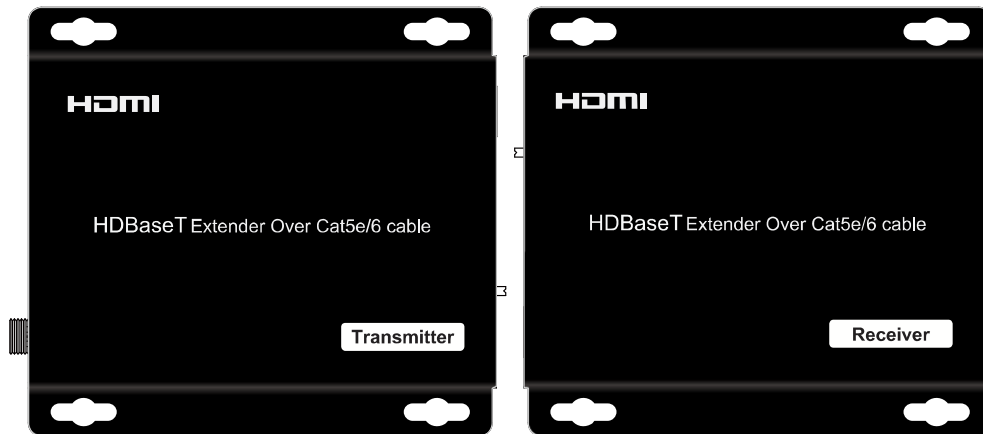


# HDBaseT Extender Over Single Cat5e/6 cable

## Model: SX-EX33

### Operating Instructions



### Dear Customer

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.

### Features

- One pair as a full functional module, no need for setting.
- Use single UTP/STP LAN cable (CAT-5E/6) to substitute HDMI cable to achieve long distance transmission.
- UTP/STP cable termination follows the standard of IEEE-568B.
- Transmission distance reaches up to 70 meters under the video format of 1080P and 4K up to 40 meters.
- POC (RX powered by TX)
- HDCP2.2/1.4 compliant.
- Full HD support: 1080p@60Hz@48b/pixels, 3D and 4Kx2K
- With LED indicators to show the power status.
- With ESD protection inside.
- Mounting ears supplied.
- Transfer Bidirectional Infrared control signal together with the HDMI signal.
- Phoenix RS232 Port for firmware update or RS232 control signal transmission.

## Notice

Our company reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

### **Warning**

**To reduce the risk of fire, electric shock or product damage:**



**1.** Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



**6.** Clean this apparatus only with dry cloth.



**2.** Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



**7.** Unplug this apparatus during lightning storms or when unused for long periods of time.



**3.** To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



**8.** Protect the power cord from being walked on or pinched particularly at plugs.



**4.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



**9.** Only use attachments / accessories specified by the manufacturer.



**5.** Do not place sources of naked flames, such as lighted candles, on the unit.



**10.** Refer all servicing to qualified service personnel.

## **TABLE OF CONTENTS**

**Package Contents**

**Panel Descriptions**

**Connecting and Operating**

**Maintenance**

**Product service**

**Warranty**

### **Package Contents**

- ① Main unit (SX-EX33).
- ② Operating instructions. (SX-EX33).
- ③ 12VDC power supply.(only for TX, RX can be powered from TX)
- ④ 2xIR TX unit. (IR emitter cable, 1 pcs for TX, 1 pcs for RX)
- ⑤ 2xIR RX unit. (IR receiver cable, 1 pcs for TX, 1pcs or for RX)
- ⑥ 2 Phoenix plugs for RS232 cable termination

**NOTE:** PART NUMBER (Abbreviation as P/N)

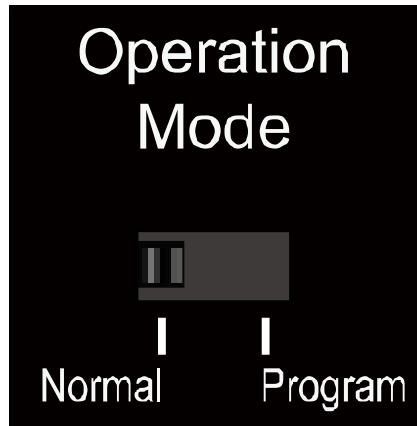
### **Connections and Operations**

- 1) Connect the HDMI input source (such as HD-DVD, PS3, STB etc.) to SX-EX33-TX.
- 2) Connect a CAT-5E/6E cable from UTP output of SX-EX33-TX to UTP input of SX-EX33-RX.
- 3) Connect the HDMI sink(such as HD-LCD、 HD-DLP) to SX-EX33-RX.
- 4) Connect the IR TX UNIT into SX-EX33-TX IR-Out port; Connect the IR RX UNIT into SX-EX33-RX IR-In port.
- 5) Connect the IR RX UNIT into SX-EX33-TX IR-In port; Connect the IR TX UNIT into SX-EX33-RX IR-Out port.
- 6) Phoenix RS232 Port can be set for firmware update or RS232 control signal transmission (Default set for RS232).

**Attention:** Please insert and extract cables gently.

## Setting instruction:

1. The switch is for bypassing RS232 signal or for firmware updating.



2. According to the silk prints nearby ("Program" for firmware update, "Normal" for RS232 transmission), change the switcher positions to set RS232 port's function.

## Update instruction:

- ① The user should receive a Firmware burn package, containing all software needed for burning and updating the Firmware on the EEPROM.
- ② Connect an RS232 cable from RS232 port of unit to PC.
- ③ Power the unit.
- ④ Extract the zipped file from the burn package to a directory (e.g. C:\dir\_name).
- ⑤ Browse to the directory (e.g. C:\dir\_name\ ) and double click the batch file Update Source. bat (for SX-EX33-TX) or Update Sink. bat (for SX-EX33-RX).
- ⑥ A short description of the link created between the PC and the board appears on the screen, followed by the burn progress percentage report.
- ⑦ A second stage of verifying the content of the EEPROM follows, also with a progress percentage report.

**For RS232 control signal transmission, just connect two RS232 cables to both RS232 ports of SX-EX33-TX and SX-EX33-RX, they work like an RS232 extension cable.**

## **Specifications**

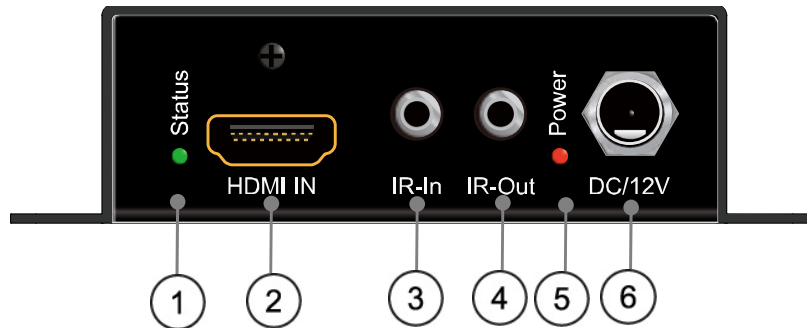
Operating Temperature Range	-5 to +35°C (-41 to +95 °F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Video Format Supported	DTV/HDTV; 4K/1080P/1080i/720P/576P/480P/576i/480i
Output Video	HDMI 2.0+HDCP1.4/2.2
Output Audio	Support DTS-HD, Dolby-HD
Maximum Transmission Distance	70 meters for 1080P, 40 meters for 4K
Power Supply	12V2A
Poc	Power from TX to RX over Cat5/6 cable
Power Consumption	2.5Watts (SX-EX33-TX) 5Watts (SX-EX33-RX)
Dimensions	105mmHx71mmWx25mmD
Mass (Main unit)	0.7Kg / 1.54lb (Pairs)

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

## Panel Descriptions

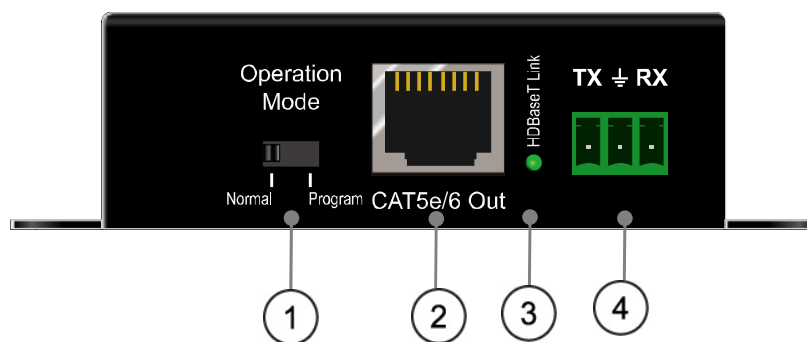
### 1. SX-EX33-TX (Transmitter)

#### Left Panel



- ① Indicator of HDMI Input.
- ② HDMI input port.
- ③ Connect IR RX cable to IR-In port.
- ④ Connect IR TX cable to IR-Out port.
- ⑤ Indicator of power Input.
- ⑥ DC power input.

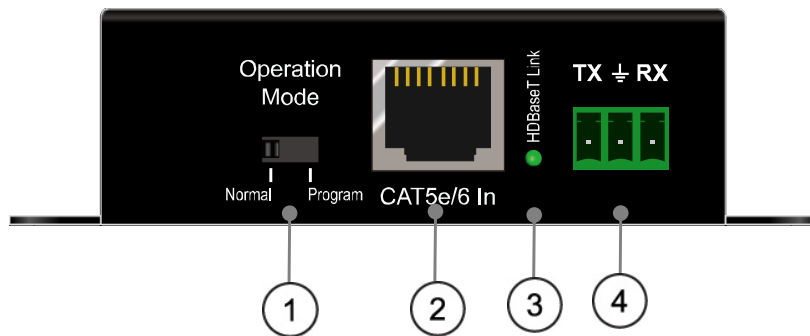
#### Right Panel



- ① The switch is for bypassing RS232 signal or for firmware updating.
- ② Cat5e/6 Out.
- ③ HDBaseT Link indicator.
- ④ RS232 Output.

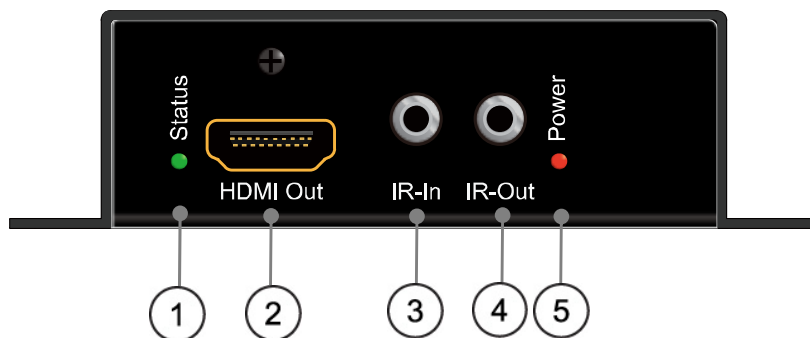
## 2. SX-EX33-RX (Receiver)

### Left Panel



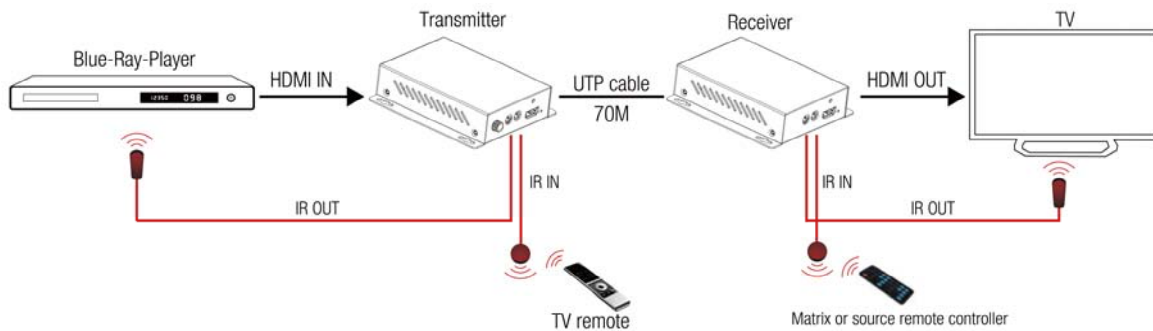
- ① The switch is for bypassing RS232 signal or for firmware updating.
- ② Cat5e/6 In.
- ③ HDBaseT Link indicator.
- ④ RS232 Input.

### Right Panel



- ① Indicator of HDMI Output.
- ② HDMI output port.
- ③ Connect IR RX cable to IR-In port.
- ④ Connect IR TX cable to IR-Out port.
- ⑤ Indicator of power Input.

## Typical Application



## MAINTENANCE

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

## PRODUCT SERVICE

### (1) Damage requiring service:

The unit should be serviced by qualified service personnel if:

- (a) The DC power supply cord or AC adaptor has been damaged;
- (b) Objects or liquids have gotten into the unit;
- (c) The unit has been exposed to rain;
- (d) The unit does not operate normally or exhibits a marked change in performance;

The unit has been dropped or the cabinet damaged.

(2) **Servicing Personnel:** Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

(3) **Replacement parts:** When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other Hazards.

(4) **Safety check:** After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

## WARRANTY

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor" ) will, for the length of the period indicated as below, **(Parts(2)Year, Labor(90) Days)** which starts with the date of original purchase ("Limited Warranty period"), at its option either(a) repair your product with new or refurbished parts, or (b)



replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

## **MAIL-IN SERVICE**

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

## **LIMITED WARRANTY LIMITS AND EXCLUSIONS**

1. This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.

The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.

2. THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

3. PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.