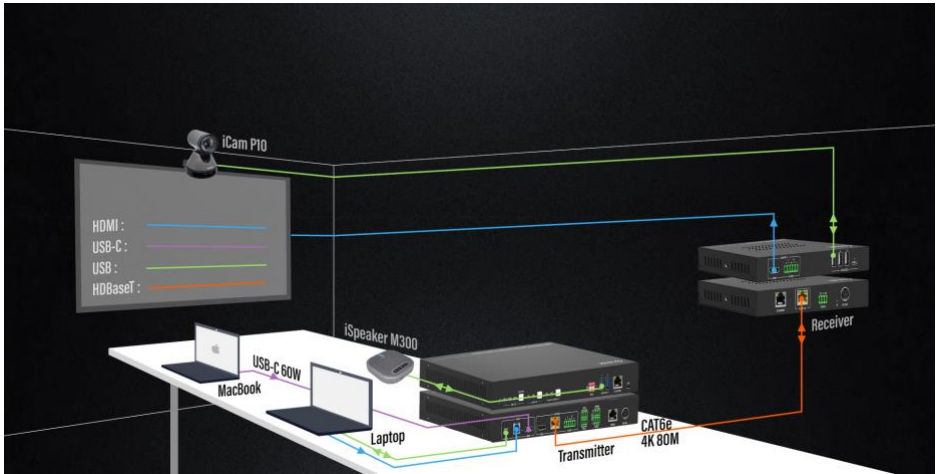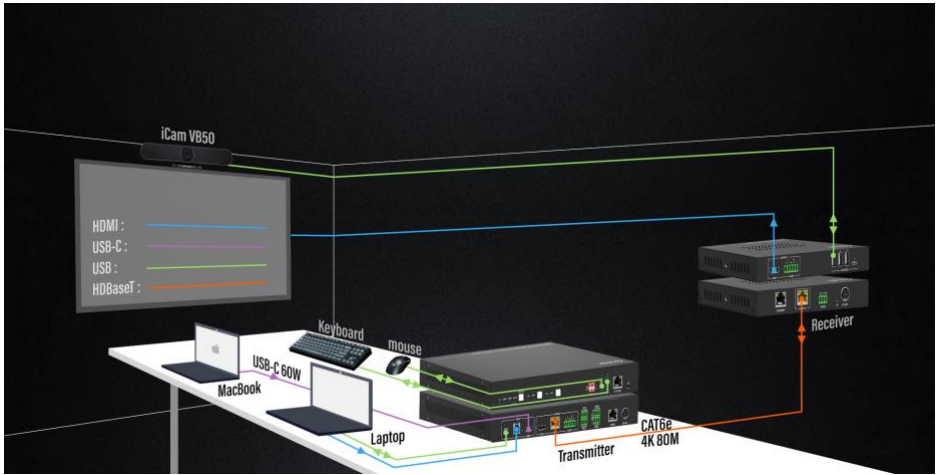# iSwitch 201K

18Gbps HDMI+USB-C KVM Switcher KIT

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Version: V1.0

1. Product Introduction

iSwitch 201K is an 18Gbps switcher kit. It supports up to 4K/60/4:4:4, HDR10 and Dolby Vision, HDCP 2.2. It also supports uncompressed transmission of 18Gbps signals with a distance of up to 100m. At the same time, it can be connected to KVM equipment, which is very suitable for equipment connection and signal transmission in conference rooms. The switcher kit also supports RS232&CEC control and bidirectional 48V PoC

1.1 Features

- HDMI 2.0, highest support 4K@60HZ 4:4:4, HDR10 and Dolby Vision, HDCP 2.2
- 1 x HDMI input, 1 x USB-B host, 1 x USB-C input, 1 x HDMI output and 1 x HDBaseT output
- HDBT 3.0, support 100m transmission and bidirectional 48V PoC
- Support RS232 control and CEC control
- USB-C input support 60W external charging
- Auto switch 5V or TMDS detection
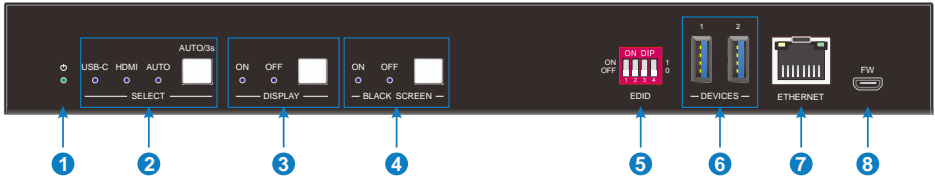- Support Dry Contact control

2. Specification

	Transmitter	Receiver
Video		
Video Input	(1) HDMI IN, (1) USB-C IN	(1) HDBT IN
Video Output Connector	(1) Type-A female HDMI (1) Type-C	(1) RJ45
Input Resolution	HDMI: Up to 4K@60Hz 4:4:4 HDR10, Dolby Vision USB-C: Up to 4K@60Hz 4:4:4	Up to 4K@60Hz 4:2:0
Video Output	(1) HDMI OUT (1) HDBT OUT	(1) HDMI
Video Output Connector	(2) Type-A female HDMI	(1) Type-A female HDMI
Output Resolution	HDMI: Up to 4K@60Hz 4:4:4 HDR10, Dolby Vision HDBT: Up to 4K@60Hz 4:2:0	Up to 4K@60Hz 4:4:4 HDR10, Dolby Vision
HDMI Standard	Up to HDMI 2.0b	Up to HDMI 2.0b
HDCP Version	Up to HDCP 2.2	Up to HDCP 2.2
Audio		
HDMI Embedded Audio Format	LPCM 7.1 audio, Dolby Atmos®, Dolby® TrueHD, Dolby Digital® Plus, DTS:X™, and DTS-HD® Master Audio™ pass-through.	
Audio Output Connector	(1) 5-pin terminal block	(1) 5-pin terminal block
Frequency Response	20Hz–20KHz, ±3dB	
Max Output Level	0.88 Vrms ± 0.5 dB. 2 V = 16 dB headroom above -10 dBV (316 mV) nominal consumer line level signal SPDIF: ±0.05dBFS	
THD+N	< 0.05% (-80 dB), 20 Hz – 20 kHz bandwidth, 1 kHz sine at 0 dBFS level (or max level)	
SNR	> 80dB, 20Hz-20 kHz bandwidth SPDIF: > 90dB, 20Hz-20 kHz bandwidth	
Crosstalk Isolation	< -80 dB, 10 kHz sine at 0 dBFS level (or max level before clipping)	
L-R Level Deviation	< 0.3 dB, 1 kHz sine at 0 dBFS level (or max level before clipping)	
Output Load Capability	1k ohm and higher (supports 10x paralleled 10k ohm loads)	
Noise Level	>70dB @ 1 kHz	
Control		
Control port	(1) EDID switch, (2) DEVICES	(4) DEVICE, (1) ETHERNET

	(1) ETHERNET, (1) FW, (1) HOST, (2) GR, (2) RS232 (1) TCP/IP	(1) RS232
Control Connector	(1) 4-pin DIP switch (2) USB Type-A, (1) RJ45 (1) Micro-USB, (1) USB Type-B (2) 3-pin terminal block (2) 3-pin terminal block, (1) RJ45	(3) USB Type-A, (1) USB Type-C (1) RJ45, (1) 3-pin terminal block
General		
Operation Temperature	-5 ~ +55℃	
Storage Temperature	-25 ~ +70℃	
Relative Humidity	10% ~ 90%	
External Power Supply	Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A.	
Power Consumption	76.5W (Max)	
USB-C Power Charging	60W(Max)	
Dimension (W*H*D)	265W x 150D x 32H mm	173W x 95D x 24.5H mm
Net Weight	1020g	410g

3. Panel Description

3.1 Transmitter

Front Panel

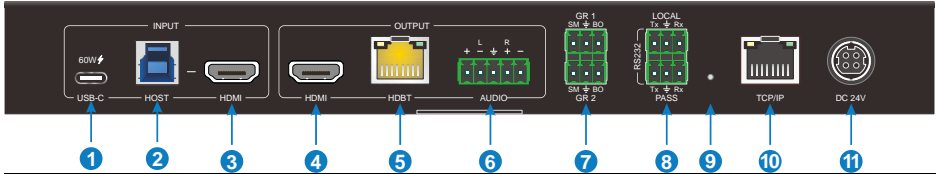| No.	Name	Description
①	Power LED	1 x green indicator light, the light is always on when the machine is working, and it goes out when the power is off
②	SELECT	● 1 x White non-backlit button, 3 x blue indicator lights, ● Click the button to select the input source (HDMI or USB-C), press and hold for 3 seconds to enter or exit automatic switching mode, and the corresponding indicator is always on
③	DISPLAY	● 1 x white non-backlit button, 2 x blue indicator lights; ● Press the button to send the DISPLAY ON/OFF CEC and RS232 commands to control the TX and RX display terminal switches at the same time, and the corresponding indicator light is always on; ● When the CEC command control includes TX, the front panel button indicator will flash three times; ● When CEC only controls RX, the CEC button indicator light switches synchronously; ● When the CEC command controls TX/RX at the same time, the buttons on the front panel switch synchronously and the indicator light flashes three times.
④	BLACK SCREEN	● 1 x white non-luminous button, 2 x blue indicator lights; ● Press the button to enter or exit the output black screen state, and the corresponding indicator light is always on;
⑤	EDID	1 x 4-pin DIP switch for EDID management
⑥	DEVICES	2 x USB-A 3.0, connect keyboard, mouse, microphone, printer and other equipment

⑦	ETHERNET	1 x RJ45, used for network passthrough transmission
⑧	FW	1 x Micro-USB, used for MCU firmware upgrade

Rear Panel

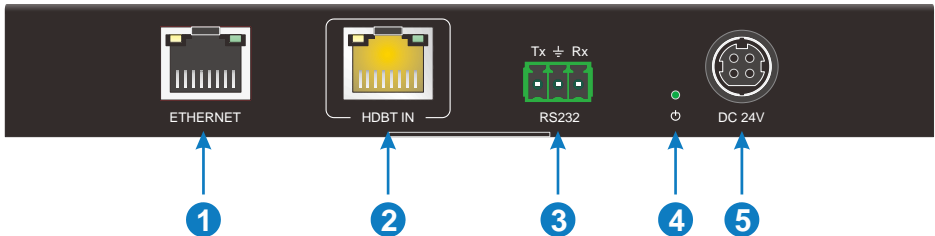| No.	Name	Description
①	USB-C	1 x USB-C 3.0 input, support external 60W charging
②	HOST	1 x USB-B 3.0, connect to HOST devices such as laptops
③	HDMI IN	1 x HDMI input, connect to HOST devices such as laptops
④	HDMI OUT	1 x HDMI loop output
⑤	HDBT	1 x HDBT output, the green light is always on when the signal is with HDCP, flashes when the input signal is without HDCP; the yellow light is always on after the TX and RX are connected;
⑥	AUDIO	1 x 5-pin balanced audio output, output audio de-embedding
⑦	Grommet	GR1: Correspond the USB-C GR2: Conrrespond the HDMI SM: Switch to the current source BO: Print a black screen to all outputs.
⑧	RS232	LOCAL: Connect the control devices to control the transmitter PASS: Bidirectional passthrough transmission with Receiver
⑨	Upgrade	1 x Built-in short-handled buttons, press and hold for 3s to enter the upgrade mode, and the power indicator flashes. At this time, you can upgrade the firmware through the serial port, and press the button again to exit the upgrade mode
⑩	TCP/IP	1 x RJ45, TCP/IP control
⑪	DC 24V	Connect DC24V5A power adapter

3.2 Receiver

Front Panel
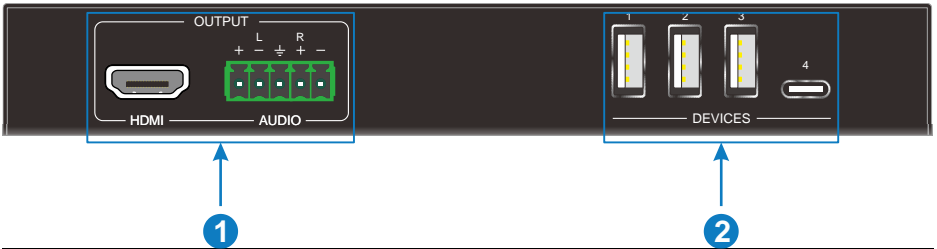
No.	Name	Description
①	OUTPUT	● 1 x HDMI output; ● 1 x 5-pin balanced audio output, HDMI output audio de-embedding
②	DEVICES	3 x USB-A 2.0, 1 x USB-C, connect keyboard, mouse, microphone, printer, camera and other equipment

Rear Panel

No.	Name	Description
	ETHERNET	1 x RJ45, used for network passthrough transmission
②	HDBT IN	1 x RJ45 interface, the green light is always on when the signal is with HDCP, flashes when the input signal is not HDCP; the yellow light is always on after the TX and RX are connected
③	RS232	1 x 3-pin phoenix head, RS232 passthrough transmission
④	Power LED	1 x green indicator light, always on when machine is working
⑤	DC 24v	Connect DC24V5A power adapter