crossXio

sys com tec

User Manual
SCT-IPD5100

HDMI 2.0/USB AV over IP Decoder

All Rights Reserved

Version: SCT-IPD5100_2026 V1.0.1

crossXio

sys com tec

HDMI 2.0/USB AV over IP Decoder

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.
This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till June, 2021. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

CE RoHS COMPLIANT

SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

HDMI 2.0/USB AV over IP Decoder

Table of Contents

1. Introduction 2
1.1. Overview 2
1.2. Features 2
1.3. Package Contents 4
1.4. Specifications 5
1.5. Panel Description 7
2. Installation 9
3. Typical Applications 10
3.1. Application Example 1 10
3.2. Application Example 2 11
3.3. Application Example 3 12
4. Hardware Installation 13
5. IP Address Identification 13
6. Device Control Overview 14
7. Customer Service 15
7.1. Warranty 15
7.2. Scope 15
7.3. Warranty Exclusion: 15
7.4. Documentation: 15

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

1. Introduction

1.1. Overview

The SCT-IPD5102 series decoders are designed to work with SCT-IPE5100 series encoders for UHD media up to 3840 x 2160@60Hz 4:4:4 to be switched and distributed over standard Gigabit Ethernet networks, where audio, video together with USB, RS232 signals can be routed separately or as a whole. Equipped with Dante technology, they realize perfect interconnectivity and interoperability with Dante audio systems.

Dual Ethernet ports are equipped. HDCP 2.2/2.3 specifications are employed. A local area network is covered with a range up to 330ft (100m) over a single Cat 5e cable or above. Standard features like HDMI ARC audio return, bidirectional serial, and independent analog audio output are included. USB extension or roaming are supported to control the remote computer through a keyboard and a mouse. Control methods of Telnet/SSH/REST API, IP controller are provided. The decoders are ideal for any low latency and signal routing applications, such as homes, classrooms, conference rooms, sport bars, auditoriums, etc.

1.2. Features

- Built-in dual Ethernet ports, any one of which can transmit A/V streams, control data and Dante audio streams.
- Supports input and output resolutions up to 3840 x 2160@60Hz 4:4:4.
- Features video wall up to the size of 16 x 16.
- Supports HDR10 and Dolby Vision.
- Supports CEC one-touch-play and standby commands to power on and off the display as well as CEC Frame.

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keitenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

- Supports multi-channel audio up to PCM 7.1, Dolby Atmos, DTS HD Master and DTS:X.
- HDMI ARC audio return.
- Analog de-embedding.
- HDCP 2.2/2.3 compliant.
- Flexible routing policies, allowing audio, video, USB, and RS232 signals to be routed separately or as a whole throughout the matrix system.
- Delivers audio, video, USB, RS232, and power signals up to 328ft/100m over a single Cat 5e cable or above.
- Ultra-low latency down to 4ms.
- Supports bidirectional RS-232 communication.
- Dual USB engine for high performance USB 2.0 over IP with improved support for cameras as well as KM over IP seamless switching and roaming.
- Supports point-to-point, point-to-multipoint, multipoint-to-point, multipoint-to-multipoint applications.
- Supports PoE+ to be remotely powered by compatible power source equipment such as a PoE-enabled Ethernet switch, eliminating the need for a nearby power outlet.
- Provides fit in or stretch out mode for video wall processing as well as video rotation management: decoded video can fill a video wall, maintain aspect ratio therein, and rotate 180° and 270° clockwise, presenting imagery that meets customers' expectations.
- Supports DHCP by default, and will fall back to Auto-IP if there's no DHCP server in the system.
- Controlled by Telnet/SSH/REST API and IP controller.
- Supports communications protocols of Telnet, SSH, HTTP, HTTPS.
- Supports 2 x 2 Dante audio transmission.

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keltenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

1.3. Package Contents

- 1 × Decoder
- 1 × 3.5mm 3-pin Phoenix Male Connector
- 1 × 3.5mm 5-pin Phoenix Male Connector
- 4 × Mounting Brackets
- 4 × Mounting Screws
- 1 × User Manual

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keitenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

1.4. Specifications

Video	
Input Video Port	2 × RJ-45
Input Video Type	IP Stream
Input Resolutions	3840 × 2160p@24/25/30/50/60Hz 4:4:4, 1920 × 1200@50/60Hz, 2400 × 1350p@60Hz, 1920 × 1080p@24/25/30/50/60/100/120Hz, 1920 × 1080i@50/60Hz, 1680 × 1050@60Hz, 1600 × 1200@60Hz, 1600 × 900@60Hz, 1400 × 1050@60Hz, 1440 × 900@60Hz, 1366 × 768@60Hz, 1360 × 768@60Hz, 1280 × 1024@60Hz, 1280 × 960@60Hz, 1280 × 800@60Hz, 1280 × 768@60Hz, 1280 × 720p@60/100/120Hz, 1024 × 768@60Hz, 800 × 600@60Hz, 720 × 576p@50Hz, 720 × 480p@60Hz, 640 × 480p@60Hz
Output Video Port	1 × HDMI Type A (19 pins)
Output Video Type	HDMI 2.0, HDCP 2.2/2.3
Output Resolutions	Up to 3840 × 2160p@60Hz 4:4:4
Input/Output Video Signal	0.5–1.2 V p-p
Input/Output DDC Signal	5 V p-p (TTL)
Video Impendence	100Ω
End-to-End Latency	Down to 4ms (Ultra Low Latency)
Maximum Data Rate	18Gbps (6 Gbps per color)
Maximum Pixel Clock	600MHz

Audio	
Input Audio Port	2 × RJ-45
Input Audio Type	• Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X
Output Audio Port	1 × HDMI; 1 × 3.5mm 5-pin phoenix connector
Output Audio Type	• HDMI: Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X • AUDIO OUT: Analog
Dante Audio Type	LPCM 2.0, 44.1/48/88.2/96 KHz

Control	
Control Method	Telnet/SSH/REST API, IP Controller

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keltenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

General	
Operating Temperature/ RH	32–113°F (0– 45°C), 10%–90% RH, non-condensing
Storage Temperature/ RH	-4–158°F (-20–70°C), 10%–90% RH, non-condensing
ESD Protection	Human body model: ±8kV (air-gap discharge) / ±4kV (contact discharge)
Power Supply	12V DC 3A; PoE+
Power Consumption (Max)	21W
Dimensions (W × H × D)	8.46" × 0.98" × 6.30" (215 mm × 25 mm × 160 mm)
Net Weight	2lbs (0.91kg)

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

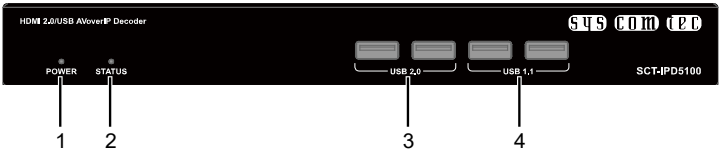
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

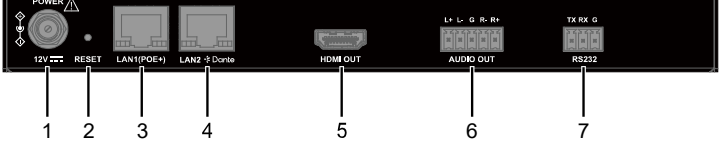
1.5. Panel Description

Front Panel



#	Name	Description
1	POWER LED	• **On**: The device is powered on. • **Blinking**: The device is booting. • **Off**: The device is powered off.
2	STATUS LED	• **On**: The device is operating normally. • **Blinking**: - The device is connected to the network but no valid input signal is detected; or - The device is connected to the network but is not routed to any encoder. • **Blinking slowly**: Firmware Upgrade in progress. • **Blinking quickly**: The **Find Me** function has been activated via Telnet/SSH/REST API for device identification. For details, refer to the separate API document. • **Off**: Network connection unavailable.
3	USB 2.0	2 × USB-A ports for USB 2.0 transmission (e.g., USB extension or roaming). Connect to USB devices. The two ports share a total current of 1.5A.
4	USB 1.1	2 × USB-A ports for USB 1.1 transmission (e.g., USB extension or roaming). Connect to USB devices. The two ports share a total current of 1A.

Rear Panel



distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

#	Name	Description
1	12V	DC 12V power connector. Connect to the DC 12V, 2A power adapter for power input.
2	RESET	• Short press (≤ 1 second) then release to reboot the device. • Press and hold for at least 5 seconds, then release to restore factory defaults. **Note:** Restoring factory defaults will erase all custom settings. Use the recessed RESET button with caution.
3	LAN1 (POE+)	By default, either **LAN1 (POE+)** or **LAN2 Dante** can be connected to an Ethernet switch for transmitting A/V streams, Dante audio streams, and control data. **LAN1 (POE+):** • Supports PoE+. **LAN2 Dante**: • When configured as an *independent Dante port***, LAN2 Dante is used for Dante audio streams, while LAN1 (POE+) handles A/V streams and control data. Note: **This configuration can be applied via the IP controller (SCT-IPCX). For details, refer to the controller's configuration guide. **IMPORTANT:** To prevent network loops, do not connect both ports to the same network. Ensure each port is connected to a separate, distinct network.
4	LAN2 Dante	
5	HDMI OUT	19-pin HDMI Type-A connector. Connect to an HDMI display.
6	AUDIO OUT	5-pin 3.5mm Phoenix connector. Connect to an audio receiver for balanced stereo audio output.
7	RS232	Connect to an RS-232 device for bidirectional serial communication.

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

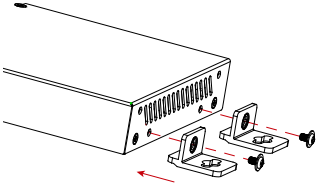
www.syscomtec.com

2. Installation

Note: Before installation, ensure the device is disconnected from the power source.

To install the device on a suitable location, follow the steps below:

1. Attach the mounting brackets to both side panels of the device using the included screws (two screws per side).



2. Mount the device with the attached brackets to the desired location using user-supplied screws (not included).

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

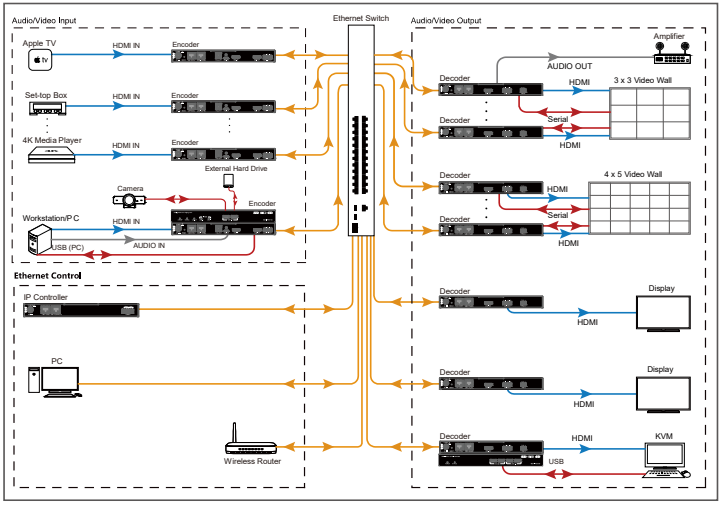
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

3. Typical Applications

3.1. Application Example 1



distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

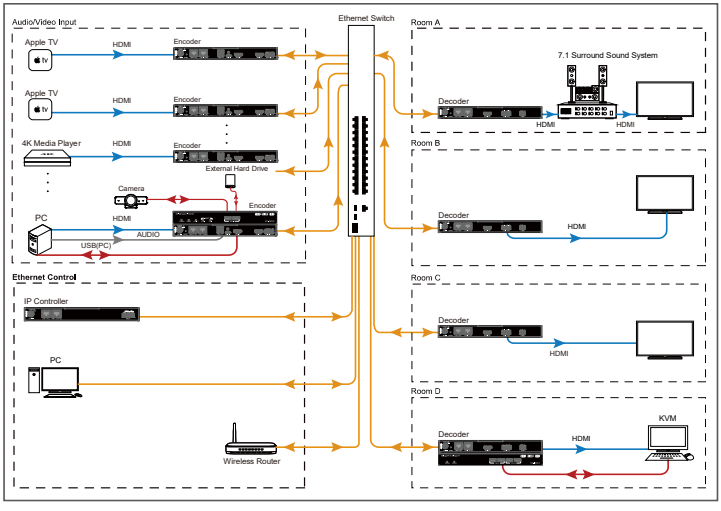
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

3.2. Application Example 2



distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

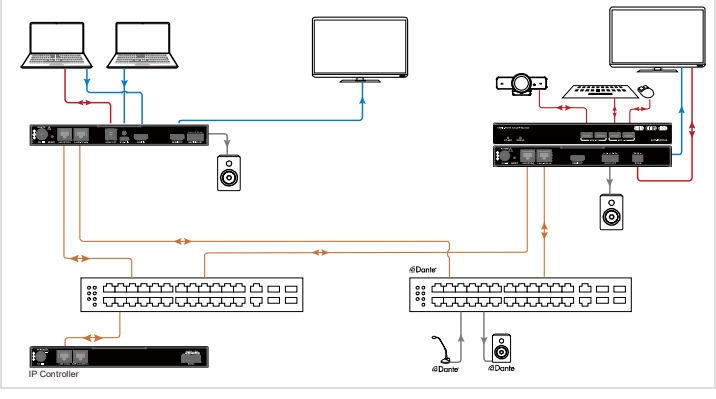
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

3.3. Application Example 3



In this application, LAN1 (PoE+) transmits A/V streams and control data, while LAN2 transmits Dante audio streams to a standalone network. The two Ethernet ports connect to separate networks.

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

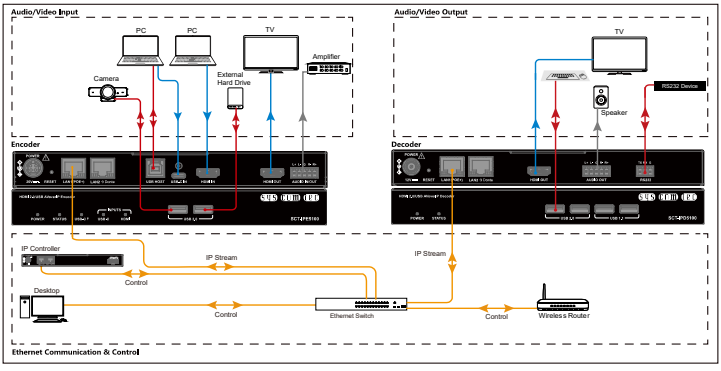
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

4. Hardware Installation



Note: Connect encoders and decoders to power adapters if the Ethernet switch doesn't support PoE.

5. IP Address Identification

The device's default IP setting is DHCP. Ensure that a DHCP server is available in the network so that the device can obtain a valid IP address during deployment. If no DHCP server is available—for example, when the device is connected directly to a computer—the device is assigned a default IP address in the range of 169.254.X.Y. The assigned IP address can be identified via the OSD or API Commands.

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keltenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

HDMI 2.0/USB AV over IP Decoder

Note:

- The default input switching mode is Auto.
- The switching mode can be configured via API commands. For details, refer to the separate API document.

6. Device Control Overview

The device can be controlled and configured through the SCT-IPCX controller, including routing of audio, video and USB signals, configurations of audio & video parameters, Dante features, firmware upgrades, and more. For details, refer to the configuration guide of the SCT-IPCX controller.

distributed by sys com tec Distribution AG

syscomtec Distribution AG
Keltenring 11
82041 Oberhaching

Tel. +49 (0)89 666 109 330
email: post@syscomtec.com

Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer

Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149

www.syscomtec.com

7. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

7.1. Warranty

The limited warranty period of the product is fixed three years.

7.2. Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

7.3. Warranty Exclusion:

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - ✓ Normal wear and tear.
  - ✓ Use of supplies or parts not meeting our specifications.
  - ✓ No certificate or invoice as the proof of warranty.
  - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  - ✓ Damage caused by force majeure.
  - ✓ Servicing not authorized by distributor.
  - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

7.4. Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.
Remarks: Please contact your local distributor for further assistance or solutions.

distributed by sys com tec Distribution AG
syscomtec Distribution AG
Keitenring 11
82041 Oberhaching
Tel. +49 (0)89 666 109 330
email: post@syscomtec.com
Vorstand:
Claus Lohse (Sprecher)
Erich Müller, Emanuel Krimmer
Aufsichtsratvorsitzender:
Otto Krimmer
Rechtsform: Aktiengesellschaft
Sitz Oberhaching
Amtsgericht München,
HRB 114750
Ust ID Nr. DE183656149
www.syscomtec.com

crossXio

sys com tec

HDMI 2.0/USB AV over IP Decoder

sys com tec

syscomtec Distribution AG

Keltenring 11

D-82041 Oberhaching (bei München)

Tel.: +49 89 666 109 330

Email: post@syscomtec.com

https://www.syscomtec.com