



Blackmagic Design 2110 IP UpDownCross 12G

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SMPTE-2110 IP video product - UpDownCross 12G

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Features

- SMPTE-2110 IP video product
- Conforms to the SMPTE-2110 IP Video Standard
- Multi-Rate 12G-SDI for HD and Ultra HD
- Uses Simple 10G Ethernet for Low Cost
- Incredibly Easy to Install
- Connect via Ethernet Switch
- Includes NMOS Protocol for Building a Virtual Router
- Get True 10-Bit Broadcast Video Quality
- Get Low Cost High Frame Rate Ultra HD
- Supports All SD, HD and Ultra HD Formats up to 2160p60
- Supports Remote Administration for Settings and Updates
- Flexible and Redundant Power

Blackmagic Design has a wide range of SMPTE-2110 IP video products, including standards converters, video monitors, audio monitors and even cameras. Plus they support Ultra HD using low cost 10G Ethernet. Most converter models are bidirectional, so they're fantastic to use on cameras when you need an extra program return. The rack mount models have an elegant design with a colour LCD for monitoring, menus and diagnostics. All models conform to the SMPTE-2110 standard for IP video, including PTP clocks and even NMOS support so you can make connections using a video router panel. The Blackmagic 2110 IP Converter 3x3G model even includes a reference video output, timed to the 2110 PTP clock.

Build Professional SMPTE-2110 Broadcast Systems

The Blackmagic 2110 IP Converters have been designed to integrate SDI equipment into 2110 IP broadcast systems. The rack mount models can be installed in equipment racks right next to the equipment you're converting. However with Blackmagic Studio Cameras, Blackmagic Audio Monitor 12G G3 and the SmartView 4K G3, you can build most of your SMPTE-2110 system without converters. Plus most Blackmagic SMPTE-2110 IP video products can be remote powered. Adding converters also means you get a low cost way to transform all your video equipment to SMPTE-2110. Simply add a Blackmagic 2110 IP Converter to live production switchers, disk recorders, streaming processors, cameras, TVs and more.

Conforms to the SMPTE-2110 IP Video Standard

Blackmagic 2110 IP products conform to the SMPTE-2110 standard for IP video, which specifies the transport, synchronization and description of 10-bit video, audio and ancillary data over managed IP networks for broadcast. It can also re-sync SDI inputs to a common PTP clock or external gear can lock to the reference output that's also generated from the PTP clock. Blackmagic 2110 IP products support SMPTE-2110-20 uncompressed video, SMPTE-2110-21 traffic shaping/timing, SMPTE-2110-30 audio and SMPTE-2110-40 for ancillary data. Plus Blackmagic 2110 IP products support multicast, which is an efficient way of distributing video, audio and data from a single source to multiple destinations.

Multi-Rate 12G-SDI for HD and Ultra HD

Blackmagic 2110 IP video products, designed for advanced television production, also feature the latest 12G-SDI video connections. This means you can connect to traditional broadcast gear using SDI and new 2110 IP based broadcast systems with the same product. 12G-SDI is multi-rate, which means that a single video BNC cable

can connect to any HD or Ultra HD equipment. You get support for 720p HD at both 720p50 and 59.94p. Plus 1080i HD interlaced standards in 1080i50 and 1080i59.94. 1080p support includes 1080p at 23.98, 24, 25, 29.97, 30, 50, 59.94 and 60p. The 12G-SDI also handles Ultra HD in all television standards including 2160p at 23.98, 24, 25, 29.97, 50, 59.94 and 60p.

Uses Simple 10G Ethernet for Low Cost

Blackmagic 2110 IP Converters are available in models with RJ-45 connectors for simple Cat6 copper cables or SFP sockets for optical fiber modules and cables. Using simple Cat6 copper cables means you can build SMPTE-2110 systems at a dramatically lower cost. The cables are simple and Ethernet switches for 10G Ethernet are very common. In most cases, modern buildings already have 10G Ethernet cable installed, so you can use the cables you already have. Plus copper cables can remote power devices such as converters and cameras. There are also models for optical fiber Ethernet. Optical fiber at 10G speed is much lower cost than 25G or 40G Ethernet. You can even use 3G, 6G or 12G-SDI SFP modules.

Incredibly Easy to Install

One of the biggest problems with SMPTE-2110 is needing an IT tech on standby to keep video systems running. Blackmagic 2110 IP converters solve this problem because they can connect point to point, so you don't need to use a complex Ethernet switch if you don't want to. That means you get the advantage of SMPTE-2110 IP video with simple Ethernet cables, remote power and bidirectional video. It's just like an SDI workflow. You can plug cameras into rack converters and get all the camera control, program video, power and tally, with a single cable. Or connect an HDMI converter to a rack converter for remote monitors. Everything automatically configures and just works.

Simple Point to Point

You can connect the converters point to point with a simple Ethernet cable between the converters. An example is between a rack and a monitor converter or camera. The point to point connection auto configures so you don't need to enter any settings. It's a simple cable that you just plug in. With point to point connections, you get the perfect solution for live events as the Ethernet cable can make connecting to cameras extremely simple with all control, power and video down a single cable.

Connect via Ethernet Switch

When working in larger SMPTE-2110 systems, such as broadcast, you can connect all your video gear to an Ethernet switch. In this case, you just plug everything into the

Ethernet switch and then make the connections between devices by configuring the Ethernet switch. It works just like a large video router as all connections are made between the SMPTE-2110 devices. Plus all Blackmagic 2110 IP products support the NMOS protocol. It's easy to configure and is totally flexible.

Blackmagic 2110 IP UpDownCross 12G

The Blackmagic 2110 IP UpDownCross 12G is a premium standards converter for live production and broadcast. It allows you to convert between any equipment with 2110 IP video, 12G-SDI, and HDMI video connections. You get the highest quality video conversion between all SD, HD, and Ultra HD video standards. It has an elegant design with an LCD display, speaker, and headphone jack. The LCD also has menus for setting the video standard. The USB port on the front panel even works as an HD webcam.

Blackmagic 2110 IP SDI to HDMI 12G

Designed for critical colour accurate monitoring using the latest generation of OLED TVs, Blackmagic 2110 IP SDI to HDMI will convert 2110 IP or 12G-SDI video to HDMI in all SD, HD and Ultra HD video standards. You also get 3D LUTs for accurate calibration of HDMI displays. Plus the 2 channel XLR analog monitoring out supports remote level and custom delays for driving powered speakers. The front panel also includes an LCD, speaker and headphone socket for monitoring.

Blackmagic 2110 IP SDI to HDMI 12G?10

The Blackmagic 2110 IP SDI to HDMI 12G-10 provides colour accurate monitoring for OLED TVs and multi-channel surround sound monitoring with powered speakers. It's perfect for colour grading rooms and theaters. It supports both 2110 IP and 12G-SDI inputs with 3D LUTs for accurate HDMI display calibration. It has 10 independent XLR audio outputs with remote level control and customizable delay for perfect AV sync with TVs and projectors. The front panel includes an LCD, speaker and headphone socket.

Includes NMOS Protocol for Building a Virtual Router

All Blackmagic 2110 IP Converters support the NMOS interface specifications so all 2110 IP video devices can operate together as a large virtual router. Plus Videohub Master Control Pro and Smart Control Pro can route sources to destinations on 2110 IP networks because they can act as NMOS controllers. The NMOS interface specification describes how SMPTE?2110 devices are discovered and controlled on IP networks. Blackmagic 2110 IP Converters support IS?04 for discovery and

registration of IP video devices and IS-05 for connection management between IP video devices. This means you can make connections between sources and destinations just like a traditional SDI router.

Get True 10-Bit Broadcast Video Quality

Blackmagic 2110 IP Converters are designed to support the highest quality video. 10-bit is the most commonly used television standard as colours can be represented with 4 times the precision of 8-bit video. Only working with 10-bit video will ensure all images are a perfect pixel for pixel transmission of the original SDI source, so you're always working at the absolute highest quality possible. This means you don't lose quality, even at high frame rate Ultra HD, so you get the sharpest green screen keying plus crisp titles and colour correction. Plus Blackmagic 2110 IP Converters include SDI re-clocking so all devices in your studio receive a regenerated signal with very low SDI jitter.

Get Low Cost High Frame Rate Ultra HD

By using 10G Ethernet, Blackmagic SMPTE-2110 IP video products can be smaller, lower power and more affordable. Plus all HD standards and Ultra HD video standards are still the highest 10-bit quality. With 10G Ethernet, all video is uncompressed, however when running at the highest 2160p59.94 and 2160p60 formats, the IP10 codec is used. To use 2160p59.94 and 2160p60 with low cost 10G Ethernet, you need some data rate reduction. The Blackmagic IP10 codec solves this problem. It has a low latency of 8 samples, is open standard and has no license fees. Plus it's an extremely small codec that uses very few FPGA resources, so it ensures SMPTE-2110 IP video products remain affordable.

HDMI is Perfect for TVs, Monitors and Projectors

Many models of Blackmagic 2110 IP converters have built in HDMI connections so you can connect to consumer cameras, monitors, televisions, video projectors, and even ATEM Mini switchers. The HDMI connections automatically switch video standards between HD and Ultra HD so you can work in any worldwide television standard. 720p HD standards include 720p50 and 720p59.94. 1080i HD interlaced standards include 1080i50 and 1080i59.94. 1080p HD standards include 1080p23.98, 24, 25, 29.97, 30, 50, 59.94 and 60p. Blackmagic 2110 IP video products even handle 1080 PsF formats. When working in Ultra HD, you get support for 2160p at 23.98, 24, 25, 29.97, 30, 50, 59.94 and 60 frames per second.

Supports All SD, HD and Ultra HD Formats up to 2160p60

Blackmagic 2110 IP Converters have connections that support SD, HD and Ultra HD

video standards. This means it can connect your existing SDI broadcast equipment to new IP based infrastructure. In standard definition, Blackmagic 2110 IP Converters support both 525i59.94 and 625i50 standards. In high definition, Blackmagic 2110 IP Converters support all 720p video standards up to 720p60, all 1080 interlaced standards up to 1080i60 and all 1080p standards up to 1080p60. In Ultra HD you get support for all standards up to 2160p60. The converters will auto switch to a new video standard when the input changes. Plus the multi channel models can run a different video standard on each channel.

Supports Remote Administration for Settings and Updates

When you have a lot of equipment installed throughout complex broadcast systems, remote administration of the equipment is vital for diagnosing problems, changing settings and upgrading software. The Blackmagic Converter Utility can be downloaded free of charge so you can update the converter software and change settings. Plus it's available on both Mac and Windows. The software can be connected directly to the USB port or via the Ethernet connection to your IP network. Admin via Ethernet means you can change settings on multiple converters from a single computer. That's great when the converters are located in hard to reach locations.

Flexible and Redundant Power

The full rack mount models of Blackmagic 2110 IP Converters include a built in AC power supply. This means you can just plug into any wall outlet. 12V DC models include an international power supply which automatically works from 100 to 240V AC, so you can use it anywhere in the world. But most Blackmagic 2110 IP Converters support both AC and PoE+ power connections, so the converters can be powered from the Ethernet connection. That's great when there is limited power where the converter is going to be installed. But PoE+ is also great for backup power as the converter will still work even if the external power cable is not plugged in. With PoE+ support, you always have a fantastic redundant power source.

Localized for 13 Popular Languages

Blackmagic 2110 IP Converters support multiple languages in the set up utility or the menus on models with an LCD, so this means you can set the user interface to the language you prefer. You get support for English, Chinese, Japanese, Korean, Spanish, German, French, Russian, Italian, Portuguese, Turkish, Polish and Ukrainian languages. Simply go into the front panel LCD menu to set the language, plus you can always change languages at any time in the future. Once a language is selected, the menus on all the LCDs will change to the selected language. This means Blackmagic Design products are perfect for installation into live production

systems that are transported for global work.

