

XT-SW41-4K18G

User Manual



Introduction

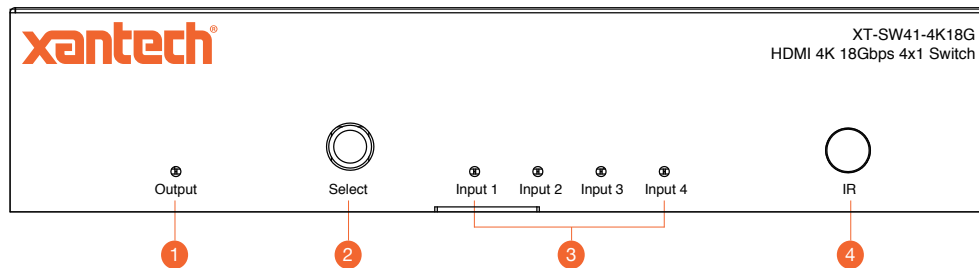
Our XT-SW41-4K18G 4K HDMI 2.0 switcher distributes 4x HDMI sources to a single output. The switcher supports full HDMI 2.0 and HDCP 2.2 with video resolutions up to and including 4K @ 60Hz 4:4:4. The 4-Way switcher also includes the advanced features of audio breakout, EDID management and RS-232 control for integration with third-party control systems.

Key Features

- Features 4x HDMI inputs that can be switched to a single HDMI output
- Supports full HDMI 2.0 specification 4K UHD video (4K @ 60Hz 4:4:4)
- Supports 3D signal display
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master Audio transmission
- HDMI audio breakout to analogue L/R audio and coaxial digital outputs concurrently
- Supports CEC bypass (Consumer Electronics Control)
- Controlled via front panel, IR and RS-232
- Advanced EDID management
- HDCP 2.2 compliant

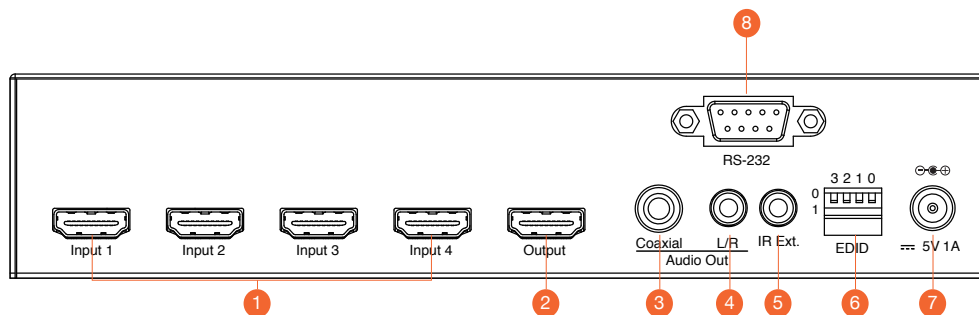
Panel Description

Front Panel



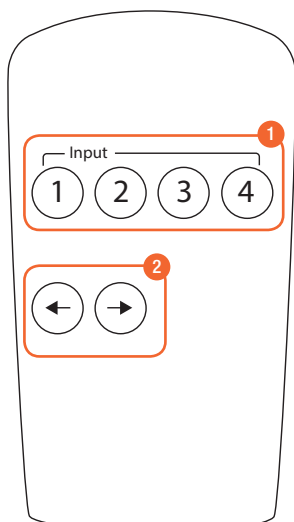
- ❶ Output LED - Indicates if the HDMI output is connected to an active HDMI display
- ❷ Select button - Press to scroll through HDMI source inputs
- ❸ HDMI input LED - Indicates HDMI source input selected
- ❹ IR receiver window - for receiving IR from Xantech XT-SW41-4K18G switcher remote control

Rear Panel



- ❶ HDMI inputs 1-4 - Connect to HDMI source devices
- ❷ HDMI output 1 - Connect to a HDMI display
- ❸ Coaxial digital audio output
- ❹ Analog L/R audio output - 3.5mm stereo audio jack. Supports 2CH PCM only
- ❺ External IR - Connect 12V Xantech IR receiver (supplied separately)
- ❻ EDID DIP switch - Used to manage the video and audio resolution output by the connected source device. See below for further details.
- ❼ Power port - Use included 5V/1A DC power adaptor
- ❽ RS-232 Serial port - For control of switcher by third party control devices

Infrared Remote Control



- ❶ Direct HDMI input selection buttons
- ❷ Scroll through input buttons - HDMI input 1-2-3-4-1...

Adjusting The EDID Settings

EDID (Extended Display Identification Data) is a data structure that is used between a display and a source. This data is used by the source to find out what audio and video resolutions are supported by the display, from this information the source will discover what the best audio and video resolutions need to be outputted.

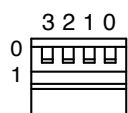
While the objective of EDID is to make connecting a digital display to a source a simple plug and play procedure, issues do arise when multiple displays or video matrix switching is introduced because of the increased number of variables.

By pre-determining the video resolution and audio format of the sources and display device you can reduce the time needed for EDID hand shaking thus making switching quicker and more reliable.

Configuration of EDID settings can be achieved using the product dip-switches on the XT-SW41-4K18G. EDID dip-switch settings are shown below.

Note: You must power cycle the product after making EDID changes. For some sources it may be necessary to power cycle the source after EDID changes have been made for the source to update its video & audio output settings.

EDID Dip-switches



Dip-switch position '0' = Off

Dip-switch position '1' = On

- [DIP]=0000: HDMI 1080p@60Hz, Audio 2ch PCM
- [DIP]=0001: HDMI 1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=0010: HDMI 1080p@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=0011: HDMI 1080i@60Hz, Audio 2ch PCM
- [DIP]=0100: HDMI 1080i@60Hz, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=0101: HDMI 1080i@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=0110: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 2ch PCM
- [DIP]=0111: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=1000: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=1001: HDMI 4K@60Hz 4:4:4, Audio 2ch PCM
- [DIP]=1010: HDMI 4K@60Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=1011: HDMI 4K@60Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=1100: DVI 1280x1024@60Hz, Audio None
- [DIP]=1101: DVI 1920x1080@60Hz, Audio None
- [DIP]=1110: DVI 1920x1200@60Hz, Audio None
- [DIP]=1111: Copy EDID from HDMI Output 1

RS-232 Control

The XT-SW41-4K18G switch can be controlled via a 9-pin serial cable.

Details of RS-232 pin assignment and communication are below. Please note that depending on your control device serial port pin configuration you may require either a 'Straight' RS-232 cable or 'Null-modem' type.

RS-232 Settings

Baud Rate: 57600 bps

Data Bit: 8-bit

Parity: None

Stop Bit: 1-bit

Flow Control: None

XANTECH RS-232		CONTROL SYSTEM	
PIN	Assignment	PIN	Assignment
1	NC	1	NC
2	Tx	2	Rx
3	Rx	3	Tx
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8	NC
9	NC	9	NC

RS-232 Commands

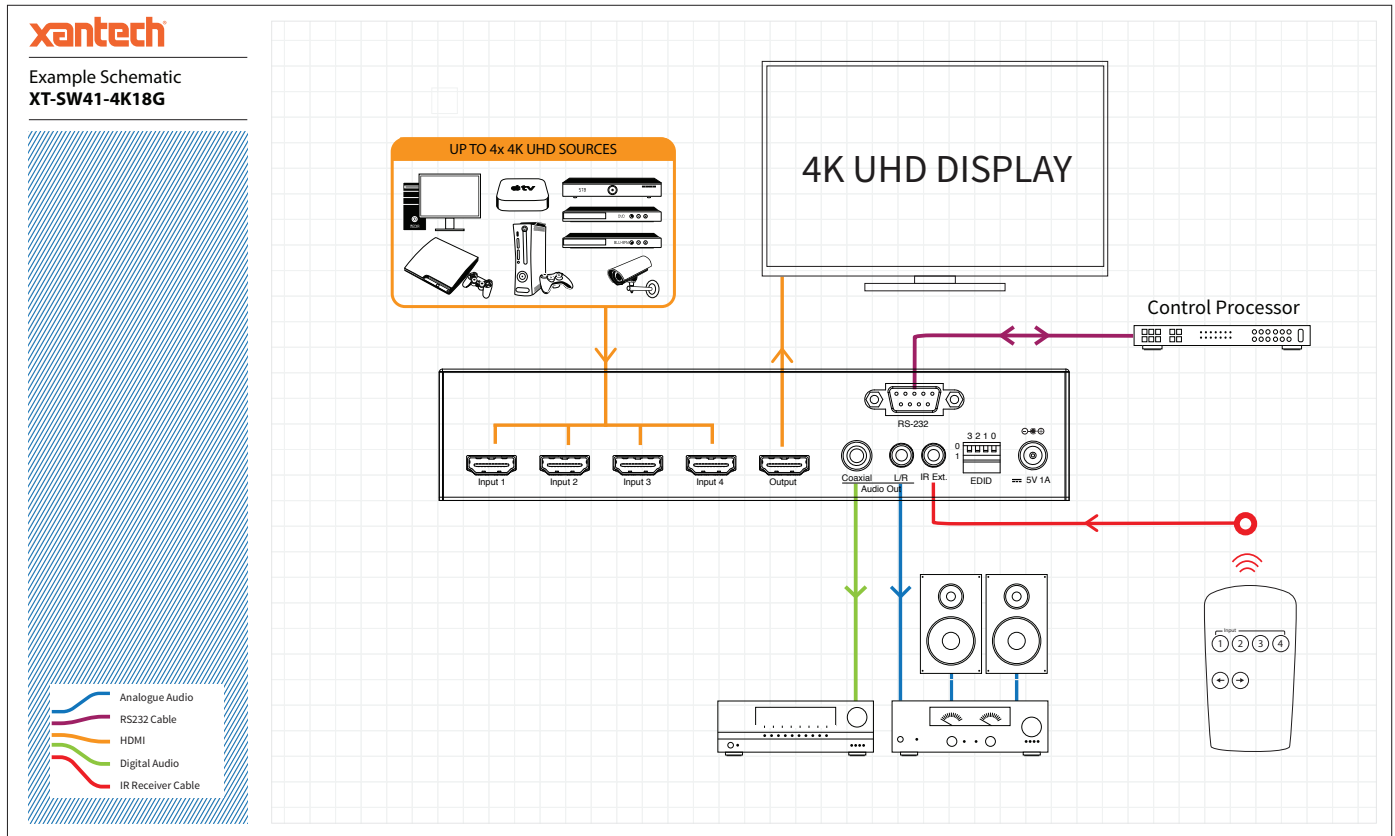
RS-232 COMMAND	DESCRIPTION
?	Print Help Information
HELP	Print Help Information
STATUS	Print System Status And Port Status
IRON/OFF	Set System IR Control On Or Off
KEYON/OFF	Set System KEY Control On Or Off
RESET	Reset System To Default Setting (Should Type "Yes" To Confirm, "No" To Discard)
OUTFRyy	Set OUTPUT From INPUT:yy
OUTON/OFF	Set OUTPUT Port On or Off Example: OUTFR04 (This would switch the output to source input 4)

Common Mistakes

- Carriage return – some programs do not require the carriage return where as other will not work unless sent directly after the string. In the case of some Terminal software the token <CR> is used to execute a carriage return. Depending on the program you are using this token maybe different. Some other examples that other control systems deploy include \r or OD (in hex)
- Spaces – Blustream commands do not require space between commands unless specified. There may be some programs that require spacing in order to work.
 - How the string should look is as follows OUTFR03
 - How the string may look if spaces are required: OUT{Space}FR{Space}03
- Baud rate or other serial protocol settings not correct - see above

Infrared Commands

SW41	NEC IR: CUSTOMER CODE 1898	HEX IR
Input 1	50	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689
Input 2	55	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689
Input 3	48	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689
Input 4	4A	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689
Back	06	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689
Forward	05	0000 006D 0000 0022 0157 00AC 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0689



Specifications:

Video Input Connectors: 4x HDMI Type A, 19-pin, female

Video Output Connectors: 1x HDMI Type A, 19-pin, female

Audio Output Connectors: 1x RCA (SPDIF), 1x 3.5mm stereo jack (L/R)

RS-232 Serial Port: 1x DB-9, female

EDID: 4-Pin DIP switch

Casing Dimensions (W x H x D): 197mm x 41mm x 94mm

Dimensions Inc. Connections (W x H x D): 197mm x 48mm x 104mm

Shipping Weight: 0.9kg

Operating Temperature: 32°F to 104°F (0°C to 40°C)

Storage Temperature : -4°F to 140°F (-20°C to 60°C)

Power Supply : 5V/1A DC

Package Contents:

- 1x XT-SW41-4K18G
- 1x 5V/1A DC power supply
- 1x Remote control
- 1x Mounting kit
- 1x Quick reference guide

Certifications

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION - changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA, INDUSTRY CANADA (IC) NOTICES

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

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