

SALSON®

User Manual

HDMI-SPL-2105C

**1x5 HDMI & Full 3D support
over Single CAT5 Distribution Amplifier
with Local Output**



Full HD
1080

WUXGA
x1920
x1200

CE

FC

RoHS
Compliance

Blu-ray
3D
READY

x.v.Color

DTS-HD
High Resolution Audio

DOLBY
TRUEHD

HDCP
HIGH-DEFINITION CONTENT PROTECTION

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

dvi
digital visual interface

7.1 CH
AUDIO

CAT-5e/6/7
SINGLE
PATENTED

rev: 111027
Made in Taiwan



Safety and Notice

The **HDMI-SPL-2105C 1x5 HDMI & Full 3D support over Single CAT5 Distribution Amplifier with Local Output** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **HDMI-SPL-2105C** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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INTRODUCTION

The **HDMI-SPL-2105C 1x5 HDMI & Full 3D support over Single CAT5 Distribution Amplifier with Local Output** provides the most flexible solution by which the high definition video and high quality audio can be transmitted to different locations over a long distance. The devices are cascable, allowing you to extend HDMI compliant displays almost anywhere. The input HDMI source can be duplicated and distributed to up to 4 HDMI enable displays through cost effective Cat-5/5e/6 cables with HDMI over CAT5 receivers (HDMI-EXT-0101C-RX and/or HDMI-EXT-1111C-RX). For convenience, HDMI-SPL-2105C is also equipped a local HDMI output for monitoring. With the built in equalization, the input HDMI cable can be extended up to 20 meters (66 feet) long under Full HD, and make the overall transmission distance superior than regular HDMI splitters or matrix switches in the market.

FEATURES

- Support HDMI Deep Color & full 3D
- HDCP compliant
- Regenerates the HDMI signal
- HDMI local output for monitoring
- Supports default HDMI EDID and has the ability to learn the EDID of displays
- Extends up to 20m (66ft) of input HDMI cable
- Extends up to 60m (200ft) of output Cat-5/5e/6 solid UTP cable under HD (720p / 1080i)
- Extends up to 40m (130ft) of output CAT-5/5e/6 solid UTP cable under Full HD (1080p)
- Pure unaltered uncompressed 7.1ch digital HDMI over CAT5e/6 cable transmission
- Allows cascading
- Perfectly integrated with other HDMI over CAT5 series products



The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

PACKAGE CONTENTS

- 1x HDMI-SPL-2105C
- 1x DC 5V 4A wall wart
- 1x User Manual

SPECIFICATIONS

Model Name		HDMI-SPL-2105C
Technical		
Role of usage		1x5 Distribution Amplifier Transmitter [TX]
HDMI compliance		HDMI Deep Color & full 3D
HDCP compliance		Yes
Video bandwidth		Single-link 225MHz [6.75Gbps]
Video support		480i / 480p / 720p / 1080i / 1080p60 up to 36-bit color
Transmission over UTP[24-bit color]		Full HD (1080p): 40m (130ft) [Cat5e] / 50m (165ft) [Cat6] HD (720p/1080i): 50m (165ft) [Cat5e] / 60m (200ft) [Cat6]
Audio support		Surround sound (up to 7.1ch) or stereo digital audio
Equalization		Built-in
Input TMDS signal		1.2 Volts [peak-to-peak]
Input DDC signal		5 Volts [peak-to-peak, TTL]
ESD protection		[1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ±8kV
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
Input		1x HDMI
Output		4x RJ-45 + 1x HDMI
HDMI connector		Type A [19-pin female]
RJ-45 connector		WE/SS 8P8C
Rotary control switch		None
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	194 x 110 x 27mm [7.6" x 4.3" x 1.1"]
	Package	270 x 175 x 80mm [10.6" x 6.9" x 3.1"]
	Carton	450 x 370 x 300mm [1'6" x 1'3" x 11.8"]
Weight	Model	588g [1.3 lbs]
	Package	1000g [2.2 lbs]
Fixedness		1U rack-mounting with ears
Power supply		5V 4A DC
Power consumption		13 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

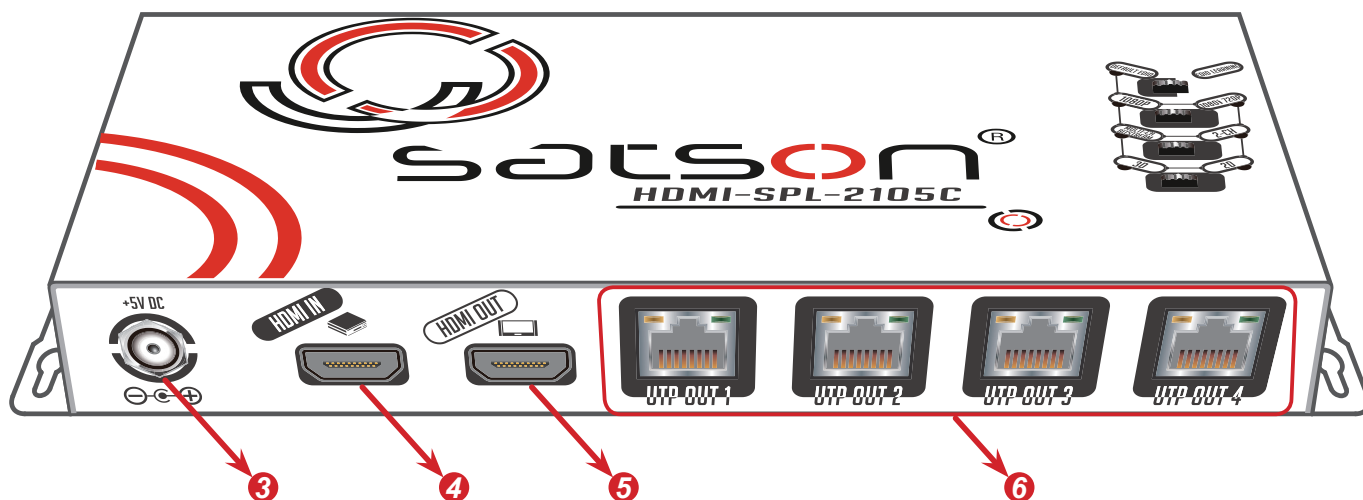
PANEL DESCRIPTIONS

Front Panel



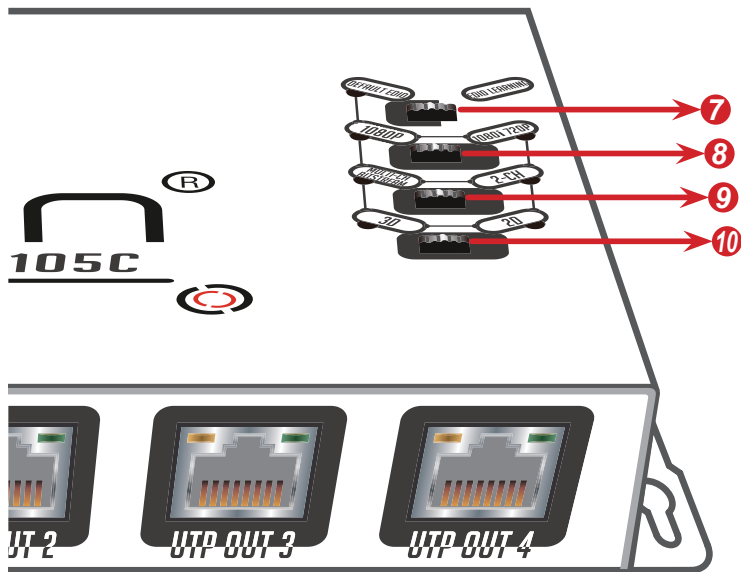
- 1 POWER:** bright - power on; dark - power off.
- 2 SIGNAL:** bright - HDMI source signal is detected; dark - no HDMI signal.

Rear Panel



- 3 +5V DC power:** connect to 5V 4A DC interlocking power adapter
- 4 HDMI IN:** connected to HDMI source
- 5 HDMI OUT:** HDMI output for local monitor
- 6 UTP OUT 1~4:** CAT output

TOP Panel



- 7 SW1:** EDID Mode
- 8 SW2:** EDID - Full HD/HD Selection
- 9 SW3:** EDID - Audio Selection
- 10 SW4:** EDID - 3D/2D Selection

SWITCH SETTING

	Left Position	Right Position
SW1	Default EDID	EDID Learning
SW2	Full HD	HD
SW3	Audio - Multi Channel	Audio - 2 Channel
SW4	3D	2D



The instant switching enables only when the video and audio setting of the source has been adjusted to "Auto" or "Pass-through"

EDID LEARNING

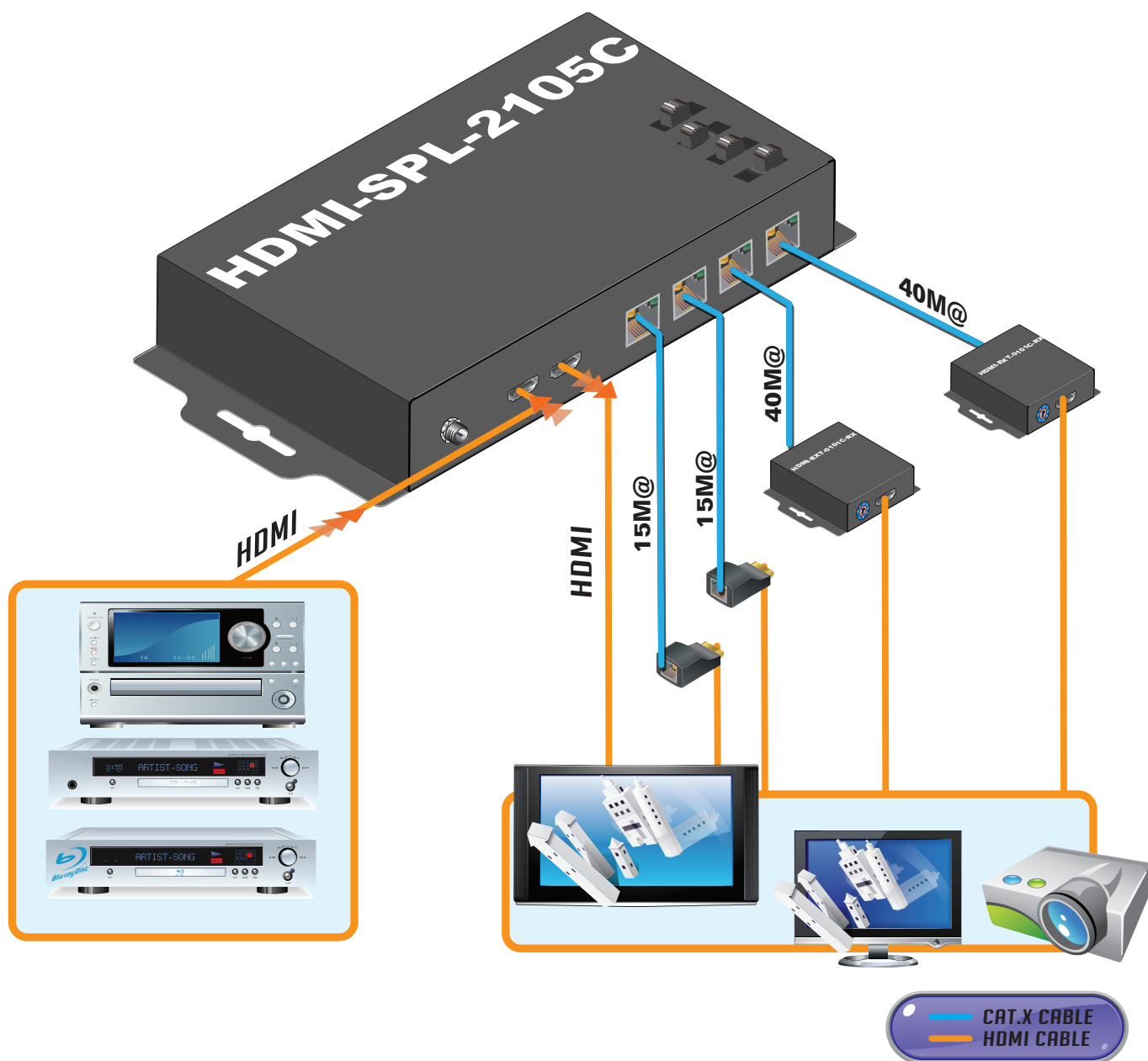
1. Power up the HDMI-SPL-2105C. Connect to **HDMI OUT** with the display you want the HDMI-SPL-2105C to learn its EDID.
2. To learn the display's EDID for source device connected to **HDMI OUT**, Set **SW1** to Right Position. Power on and wait for about 5 seconds to complete the EDID learning process.

HARDWARE INSTALLATION

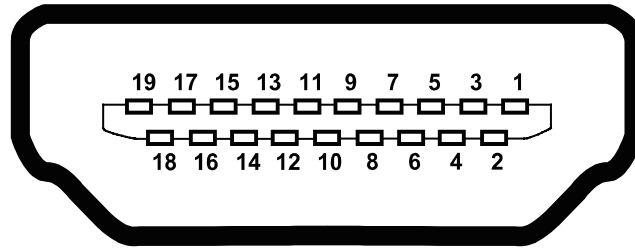
Broadcasts HDMI signals to four remote displays with a local port

1. Turn off all devices, including sources and displays.
2. Connect an HDMI source (such as a Blu-ray Disc player) to the **HDMI IN** port.
3. Connect the receivers (HDMI-EXT-0101C-RX or HDMI-EXT-1111C-RX) via Cat-5/5e/6 cables to each **HDMI Signal OUTPUT** port.
4. Connect the local HDMI equipped monitor.
5. Plug in 5V 4A DC power supply.
6. Power on the HDMI displays.
7. Power on the HDMI source device.

CONNECTION DIAGRAM











PIN DEFINITION

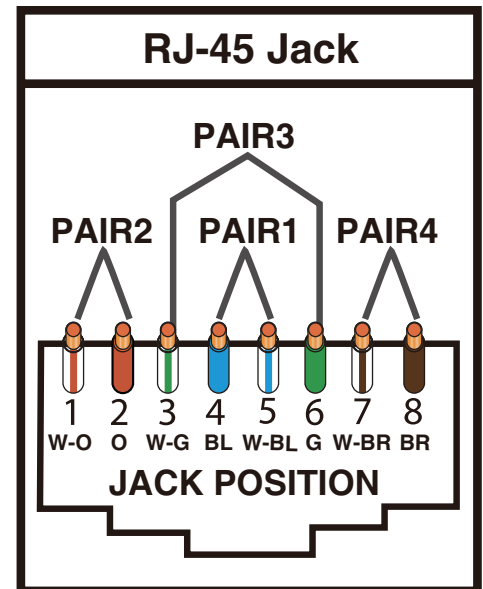


Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	Pin 8	TMDS Data0 Shield	Pin 15	SCL
Pin 2	TMDS Data2 Shield	Pin 9	TMDS Data0–	Pin 16	SDA
Pin 3	TMDS Data2–	Pin 10	TMDS Clock+	Pin 17	DDC/CEC Ground
Pin 4	TMDS Data1+	Pin 11	TMDS Clock Shield	Pin 18	+5V Power
Pin 5	TMDS Data1 Shield	Pin 12	TMDS Clock–	Pin 19	Hot Plug Detect
Pin 6	TMDS Data1–	Pin 13	CEC		
Pin 7	TMDS Data0+	Pin 14	Reserved (N.C. on device)		

CAT5 [RJ45]

Data Link TIA/EIA-568-B		
PIN	Color	Function
1	 W-O	TX0-
2	 O	TX0+
3	 W-G	TX1-
4	 BL	TX2-
5	 W-BL	TX2+
6	 G	TX1+
7	 W-BR	TXC-
8	 BR	TXC+



NOTICE

1. If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI or HDMI display EDID information.
2. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C & VG-870B.
3. The transmission length is largely affected by the type of Cat-5/5e/6 cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m [1,000ft] bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat-5e cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended.
5. To reduce the interference among the unshielded twisted pairs of wires in Cat-5/5e/6 cable, one can use double shielded STP cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the category 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-5/5e/6 cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
7. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input 1] generally can produce better transmission performance among all HDMI inputs.

PERFORMANCE GUIDE

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use EIA/TIA-568-B termination (T568B) at any time		

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