



# TLS electronics 875150 HDBaseT Set 100 HDMI USB RS232 IR User Manual

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## 875150 HDBaseT Set 100 HDMI USB RS232 IR User Manual



Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating, or adjusting this product. Please keep this manual for future reference.

### **SURGE PROTECTION DEVICE RECOMMENDED**

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shocks, lightning strikes, etc. The use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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## Safety and Notice

1. The transmission distances of HDMI over UTP cables are measured using TE CONNECTIVITY 1427071-6
2. EIA/TIA-568-B termination for CAT cables is recommended for better performance.
3. DO NOT use 568A/568B standard mixed CAT cable (cross-over cable) because there are 2 pairs swapped, this will make POE OVER-CURRENT and damage POE components. Please use a straight-through CAT cable (both RJ45 headers are 568A or 568B standard).
4. It is recommended that power up the device after connections of the source, sink, and CAT cable.
5. To reduce the interference among the unshielded twisted pairs of wires in CAT cable, do not run HDBaseT / Zone Cat5e/6/6a cabling with or in close parallel proximity to mains power cables. Shielded CAT cables can be used to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the CAT cables has a major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of CAT cables.
7. Do not substitute or use any other Power Supply other than the enclosed unit, or a TLS approved Replacement Part. Doing so will void the warranty and potentially expose the user to dangerous voltages resulting in an electrical shock.
8. Do not disassemble the device for any reason. Doing so will void the manufacturer's warranty. Also, our unique case is an integral part of the design of this unit and is responsible for cooling and circuitry shielding. Any modifications to this case will potentially cause malfunction and product failure.
9. Do not expose the device to water, moisture, or liquids. Possible electric shock may result as well as the failure

of the unit to operate.

## Introduction

This Model allows HDMI signals to be transmitted over a Single CAT5e/6 cable. This solution has the added features of RS232 and 2-way IR control functionality over the same CAT5e/6 cable. It can extend 4K@60Hz YUV4:4:4 over an HDBaseT link and up to 100M. The slimmest HDBaseT design makes it perfect to mount behind ultra-thin TVs.

### Note:

#### 1. About POC

The POC function is designed for powering compatible TX or RX units of TLS ONLY. DO NOT connect it with any third-party Power Over Ethernet devices. Damage may result.

## Applications

- Household entertainment sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

## System Requirements

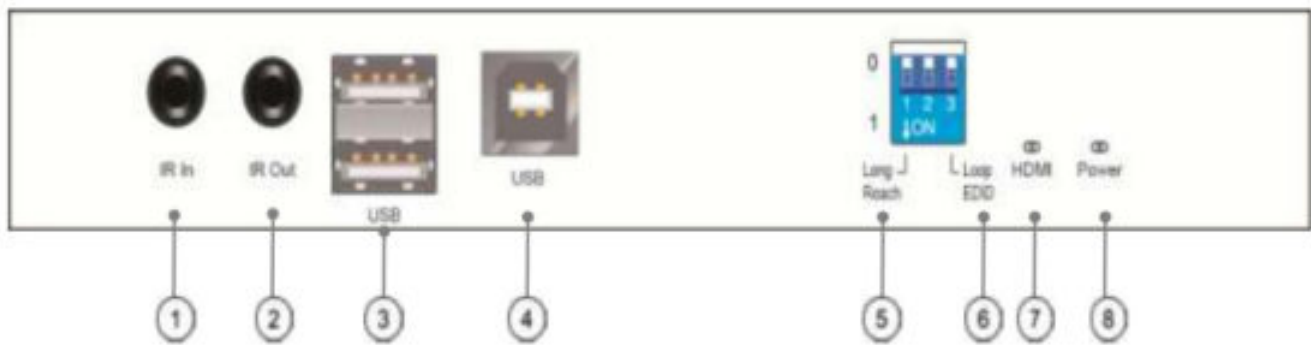
Input HDMI source equipment such as DVD/Blu-ray player, host PC/Laptop, and HDMI Equipped output display (TV or monitor) with an amplifier or active speakers.


## Features

- Bandwidth up to 18Gbps, resolution up to 4K2K@60hz YUV 4:4:4
- Transmit up to 150m under 1080p, 100m under 4K
- Support HDR10
- Support KVM and USB2.0
- Support Bi-directional wide band IR and RS232 Pass through
- Support Dual POC (Receiver powered by transmitter or transmitter powered by Receiver)
- Support HDCP2.2/ HDCP1.4 Compliant
- Support Copy local and remote EDID functionality
- Supports audio extractor rate up to 192kHz
- Support PCM7.1, Dolby, DTS
- With micro USB port for firmware upgrade

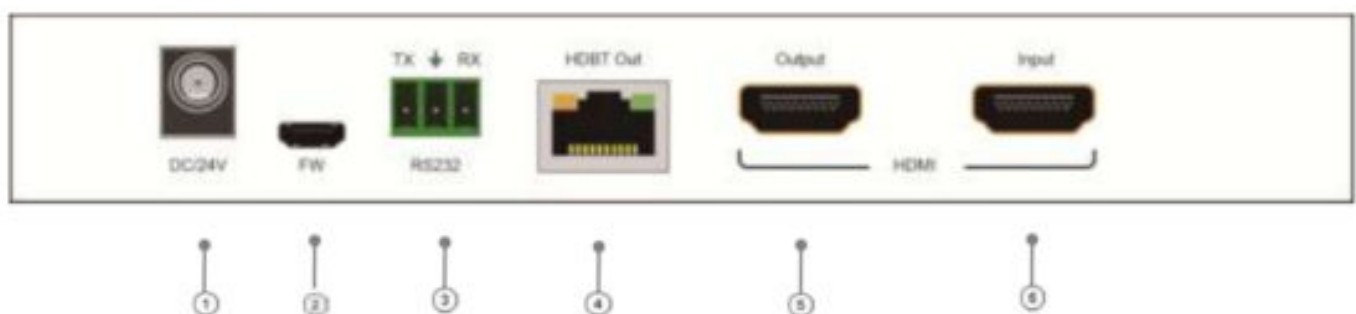
## Panel Description


### Transmitter Front



1. IR In: Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in a direct line of sight of the equipment to be controlled.
2. IR Out: Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in a direct line of sight of the equipment to be controlled.
3. USB Type-A for extension
4. USB Type B for connection
5. DIP Switch: Switch to "0" transmit up to 100m under 4K@60Hz.  
Switch to "1" transmit up to 150m under 1080P@60Hz. (Before power on, TX and RX must be selected to 0 or 1 at the same time. Please do not switch it in the working process)
6. EDID Switch: Switch to "0" copy EDID from the display of the receiver (remote EDID mode). Switch to "1" copy EDID from loop out a display of transmitter (local EDID mode).
7. Indicator of HDMI
8. Indicator of power input
9.  **Note:** EDID copy function on transmitter does not support 150M long distance, when it is long distance move, the EDID only supports 1080P@60Hz.

## Transmitter Rear



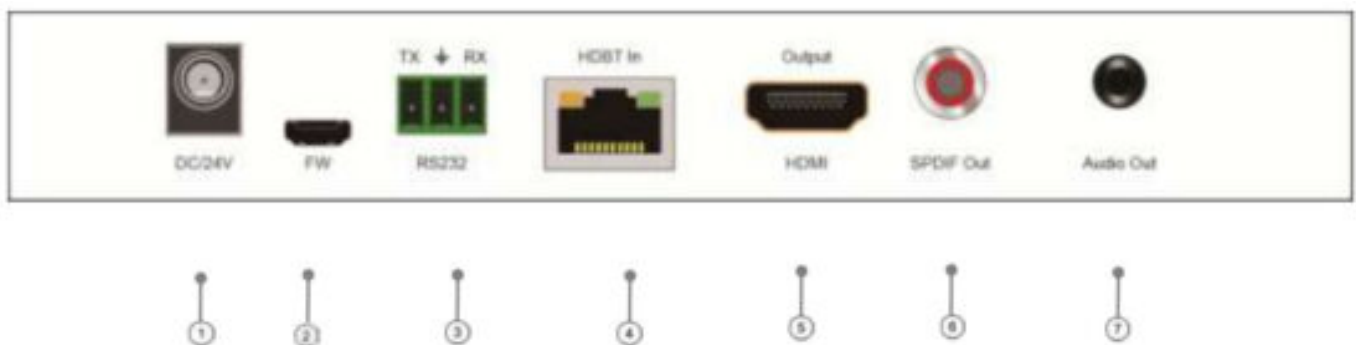
1. DC 24V input
2. Update: USB port to update the firmware
3. RS232 in: Connect to a PC or laptop with a phoenix terminal for the transmission of RS232 commands
4. HDBT out: Connect to the receiver unit with a single CAT5e/6 cable for transmission of all data signals
5. HDMI loop out: Connect to an HDMI equipped TV/Monitor for display of the HDMI input source signal
6. HDMI In: Connect to HDMI source equipment such as DVD or Blu-ray player
7.  **Note:** do not connect the projector directly which will break the HDBT port, please contact us and require technical support for such an application.

## Receiver Front



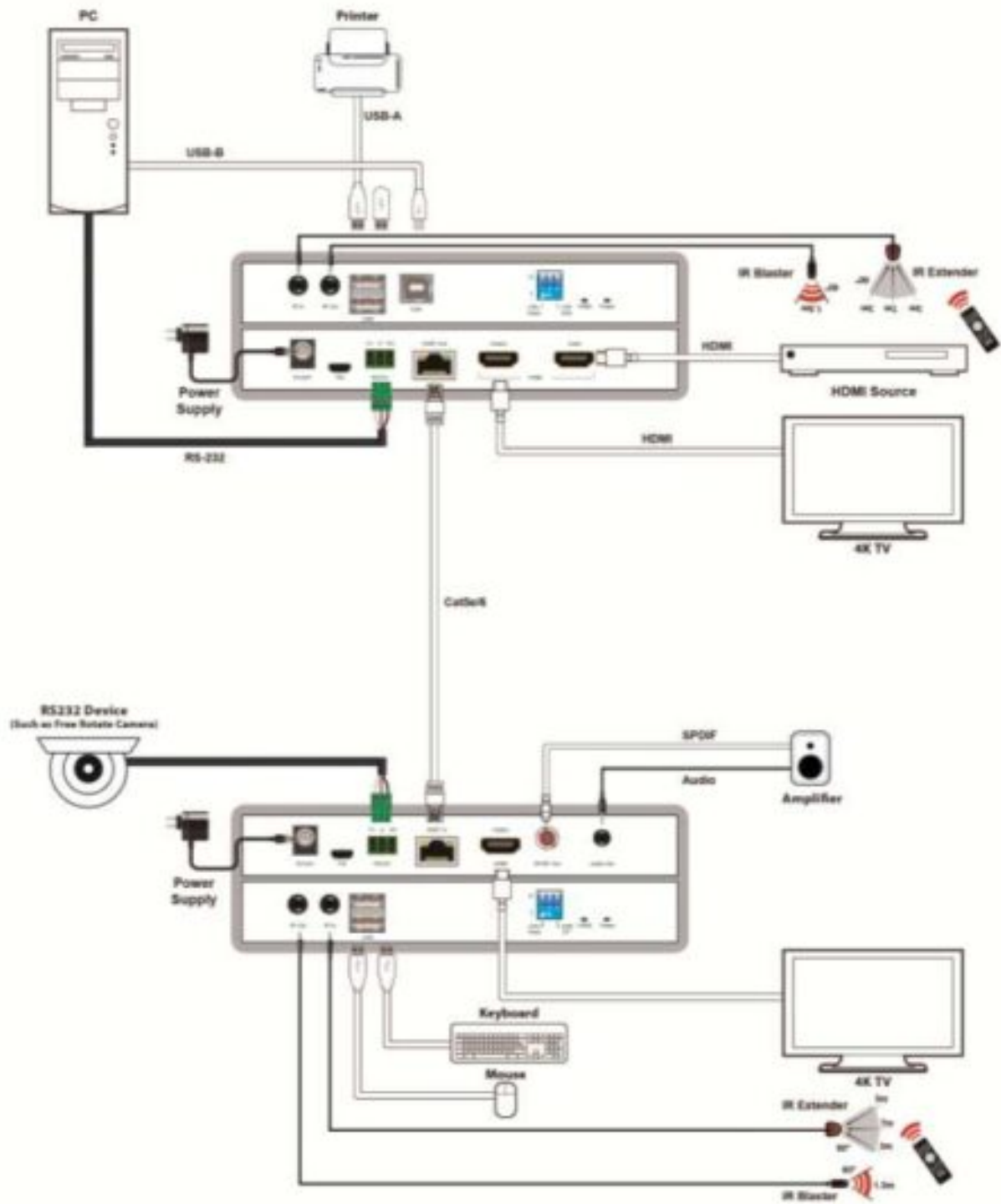
- **IR Out:** Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in a direct line of sight of the equipment to be controlled.
- **IR In:** Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in a direct line of sight of the equipment to be controlled.
- USB Type-A for extension
- **DIP Switch:** Switch to "0" transmit up to 100m under 4K@60Hz.  
Switch to "1" transmit up to 150m under 1080P@60Hz. (Before power on, TX and RX must be selected to 0 or 1 at the same time. Please do not switch it in the working process)
- **Audio Switch:** Switch to "0" extract Audio and output. Switch to "1" close extraction Audio output(analog audio and SPDIF).
- Indicator of HDMI
- Indicator of power input

## Receiver Rear



1. DC 24V input
2. **Update:** USB port to update the firmware
3. **RS232 Out:** Connect to the device that is to be controlled via the phoenix terminal by RS-232 commands
4. **HDBT in:** Connect to the transmitter unit with a single CAT5e/6 cable for transmission of all data signals
5. **HDMI output:** Connect to an HDMI equipped TV/Monitor for display of the HDMI input source signal
6. SPDIF out
7. Analog audio out

## Connection Diagram



## Specifications

Operating Temperature Range	-5 to +40°C (23 to +104 °F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Video Format Supported	DTV/HDTV; 4K/1080P/1080i/720P(50HZ)/576P/48 OP/576i/480i
Output Video	HDMI 2.0+HDCP1.4/2.2
Output Audio	Support PCM, DTS-HD, Dolby-HD
Maximum Transmission Distance	150 meters for 1080P, 100 meters for 4K
Power Supply	24V1A
Poc	Power from TX to RX over CatS/6 cable
Power Consumption	14Watts
Dimensions	172.4mmHx113.2mmWx24mmD
Mass (Main unit)	1.1Kg (Pairs)

**NOTE:** Specifications are subject to change without notice. Weight and dimensions are approximate.

### Firmware Update:

1. The user should use the CD in the color box, read and install the software on the PC;

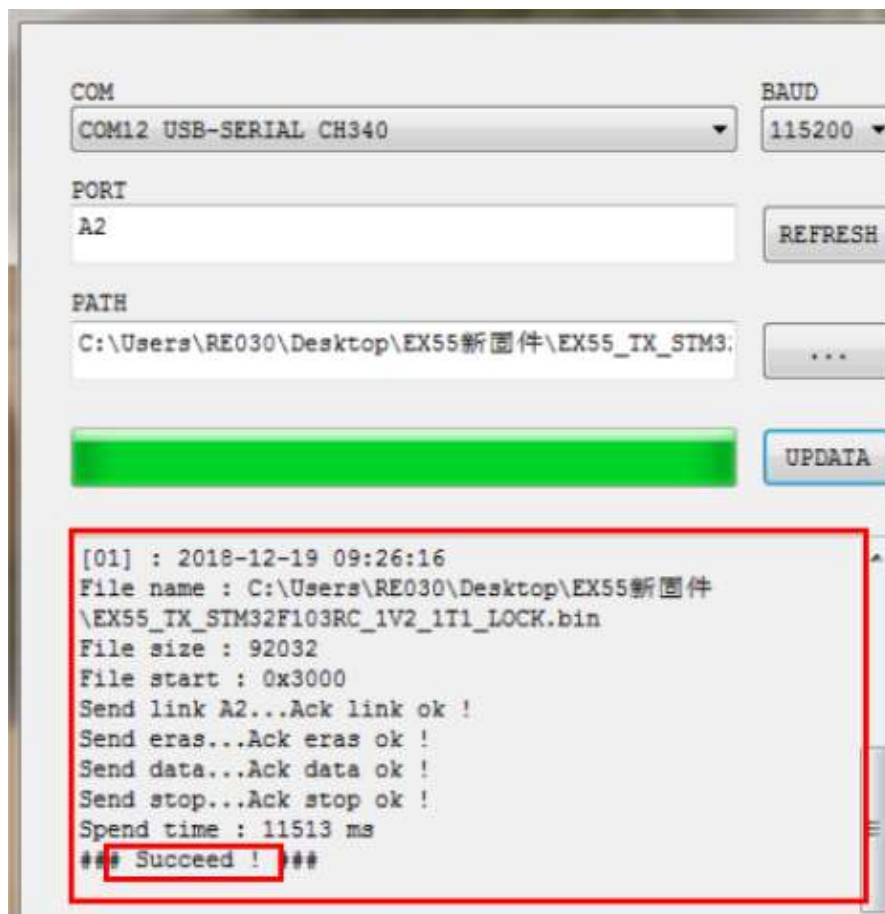


2. Connect the unit to the PC with a USB cable from the micro USB port, and click software to select the correct USB port:



(Note: if the PC is unable to identify the correct USB port, please install the driver from CD first)

3. Type in "A2" in PORT and select PATH with update file then click UPDATA wait for the update till display "Succeed" in the red frame:



(Note: please differentiate the firmware for TX and RX before upgrade)

## Package Contents

- Main unit
- 24V1A DC power supply
- 1xIR TX unit
- 1xIR RX unit
- 2 Phoenix plugs for RS232 cable termination
- 1 USB-cable A-B
- 1 USB micro cable
- 2 mounting brackets

## Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzene to clean this unit.

## Warranty Policy

TLS electronics products are warranted against defects in material and workmanship for two years from the date of shipment. During the warranty period, TLS electronics will, at its option, repair or replace products that prove to be defective. Repairs are warranted for the remainder of the original warranty or a 90-day extended warranty, whichever is longer.

For equipment under warranty, the owner is responsible for freight to TLS electronics and all related customs, taxes, tariffs, insurance, etc. TLS electronics is responsible for the freight charges only for the return of the equipment from the factory to the owner. TLS electronics will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to TLS electronics.



All equipment returned for warranty repair must have a valid RMA number issued prior to return and be marked clearly on the return packaging. TLS electronics strongly recommends all equipment be returned in its original packaging. TLS electronics obligations under this warranty are limited to the repair or replacement of failed parts, and the return shipment to the buyer of the repaired or replaced parts.

## **Limitations of Warranty**

The warranty does not apply to any part of a product that has been installed, altered, repaired, or misused in any way that, in the opinion of TLS electronics, would affect the reliability or detracts from the performance of any part of the product, or is damaged as the result of use in a way or with equipment that had not been previously approved by TLS electronics. The warranty does not apply to any product or parts thereof where the serial number or the serial number of any of its parts has been altered, defaced, or removed.

The warranty does not cover damage or loss incurred in the transportation of the product. The warranty does not cover replacement or repair necessitated by loss or damage from any cause beyond the control of TLS electronics, such as lightning or other natural and weather-related events or wartime environments. The warranty does not cover any labor involved in the removal and or reinstallation of warranted equipment or parts on-site, or any labor required to diagnose the necessity for repair or replacement.

The warranty excludes any responsibility by TLS electronics for incidental or consequential damages arising from the use of the equipment or products, or for any inability to use them either separate from or in combination with any other equipment or products. A fixed charge established for each product will be imposed for all equipment returned for warranty repair where TLS electronics cannot identify the cause of the reported failure.

## **Exclusive Remedies**

TLS electronics' warranty, as stated is in lieu of all other warranties, expressed, implied, or statutory, including those of merchantability and fitness for a particular purpose. The buyer shall pass on to any purchaser, lessee, or other the user of TLS electronics' products, the aforementioned warranty, and shall indemnify and hold harmless TLS electronics from any claims or liability of such purchaser, lessee, or user based upon allegations that the buyer, its agents, or employees have made additional warranties or representations as to product preference or use. The remedies provided herein are the buyer's sole and exclusive remedies. TLS electronics shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

## **RMA Policy**

When returning a product to TLS electronics for any reason, the customer should fill out the official RMA form to obtain an RMA number. Without permission or approval, TLS electronics will be not responsible for any return. This can be initiated by emailing or calling your related sales. All requests are processed within 48 hours.

## **Standard Replacement**

For customers that agree to return defective products to TLS electronics first, a The standard Replacement option is available.

An RMA number must first be issued by sales. This RMA number will need to be referenced on the outside of the return shipment.

Upon receipt of the defective product, TLS electronics will, at its discretion, either repair or replace the product and ship it out in the most expeditious manner possible. Subject to availability, the replacement product will be shipped on the business day following receipt of the defective product. In the event the product returned to TLS electronics has been discontinued (i.e. the product is no longer being manufactured by TLS electronics but is still under warranty), TLS electronics will, at its discretion, either repair or replace it with the recertified product.

## **Once you have obtained an RMA number**

After obtaining an RMA number from TLS electronics, you must send the product – freight prepaid – to TLS electronics. The TLS electronics RMA number must be prominently displayed on the outside of your package. If

you send your product to TLS electronics without the RMA number prominently displayed on the outside of the package, it will be returned to you unopened.

Please use a shipping company that can demonstrate proof of delivery. TLS electronics does not accept responsibility for any lost shipments unless proof of delivery to TLS electronics is provided.

### **Please note:**

Products shipped to TLS electronics must be properly packaged to prevent loss or damage in transit.

Shipping your RMA to TLS electronics using regular mailing envelopes is not acceptable, as they do not protect the product from damage during shipping. TLS electronics will not repair or replace a module that is shipped in such a way that the product is not properly protected. TLS electronics will not accept any product that has been damaged as a result of an accident, abuse, misuse, natural or personal disaster, or any unauthorized disassemble repair or modification.

### **Warranty**

The warranty time is two years from the date of original shipment. This warranty shall be void if a serial number has been removed from the product.

Upon determination of a legitimate defect covered by this warranty and at TLS's sole discretion, the user should bear the transport cost during the warranty.

If the product is out of warranty then a repair charge is required. Minimum repair charge: 10% of the retail price plus the cost of failed components. We will repair the failed product after the repair cost has been approved by the Customers and proper financial arrangements are made. Customers must cover round-trip shipment expenses.

### **Return and RMA Policies**

Shipments will not be received and processed for warranty repair/replacement without a TLS electronics RMA(Return Materials Authorization).

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Relens GmbH

Contact: [info@tls-electronics.de](mailto:info@tls-electronics.de)

### **Documents / Resources**

	<p><a href="#">TLS electronics 875150 HDBaseT Set 100 HDMI USB RS232 IR</a> [pdf] User Manual 875150, HDBaseT Set 100 HDMI USB RS232 IR</p>
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### **References**

- [electronics.de](http://electronics.de)

-  [TLS electronics GmbH, Hilden](#)

Manuals+.