USER   MANUAL

HDMI Extender By Coaxial

Full HD up to 80 channel&500m

Model No：AA6146

Enjoy the vivid world!

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.

The products are designed to make your A/V device use more convenient, comfortable, productive and cost-efficient.

The HDMI coaxial extender can do digital coding processing for HDMI signal with DTV technology. The product adopts RF modulation technology characteristic to transmit the Multiple RF signal through one common coaxial cable (SYV-75/RG59) for long distance transmission *without amplification.* The receiver can restore the high-definition video signal and transmit it to the TV or monitor. By adding DTV network mixer at the RF cable, you can easily achieve many kinds of transmission mode, e.g. signal split, switch and matrix.

Our devices offer solutions for noise, space and security concerns, data center control, information distribution, conference room presentation, school and corporate training environments.

INTRODUCTION

FEATURES：

- Contains a transmitter (TX) and a receiver (RX). The TX supports a HDMI input and the RX supports a HDMI output.
- Support HDMI resolution up to 1080P/60Hz.
- Transmission distance up to 500 meters by SYV-75-5 coaxial cable and no need amplification.
- Adding digital TV network mixer in RF cable, can easily achieve many kinds of transmission mode, e.g. signal split, switching and matrix.
- Support 80 channels for option; frequency ranges 139MHz~950MHz.
- Products using the broadcast signal transmission mode, only one line can transmit 48 channels of high-definition video signal at the same time.
- The use of digital TV communication protocol, anti interference and error correction capability is very strong.
- Installs in minutes. Analog monitor system upgrade to HD systems can continue to use the original connector and cable.
- DC5V/2A power adapter

PACKAGE CONTENTS：

1. Extender TX unit   1pcs
2. Extender RX unit   1pcs
3. AC power adapter   2pcs
4. User manual   1pcs
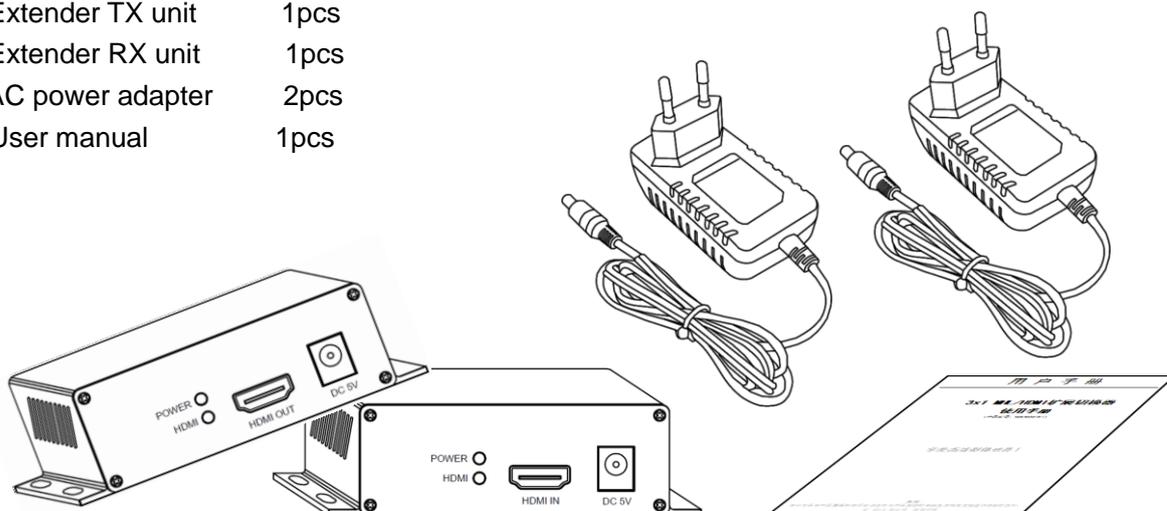
# FEATURES OF THE INTERFACE:

Transmitter (TX)
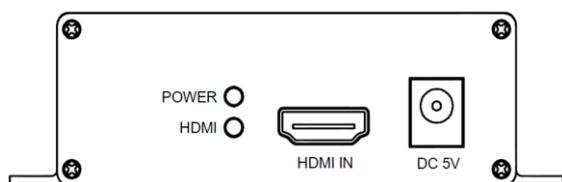
FIG.1 TX Front Panel View

PWR LED: POWER ON/OFF indicator

HDMI LED: HDMI input indicator

DC5V: 5V DC in jack

HDMI IN: HDMI signal input
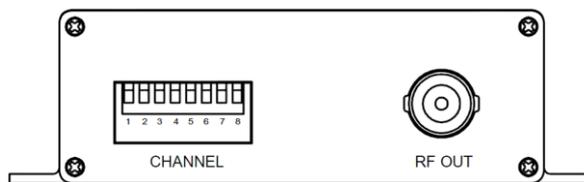
FIG.2 TX Rear Panel View

CHANNEL: Channel selection switch

RF OUT: RF signal output

Receiver (RX)
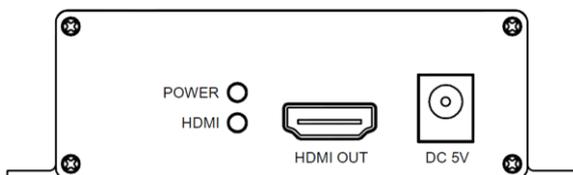
FIG.3 RX Front Panel View

PWR LED: POWER ON/OFF indicator

HDMI LED: HDMI output indicator

**DC5V:** 5V DC in jack

HDMI OUT: HDMI signal output
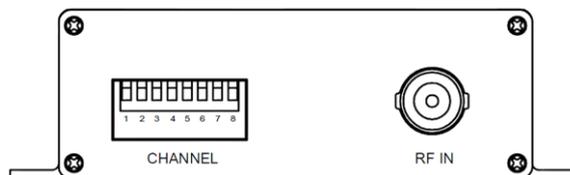
FIG.4 RX Rear Panel View

CHANNEL: Channel selection switch

RF IN: RF signal input

OPERATIONG AND CONNECTION：

Ⅰ. Point to point mode
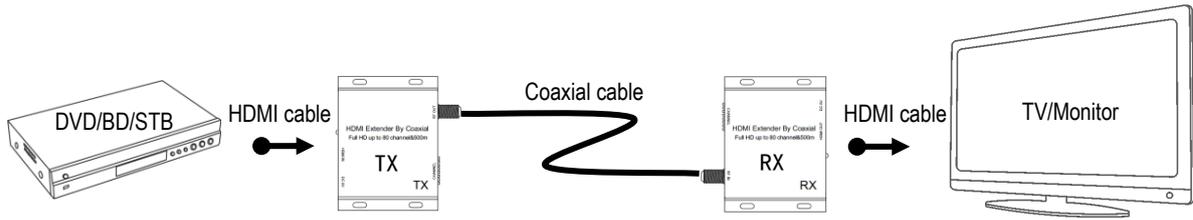
FIG.5 CONNECTION DIAGRAM

1. Connect one SYV-75/RG59 coaxial cable from TX RF OUT into the RX RF IN.

2. Connect one HDMI cable from a DVD/BD player into the HDMI input port of TX.

3. Connect one HDMI cable from TV/Monitor into the HDMI output port of RX.

4. Set same ID to Channel switch of TX and RX (Detailed setting method reference behind the table).

5. Connect 5V power supply to the TX&RX, and inserted into the power socket.

Ⅱ. Splitter mode
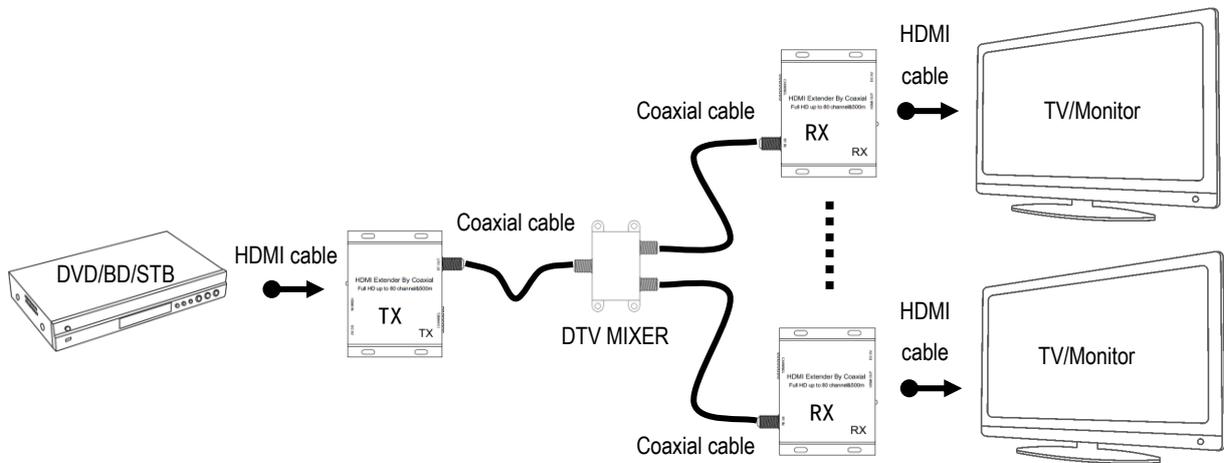
FIG.6 SPLITTER CONNECTION DIAGRAM

1. Connect one SYV-75/RG59 coaxial cable from TX RF OUT into the input port of DTV mixer.

2. Connect SYV-75/RG59 coaxial cables from RX RF IN into the output ports of DTV mixer.

3. Connect one HDMI cable from a DVD/BD player into the HDMI input port of TX.

4. Connect HDMI cables from TV/Monitor into the HDMI output port of RX.

5. Set same ID to Channel switch of TX and RX (Detailed setting method reference behind the table).

6. Connect 5V power supply to the TX&RX, and inserted into the power socket.

Ⅲ. Matrix mode
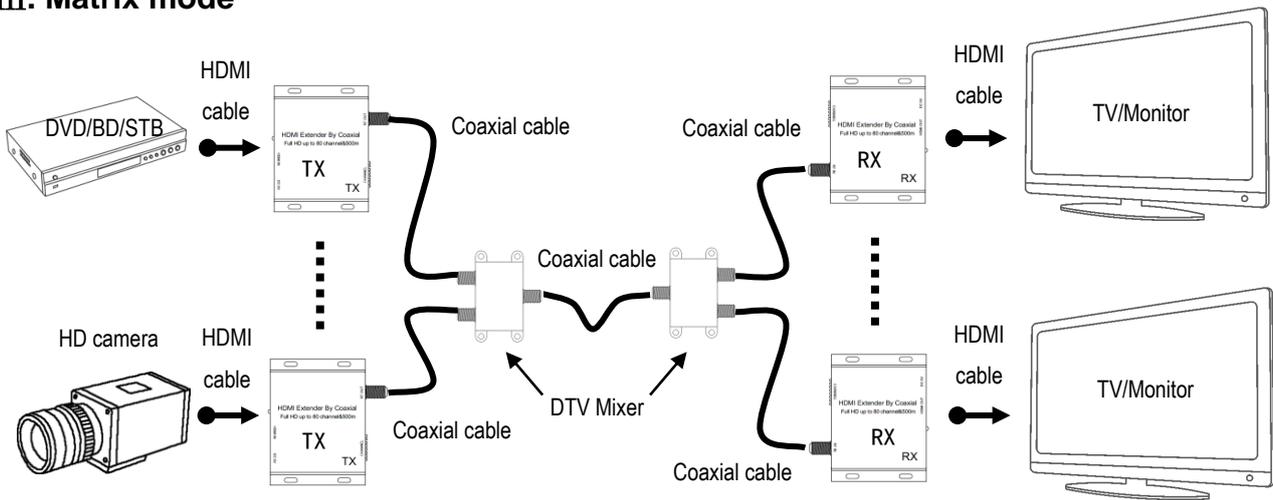
FIG.7 MATRIX CONNECTION DIAGRAM

1. Connect SYV-75/RG59 coaxial cables from TX RF OUT into the output ports of DTV mixer.

2. Connect SYV-75/RG59 coaxial cables from RX RF IN into the output ports of DTV mixer.

3. Connect input ports of two DTV mixers with one SYV-75/RG59 coaxial cable.

4. Connect HDMI cables from DVD/BD player into the HDMI input port of TX.

5. Connect HDMI cables from TV/Monitor into the HDMI output port of RX.

6. The need for communication with the TX and RX set to the same channel.

7. Connect 5V power supply to the TX&RX, and inserted into the power socket.

Notes:

1. In normal conditions, transmission distance up to 500 meters by SYV-75-5 coaxial cable and no need amplification. For the high-frequency RF signal haves signal attenuation, signal strength will become weakened after adding DTV network mixer and multi output.

2. If the signal frequency is high, the transmission attenuation is greater. So choose low channel for long-distance transmission.

3. When the transmission distance is short (less than 100 meters), because the signal is too strong, RX may protect and display "NO SIGNAL" to TV. So now you should choose high channel or adding attenuator in coaxial cable for the signal attenuation.

4. With the channel set and frequency values refer to the table below, and channel selection switch setting method is as follows:
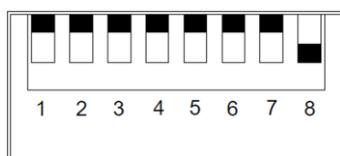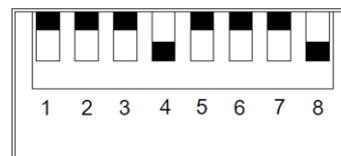
e.g.1 CH1 （0000 0001）   e.g.2 CH11 （0001 0001）

Channel set and frequency reference table

Channel ID	Switch Setting （12345678）	Frequency （MHz）	BW （MHz）	Channel ID	Switch Setting （12345678）	Frequency （MHz）	BW （MHz）
1	0000 0001	142.5	7	41	0100 0001	634	8
2	0000 0010	149.5	7	42	0100 0010	642	8
3	0000 0011	156.5	7	43	0100 0011	650	8
4	0000 0100	163.5	7	44	0100 0100	658	8
5	0000 0101	177.5	7	45	0100 0101	666	8
6	0000 0110	184.5	7	46	0100 0110	674	8
7	0000 0111	191.5	7	47	0100 0111	682	8
8	0000 1000	198.5	7	48	0100 1000	690	8
9	0000 1001	205.5	7	49	0100 1001	698	8
10	0001 0000	212.5	7	50	0101 0000	706	8
11	0001 0001	219.5	7	51	0101 0001	714	8
12	0001 0010	226.5	7	52	0101 0010	722	8
13	0001 0011	410	8	53	0101 0011	730	8
14	0001 0100	418	8	54	0101 0100	738	8
15	0001 0101	426	8	55	0101 0101	746	8
16	0001 0110	434	8	56	0101 0110	754	8
17	0001 0111	442	8	57	0101 0111	762	8
18	0001 1000	450	8	58	0101 1000	770	8
19	0001 1001	458	8	59	0101 1001	778	8
20	0010 0000	466	8	60	0110 0000	786	8
21	0010 0001	474	8	61	0110 0001	794	8
22	0010 0010	482	8	62	0110 0010	802	8
23	0010 0011	490	8	63	0110 0011	810	8
24	0010 0100	498	8	64	0110 0100	818	8
25	0010 0101	506	8	65	0110 0101	826	8
26	0010 0110	514	8	66	0110 0110	834	8
27	0010 0111	522	8	67	0110 0111	842	8
28	0010 1000	530	8	68	0110 1000	850	8
29	0010 1001	538	8	69	0110 1001	858	8
30	0011 0000	546	8	70	0111 0000	866	8
31	0011 0001	554	8	71	0111 0001	874	8
32	0011 0010	562	8	72	0111 0010	882	8
33	0011 0011	570	8	73	0111 0011	890	8
34	0011 0100	578	8	74	0111 0100	898	8
35	0011 0101	586	8	75	0111 0101	906	8
36	0011 0110	594	8	76	0111 0110	915	8
37	0011 0111	602	8	77	0111 0111	924	8
38	0011 1000	610	8	78	0111 1000	930	8
39	0011 1001	618	8	79	0111 1001	938	8
40	0100 0000	626	8	80	1000 0000	946	8

Switch setting note: 0-dial switch to the up, 1-dial switch to the down. In fact, the switch 8 bit code equals to the binary code of channel ID.

SPECIFICATIONS: AA6146

HDMI resolution ………………………………..24/50/60fs/1080p/1080i/720p/576p/576i/480p/480i

HDMI Audio Format…………………………………………………………………..LPCM

HDMI Max bandwidth…………………………………………………………...225MHz

HDMI Max baud rate…………………………………………………………6.75Gbps

Input/Output TMDS signal …………………………………………….0.5~1.5Volts p-p(TTL)

Input/Output DDC signal ……………………………………………. 5Volts p-p (TTL)

RF frequency range…………………………………………………...139～950 MHz

RF Channel B/W………………………………………………...................7/8 MHz

The number of Channel……………………………………………................................80

RF Output power…………………………………………………….............................. -6dBm

RF Connector type……………………………………………………The imperial F type/BNC

Coaxial cable Characteristic impedance……………………………………………………75Ω

RF transmission distance…………………………………………≤500m SYV-75-5 coaxial standard cable

HDMI output cable distance…………………………………...≤15m AWG26 HDMI standard cable

TX Max working current …………………………………………………………… 650Ma

RX Max working current …………………………………………………… 500mA

Power adapter format Input ……...……….……….…….…… AC 100V～240V 50HZ/60Hz, DC5V/2A

Operating Temperature range ……..………………………………………. -10 to +45℃

Storage Temperature range………………………………………………. -20 to +60℃

Operating Humidity range ………………………………………….10 to 90%RH (No Condensation)

Storage Humidity range………………………….………………………5 to 95%RH (No Condensation)

Case Dimension (L x W x H) ……………………………………………….94x74x28 (mm)

Weight ……………………………………………………………………..…… 240g

Notes:

Pls use the machine as the instruction listed to keep the long use lifetime of the machine.

1. The machine should be placed at the spot far from the Damp, High-Temperature, Dusty, Erosive, and oxidative environment.

2. All parts will be free from the strong shake, hit, fall.

3. Touching the power adaptor with the wet hands is prohibited.

4. Pls hold the power adaptor head and do not pull the power cord when cut off from the socket.

5. Pls turn the power off when the machines not used for long time.

6. Pls do not open the cover and do not touch the inside parts.

7. Pls use the original factory power adaptor.

FAQ:

Before power on, pls check the connection line carefully. And make sure that all interfaces are normally connected. The common trouble shooting way shows below:

No.	Problem Description	Solutions
1	Non-Power-Connected	1. Check if the power adaptor head is truly and correctly inserted the power socket. 2. Check the power if it is in on status.
2	Display "No SIGNAL" to TV	1. Confirm the coaxial cables are intact and reliable connection. 2. Confirm the length of coaxial cable is too short. When the transmission distance is short (less than 100 meters), you should choose high channel or adding attenuator in coaxial cable for the signal attenuation. 3. Confirm the TX and RX channel settings should be the same 4. Check the cable quality. (Recommend use SYV-75/RG59 coaxial standard cable)
3	Display "SIGNAL LOSS" to TV	1. Confirm the HDMI cable of TX is intact and reliable connection. 2. Check the signal source is power on and output normal. 3. Check the HDMI cable quality.
4	Display "RESOLUTION NOT SUPPORT" to TV	1. Check the signal source output resolution, may be set too high. 2.Confirm whether to support the signal resolution of TV
5	Image mosaic/ Abnormal Picture	1. Confirm the coaxial cables are intact and reliable connection. 2. Confirm the length of coaxial cable is too short or long. 3. Device EDID read error, please reboot. 4. Nearby signal interference, proposals to change the other channel
6	Abnormal sound	1. Check the signal source output audio format is LPCM. Audio output options of signal source should be set to "Auto" or "LPCM" 2. Device EDID read error, please reboot.