is perfectly suitable for applications with modern LCD TVs and in professional environments as up-scaler. The device is equipped with one DisplayPort, 2x HDMI and one PC VGA input. It can convert almost any notebook PC resolution to the native rate of a regular LCD-TV.



## SCALER



### SP-SUPERMIX

The SP-SUPERMIX is an innovative PIP processor with extensive operating options and uncompromising image quality, for 4x image signals which can be shown simultaneously in Full HD resolution. The device uses 4x full-value scalers to allow any combination of the four input signals, e.g. overlays with transparency or blending between the images.

The device features 4 basic modes:

- LED wall processor
- Matrix 4x4
- PIP/seamless switching
- Remote function for mobile applications

### SP-OMNISCALE

The OMNISCALE is a versatile low-cost scaler and is perfectly suitable for applications with modern LCD TVs and in professional environments as universal up-scaler. It is equipped with one composite and one SD/HD input as well as with 3x HDMI and 3x PC/VGA inputs.

## CONVERTER



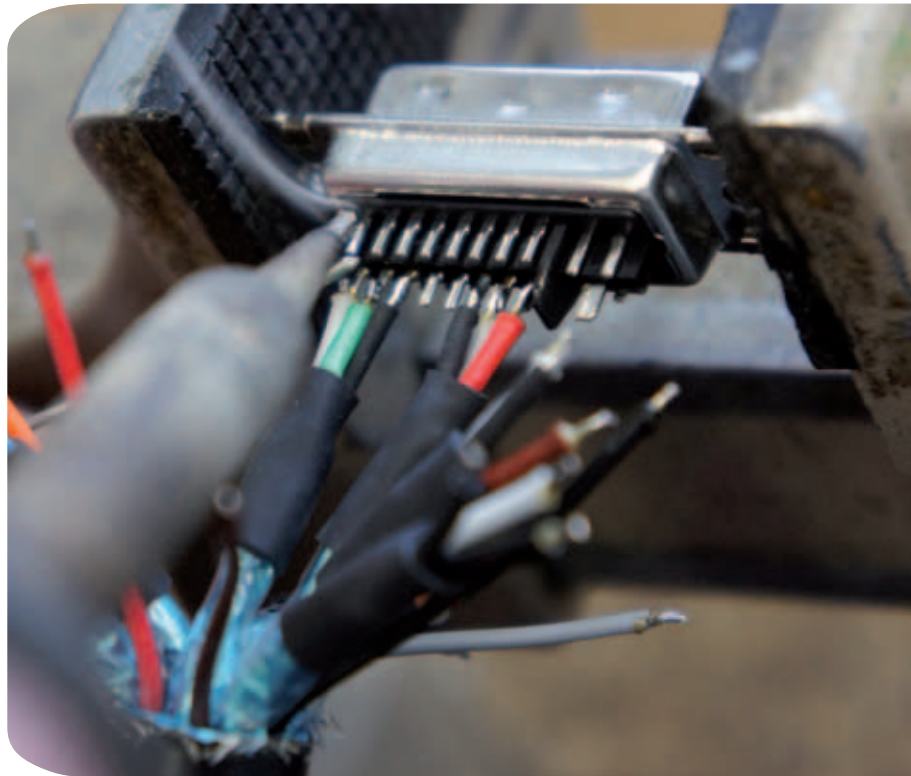
### SP-OPTO-RCA

White, digital input audio converter which converts optical or coaxial audio signals to analogue stereo signals.

The converter supports sampling rates of 32, 44.1, 48 and 96 kHz and 2-channel LPCM (Linear Pulse Code Modulation). The resolution of the S/PDIF bitstream can be up to 24 bit. The converter only supports 2-channel formats and does not convert 5.1 to 2.0!

Soldering is a thermal process for joining two metals.

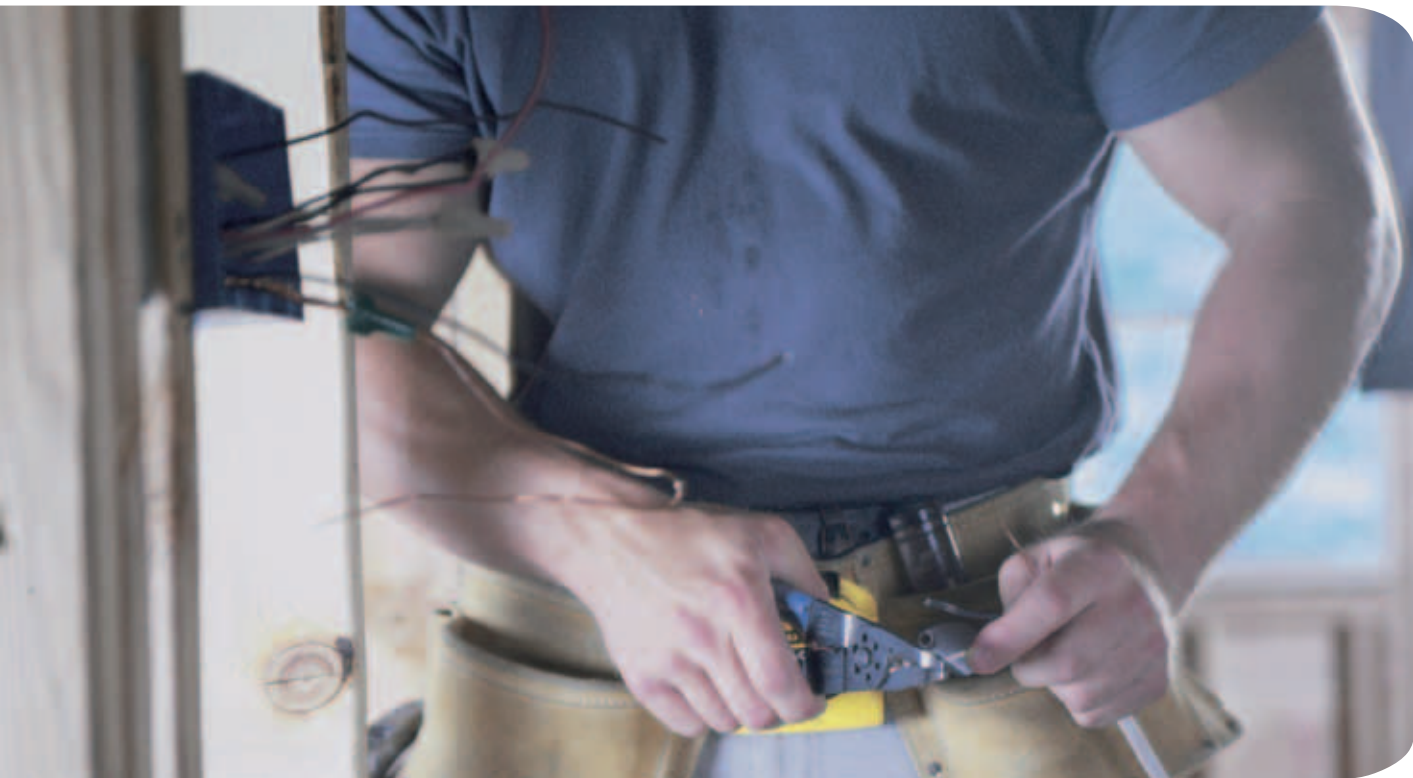
For HDMI connections we offer mounting sets with screw terminals. They allow an easy and versatile installation.



## HDMI/DVI PIN ASSIGNMENT

DVI Pin	HDMI Pin	Braid Colour			Cable Type	Function	DVI-D Single Link digital	VGA
		K-series	E-series < 10m	E-series >10m				
					ZNK CC7610001			NX-DVIM-VGAF-AD
C1						Analogue Red Video		Pin 1
C2						Analogue Green Video		Pin 2
C3						Analogue Blue Video		Pin 3
C4						Analogue Horizontal Sync		Pin 13
C5						Analogue Common Ground Return RGB		Pin 6,7,8
1	3	White	White	White	White	TDMS Data 2 -	x	
2	1	Blue	Light blue	Red	Orange	TDMS Data 2 +	x	
3	2	Wire	Wire	Wire	Wire	TDMS Data 2/4 Shield	x	
4						TDMS Data 4 -		
5						TDMS Data 4 +		
6	15	Green (single)	Grey (single)	Orange (single)	Purple (single)	DDC Clock	x	Pin 15
7	16	Orange (single)	Purple (single)	Yellow (single)	Brown (single)	DDC Data	x	Pin 12
8						Analogue Vertical Sync.		
9	6	White	White	White	White	TDMS Data 1 -	x	
10	4	Red	Green	Brown	Green	TDMS Data 1 +	x	
11	5	Wire	Wire	Wire	Wire	TDMS Data 1/3 Shield	x	
12						TDMS Data 3 -		
13						TDMS Data 3 +		
14	18	White (single)	White (single)	White (single)	Yellow (single)	5V + Power	x	
15	17	Yellow (single)	Wire	Wire	Blue (single)	Ground (Analogue H/V Sync.)	x	Pin 10
16	19	Purple (single)	White (single)	White (single)	Green (single)	Hot Plug Detect	x	Pin 9
17	9	White	White	White	White	TDMS Data 0 -	x	
18	7	Green	Red	Blue	Blue	TDMS Data 0 +	x	
19	8	Wire	Wire	Wire	Wire	TDMS Data 0/5 Shield	x	
20						TDMS Data 5 -		
21						TDMS Data 5 +		
22	11	Wire	Wire	Wire	Wire	TDMS Clock Shield	x	
23	10	Brown	Brown	Green	Brown	TDMS Clock +	x	
24	12	White	White	White	White	TDMS Clock -	x	
	13	Blue (single)	Red (single)	Red (single)		CEC --> nc		
	14	Red (single)	Yellow (single)	Orange (single)		Reserve --> nc (not connected)		
Housing	Housing	Shield	Shield	Shield	Shield	Common Shield	x	Shield

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## HDMI AND DVI ACCESSORIES



### UP-ED/HDMISKA

White or black in-wall mounting set EDIZIO-due, equipped with one HDMI chassis connector (1.4), with screw terminal on the rear side and one cover plate made of plastic (UP-ED/HDMISKASW).



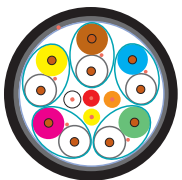
### UP-ED/HDMI-AKTIV

White in-wall mounting set, replacing the receiver SP-2xCAT5RX-IR. Operates together with the transmitter SP-2xCAT5TX-IR and comes with one cover frame made of plastic. The range with 1920x1080p is 60 m, SXGA 80 m.



### FLF/HDMI-SKA

White or black FLF mounting plate, equipped with one HDMI female chassis connector, with screw terminals on the rear side (FLF/HDMI-SKA-SW).



### NX-HDMI-KABEL-CU

Black HDMI cable with an outer diameter of 9.5 mm and PVC jacket, for self-assembly with the NX-DIY-HDMICASE.



### NX-DVI-D-MALE

DVI-D male connector with 24+1 pins, gold-plated contacts and metal housing. Fitting housing: NX-DVI-HAUBE.

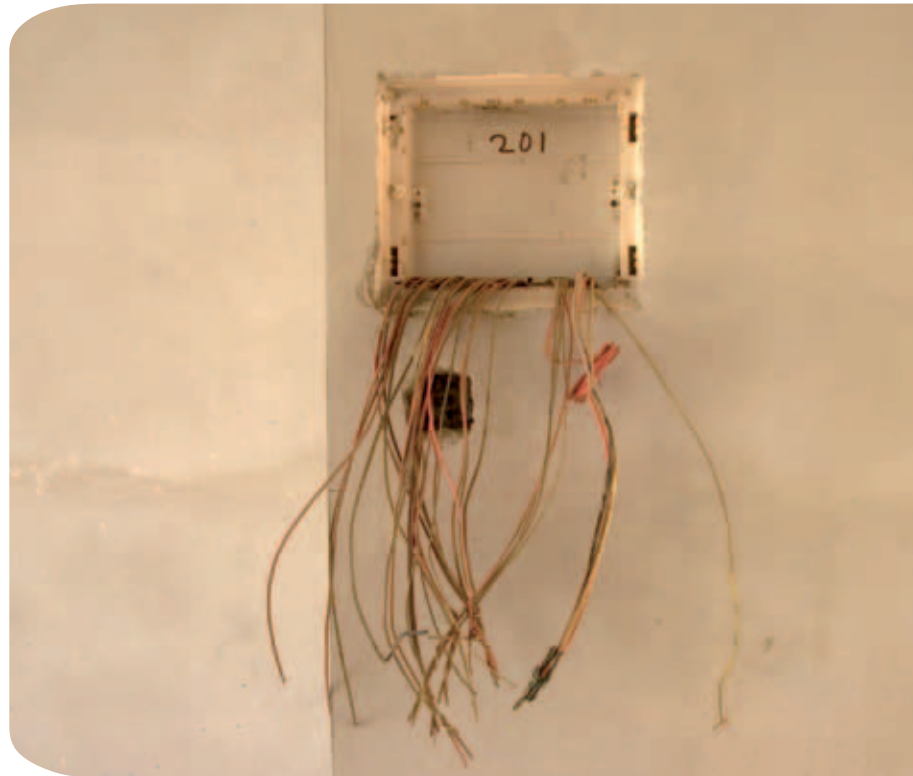


### NX-DIY-HDMICASE

With this assembling case NX-DIY-HDMICASE you have everything you need to assemble your own HDMI components. The set contains: 1x crimping tool, 1x continuity tester, 10x HDMI connectors, 10x cable guides and 5x compression guides.

The in-wall, on-wall and FLF mounting sets shown here are also available in other versions.

FLF mounting sets can also be engraved. White FLF are labelled with black letters whereas black FLF are labelled with white letters.



## UP- & FLF MOUNTING PLATES WITH DVI OR HDMI CONNECTORS



### UP-ED/2HDMI-KBS

White in-wall mounting set EDIZIOdue, equipped with 2x HDMI breakout cables (1.4) female/female of approx. 10 cm length and one cover frame made of plastic.



### UP-ED/HDMI-KBS

White or black in-wall mounting set EDIZIOdue, equipped with one short HDMI breakout cable (1.4) female/female of approx. 10 cm length and one cover frame made of plastic. (UP-ED/HDMI-KBS-SW).



### UP-ED/HDMI/3.5/VGA

White in-wall mounting set EDIZIOdue, equipped with one HDMI breakout cable female/female (approx. 10 cm), one 3.5 mm mini jack breakout cable f/f (approx. 25 cm), one VGA 15-pole „HD“ feed-through f/f and one cover frame made of plastic.



### FLF/3.5KBS/DVIKBSW

White or black FLF mounting plate, equipped with one 3.5 mm stereo mini jack cable (25 cm) and one DVI-I breakout cable female/female (20 cm) (FLF/3.5KBS/DVIKBS).



### FLF/DPPORT-KBS

White or black FLF mounting plate, equipped with one DisplayPort cable female/female (length: 20 cm) (FLF/DPPORT-KBS-SW).



### FLF/HDMI-KBS

White or black FLF mounting plate, equipped with one HDMI feed-through and one breakout cable female/female (length: 10 cm) (FLF/HDMI-KBS-SW).



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