



User manual
875150
HDBaseT Set 100
HDMI USB RS232 IR



Table of contents

Table of contents.....	2
Safety and Notice	3
Introduction	5
Applications	5
System Requirements	5
Features.....	6
Panel Description.....	7
Transmitter Front	7
Transmitter Rear	8
Receiver Front	9
Receiver Rear	10
Connection Diagram	11
Specifications.....	12
Firmware Update:	13
Package Contents	14
Maintenance	14
Warranty Policy.....	14
Limitations of Warranty	15
Exclusive Remedies	15
RMA Policy	16
Standard Replacement.....	16
Once you have obtained an RMA number.....	16
Please note:.....	17
Warranty	17
Return and RMA Policies.....	17

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 shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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 straight-through CAT cable (both RJ45 headers are 568A or 568B standard).
- 4) It is recommended that power up the device after connections of 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 the 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



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shock may result as well as 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 a HDBaseT link and upto 100M. The slimmest HDBaseT design, making it perfect to mount behind ultra thin TVs.

Note:

1) About POC

The POC function is designed for powering compatible TX or RX unit 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 amplifier or active speakers.

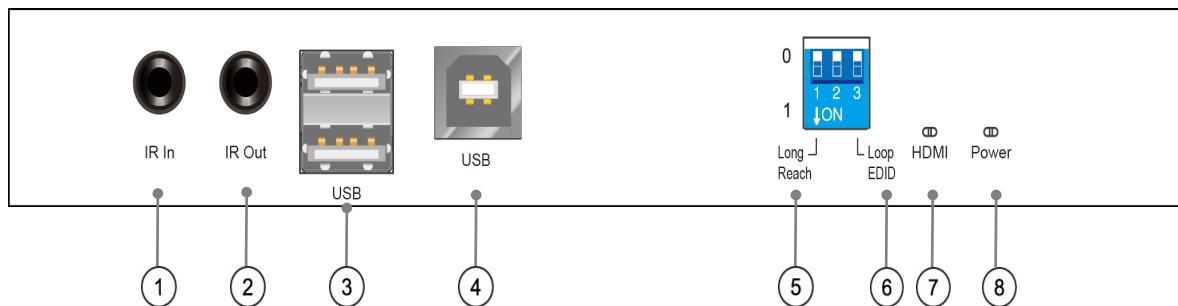


Features

- 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 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 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 upto 100m under 4K@60Hz. Switch to "1" transmit upto 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)

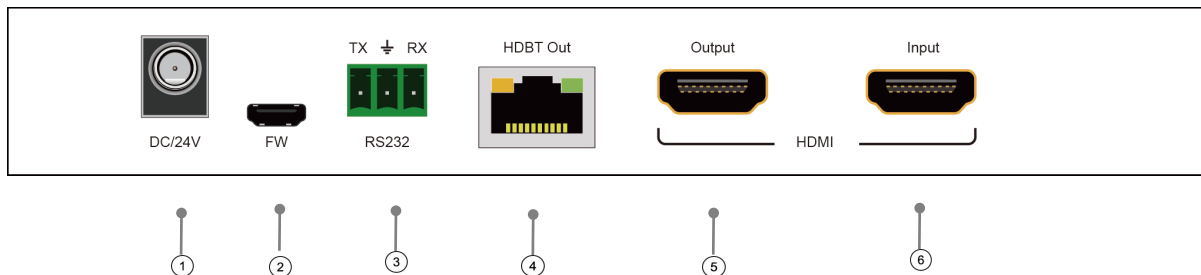
⑥ **EDID Switch:** Switch to "0" copy EDID from display of receiver(remote EDID mode). Switch to "1" copy EDID from loopout display of transmitter(local EDID mode).

⑦ Indicator of HDMI

⑧ Indicator of power input

⚠ ⑥ Note: EDID copy function on transmitter do not support 150M long distance, when it is long distance mode, the EDID only support 1080P@60Hz.

Transmitter Rear

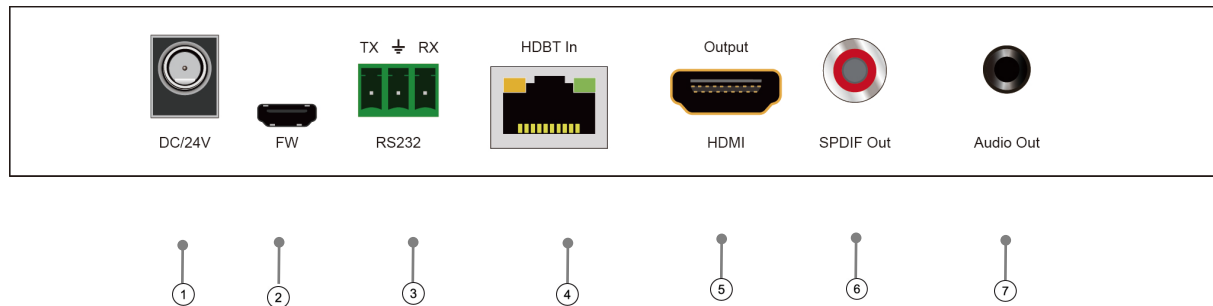


- ① DC 24V input
- ② **Update:** USB port to update the firmware
- ③ **RS232 in:** Connect to a PC or laptop with phoenix terminal for the transmission of RS232 commands
- ④ **HDBT out:** Connect to the receiver unit with a single CAT5e/6 cable for transmission of all data signals
- ⑤ **HDMI loop out:** Connect to a 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

 ④ Note: do not connect projector directly which will break HDBT port, please contact us and require technical support for such application.

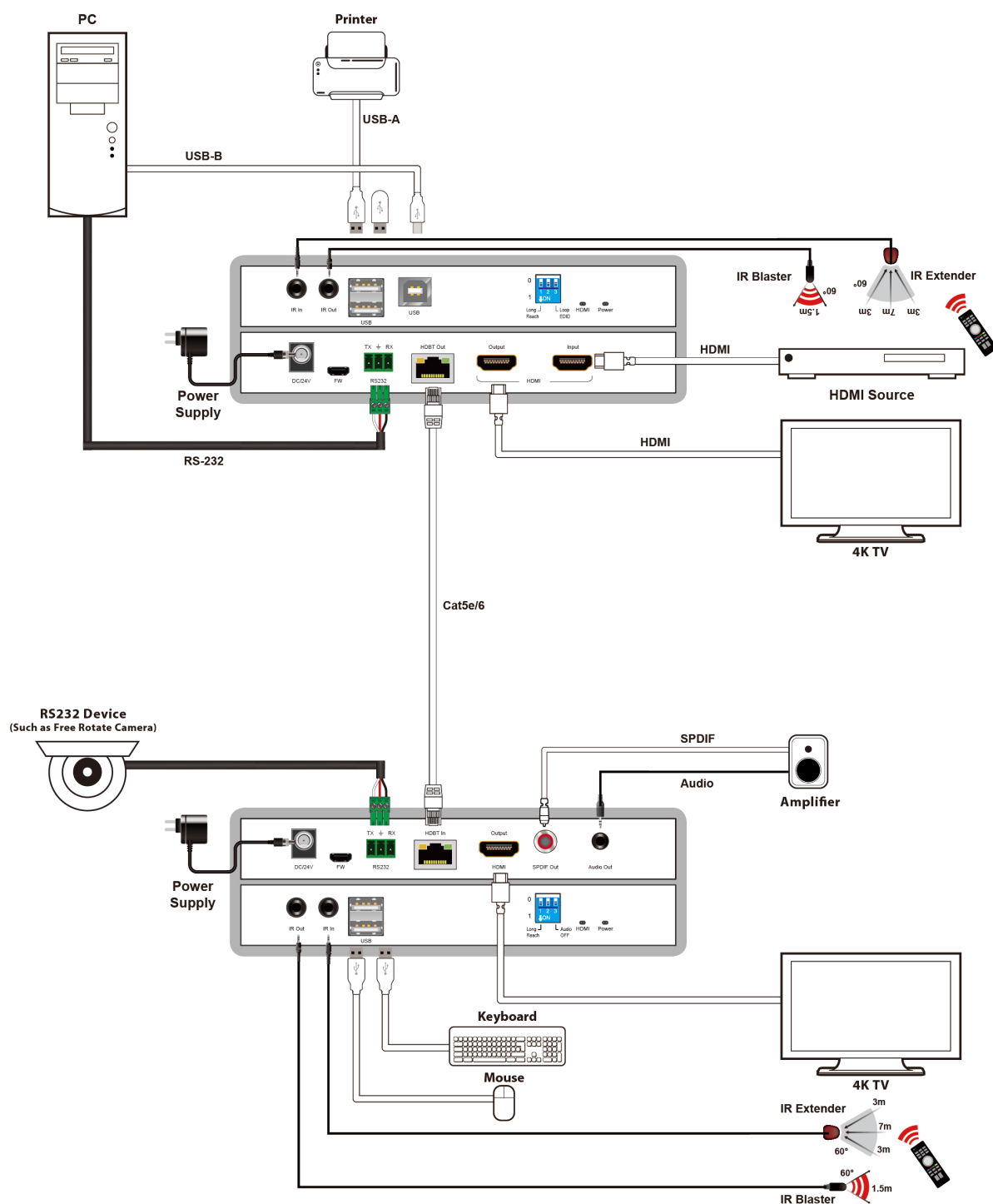
Receiver Front

- ① **IR Out:** Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in direct line of sight of the equipment to be controlled.
- ② **IR In:** Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in direct line-of-sight of the equipment to be controlled.
- ③ USB Type A for extension
- ④ **DIP Switch:** Switch to “0” transmit upto 100m under 4K@60Hz. Switch to “1” transmit upto 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)
- ⑤ **Audio Switch:** Switch to “0” extract Audio and output.Switch to “1” close extraction Audio output(analog audio and SPDIF).
- ⑥ Indicator of HDMI
- ⑦ 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 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 a HDMI equipped TV/Monitor for display of the HDMI input source signal
- ⑥ SPDIF out
- ⑦ Analog audio out

Connection Diagram



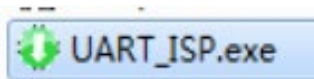
Specifications

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/480P/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 Cat5/6 cable
Power Consumption	14Watts
Dimensions	172.4mmH×113.2mmW×24mmD
Mass (Main unit)	1.1Kg (Pairs)

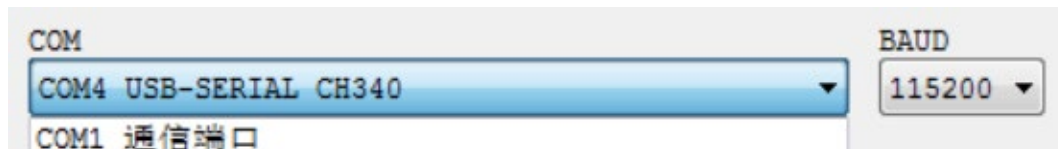
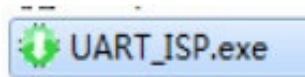
NOTE: Specifications are subject to change without notice. Weight and dimensions are approximate.

Firmware Update:

- ① The user should use the CD in colorbox, read and install software in PC;

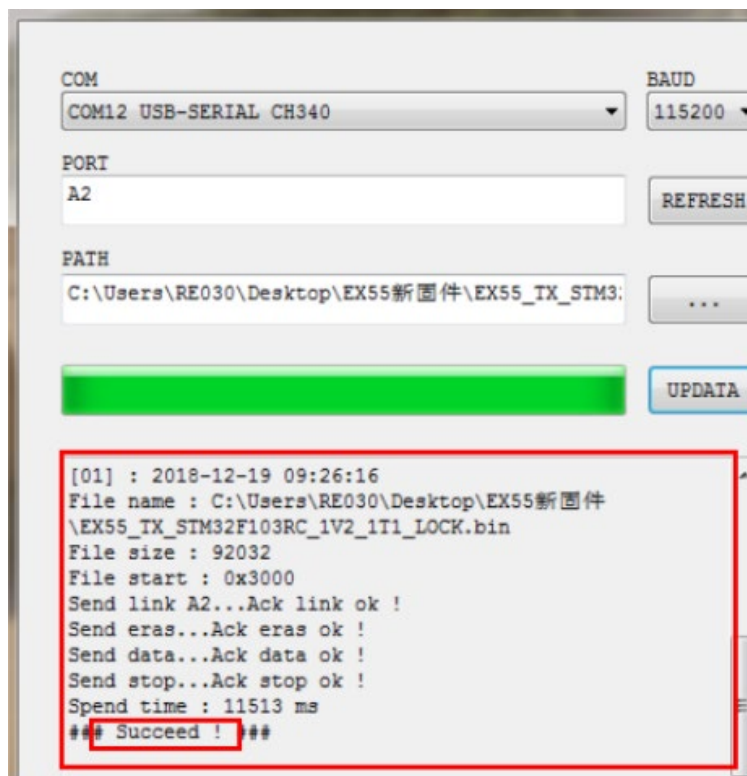


- ② Connect unit to PC with usb cable from micro usb port, click software to select correct usb port:



- ⚠ (Note: if 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 update till display "Succeed" in 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

TLSAV products are warranted against defects in material and workmanship for two years from the date of shipment. During the warranty period, TLSAV 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 TLSAV and all related customs, taxes, tariffs, insurance, etc. TLSAV is responsible for the freight charges only for return of the equipment from the factory to the owner. TLSAV will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to TLSAV.

All equipment returned for warranty repair must have a valid RMA number issued prior to return and be marked clearly on the return packaging. TLSAV strongly recommends all equipment be returned in its original packaging. TLSAV obligations under this warranty are limited to 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 TLSAV, 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 TLSAV. 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 transportation of the product. The warranty does not cover replacement or repair necessitated by loss or damage from any cause beyond the control of TLSAV, 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 TLSAV 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 TLSAV cannot identify the cause of the reported failure.

Exclusive Remedies

TLSAV's 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 user of TLSAV's products, the aforementioned warranty, and shall indemnify and hold harmless TLSAV 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. TLSAV 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 product to TLSAV for any reason, the customer should fill out the official RMA form to obtain a RMA number. Without the permission or approval, TLSAV will be no 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 product to TLSAV first, a 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, TLSAV 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 TLSAV has been discontinued (i.e. the product is no longer being manufactured by TLSAV but is still under warranty), TLSAV will, at its discretion, either repair or replace with recertified product.

Once you have obtained an RMA number

After obtaining an RMA number from TLSAV, you must send the product - freight prepaid - to TLSAV. The TLSAV RMA number must be prominently displayed on the outside of your package. If you send your product to TLSAV 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. TLSAV does not accept responsibility for any lost shipments unless proof of delivery to TLSAV is provided.

Please note:

Product shipped to TLSAV must be properly packaged to prevent loss or damage in transit.

Shipping your RMA to TLSAV using regular mailing envelopes is not acceptable, as they do not protect the product from damage during shipping.

TLSAV will not repair or replace a module that is shipped in such a way that the product is not properly protected. TLSAV will not accept any product that has been damaged as a result of accident, abuse, misuse, natural or personal disaster, or any unauthorized disassemble, repair or modification.

Warranty

Warranty time is two year and 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 sole discretion, user should bear the transport cost during the warranty.

If product is out of warranty then 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 repair cost has been approved by Customers and proper financial arrangements are made. Customer must cover round trip shipment expenses.

Return and RMA Policies

Shipments will not be receiver and processed for warranty repair/replacement without an TLSAV RMA(Return Materials Authorization).