

# SB-5688CK

8x HDMI Inputs / 8x HDMI & 8x HDBaseT™ Outputs - UHD 4K2K Matrix Routing Switch w/ EDID Management/Learning



### IMPORTANT WARRANTY INFORMATION.

*If you remove the HDMI screw posts, you must use the provided HDMI Locking Post replacement screws to keep the internal HDMI jack secure. Removing the HDMI screws without installing the HDMI Locking Post replacement screws will void your warranty.*



## SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualified service personnel when:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the equipment.
  - C. The equipment has been exposed to rain.
  - D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
  - E. The equipment has been dropped, or the enclosure damaged.

# TABLE OF CONTENTS

## HDMI over HDBaseT™ Matrix Switcher Series

Thank you for purchasing the SB-5688CK HDMI-HDBaseT™ Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual thoroughly before attempting to use the 8x8 HDMI-HDBaseT™ Matrix switcher.

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### PACKAGE CONTENTS

Check that you have the following components:

- SB-5688CK Matrix Switcher
- RS-232 V2.0 / Ethernet V2.0 Protocol Instructions
- IR Remote Control (SW-5688CK)
- (8) Individual IR Remote Controls (SW-5688CK-IR01~IR08)
- 19 inch ear mount bracket (Part # 2U-440L)
- SB-100 IR Extender Receiver Set
- CD Contents: Manual, Windows GUI, ISP V1.0 Windows driver
- RS-232 Cable 6 feet (2M)
- HDMI Locking Post Replacement Screws
- Users Guide
- Worldwide Universal Power Supply: 100~240VAC, AC 50/60Hz
- *Optional: SB-100C IR Extender Receiver Cable (6.5ft (2M))*



-- SB-6335R HDBaseT™ Receivers sold separately --

### SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

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# INTRODUCTION & FEATURES

## INTRODUCTION

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The SB-5688CK is a professional 8x8 matrix routing switch. Supporting (8) HDMI Inputs and (8) HDMI and (8) HDBaseT™ Outputs. The SB-5688CK is based on HDBaseT™ standards and supports full HDMI video resolutions with embedded EDID, Audio, RS-232, Ethernet and bi-directional IR, all over a single CATx cable. This unit has a wide frequency range of 25MHz ~ 340MHz so there is no signal degradation. High Definition Digital signals can be selected and distributed to any of the (8) Inputs to any of the (16) outputs simultaneously (channel outputs mirrored). The switcher is certified as being fully CEC and HDCP 1.3 and supports HDMI 1.4a, 4K2K@30Hz, DVI 1.0, 3D formats. Supports UXGA/WUXGA/DVI 1920x1200 resolutions to any HD display. The SB-5688CK has (1) HDMI port per Input and (8) HDMI and (8) HDBaseT™ ports per Output, effectively making this an (8) In by (16) Out switcher (same signal on both HDMI and HDBaseT™ outputs). Using the IR remote and the switcher's HDBaseT™ extender transmitter (Tx) allows you to connect a source in a remote location. Likewise, the HDBaseT™ Output and our HDBaseT™ receivers allow you to connect a displays in remote locations. The EDID management can be selected between (7) different modes. Control is provided via front panel push buttons, IR remote, RS-232 or TCP/IP (not a web-browser). A RS-232 Windows GUI interface is provided for matrix routing control (Windows only).

## FEATURES

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Based on HDBaseT™, bi-directional IR, RS-232, Multi Format Audio and Ethernet control. Full Resolution HD Video, all HDBaseT™ signals over single CATx cable.

- (8) HDMI digital video and digital multi-channel audio player source devices matrix switched to (8) HDMI and (8) HDBaseT™ Transmitter outputs to (8) destinations
- HDBaseT™, IR, RS-232, Multi-channel digital audio format applications and HD video signals over single CAT6/6a/7 category cable
- HDMI digital video w/ embedded HDCP, DVI 1.0 formats and CEC/HDCP 1.3 compliant
- Worldwide EDID control modes for full HDMI 4K2K@24/30Hz HD video resolutions
- Supports HDMI 4K2K@24/30Hz, 1.4a 3D formats
- Wide range of HD resolutions from PC, XGA to WUXGA 1920x1200 and HDTV/DTV, HDMI resolutions for 480i/480p, 576i/576p, 720p, 1080i/p & 4K2K (24/30Hz)
- Compatible with all HDMI source devices, PC monitors, Plasma HD displays, HDTVs and audio receivers or audio amplifiers
- Digital video TMDS formats resolutions up to 4K2K with Deep color 36-bit
- Digital multi-channel Audio Support : Dolby TrueHD, Dolby Digital, Dolby Digital Plug/ex, DTS, DTS-HD, DTS-HD Master, DTS-EX, PCM, PCM2, LPCM2
- Audio Input: Supports HDMI multi-channel digital audio
- Audio Output: Supports HDMI multi-channel digital audio
- Various User Interface Controls:
  - Windows based GUI control via RS-232 Interface control driver for 2000/XP/WIN7-32/WIN7-64/WIN8
  - Front panel push buttons
  - IR wireless remote control
  - Ethernet switch control
  - Third party RS-232 control (via simple ASCII)
- Supports (7) Worldwide Control Function Keys: Full function front panel controls: ALL, OFF, EDID, LOCK, RECALL, MEMORY & ENTER
- Supports EDID Modes:
  - a. Embedded EDID Modes: FSS, H24-3D, H24-3D-M, H36-3D, H36-3D-M, 4K2K-3D & DVI-D 1920x1200-60Hz
  - b. External Modes: Learning mode
- Automatic scanning input & output status via LCM screen on the front panel
- Supports IR remotes and IR extenders for a distance of up to ~ 984 feet (300M) maximum
- Supports universal power adaptor AC100V~AC240V, 50/60Hz

The switcher will remember that last state during a power cycle. When power is removed and resorted, the last configuration will be invoked.

# SPECIFICATIONS

## SPECIFICATIONS

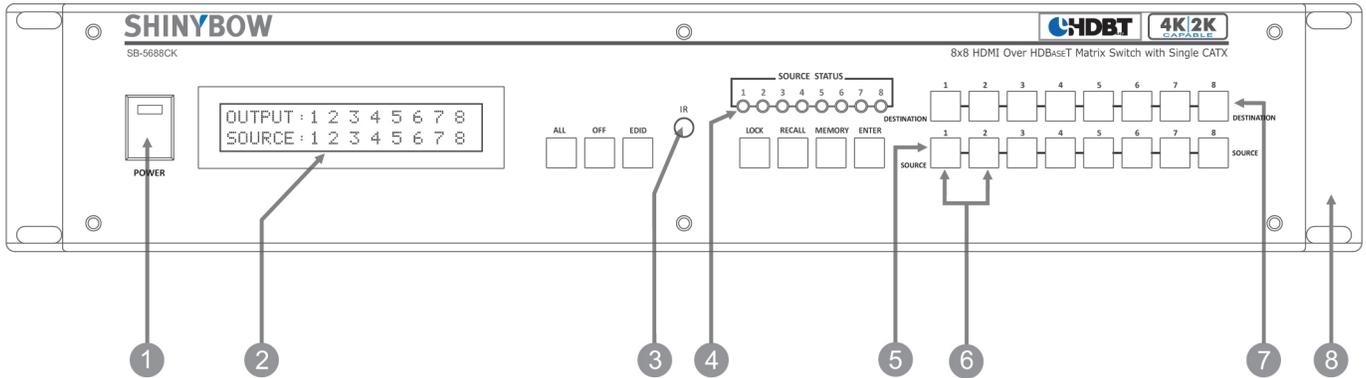
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- **Type of HDMI Switcher:** (8) Inputs to (8) Outputs HDMI over HDBaseT™ Matrix Switch with single CATx Cable
- **HDMI Support:** HDMI 4K2K@30Hz, 1080p@60Hz, H36-bit Deep color, 3D of HDMI V1.4 formats
- **HDBaseT™ Support:** Bi-directional IR, RS-232, Multi Format Audio, Ethernet over one CATx cable
- **HDCP/CEC Support:** HDCP 1.3 Compliant, CEC Compliant
- **Video Bandwidth:** Double Data Rates: 340MHz, Total 6.75Gbps bandwidth
- **Digital Video Support:** HD: 480i/480p/720p/1080i/p and 4K2K up to 36bit deep color
- **Inputs:** (8) HDMI (HDMI or DVI digital source)
- **Outputs:**
  - **HDMI:** (8) HDMI (to Destination)
  - **HDBaseT™:** (8) HDBaseT™ Transmitter via category cable & RJ-45 connector
- **HDBaseT™ Control Inputs:**
  - (8) IR In (Sends IR signals to (8) Rooms via HDBaseT™ Transmitter)
- **HDBaseT™ Control Outputs:**
  - (8) IR Out (Links to Receive IR signals from (8) Rooms via a HDBaseT™ Extender)
  - (1) All Tx LAN (All HDBaseT™ Transmitter Ethernet links to a HDBaseT™ Receiver)
- **HDBaseT™ Control I/O:**
  - (8) RS-232 I/O (Control (8) Rooms RS-232 via HDBaseT™ extender Tx)
  - (8) IR In to (8) IR Out following the IR Matrix Switcher status
- **Switcher Controls:**
  - Select & Function buttons on front panel (Data status via LCM panel show out)
  - IR Remote Control (switch control)
  - (8) IR Room Remote Controls (switch control)
  - IR External port (switch control via 3.5mm OD Jack)
  - RS-232 series interface (switch control)
  - Ethernet series interface (switch control)
- **Source Status:** Input status LEDs indicates presence of a live signal
- **(23) Function Control Keys:** 1. ALL, 2. OFF, 3. RECALL, 4. ENTER, 5. MEMORY, 6. LOCK, 7. EDID, 8. Destination button 1 thru 8, 9. Source button 1 thru 8
- **(7) EDID Management Modes:**
  - **Select Embedded EDID Modes:** Mode1: FSS, Mode2: H24-3D, Mode3: H24-3D-M, Mode4: H36-3D, Mode5: H36-3D-M, Mode6: 4K2K-3D, PCM-2CH, Mode7: DVI-D 1920x1200
  - **Select LEARNING Mode:** Learning Destination EDID to Link Source
- **Infrared Frequency:** 38Khz
- **IR Extend Distance:** ~984 feet/300M max
- **HDBaseT™ Extender Distance:** ~328 feet/100M max
- **HDMI I/O Connector:** HDMI Type A - SMD 19-pin female type
- **Temperature:** Operating Temperature 32°F-100°F (0°C-32°C)
- **Dimensions (LxWxH):** 19 x 9.85 x 3.46 in (482x250x88 mm)
- **Rack Mount:** 2RU High 19in Rack Mount #2U-440L (with rack mount)
- **Power Supply:** AC 100~240VAC 50/60Hz (120V/1A/120W; 220V/0.54A/120W)
- **Safety Approvals:** CE, FCC, REACH and WEEE
- **Weight:** 3.75 Kg/6.25 lb

As product improvements are continuous, specifications are subject to change without notice.

# FRONT PANEL

## FRONT PANEL



**1. POWER ON SWITCH:** The power switch turns the unit on and off. The LCM will illuminate blue to indicate the switcher is ON and receiving power. The switcher will remember the last setting during a power cycle. When power is removed and resorted, the last configuration will be evoked.

**2. STATUS DISPLAY:** Front panel status display shows current matrix routing configuration. This same display also shows particular configuration settings depending on your current function. In run mode (as shown above), the display shows each Output (destination) channel to which Input (source) it is assigned.

**3. IR SENSOR:** The IR sensor receives IR commands from the supplied remote control or third party IR emitter.

**4. INPUT STATUS DISPLAY:** Input sources 1 to 8 LED illuminates blue to indicate that a video source is present on that input.

**5. SOURCE SELECT BUTTONS:** Separate inputs 1 thru 8 select buttons are provided each source selection.

**6. EDID MODE SELECT BUTTONS:** Used to select EDID mode using Source button #1 or #2.

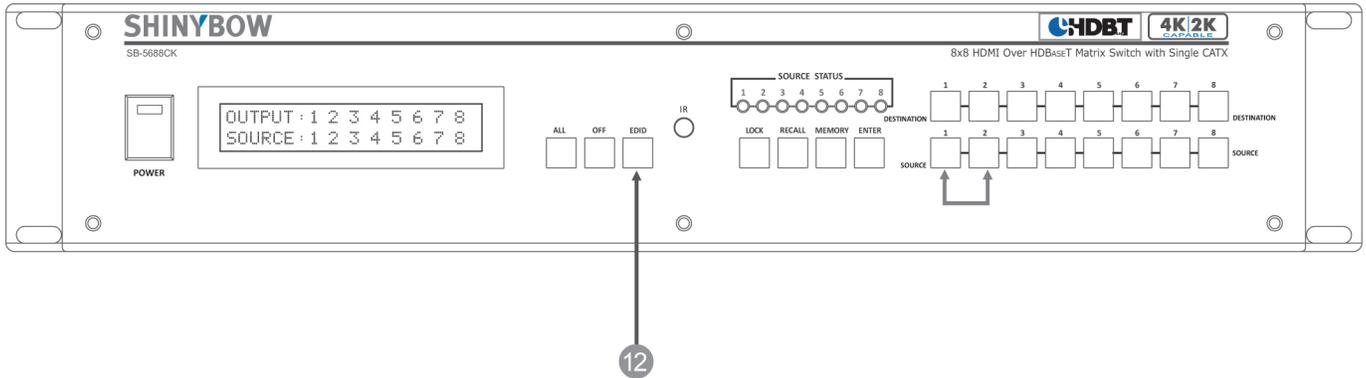
**7. DESTINATION SELECT BUTTONS:** Separate outputs 1 thru 8 select buttons are provided for each destination assignment. Routing can be source to destination or source to multiple destinations.

**Example:** Press Destination 1, 3, 5, then press Source 2. It will route Input 2 to Output 1, 3, 5 respectively.

**8. 19 INCH EAR MOUNT PAIR:** Converts desktop to 19 inch rack mount. Bracket (part # 2U-440L) INCLUDED. Image shows rack mount bracket attached.

# FRONT PANEL-EDID

## FRONT PANEL-EDID



### 12. FUNCTION KEY - EDID (1):



Used to display changes/current EDID mode.

- Press **EDID** to select new EDID mode.
- Press **SOURCE** row #1 or #2 to select EDID modes.
- Press **ENTER** to ready memory location.
- Or press **EDID** again to cancel the operation.

Operation completes.

**Note: Operation will abort if no keys are pressed within 5 seconds.**

### FUNCTION KEY - EDID (2):



Select external **LEARNING** mode.

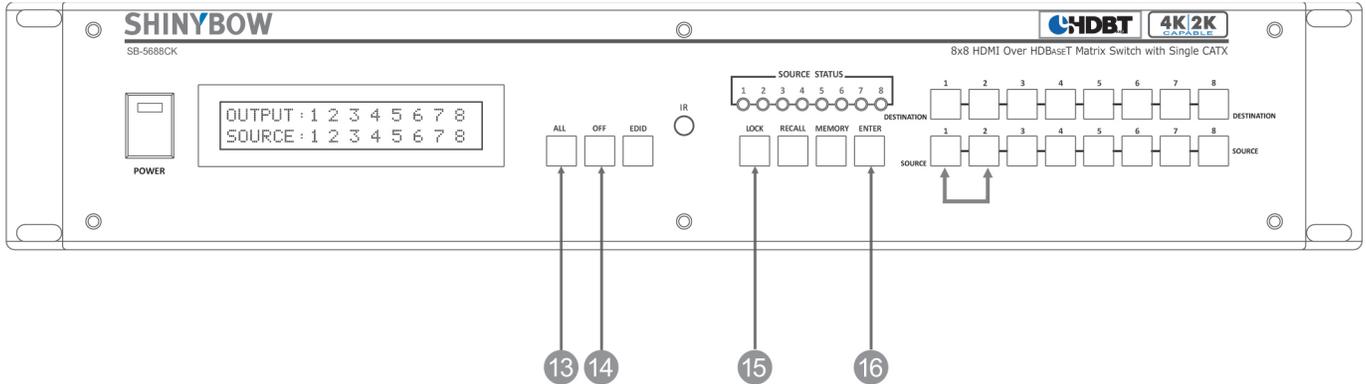
- Press **EDID** to select new EDID mode.
- Press **DESTINATION** again, press the same Destination **#1 THRU #8** to learn the HDBaseT™ out port EDID. The EDID for HDBaseT™ (CATx) has been learned.
- Press **ENTER** to ready memory location.
- Or press **EDID** again to cancel the operation.

Operation completes.

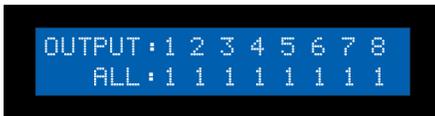
**Note: Operation will abort if no keys are pressed within 5 seconds.**

# FRONT PANEL-ALL-OFF-LOCK-ENTER

## FRONT PANEL-ALL-OFF-LOCK-ENTER



### 13. FUNCTION KEY - ALL:



- Disables (mutes) video on all destinations OR assign the same source to all destinations.
- Option 1**
- Press **ALL** followed by **OFF** button. The display will show "0" to indicate none of the destinations are assigned a video source.
- Option 2**
- Press **ALL** followed by Source **1 THRU 8**. The display will show the source selected.
  - Press **ENTER**. The pre-set source selection will be assigned all destinations.

### 14. FUNCTION KEY - OFF:



- Disables (mutes) video on the selected destinations.
- Press **OFF** button followed by any Destination channel.
  - Press **1 THRU 8** output destination. The display will show "0" for the selected channel, indicating no video selected.

### 15. FUNCTION KEY - LOCK:

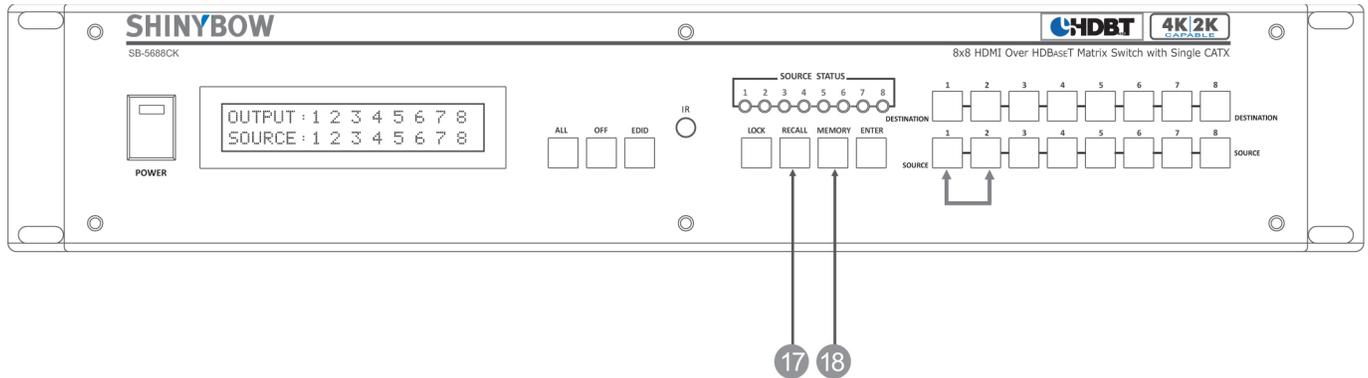


- Press and hold **LOCK** button for two seconds lockout the front panel.
- Press and hold **LOCK** button for two seconds to enable the front panel.

**16. FUNCTION KEY - ENTER:** Press **ENTER** to confirm entries.

# FRONT PANEL-RECALL-MEMORY

## FRONT PANEL-RECALL-MEMORY



### 17. FUNCTION KEY - RECALL:



The system will show previously stored presets, up to a total of (16). Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Press **RECALL** button.
- Press **1 THRU 8** on either Source or Destination row.
- Press **ENTER**. The pre-set configuration will execute.

Operation completes.

**Note: Operation will abort if no keys are pressed within 5 seconds.**

- Or press **RECALL** again to cancel the operation.

### 18. FUNCTION KEY - MEMORY:



The system will show stored presets, up to a total of (16.) Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Configure desired matrices.
- Press **MEMORY** button.
- Press **1 THRU 8** on either Source or Destination row.
- Press **ENTER** to ready memory location.
- Or press **MEMORY** again to cancel the operation.

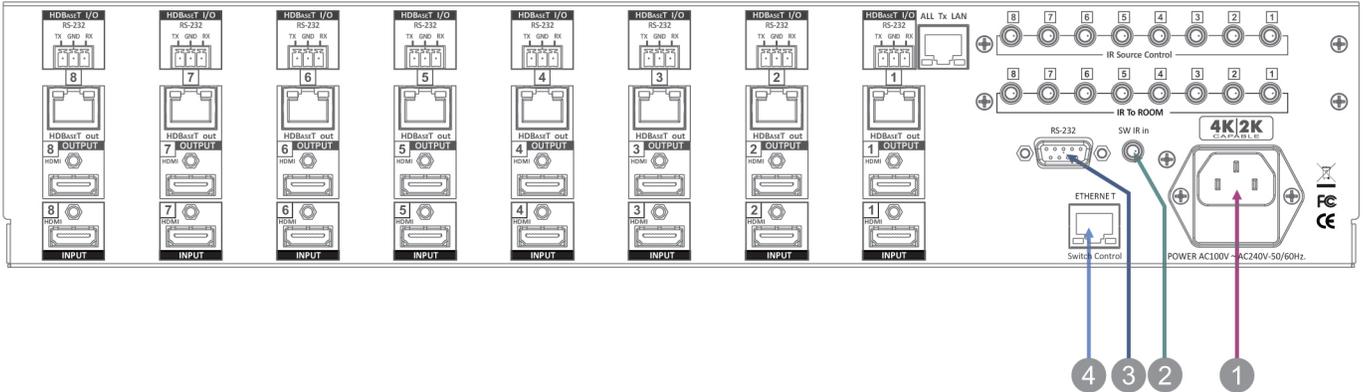
Operation completes.

**Note: Operation will abort if no keys are pressed within 5 seconds.**

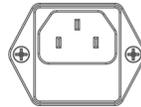
- Or press **MEMORY** again to cancel the operation.

# BACK PANEL-SWITCH CONTROLS

## BACK PANEL-SWITCH CONTROLS



**1. DC POWER INLET:** The switcher is fitted with a AC power plug input connector. Ensure that the plug used is of an approved type and is of sufficient current carrying connector capacity with the correct voltage and connector polarity. 100~240Volt AC, 50/60Hz power supply.



**POWER SOCKET:** Connector Type: IEC 60320 C13

**2. IR EXTENDER CONTROL:** Supports (1) IR extender. Extends maximum distance of ~984 ft/300M. When you plug the external IR extender into the switcher, the front panel IR receiver remains active.

SW IR in

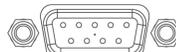


Switch Control

**IR EXTENDER JACK:** Female jack - inner OD Ø 3.5mm

**3. RS-232 CONNECTION:** RS-232 control port allows for interfacing to a PC, such as a computer or touch panel control, to the switcher via the DB-9pin female connector for serial RS-232 control.

RS232

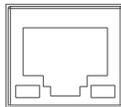


Switch Control

**REMOTE PORT:** D-SUB-9pin female connector

**4. ETHERNET CONNECTION:** ETHERNET control port allows for TCP/IP interfacing to a PC, such as a computer or touch panel control (not a web-browser), to the switcher via the RJ-45 female connector to control switcher.

Ethernet



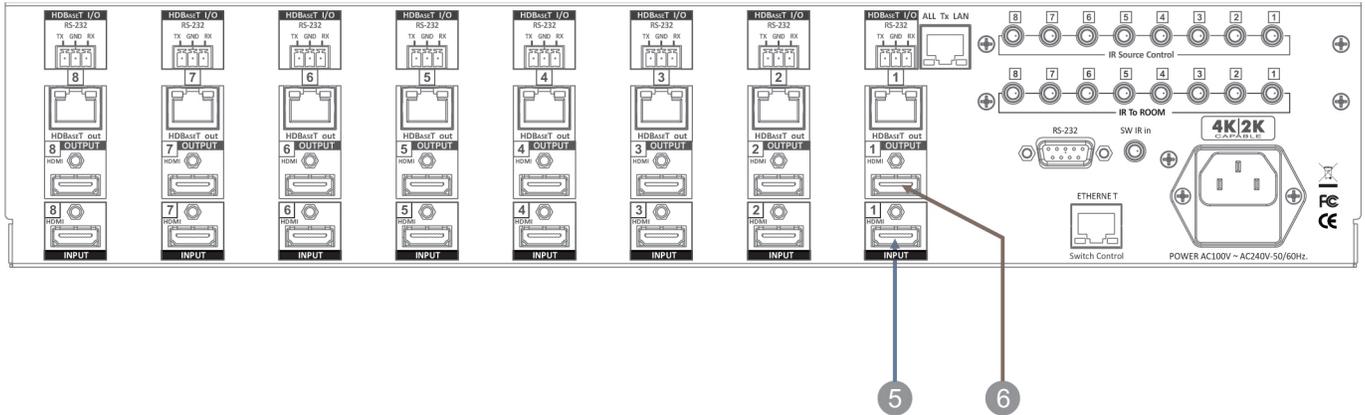
Switch Control

**REMOTE PORT:** Control the switcher RJ-45 female connector

**ETHERNET PORT:** *Note: The Ethernet port and RS-232 port cannot be used simultaneously. Any connection to the Ethernet port will disable serial commands sent to the RS-232 port.*

# BACK PANEL-HDMI INPUT / OUTPUT

## BACK PANEL-HDMI INPUT / OUTPUT



**5. INPUTS- 1,2,3,4,5,6,7, & 8 HDMI:** Connects HDMI signal source to the Input. This HDMI port supports HDMI with embedded audio and DVI with AUX audio sources. If you remove the HDMI screw posts, you must use the provided HDMI Locking Post replacement screws to keep the internal HDMI jack secure. Removing the HDMI screws without installing the HDMI Locking Post replacement screws will void your warranty.



**HDMI CONNECTOR:** HDMI Type A SMD 19pin female socket connector

*Note: With the proper adapters, the switcher can be used with DVI digital video signals, as it is HDCP compliant. DVI Audio is supported.*

**6. OUTPUTS- 1,2,3,4,5,6,7 & 8 HDMI:** Connects HDMI signal source to the Output. This HDMI port supports HDMI with embedded audio and DVI with AUX audio. If you remove the HDMI screw posts, you must use the provided HDMI Locking Post replacement screws to keep the internal HDMI jack secure. Removing the HDMI screws without installing the HDMI Locking Post replacement screws will void your warranty.

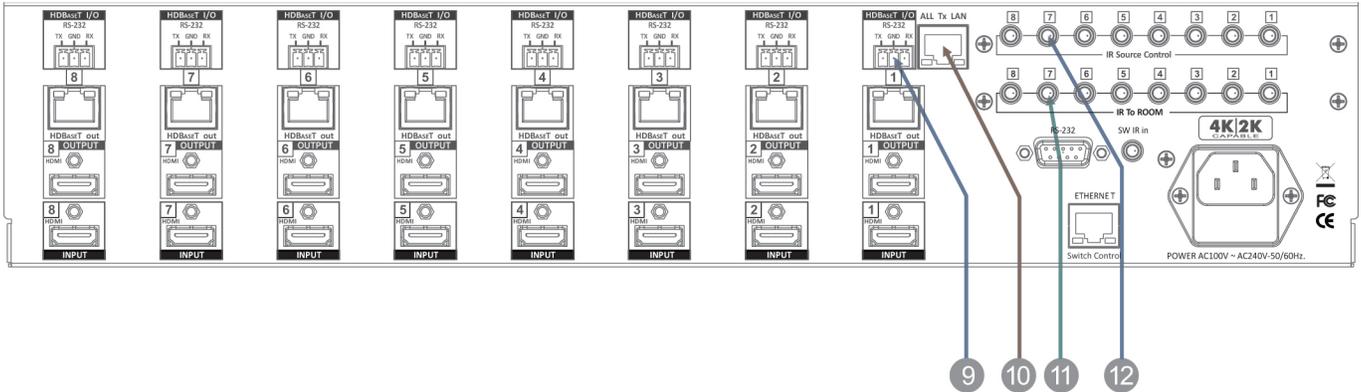


**HDMI CONNECTOR:** HDMI Type A SMD 19pin female socket connector

*Note: With the proper adapters, the switcher can be used with DVI digital video signals, as it is HDCP compliant. DVI Audio is supported.*

# BACK PANEL-HDBASET™ CONTROLS

## BACK PANEL-HDBASET™ CONTROLS



**9. HDBaseT™ RS-232 - 1,2,3,4,5,6,7 & 8 CONNECTION:** (8) RS-232 control ports allow for interfacing to a PC. Controls I/O via the HDBaseT™ Transmitters up to (8) rooms each via the Terminal Block-3pin female socket for serial RS-232 control.



**REMOTE PORT:** Terminal Block-3pin female socket

**10. HDBASET™ LAN CONNECTION:** All Tx LAN: Provides Ethernet (LAN) connection from the switcher to All HDBaseT™ Transmitters (ie. SB-6320T).



**ALL HDBASET™ TX LAN PORT CONNECTOR:** HDBaseT™ Phone-Jack 8P8C, RJ-45 female socket  
**LAN Controls:** *Note: From switcher to HDBaseT™ Transmitter.*

**11. HDBASET™ IR INPUT - 1,2,3,4,5,6,7 & 8 REMOTE IR SIGNAL TO ROOM:** Sends (8) IR signals to (8) rooms via the switchers HDBaseT™ Transmitters. When you plug the switchers HDBaseT™ IR Transmitters into the external port, the rooms IR HDBaseT™ receivers remain active.



**IR EXTENDER JACK:** Female jack - inner OD Ø 3.5mm

\*\*\*\*Certain matrix chassis have an “ALL IN” jack. The “ALL IN” jack has been removed and replaced with a blank filler cover.

**12. IR OUTPUT - 1,2,3,4,5,6,7 & 8 IR SIGNAL TO SOURCE DEVICE:** Sends (8) IR signals to each source device. The IR source channel is specific to each source device.



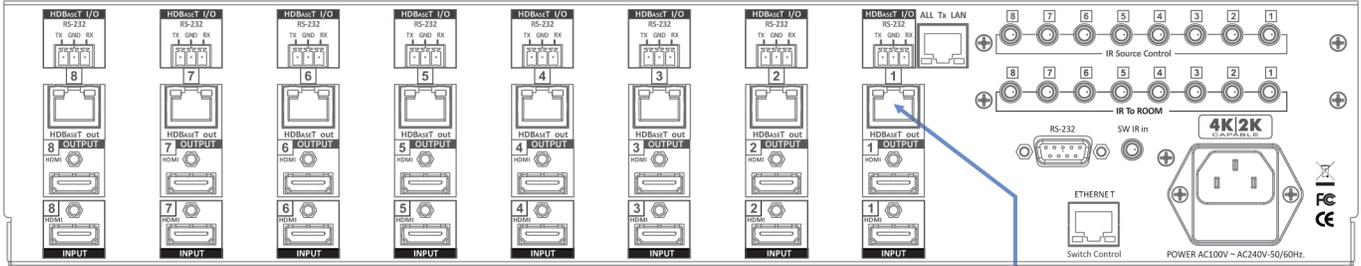
**IR EXTENDER JACK:** Female jack - inner OD Ø 3.5mm

*For example;* IR #1 should connect to HDMI Source #1 and so on.

\*\*\*\*Certain matrix chassis are labeled “IR From ROOM” and have an additional connection labeled “ALL OUT”. Regardless, the function of these jacks only supports IR follow Source Control. The “ALL OUT” jack has been removed and replaced with a blank filler cover.

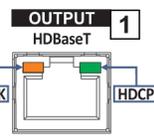
# BACK PANEL-HDBASET™ I/O

## BACK PANEL-HDBASET™ I/O



13

**13. OUTPUT - 1,2,3,4,5,6,7 & 8 HDBaseT™ (Transmitter):** Sends (8) HDMI and control signals via the switchers (8) HDBaseT™ Transmitters to link (8) external HDBaseT™ Receivers. The switcher uses a CAT6/6a/7 category cable from the (8) HDBaseT™ Transmitters #1~8 Outputs RJ-45 jacks. Controls RS-232, Ethernet, IR input/output signals between switcher and receiver.



**HDBASET™ TRANSMITTER CONNECTOR:**  
(8) RJ-45 Jack 8P8C female socket

**Link LED :**  
Solid = valid link  
Flash = attempting to link  
Off = no link established

*This unit IS NOT compatible with EZ-45 connectors.*

HDBaseT I/O Transmission :

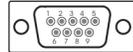


Projector  
RS-232 & IR

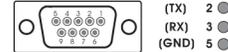


HDBaseT Receiver  
Application HDBaseT Receiver :  
- SB-6333R, SB-6333R3  
- SB-6335R, SB-6335R4

RS-232 Pin Define:

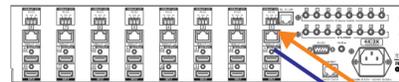


RS-232 Cable Pins out  
PC 232 PINS  
DB-9P , MALE plug



HDBaseT Receiver SB-6335R  
RS-232 PINS OUT  
DB-9P , FEMALE socket

SB-5688CK  
8x8 HDMI-HDBaseT Matrix Switcher



RS-232 & IR  
TX

| Category Cable Lengths via Switcher and HDBaseT™ Receiver |                           |                |                |                |
|---|---------------------------|----------------|----------------|----------------|
| CABLE TYPE<br>RESOLUTION                                  | PIXEL CLOCK RATE<br>(MHZ) | CAT5e<br>(70M) | CAT6<br>(100M) | CAT6<br>(100M) |
| 1024x768@60Hz   | 65.00 MHZ                 | Yes            | Yes            | Yes            |
| 1280x720p@60Hz  | 73.84 MHZ                 | Yes            | Yes            | Yes            |
| 1920x1080i@60Hz   | 74.25 MHZ                 | NA             | NA             | NA             |
| 1280x1024@60Hz  | 108.00 MHZ                | Yes            | Yes            | Yes            |
| 1920x1080p@60Hz   | 148.50 MHZ                | Yes            | Yes            | Yes            |
| 1920x1200@60Hz  | 152.90 MHZ                | Yes            | Yes            | Yes            |
| 1600x1200@60Hz  | 162.00 MHZ                | Yes            | Yes            | Yes            |
| BD player: 1080p  | 174.00 MHZ                | Yes            | NA             | Yes            |

# REMOTE CONTROL

## Before making any connections to the switcher, observe the following:

- Ensure the main voltage supply matches the label on the supplied plug-pack (+/-10%).
- Ensure that the power switch is OFF.
- Ensure that all system grounds (earth) are connected to a common point.
- Avoid powering equipment within a system from multiple power sources that may be separated by large distances.
- Connect all audio video sources and destination equipment.
- Power up all source and destination audio-visual sources.
- For each destination output select the appropriate input source by using the front panel input select buttons. The supplied IR remote control. Or through the RS-232 serial communications port.
- Upon powering up the switcher, it will return to its last used setting before being powered down.

## REMOTE CONTROL

### IR REMOTE CONTROL KEY:

#### 1. & 2. SWITCH POWER ON or OFF:

Power ON and OFF

#### 3. DESTINATION: 1 THRU 8 OUTPUT SELECTION:

Destination buttons to select the output display channel

#### 4. SOURCE: 1 THRU 8 INPUT SOURCE SELECTION:

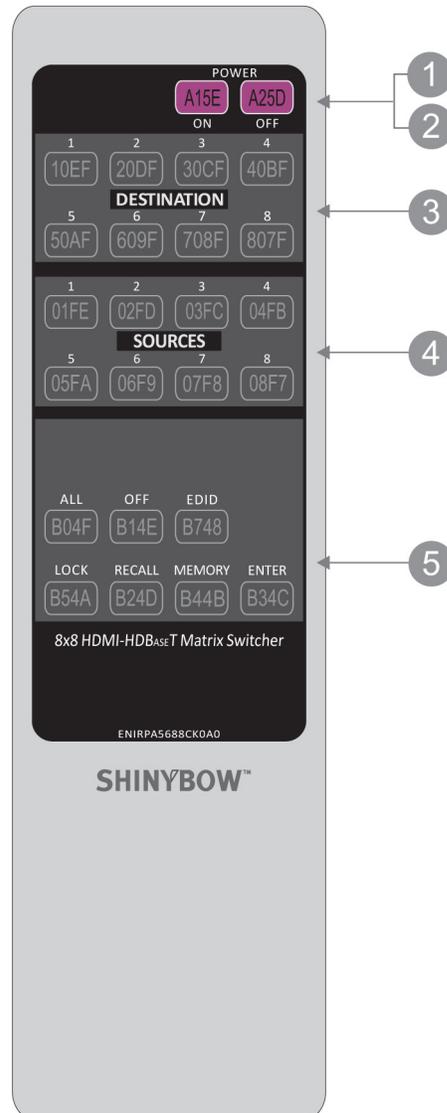
Input 1~8 source selection buttons

#### 5. FUNCTION KEY: Function selection buttons

|        |       |      |
|--------|-------|------|
| ALL    | OFF   | EDID |
| MEMORY | ENTER | LOCK |

RECALL

IR REMOTE : SW-5688CK



# REMOTE PROTOCOL COMMANDS

## IR REMOTE CUSTOM AND DATA CODES (NEC Standard)

---

### HOW TO SETUP IR CODES :

### CUSTOM CODE : 4CB3

|            |      |      |         |      |      |
|------------|------|------|---------|------|------|
| POWER ON:  | 4CB3 | A15E | LOCK:   | 4CB3 | B54A |
| POWER OFF: | 4CB3 | A25D | RECALL: | 4CB3 | B24D |
| ALL:       | 4CB3 | B04F | MEMORY: | 4CB3 | B44B |
| OFF:       | 4CB3 | B14E | ENTER:  | 4CB3 | B34C |
| EDID:      | 4CB3 | B748 |         |      |      |

### PRESS DESTINATION - # then PRESS SOURCE - #

|                       |      |                  |      |
|-----------------------|------|------------------|------|
| DESTINATION #1 : 4CB3 | 10EF | SOURCE #1 : 4CB3 | 01FE |
| DESTINATION #2 : 4CB3 | 20DF | SOURCE #2 : 4CB3 | 02FD |
| DESTINATION #3 : 4CB3 | 30CF | SOURCE #3 : 4CB3 | 03FC |
| DESTINATION #4 : 4CB3 | 40BF | SOURCE #4 : 4CB3 | 04FB |
| DESTINATION #5 : 4CB3 | 50AF | SOURCE #5 : 4CB3 | 05FA |
| DESTINATION #6 : 4CB3 | 609F | SOURCE #6 : 4CB3 | 06F9 |
| DESTINATION #7 : 4CB3 | 708F | SOURCE #7 : 4CB3 | 07F8 |
| DESTINATION #8 : 4CB3 | 807F | SOURCE #8 : 4CB3 | 08F7 |

*For Example:*

### Select Destination # 1 to show Source (#1~8).

The IR Data Code list :

|                            |      |      |      |      |      |
|----------------------------|------|------|------|------|------|
| Destination # 1, Source #1 | 4CB3 | 10EF | 4CB3 | 01FE | 01FE |
| Destination # 1, Source #2 | 4CB3 | 10EF | 4CB3 | 01FE | 02FD |
| Destination # 1, Source #3 | 4CB3 | 10EF | 4CB3 | 01FE | 03FC |
| Destination # 1, Source #4 | 4CB3 | 10EF | 4CB3 | 01FE | 04FB |
| Destination # 1, Source #5 | 4CB3 | 10EF | 4CB3 | 01FE | 05FA |
| Destination # 1, Source #6 | 4CB3 | 10EF | 4CB3 | 01FE | 06F9 |
| Destination # 1, Source #7 | 4CB3 | 10EF | 4CB3 | 01FE | 07F8 |
| Destination # 1, Source #8 | 4CB3 | 10EF | 4CB3 | 01FE | 08F7 |

# ROOM REMOTE CONTROLS

## ROOM REMOTE CONTROL #1 ~ #8 CUSTOM CODE AND DATA CODES

### IR CUSTOM AND DATA CODES (NEC Standard)

PRESS Number To Select SOURCE  
CUSTOM CODE: 4CB3

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR01



#### IR-01 DATA CODE:

SOURCE #1 : 4CB3 11EE  
SOURCE #2 : 4CB3 12ED  
SOURCE #3 : 4CB3 13EC  
SOURCE #4 : 4CB3 14EB  
SOURCE #5 : 4CB3 15EA  
SOURCE #6 : 4CB3 16E9  
SOURCE #7 : 4CB3 17E8  
SOURCE #8 : 4CB3 18E7

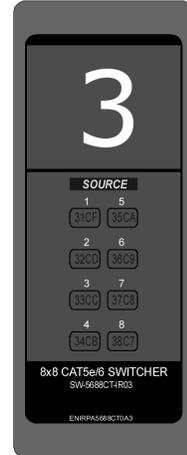
8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR02



#### IR-02 DATA CODE:

SOURCE #1 : 4CB3 21DE  
SOURCE #2 : 4CB3 22DD  
SOURCE #3 : 4CB3 23DC  
SOURCE #4 : 4CB3 24DB  
SOURCE #5 : 4CB3 25DA  
SOURCE #6 : 4CB3 26D9  
SOURCE #7 : 4CB3 27D8  
SOURCE #8 : 4CB3 28D7

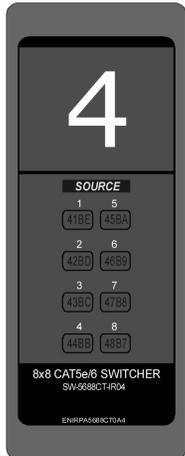
8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR03



#### IR-03 DATA CODE:

SOURCE #1 : 4CB3 31CE  
SOURCE #2 : 4CB3 32CD  
SOURCE #3 : 4CB3 33CC  
SOURCE #4 : 4CB3 34CB  
SOURCE #5 : 4CB3 35CA  
SOURCE #6 : 4CB3 36C9  
SOURCE #7 : 4CB3 37C8  
SOURCE #8 : 4CB3 38C7

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR04



#### IR-04 DATA CODE:

SOURCE #1 : 4CB3 41BE  
SOURCE #2 : 4CB3 42BD  
SOURCE #3 : 4CB3 43BC  
SOURCE #4 : 4CB3 44BB  
SOURCE #5 : 4CB3 45BA  
SOURCE #6 : 4CB3 46B9  
SOURCE #7 : 4CB3 47B8  
SOURCE #8 : 4CB3 48B7

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR05



#### IR-05 DATA CODE:

SOURCE #1 : 4CB3 51AE  
SOURCE #2 : 4CB3 52AD  
SOURCE #3 : 4CB3 53AC  
SOURCE #4 : 4CB3 54AB  
SOURCE #5 : 4CB3 55AA  
SOURCE #6 : 4CB3 56A9  
SOURCE #7 : 4CB3 57A8  
SOURCE #8 : 4CB3 58A7

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR06



#### IR-06 DATA CODE:

SOURCE #1 : 4CB3 61BE  
SOURCE #2 : 4CB3 62BD  
SOURCE #3 : 4CB3 63BC  
SOURCE #4 : 4CB3 64BB  
SOURCE #5 : 4CB3 65BA  
SOURCE #6 : 4CB3 66B9  
SOURCE #7 : 4CB3 67B8  
SOURCE #8 : 4CB3 68B7

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR07



#### IR-07 DATA CODE:

SOURCE #1 : 4CB3 71BE  
SOURCE #2 : 4CB3 72BD  
SOURCE #3 : 4CB3 73BC  
SOURCE #4 : 4CB3 74BB  
SOURCE #5 : 4CB3 75BA  
SOURCE #6 : 4CB3 76B9  
SOURCE #7 : 4CB3 77B8  
SOURCE #8 : 4CB3 78B7

8x8 CAT5e/6 SWITCHER  
SW-5688CT-IR08



#### IR-08 DATA CODE:

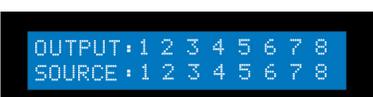
SOURCE #1 : 4CB3 817E  
SOURCE #2 : 4CB3 827D  
SOURCE #3 : 4CB3 837C  
SOURCE #4 : 4CB3 847B  
SOURCE #5 : 4CB3 857A  
SOURCE #6 : 4CB3 8679  
SOURCE #7 : 4CB3 8778  
SOURCE #8 : 4CB3 8877

# EDID FUNCTION - SYSTEM RESET/FACTORY RESET

## SYSTEM RESET

| SYSTEM RESET   | RETURN SWITCH TO FACTORY DEFAULTS  |
|--|--|
| <p>Press <b>RECALL &gt; OFF &gt; ENTER</b></p>      | <p><b>RESET to Factory Default</b></p> <ol style="list-style-type: none"> <li>1. Press <b>RECALL</b> button: The LCM will show the current stored presets status.</li> <li>2. Press <b>OFF</b> button: The LCM will show “<b>SYSTEM RESET</b>”</li> <li>3. Press <b>ENTER</b> button: To confirm entries.<br/>The switch will reset all customizable values back to factory defaults. You must <b>POWER CYCLE</b> the switch for the new values to take effect.</li> </ol> |
| <p><b>NOTE:</b> Factory Reset Defaults to:</p> <ol style="list-style-type: none"> <li>1. Source Destination will be set to 1-1, 2-2, 3-3, etc.</li> <li>2. Switch matrices stored in memory will be cleared.</li> <li>3. Lock function will return to Un-Locked.</li> <li>4. AUX function will disable and return to UN-AUX (On Select Models).</li> <li>5. ARC function will disable and return to SPDIF as the Output (On Select Models).</li> <li>6. EDID will return to FSS® (1080p-2ch Mode).</li> <li>7. Ethernet port will return to DHCP=ENABLED.</li> </ol> |  |

## RESET EDID

| EDID RESET  | PROCEDURE  |
|---|--|
| <p><b>From the Front Panel:</b><br/>Press <b>EDID &gt; RECALL &gt; OFF &gt; ENTER</b></p>    | <p><b>RESET EDID</b></p> <p>Press <b>EDID</b>.</p> <p>Press <b>RECALL</b>.</p> <p>Press <b>OFF</b>. The display should show Reset EDID.</p> <p>Press <b>ENTER</b>.</p>   |
| <p><b>LEARNING MODE 2</b></p> <p>Press <b>EDID &gt; OFF &gt; DESTINATIONS &gt; ENTER</b></p> <p>The EDID for HDMI has been passed from the Destination port to the Source port.</p>     | <p><b>SETTING EDID TO LEARNING MODE 2</b></p> <ol style="list-style-type: none"> <li>1. Press <b>EDID</b> button: The LCM will show the current EDID status.</li> <li>2. Press <b>OFF</b> button: Does the OFF button stay illuminated? <ul style="list-style-type: none"> <li><b>*If Yes:</b> Press ALL the Destination buttons individually so they illuminate blue. The switcher will <b>LEARN</b> the destination HDMI EDID and pass to the selected source. The switcher will Enable or Disable HDMI EDID for the selected source.</li> </ul> </li> <li>3. Press <b>ENTER</b> to confirm changes. The LCM will return to the default screen showing selected matrix routing status. This puts you in Learning Mode 2. <ul style="list-style-type: none"> <li><b>*If No:</b> You might need a f/w update.</li> </ul> </li> </ol> |

# EDID FUNCTION

## EDID FUNCTION FOR HDMI MATRIX SWITCHER

| EDID SETUP  | To Change The EDID Setup   |
|---|--|
| <b>Step 1.</b> Press the <b>EDID</b> button   | The display will show the currently selected EDID mode.  |
| <b>Step 2.</b> Press <b>SOURCE #1 OR #2</b> button row  | The button will flash blue and the display will show the current <b>Embedded EDID</b> Status.  |
| <b>Step 3.</b> Press the <b>ENTER</b> button  | To set EDID mode. The switcher will return to operation mode.  |
| Operation will abort if no keys are pressed within 5 seconds.   |  |
| EMBEDDED EDID MODES   | Total 7 EDID Modes   |
| <b>Embedded EDID Setup</b><br>Press <b>EDID &gt; SOURCE &gt; ENTER</b><br>SOURCE #1 or SOURCE #2<br> | To select Embedded EDID mode or LEARNING mode.<br>Repeatedly pressing the <b>SOURCE 1</b> button will cycle up thru the options.<br>Repeatedly pressing the <b>SOURCE 2</b> button will cycle down thru the options.<br><br><b>Embedded EDID:</b><br>Mode 1 : FSS®<br>Mode 2 : H24-3D<br>Mode 3 : H24-3D-M<br>Mode 4 : H36-3D<br>Mode 5 : H36-3D-M<br>Mode 6 : 4K2K-3D, PCM-2CH<br>Mode 7 : DVI-D 1920x1200-60Hz |

## EDID FUNCTION FOR HDMI MATRIX SWITCHER

| RESET  | EDID Return To Factory Default   |
|--|--|
| <b>How to RESET EDID mode</b><br>Press <b>EDID &gt; RECALL &gt; ENTER</b><br>  | To RESET to FACTORY DEFAULT (1080p-2CH).<br>Press <b>EDID</b> button: The LCM will show the current EDID status.<br>Press <b>RECALL</b> button: The LCM will show the <b>RESET EDID</b> .<br>Press <b>ENTER</b> to confirm entries.<br>The EDID will return to FSS® mode and resolution 1080p-2CH. |
| EDID STATUS  | To View The Current EDID Status  |
| <b>Step 1.</b> Press <b>EDID</b> button  | The button will flash blue and the display will show the current Embedded EDID Status.   |
| <b>Step 2.</b> Press <b>EDID</b> button  | To exit.   |
| HOW TO SETUP FSS® FUNCTION   | Fast Speed Start®  |
| <b>Step 1.</b> Press the <b>DESTINATION #1~8</b> button row<br>Then Press the <b>SOURCE #1~8</b> button row  | To setup and Install all devices.  |
| <b>Step 2.</b> Press <b>EDID</b> button  | Select a optimum status of Embedded EDID mode.   |
| <b>Step 3.</b> Press <b>ENTER</b> button   | To confirm entries.  |
| <b>Step 4.</b> Press <b>EDID</b> button  | To select the EDID FSS® mode.  |
| <b>Step 5.</b> Press <b>ENTER</b> button   | To confirm entries.  |

# EDID FUNCTION

## EDID FUNCTION FOR HDMI MATRIX SWITCHER

| EDID FUNCTION FOR HDMI MATRIX SWITCHER                                      |  |
|---|--|
| <b>Mode 1. FSS® (Fast Speed Start)</b><br>EDID :<br>1. FAST SPEED START     | <b>Fast Speed Start®</b> mode shortens the startup time of the switcher. Selecting this mode does not force the EDID setup to be cancelled. Users may first select one EDID mode from mode 2 to 3, and then select mode 1 for Fast Speed Start®. |
| <b>Mode 2. H24-3D (1080p-24 bits)</b><br>EDID :<br>2. H24-3D; PCM 2CH       | Audio Support: PCM 2CH   |
| <b>Mode 3. H24-3D-M (1080p-24 bits)</b><br>EDID :<br>3. H24-3D; MULTI AUDIO | Audio Support: MAT(MLP) 7.1CH, PCM-2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH   |
| <b>Mode 4. H36-3D (1080p-36 bits)</b><br>EDID :<br>4. H36-3D; PCM 2CH       | Audio Support: PCM 2CH   |
| <b>Mode 5. H36-3D-M (1080p-36 bits)</b><br>EDID :<br>5. H36-3D; MULTI AUDIO | Audio Support: MAT(MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH   |
| <b>Mode 6. 4K2K (24/30Hz)</b><br>EDID :<br>6. 4K2K-3D; PCM 2CH              | HDMI Support: 4K2K-3D, PCM 2CH (3860x2160-24/30Hz)<br><br>Audio Support: PCM 2CH   |
| <b>Mode 7. 1920x1200-60Hz (DVI-D)</b><br>EDID :<br>7. DVI-D 1920x1200-60HZ  | DVI Support: DVI-D 1920x1200 60Hz  |

# EDID FUNCTION

| LEARNING EDID SINGLE TO SINGLE   | Learning Destination #2 EDID To Source #3   |
|--|---|
| <b>Step 1.</b> Press <b>EDID</b> button  | The button will flash blue and the display will show the current <b>Embedded EDID</b> Status.   |
| <b>Step 2.</b> Press the <b>DESTINATION #2</b> button row  | Copy the Destination #2 Display EDID.   |
| <b>Step 3.</b> Press the <b>SOURCE #3</b> button row   | Learning the Destination #2 EDID To Source # 3.   |
| <b>Step 4.</b> Press <b>ENTER</b> button   | To confirm entries.   |
| LEARNING EDID SINGLE TO MULTIPLE   | Learning Destination EDID Link To The Majority Sources  |
| <b>Step 1.</b> Press <b>EDID</b> button  | The button will flash blue and the display will show the current Embedded EDID Status.  |
| <b>Step 2.</b> Press the <b>DESTINATION 1-8</b> button row   | Copy any 1~8 Destinations EDID.   |
| <b>Step 3.</b> Press the <b>SOURCE 1-8</b> button row  | Learning the Destination EDID link to source #1-8.  |
| <b>Step 4.</b> Press <b>ENTER</b> button   | To confirm entries.   |
| LEARNING EDID SINGLE TO ALL  | Learning Destination EDID Link To All Sources   |
| <b>Step 1.</b> Press <b>EDID</b> button  | The button will flash blue and the display will show the current Embedded EDID Status.  |
| <b>Step 2.</b> Press destination button <b>1THRU 8</b>   | Learning anyone 1~8 Destination EDID to all sources.  |
| <b>Step 3.</b> Press <b>ALL</b> button   | Learning selected destination EDID to all sources.  |
| <b>Step 4.</b> Press <b>ENTER</b> button   | To confirm entries.   |
| SINGLE LEARNING #1 DEFINITION  | Single Learning EDID From Destination To Source   |
| <p>1. Switcher will LEARN destination EDID and pass the selected source.</p> <p>2. Learning EDID setup for HDBaseT™ CATx Key Press Sequence: <b>EDID &gt; DESTINATION # &gt; DESTINATION # &gt; SOURCE # &gt; ENTER</b>. Again, Press the same <b>DESTINATION #</b> to learn HDBaseT™ CATx EDID. The EDID for HDBaseT™ CATx has been learned</p> <p>3. To set up learning between a single destination and multiple sources: Press: <b>EDID</b> button &gt; <b>DESTINATION 1 THRU 8</b> &gt; Press the majority <b>SOURCES 1 THRU 8</b> &gt; Press <b>ENTER</b>. Switcher will learn single destination EDID to many source devices.</p> <p>4. How to Learning single destinations with all sources. Press <b>EDID</b> button &gt; Press <b>ALL</b> button &gt; Press <b>ENTER</b> to confirm.</p> |   |
| MULTIPLE LEARNING #2 DEFINITION  | Multiple Learning EDID From Destination To Source   |
| <p>1. Switcher will multiple LEARN destination EDID and pass the selected source.</p> <p>2. To set up multiple learning between a single destination and single source: Press <b>EDID</b> button &gt; Press <b>OFF</b> button &gt; Press <b>DESTINATION 1 THRU 8</b> &gt; Press <b>ENTER</b> to confirm. Switcher will learn destination EDID to source device.</p> <p>3. When the Source has “Learned” the EDID data from a destination, it will save that EDID information into EPROM and the EDID data will not change. To change a saved HDMI EDID information, you have to select a new LEARNING destination to source or Disable the LEARNING.</p>   |   |
| LEARNING EDID  | Learning EDID from Destination to Source  |
|   | <p>Press <b>EDID &gt; DESTINATION</b> Button: The LCM will be show LEARNING.<br/>Switcher will <b>LEARN</b> destination HDMI EDID and pass the selected source.</p> <p><b>Learning EDID setup for HDMI:</b><br/>Key Sequence: <b>EDID &gt; DESTINATION # &gt; SOURCE # &gt; ENTER</b> The EDID for HDMI has been learned.</p>                                     |
|   | <p>Switcher will <b>LEARN</b> destination HDBaseT™ CATx EDID and pass the selected source.</p> <p><b>Learning EDID setup for HDBaseT™ CATx:</b><br/>Key Sequence: <b>EDID &gt; DESTINATION # &gt; DESTINATION # &gt; SOURCE # &gt; ENTER</b><br/>Again, Press the same DESTINATION # to learn HDBaseT™ CATx EDID The EDID for HDBaseT™ CATx has been learned.</p> |

**NOTE: The already learned EDID cannot be modified. You can only rebuild a new Learning EDID.**

**For Example:** When the Source has “Learned” the EDID data from a destination, It will save that EDID information into EPROM and the EDID data cannot change. Please select new learning destination to sources or change to one of the embedded EDID modes when you want to remove the learning EDID memory from EPROM.

# EDID FUNCTION

## EDID MULTIPLE LEARNING MODE-2

The MULTIPLE LEARNING MODE-2 feature is part of a firmware update released after JUNE 2014. If you do not see the MULTIPLE LEARNING MODE-2 feature then you do not have the latest firmware. You should contact your place of purchase for availability of a firmware update. Not all devices are capable of a firmware update. Firmware update requires a PC with OS Windows XP or WIN7 and an RS-232 port (or USB to RS-232). Customer is responsible for implementing a firmware update and accepts all risks. Others limitations may apply.

| LEARNING EDID #2   | Passing EDID From Destination To Source   |
|--|---|
| <p><b>Multiple Learning mode #2 EDID setup</b><br/>Press<br/><b>EDID &gt; OFF &gt; DESTINATION #1 THRU #8 &gt; ENTER</b></p>     | <p>The EDID for HDMI has been Learned from the Destination port to the Source port.</p> <ol style="list-style-type: none"><li>1. Press <b>EDID</b> button. The LCM will show the current EDID status.</li><li>2. Press <b>OFF</b> button. The LCM will show the current EDID LEARN status.</li><li>3. Press <b>DESTINATION #1 THRU #8</b> The switcher will LEARN the destination HDMI EDID and pass to the selected source. Switcher will Enable or Disable HDMI EDID for the selected source.</li><li>4. Press <b>ENTER</b> to confirm changes. The LCM will return to the default screen showing selected matrix routing status.</li></ol> |
| <p><b>NOTE:</b> When the Source has “Learned” the EDID data from a destination, it will save that EDID information into EPROM and the EDID data will not change. To change a saved HDMI EDID information, you have to select a new LEARNING destination to source or Disable the LEARNING</p>  |   |

# APPLICATION - SWITCH I/O CONTROL

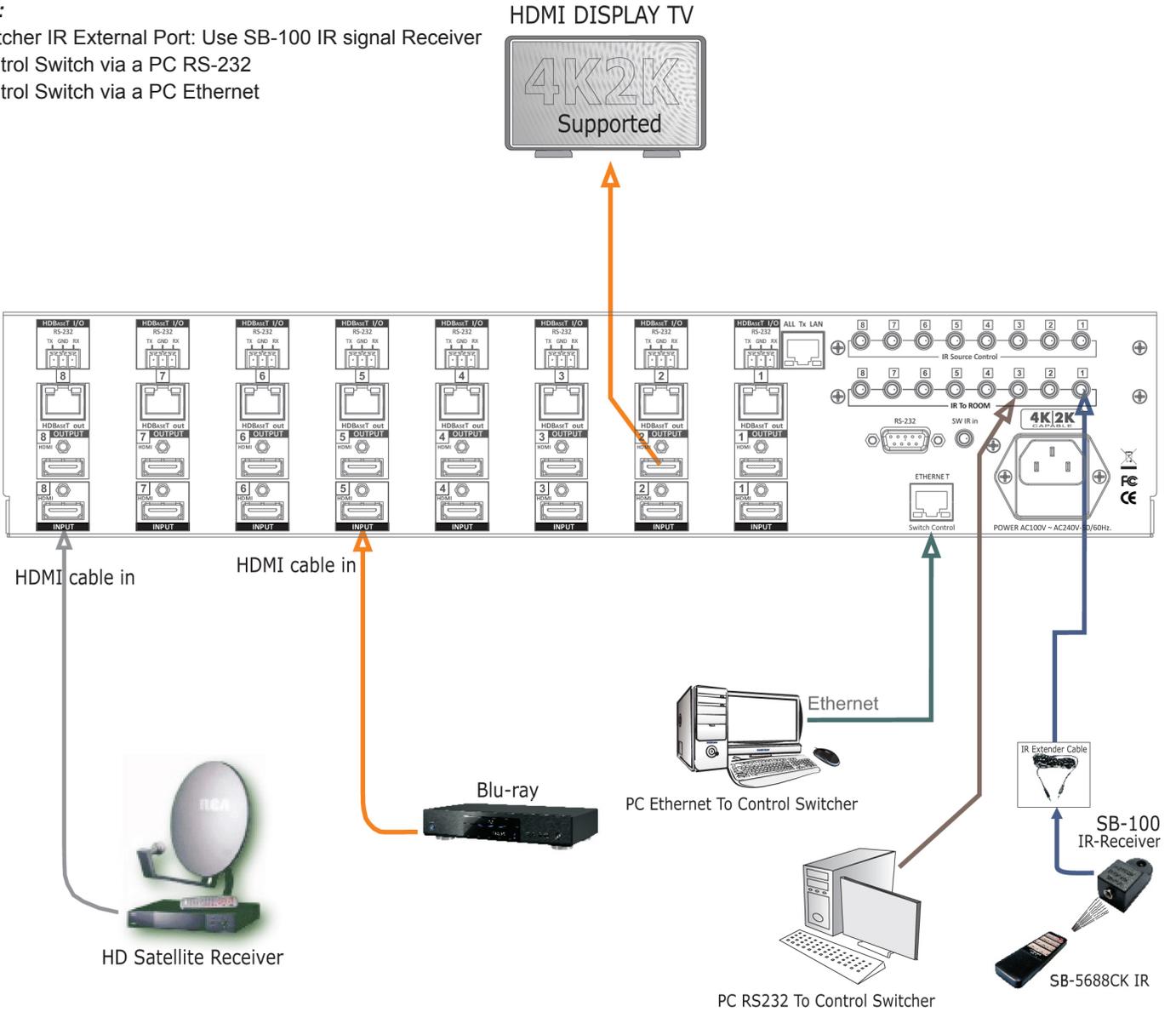
## INSTALLING DIAGRAM

### Sample Connection:

Using IR External, RS-232 or Ethernet commands to control the SB-5688CK via PC or SB-100 IR receiver to transmit the SB-5688CK's IR signal.

### NOTE:

1. Switcher IR External Port: Use SB-100 IR signal Receiver
2. Control Switch via a PC RS-232
3. Control Switch via a PC Ethernet



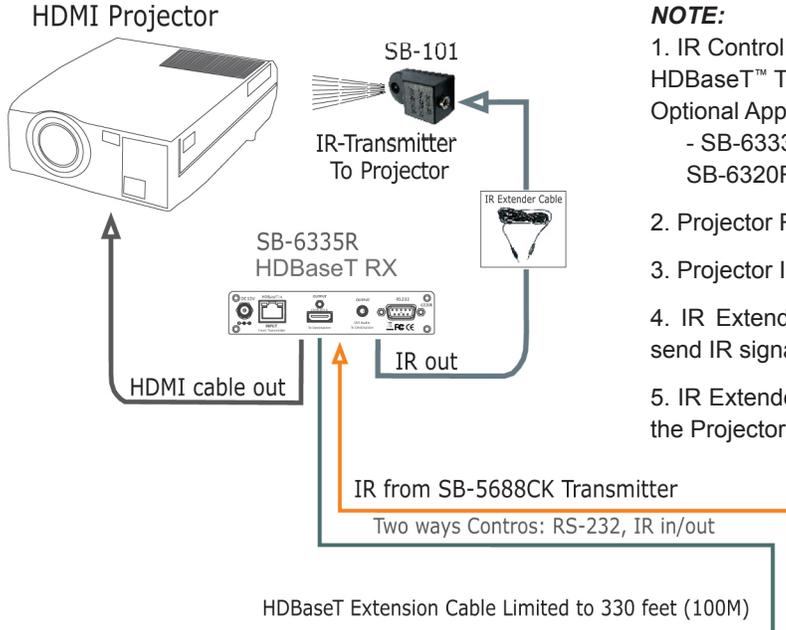
Application RS-232, IR and Ethernet control the Switcher.

# APPLICATION - HDBASET™ I/O & RS-232/LAN CONTROLS

## INSTALLING DIAGRAM

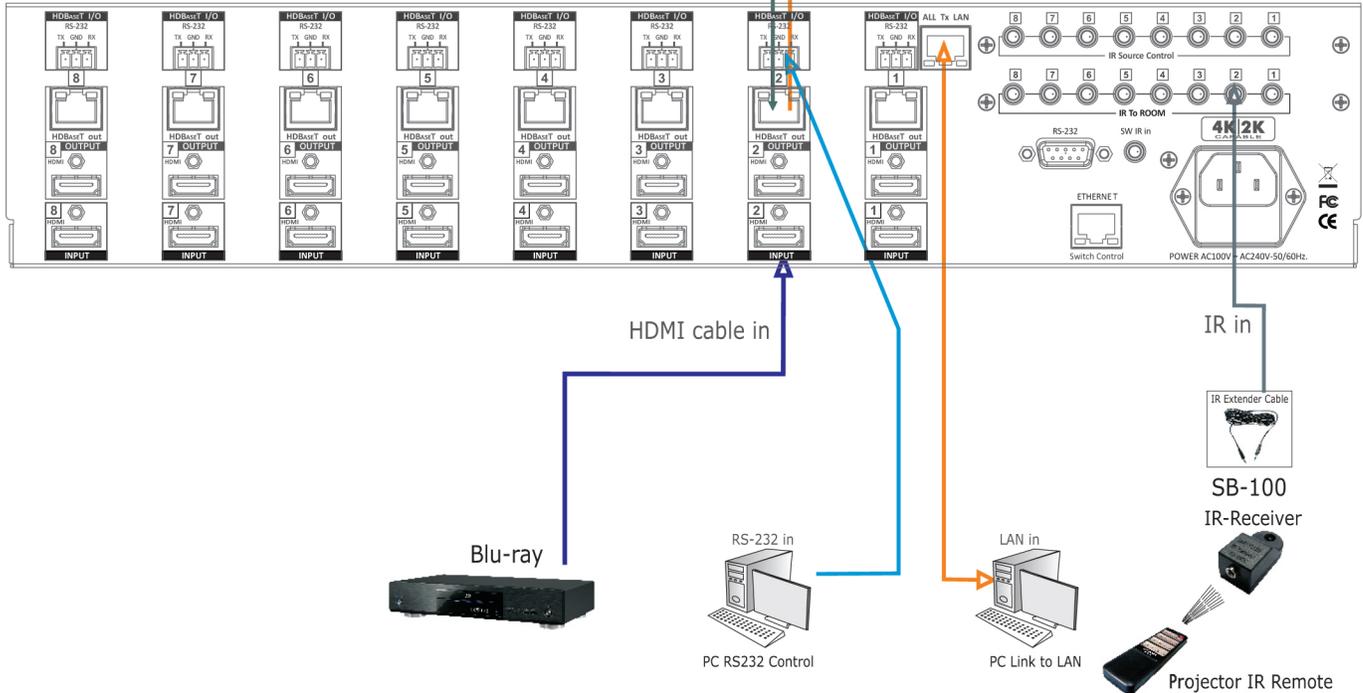
### Sample Connection:

Using SB-5688CK's HDBaseT™ Transmitter and one HDBaseT™ Receiver (SB-6335R) to control a projector via RS-232, LAN or IR remote signals.



### NOTE:

1. IR Control Projector Over HDBaseT™ Extender: SB-5688CK HDBaseT™ Transmitter  
Optional Application HDBaseT™ Receivers:  
- SB-6333R, SB-6333R3, SB-6335R, SB-6335R4, SB-6335R5, SB-6320R, SB-6320R4, SB-6320R5
2. Projector RS-232 control by a PC via HDBaseT™ extender
3. Projector IR control via HDBaseT™ Extender IR in/out.
4. IR Extender Transmitter (SB-101): Use the SB-101 IR Transmitter to send IR signal to the Projector
5. IR Extender Receiver (SB-100): Use the SB-100 IR Receiver to receive the Projector IR remote signal



# APPLICATION - HDBASET™ IR MATRIX ROUTING SOURCE CONTROL

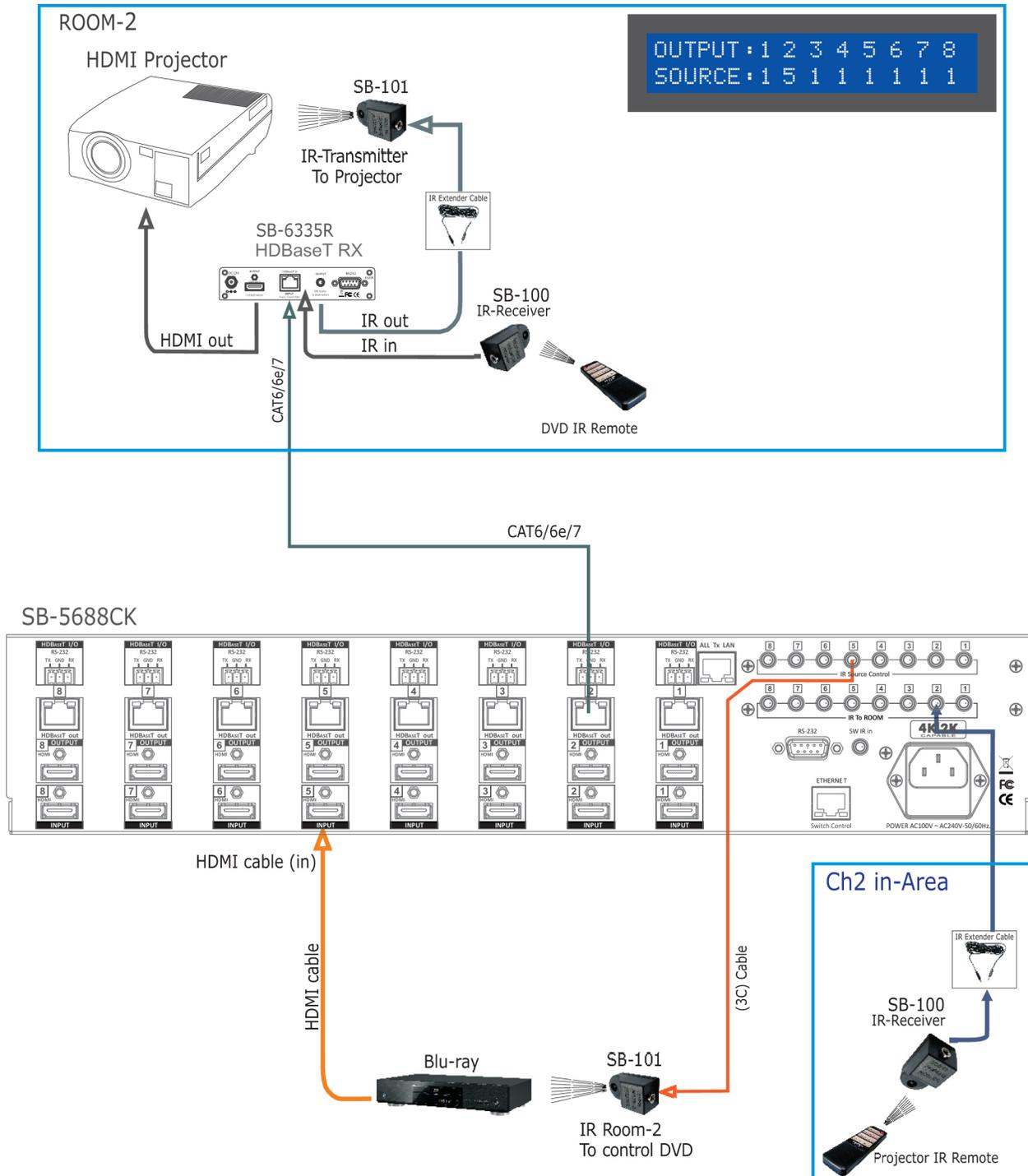
## INSTALLING DIAGRAM

### Sample Connection:

The HDBaseT™ IR return (from Room) will follow the video source. In this example, the IR remote for the projector is connected to port #2 "IR To Room". From the SB-6335R, the IR Output is connected to the projector. This allows remote operation of the projector from the SB-5688CK. The IR control for source devices uses the same port number on "IR Source" as the Source device connection. In this example, the Blu-Ray player is connected to Input port #5. Likewise, the IR to control the Blu-Ray player is connected to port #5.

IR source device control will follow the video source selected.

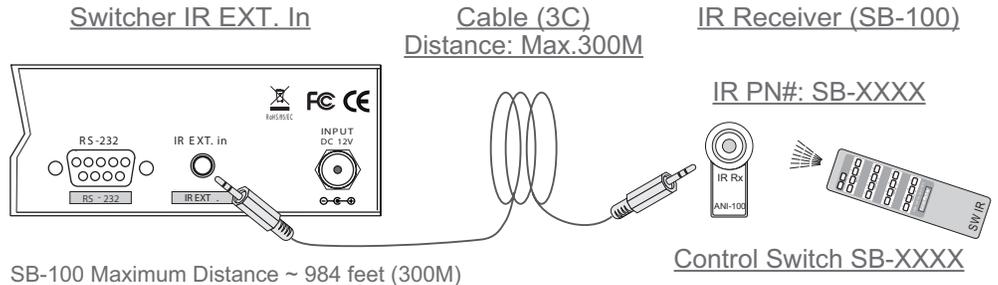
Connect IR emitter SB-101 or SB-101C to the corresponding port number as the source device, video Input port.



# IR EXTENDER

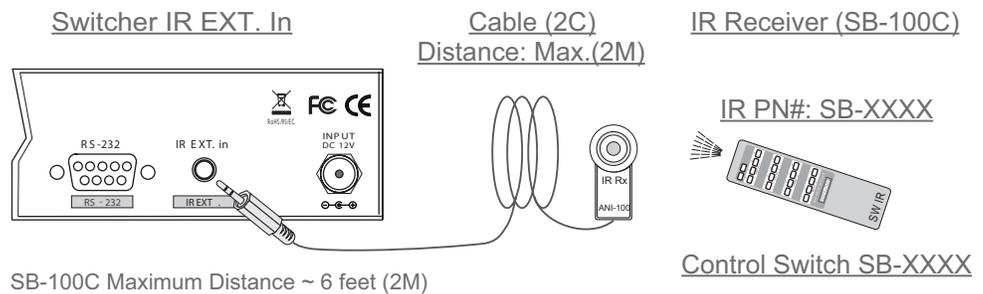
## IR EXTENDER

### 1. SB-100 IR 300M Receiver



The SB-100 IR Receiver is required when using the port "ALL in" Jack.

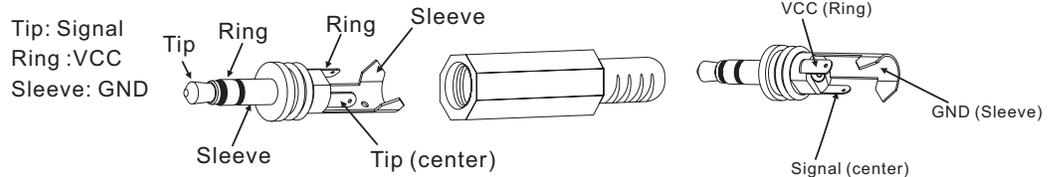
### 2. SB-100C IR 2M Receiver



The SB-100C IR Receiver will not function on the port "ALL in" Jack.

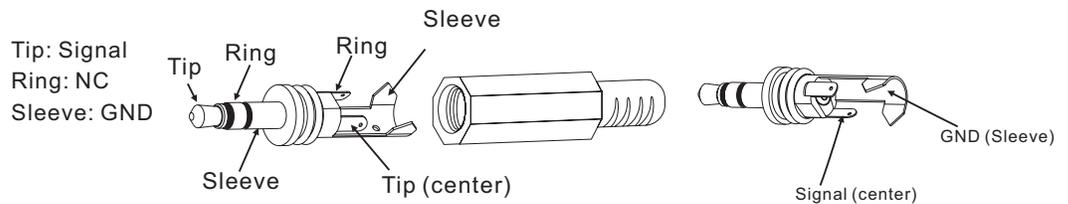
\*\*\* When you plug the External IR extender into the switcher, the front panel IR receiver remains active. \*\*\*

Pin configuration for IR 984 feet (300M) Extender Receiver such as SB-100 compatible



SB-100 Receiver and SB-101 Transmitter The DISTANCE maximum ~ 984 feet (300M)

Pin configuration for IR Receiver 6 feet (2M) cable such as SB-100C compatible



SB-100 Receiver and SB-101C Transmitter The DISTANCE maximum ~ 984 feet (300M)

**Note:** The External IR jack has voltage on the "Ring" portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.

# ETHERNET & RS-232 SERIAL INTERFACE

Example of the commanded string to select Inputs:

| FUNCTION        | COMMAND        | VARIABLES                                      |
|-----------------|----------------|--|
| Select source   | Source xxx;    | xxx = Input Channel (001=Source1, 002=Source2) |
| COMMAND EXAMPLE | RESPONSE       | DESCRIPTION                                    |
| Source 001;     | Source 001#ok; | Select source number 1                         |

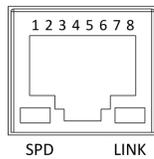
## ETHERNET SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM VERSION COMPATIBLE V2.0

For a complete list of commands, please reference external document extended Ethernet Protocol Instruction Manual.

### ETHERNET SERIAL INTERFACE

| PIN | ETHERNET | REFERENCE |
|-----|----------|-----------|
| 1   | TXOP     | TX +      |
| 2   | TXON     | TX -      |
| 3   | RXIP     | RX +      |
| 4   | NC       |           |
| 5   | NC       |           |
| 6   | RXIN     | RX -      |
| 7   | NC       |           |
| 8   | GND      |           |

### Ethernet



Note :  
Control the switcher  
SPD : Speed  
LINK : Ethernet link  
RJ-45 Female 8P-8 Connector

### ETHERNET TCP/IP PROTOCOL COMMANDS ( ETHERNET / RS-232 CONTROL DRIVER V2.0 )

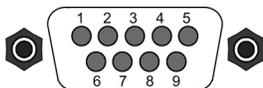
**\*\* The Ethernet port and RS-232 port CANNOT be used simultaneously. Any connection to the Ethernet Control port will DISABLE serial commands sent to the RS-232 port. \*\***

## RS-232 SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION COMPATIBLE V2.0

For a complete list of commands, please reference external document extended RS-232 Protocol Instruction Manual.

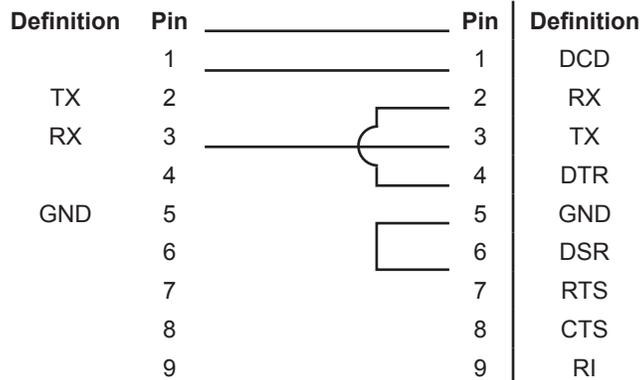
Shinybow  
Device

### RS-232 PIN DIAGRAM



### RS-232 CONFIGURATION

RS-232 cable is a straight thru cable and not null-modem



PC

### RS-232 SERIAL INTERFACE PROTOCOL COMMANDS ( ETHERNET / RS-232 CONTROL DRIVER V2.0 )

The Shinybow switcher can be controlled via the RS-232 serial control port to allow for interfacing to a PC, or similar third party control system.

The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1. When the unit recognizes a complete command it will perform the requested action - there is no delimiter character required.

# HDBASET™ TRANSMITTERS & RECEIVERS

## APPLICATION

HDBaseT™ Matrix Switcher using HDBaseT™ Receiver (Sold separately).

### HDBaseT™ Receiver: SB-6333R

Distance: Max.100M

#### INPUTS:

- (1) HDBaseT™ in
- (1) IR in (Send IR signal to SB-5688CK TX)

#### OUTPUTS:

- (1) HDMI out
- (1) HDMI
- (1) IR out (IR signal from SB-5688CK Transmitter)

#### CONTROLS:

- (1) RS-232, (1) IR in, (1) IR out



### HDBaseT™ Receiver: SB-6335R

Distance: Max.100M

#### INPUTS:

- (1) HDBaseT™ in
- (1) IR in (Send IR signal to SB-5688CK TX)

#### OUTPUTS:

- (1) HDMI out
- (1) HDMI
- (1) IR out (IR signal from SB-5688CK Transmitter)

#### CONTROLS:

- (1) RS-232, (1) IR in, (1) IR out



### HDBaseT™ Receiver: SB-6335R4

Distance: Max.100M

#### INPUTS:

- (1) HDBaseT™ in
- (1) IR in (Send IR signal to SB-5688CK TX)

#### OUTPUTS:

- (1) HDMI out
- (1) HDMI
- (1) IR out (IR signal from SB-5688CK Transmitter)

#### CONTROLS:

- (1) RS-232, (1) IR in, (1) IR out, (1) LAN



# TRANSMITTER & RECEIVER OPTIONS

## RACKMOUNT (OPTIONAL)

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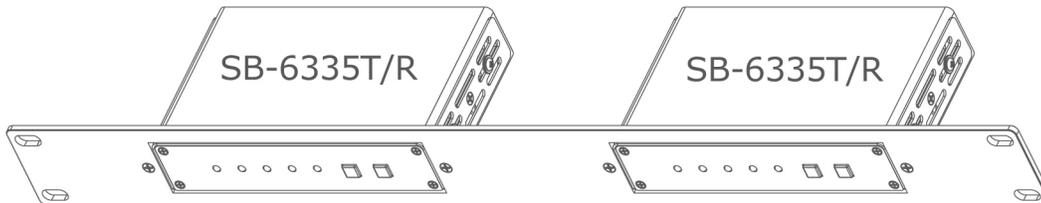
**SB-6075A:** SB-6335T/R 19 INCH 1RU-1UNIT RACK MOUNT

**Model No.:** #1U-1p-L440-44MM



**SB-6075B:** SB-6335T/R 19 INCH 1RU-2UNIT RACK MOUNT

**Model No.:** #1U-2p-L440-44MM

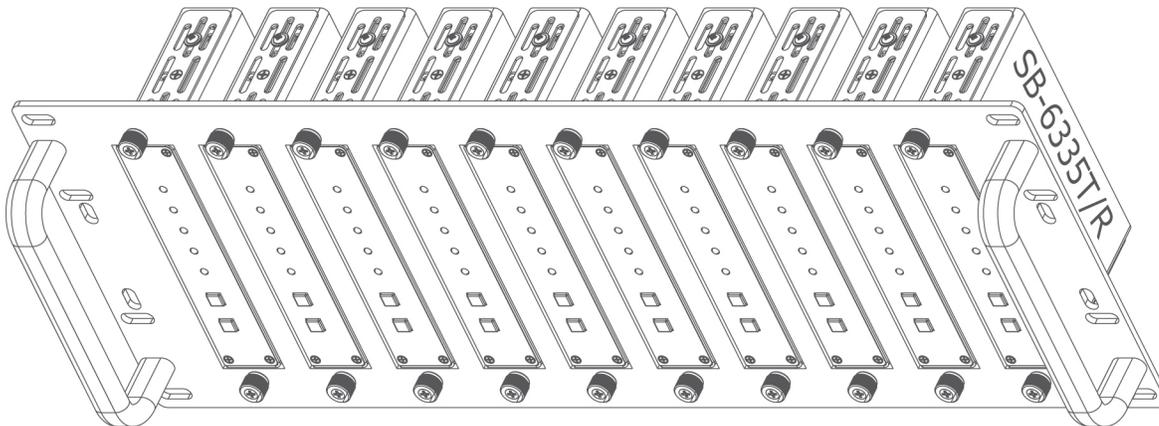


**SB-6069:** SB-6335T/R 19 INCH 4U-10P RACK MOUNT

**Model No.:** #4U-10p-L130MM

SB-6335T/R 4U Ear mount pairs

**Parts No.:** MEER6069ER13000



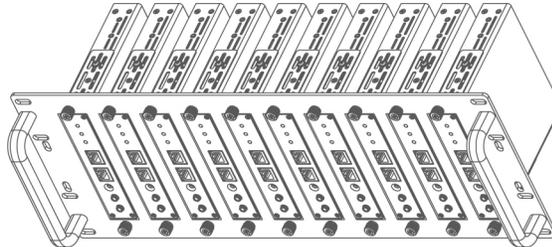
# TRANSMITTER & RECEIVER OPTIONS

## APPLICATION

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### Optional 19 inch Rack Mount Bracket for SB-6335T and/or SB-6335R:

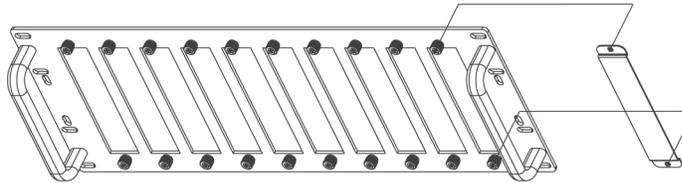
Complete 19 inch 4U rack mount of SB-6069  
Install Application: SB-6335T/R



---

### SB-6069 (optional) SB-6335T/R 19 INCH 4U-10P RACK MOUNT

Model No.: #4U-10p-M130MM  
SB-6335T/R 4U Ear mount pairs  
Parts No.: MEER6069ER13000



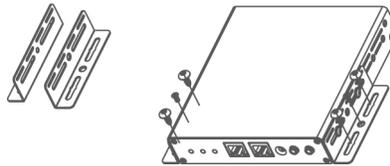
Model No.: #4U-10p-M130MM-COV  
SB-6335T/R 4U Ear mount pairs  
Parts No.: MEER6069ER11000



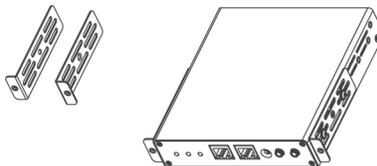
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### SB-6335T/R: WALL MOUNT ACCESSORIES

Model No.: #WM-1INCH-130MM  
SB-6335T/R 4U Ear mount pairs  
Parts No.: MEER6320ER11000



Model No.: #4U-10p-M130MM-EAR  
SB-6335T/R 4U Ear mount pairs  
Parts No.: MEER6335ER11001



Supports the HDBaseT™ extender Transmitter and Receiver via HDBaseT™ CAT6/6a/7 cable.

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