

P | Cabling

Cabling System for HDBaseT 5Play Digital Multimedia



Members of METZ CONNECT

4K Ultra High Definition

Connecting several terminals to one another within a network becomes more and more common in private housing environments, in the education sector, in office buildings, hotels, airports, trade fairs, shopping centers, etc. For example, in households several TV terminals are distributed over the entire house and supplied with different media contents. This means that, for example, different TV terminals, beamers or other displays are available, which can be supplied with media contents by a central blu-ray player, a computer, an NAS, etc.

In the resolution of image and video files, a new standard called 4K Ultra-High Definition TV (UHD TV) has now been developed, which constitutes a new dimension in terms of picture sharpness. 4K UHD has a resolution four times higher than that of 2K Full HD, thus offering an even sharper and more natural display high in details, making it the new reference in the world of digital images. Even though, due to the compression of the color information, the same frame rate of 60 frames per second can be used in 4K UHD video contents via HDMI 2.0, it is still necessary to use a high transmission rate of 8.91 Gbits/s, whereas 2K video contents, using 60 frames per second via HDMI 1.4, require a transmission rate of only 4.46 Gbits/s.

HDMI Standard, Resolution	Color information	Frame rate (frames per second)	Transmission rate
HDMI 1.4, 2K	4:4:4	60 fps	4.46 Gbit/s
HDMI 1.4, 4K	4:4:4	30 fps	8.91 Gbit/s
HDMI 2.0, 4K	4:2:0 (chroma)	60 fps	8.91 Gbit/s

HDBaseT™ 2.0 for the transmission of 5Play™ Digital Multimedia*

HDBaseT is a connectivity standard for uncompressed HD multimedia contents. HDBaseT 2.0 is the latest technology published by HDBaseT Alliance for a complete multimedia entertainment center for transmitting 5Play digital multimedia contents via twisted-pair cables. HDBaseT offers the customer a simple plug-and-play and a cost-efficient solution and common cabling via Cat.5e/6/6A RJ45 twisted pair for a fully comprehensive multimedia system.

HDBaseT contains a few additional functions for digital multimedia, thereby improving the HDMI standard. These functions are marketed under the name 5Play and form the base for HDBaseT.

 <p>2K Full HD, 4K UHD, 3D video contents</p>	 <p>All standard audio formats</p>	 <p>10/100 Mbit Ethernet (100 BASE-T)</p>
 <p>Control signals: CEC, RS-232, USB, infrared, IP</p>	 <p>Electrical power over data cable up to 100 W</p>	

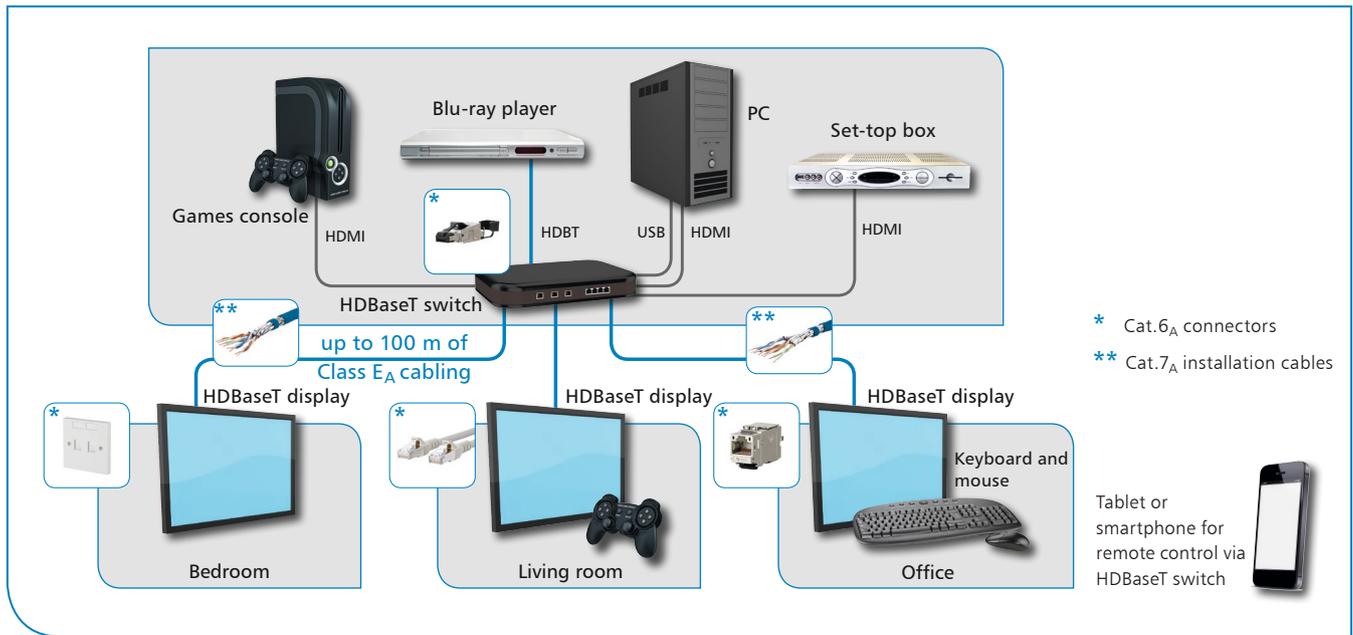
Communication between the TV, the sound system, the computer and the electronic entertainment devices and access to stored multimedia contents (music and video streaming) is made possible by 10/100 Mbit Ethernet (100 BASE-T Ethernet) via a standard twisted-pair copper cable Cat.5e/6/6A using RJ45 connectors over a distance of up to 100 m. Thus, HDBaseT can use a cost-efficient cabling infrastructure, allowing all 5Play functions to be transmitted via a single cable.

Application example for HDBaseT

Typically, HDBaseT matrix converters and transmitters are used, in order to collect several sources, input devices/interfaces (using different interfaces such as HDMI) and then to transmit the 5Play functions to devices, displays or receivers capable of HDBaseT or to play back the digital media there.

The connection between the source and the playback devices/displays is made with Cat.5e/6/6A twisted-pair cables.

*HDBaseT™ and 5Play™ are registered trademarks of the HDBaseT Alliance.



Perfect Cabling System for HDBaseT 5Play Digital Multimedia

„ A single cable for all 5Play digital multimedia contents!“

METZ CONNECT supports HDBaseT 5Play digital multimedia via a shielded Class E_A cabling system (S/FTP cables and shielded connectors) for a distance of up to 100 m.

Where common Cat.5e and HDMI cables for 4K video signals reach their limits due to their electrotechnical properties, Cat.6_A connectors and Cat.7/7_A cables from METZ CONNECT can achieve cable distances of up to 100 m without losses even in 4K digital multimedia video signal distribution and thus maintain the previous cable distances, even though their bandwidth has increased considerably due to the high-resolution 4K contents.

Thus, METZ CONNECT offers network cabling for interruption-free transmission of high-resolution 4K image qualities from sources such as laptops, blu-ray players and 4K media players to HD and 4K displays.

Advantages of the HDBaseT 5Play Digital Multimedia Cabling System

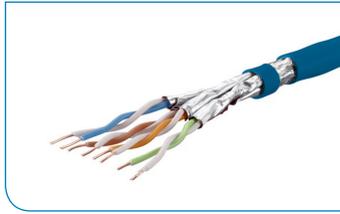
- Distance of up to 100 m
- HDBaseT transmits video, audio, 10/100 Mbit Ethernet, control signals and power supply through a single cable
- High-quality uncompressed 4K UHD videos and all 3D video standards
- Simple cabling through standard Cat.7/7_A twisted-pair copper LAN cable with Cat.6_A RJ45 connectors
- Cost efficiency through low-cost Class E_A cabling infrastructure and lower installation costs due to theoretically a single cable for all applications
- Lower costs for electric infrastructure through up to 100-W Power over Cable / Power over Ethernet (PoE) energy transmission within HDBaseT
- HDBaseT as standard: Makes official conditions available to its members, which guarantee product compatibility and standard conformity for different manufacturers

Products from our P|Cabling range for a HDBaseT 5Play Digital Multimedia cabling system

**GC1200 pro22 Cat.7_A
S/FTP LSHF-FR**



**GC1000 plus23 Cat.7
S/FTP 4P LSHF**



Patch cord Cat.6_A AWG26



C6_A RJ45 field plug pro



**Keystone faceplate 2 port
unequipped**



**Keystone wall outlet 2 port
unequipped**



Cable connector class F_A



C6_Amodul K 180° Jack



Order data

Installation cables

GC1200 pro22 Cat.7_A S/FTP LSHF-FR

1308427A3424M simplex
1308427A34241 500-m drum
1308427A34242 1000-m drum

GC1000 plus23 Cat.7 S/FTP LSHF

130842703214M simplex
1308427032141 500-m drum
1308427032142 1000-m drum

Patch cords

Patch cord Cat.6_A AWG26

130845XX33-E gray

Plugs

C6_A RJ45 field plug pro

130E405032-E

C6_A RJ45 field plug pro 360

130E405042-E

Wall outlets

Keystone faceplate

1309152502KE 2 port unequipped

Keystone wall outlet

1130B20D21200KE 2 port unequipped

Cable connector

Cable connector class F_A

130863-02-E

Module inserts

C6_Amodul K 180° Jack - Keystone

130B21-E

C6_Amodul K 270° Jack - Keystone

130B22-E

C6_Amodul K 90° Jack - Keystone

130B23-E



We realize ideas

METZ CONNECT GmbH

Im Tal 2
78176 Blumberg
Germany

Phone +49 77 02 533-0
Fax +49 77 02 533-189

info@metz-connect.com
www.metz-connect.com

METZ CONNECT Inc.

200 Tornillo Way
Tinton Falls, NJ 07712
USA

Phone +1-732-389-1300
Fax +1-732-389-9066

info@metzconnectusa.com
www.metz-connect.com

