

Blackmagic Videohub 20x20 12G







Product Technical Specifications

Smart Videohub CleanSwitch 12x12







Blackmagic Videohub 20x20 12G



Blackmagic Videohub 20x20 12G is an advanced zero latency video router that supports any combination of SD, HD and Ultra HD on the router at the same time. It has 20 12G-SDI inputs and 20 12G-SDI outputs plus reference connections in a one rack unit size. The front panel LCD lets you see video before routing and clearly displays routing labels and video standards. Routing can be performed by direct button selection and using the large spin knob control that has an electronic clutch. It also features SDI re-clocking, external Ethernet control and supports all SDI video standards up to 2160p60.

Connections

SDI Video Inputs Video Input Re-Sync Reference Outputs

None Reference terminating loop output.

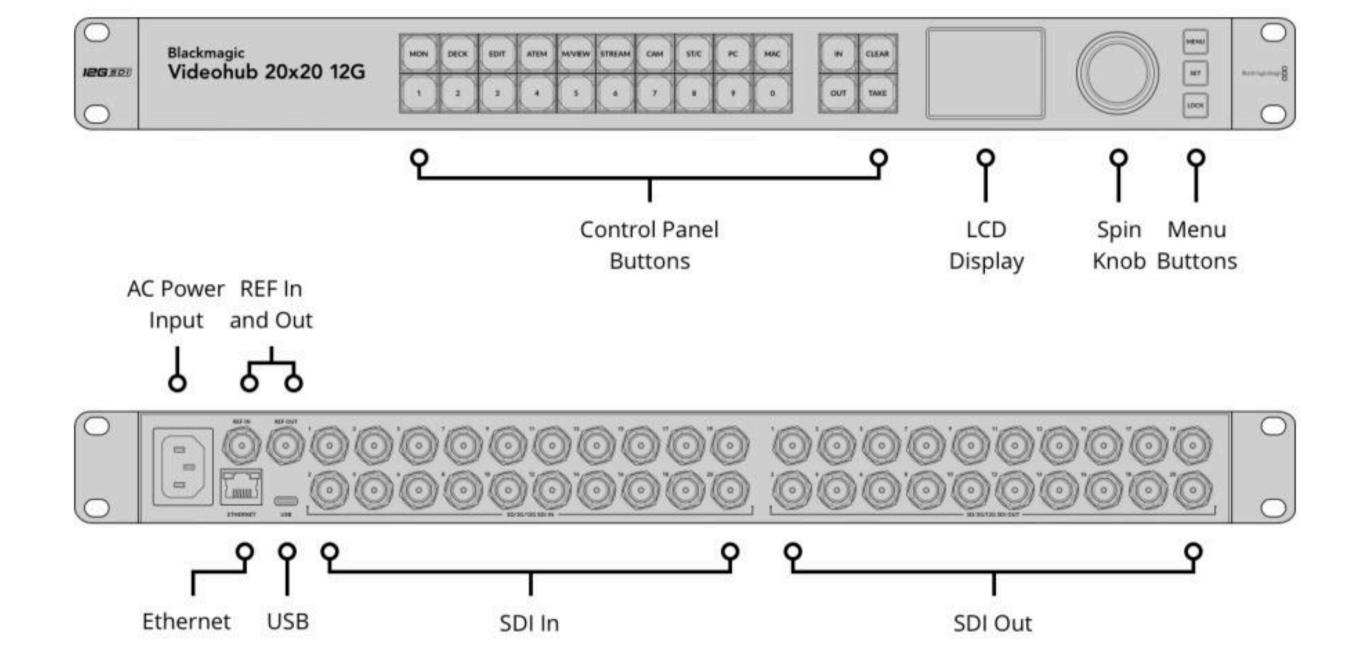
SDI Video Outputs SDI Reclocking Ethernet

20 On all SDI outputs. Supports 10/100/1000 BASE-T.

SDI Rates Reference Inputs Computer Interface

DVB-ASI, 270Mb, 1.5G, 3G, 6G, 12G. Tri-Sync or Black Burst. USB-C

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Standards

SD Video Standards

525i59.94 NTSC, 625i50 PAL

HD Video Standards

720p50, 720p59.94, 720p60 1080i50, 1080i59.94, 1080i60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p47.95, 1080p48, 1080p50, 1080p59.94, 1080p60 1080PsF23,98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30

2K Video Standards

2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2Kp47.95 DCI, 2Kp48 DCI, 2Kp50 DCI, 2Kp59.94 DCI, 2Kp60 DCI 2KPsF23.98 DCI, 2KPsF24 DCI, 2KPsF25 DCI, 2KPsF29.97 DCI, 2KPsF30 DCI

Ultra HD Video Standards

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p47.95, 2160p48, 2160p50, 2160p59.94, 2160p60

4K Video Standards

4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, 4Kp47.95 DCI, 4Kp48 DCI, 4Kp50 DCI, 4Kp59.94 DCI, 4Kp60 DCI

SDI Compliance

SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 372M, SMPTE 424M, SMPTE 425M level A and B SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-10, ITU-R BT.656 and ITU-R BT.601

SDI Audio Sampling

Television standard sample rate of 48kHz and 24-bit.

SDI Video Sampling

YUV 4:2:2 and RGB 4:4:4

SDI Color Precision

10, 12-bit RGB 4:4:4 in all HD and 2K modes, Ultra HD modes up to 2160p30 and 4K modes up to 4Kp30 DCI. 10-bit YUV 4:2:2 in all modes.

SDI Color Space

REC 601, REC 709, REC 2020

SDI Auto Switching

Automatically selects between 270Mb SD-SDI, 1.5G HD-SDI, 3G level A and level B HD-SDI, 6G HD-SDI, 12G-SDI and DVB-ASI on each input so that each input can be running a different television standard.

SDI Metadata Support

Video payload identification ancillary data as per SMPTE 352M.

Control

Built in Control Panel

24 buttons for local control of Videohub with 3 buttons and search dial for menu control. 2.2 inch color display.

External Control Panel

Includes Blackmagic Videohub software control panel for Mac and Windows. Supports Videohub Smart Control Pro and Videohub Master Control Pro hardware panels. Includes Blackmagic Videohub SDK and Ethernet Videohub Control Protocol.

Control Panel Connection

Ethernet

Software

Software Control

Router control included free for Windows™ and Mac™.

Internal Software Upgrade

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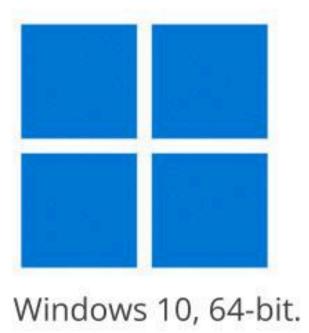
Via included updater application.



Operating Systems



Mac 12.0 Monterey, Mac 13.0 Ventura or later.



Windows 11.

Display

Displays

Built in 2.2 inch LCD for video and menu settings.

Power Requirements

Power Supply

1 x Internal 100 - 240V AC 50/60Hz. IEC power cable required.

Power Fail Protection

Crosspoint connections preserved and restored instantly at power on.

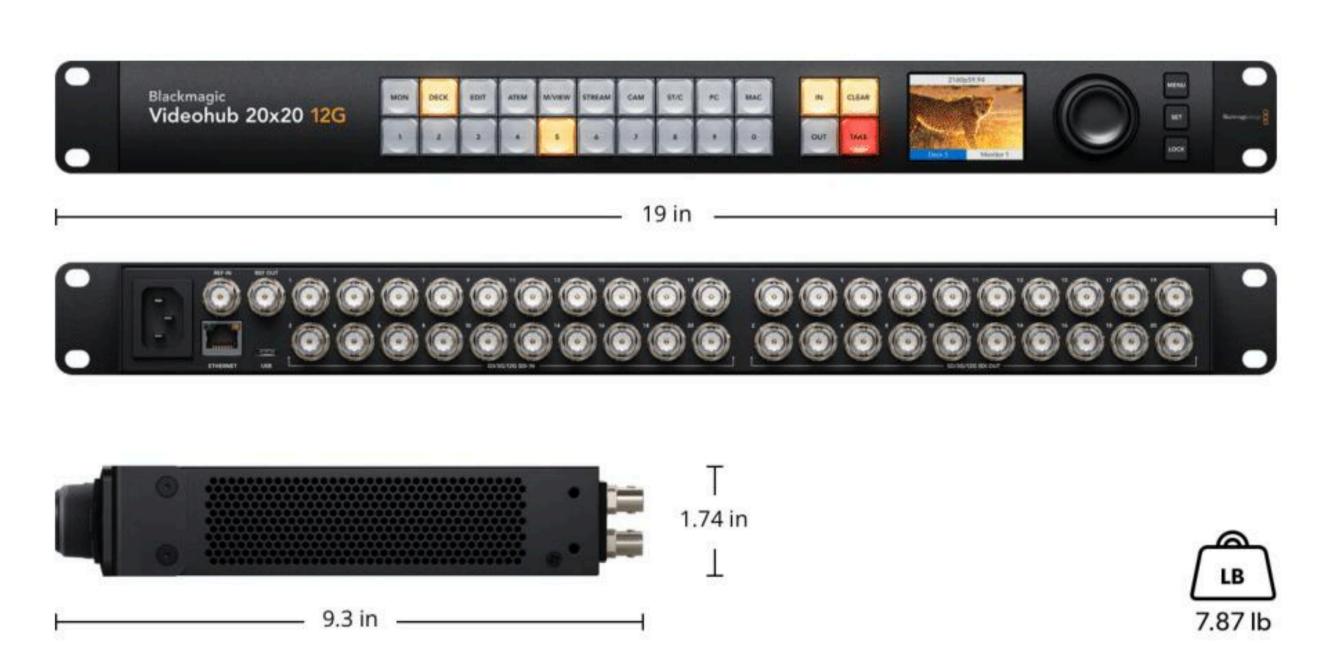
Power Usage

27.5 W max.

Physical Installation

1 rack unit height.

Physical Specifications



Environmental Specifications	S	
Operating Temperature 0° to 40° C (32° to 104° F)	Storage Temperature -20° to 60° C (-4° to 140° F)	Relative Humidity 0% to 90% non-condensing
What's Included		
Blackmagic Videohub 20x20 12G Welcome wallet with QR code for s	oftware download	
Warranty		
3 Year Limited Manufacturer's War	ranty, and 12 Month Warranty on the front	panel.
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Smart Videohub CleanSwitch 12x12



Compact 6G-SDI router with built in re-synchronizers on all inputs allows clean switching between all video sources of the same video standard, and can be used as 12 re-synchronizers for automatic re-timing of SDI feeds. Smart Videohub CleanSwitch supports 12 inputs and 12 outputs in virtually all SD, HD and Ultra HD video formats. Supports multiple formats on the same router at the same time and will clean switch between multiple formats that match the reference frame rate when the switching is between the same video standard. Includes front panel button and spin knob routing, elegant machined metal front panel with LCD for routing display and video monitoring and remote Ethernet control.

Connections

SDI Video Inputs

12 x 10-bit SD-SDI, HD-SDI and 6G-SDI.

SDI Video Outputs

12 x 10-bit SD-SDI, HD-SDI and 6G-SDI.

SDI Rates

270Mb, 1.5G, 3G, 6G.

Video Input Re-Sync

On all 12 inputs for clean switch.

SDI Reclocking

On all SDI outputs.

Reference Input

Tri-Sync or Black Burst.

Control Panel Connection

Ethernet.

Serial Control Connection

RJ-6 RS-422.

Multi Rate Support

Auto detection of SD, HD or 6G-SDI. Simultaneous routing of 4K, HD and SD video.

Updates

USB

Front Panel Router Control

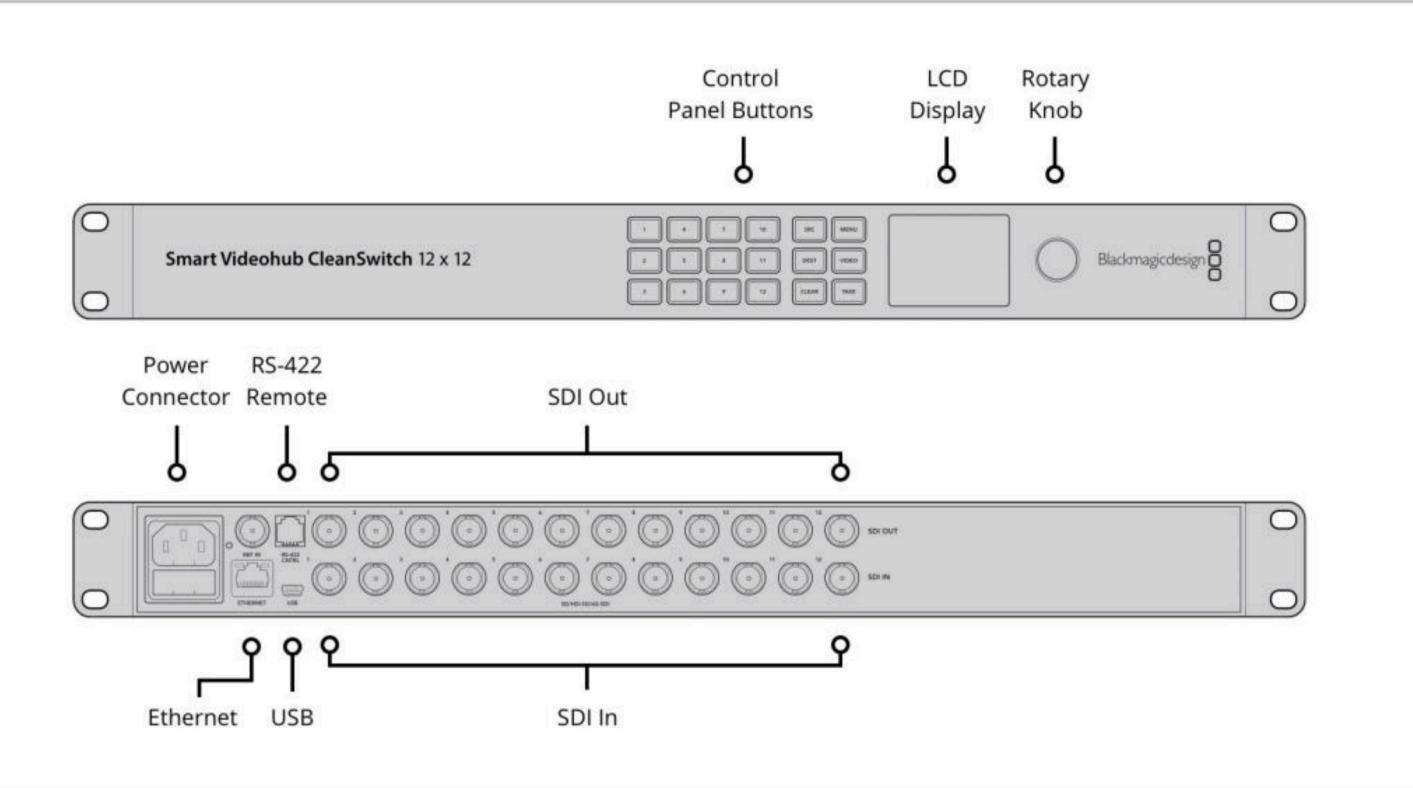
12 buttons for local control of Videohub. 6 buttons and scroll wheel for control of LCD display or RJ45 Ethernet.

Router Configuration

Via front panel LCD or RJ45 Ethernet.

RS-422 Router Control

1 x input for controlling router crosspoint switching.



Standards

SD Video Standards

525i59.94 NTSC, 625i50 PAL.

HD Video Standards

720p50, 720p59.94, 720p60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30 1080i50, 1080i59.94, 1080i60

2K Video Standards

2K DCI 23.98p, 2K DCI 24p, 2K DCI 25p 2K DCI 23.98PsF, 2K DCI 24PsF, 2K DCI 25PsF

Ultra HD Video Standards

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30

4K Video Standards

4K DCI 23.98p, 4K DCI 24p, 4K DCI 25p

SDI Compliance

SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M Level A and B, ITU-R BT.656 and ITU-R BT.601.

SDI Video Sampling

4:2:2 and 4:4:4

SDI Audio Sampling

Television standard sample rate of 48kHz and 24 bit.

SDI Color Precision

10-bit 4:2:2 and 4:4:4

SDI Color Space

YUV or RGB.

SDI Auto Switching

Automatically selects between SD-SDI, HD-SDI, and 6G-SDI on each input.

SDI Metadata Support

Video payload identification ancillary data as per SMPTE 352M.

Control

Built in Control Panel

12 buttons for local control of Videohub with 6 buttons and scroll wheel for menu control. 2.2 inch color display.

External Control Panel

Includes Blackmagic Videohub software control panel for Mac and Windows. Supports Blackmagic Smart Control and Blackmagic Master Control hardware panels. Includes Blackmagic Videohub SDK and Ethernet Videohub Control Protocol.

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Software

Software Control

Router control included free for Windows™ and Mac™.

Internal Software Upgrade

Via included updater application.

Operating Systems



Mac 10.15 Catalina, Mac 11.1 Big Sur or later.



Windows 10, 64-bit.

Display

Built in LCD for video and menu settings.

Power Requirements

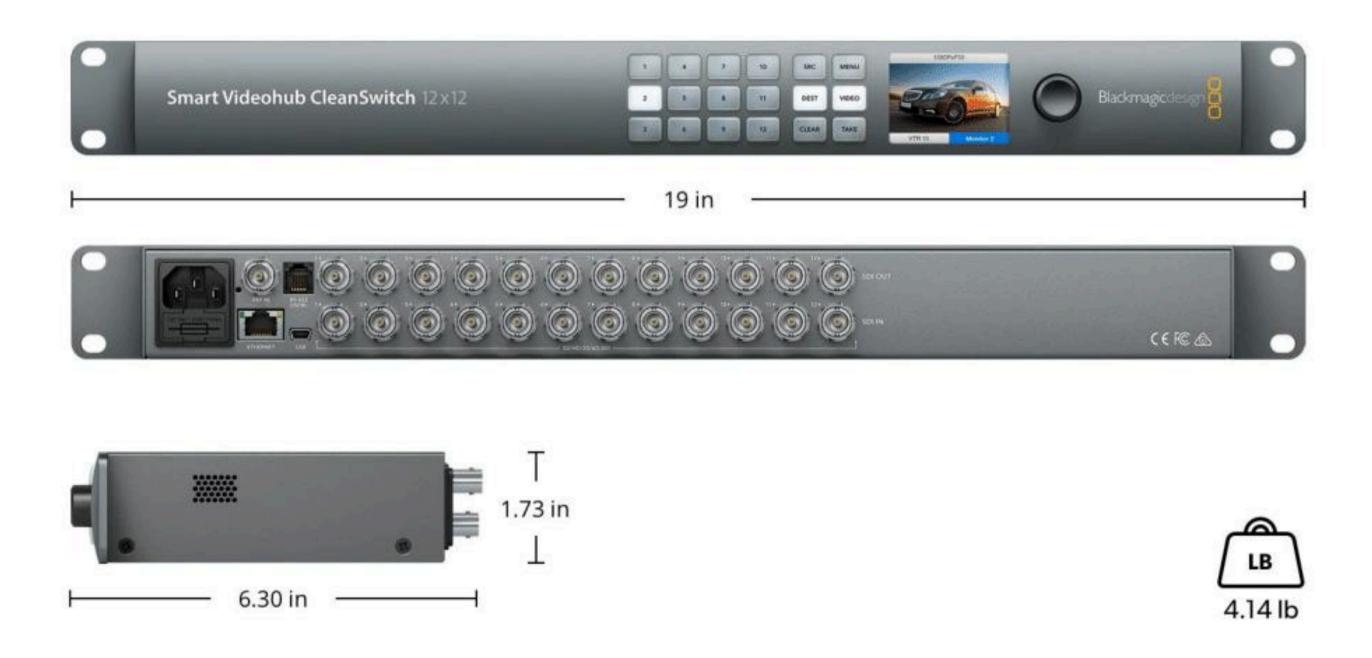
Power Fail Protection

Router connections preserved and restored instantly at power on.

Power Supply

IEC power cable required. 100 - 240V AC input.

Physical Specifications



Physical Installation		
1 rack unit size. Less than 6 inches deep.		
Environmental Specifications		
Operating Temperature 0° to 40° C (32° to 104° F)	Storage Temperature -20° to 45° C (-4° to 113° F)	Relative Humidity 0% to 90% non-condensing
What's Included		
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