



Blackmagic Design 2110 IP Mini BiDirect 12G SFP

ProdCode: BMDCONVIP12GSFP

Convert broadcast cameras with SDI connections to SMPTE-2110 IP video systems - SFP

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Features

- Conforms to the SMPTE ST-2110 standard for IP video
- Available in models with RJ-45 connectors for simple Cat6 copper cables or SFP sockets for optical fiber modules and cables
- Easy to Install
- Point to point connection auto configures so you don't need to enter any settings
- Support the NMOS interface specifications so all 2110 IP video devices can operate together as a large virtual router
- Designed to support the highest quality video

Build 2110 IP Video Systems for Broadcast, Live Production and AV

Blackmagic Design has a wide range of SMPTE-2110 IP video products, including 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 ST-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 SMPTEâ€™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. But adding converters 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 SMPTEâ€™2110 IP Video Standard

Blackmagic 2110 IP products conform to the SMPTE ST-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.

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 12Gâ€SDI 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 more complex to configure, but is totally flexible.

Mini Converter or Rack Mount Models

Blackmagic SMPTE-2110 IP video products feature different designs based on their use. The 2110 IP Mini models are small so they can be hidden behind equipment.

While the rack mount models have elegantly designed front panels with an LCD, so you can walk up and change settings right from the front panel. The display also shows live video monitoring of all inputs and outputs. In addition, the LCD includes routing menus for selecting the IP source for each of the video outputs. It's just like a mini router, but built into the front panel. The rack mount models have active cooling so they can be stacked together in a rack. Plus most models support PoE Ethernet power.

Blackmagic 2110 IP Converter 3x3G

The perfect 3 channel rack mount HD SMPTE-2110 converter. With 3 separate 3G-SDI input channels and 3 separate 3G-SDI output channels, you can connect up to 3 x 3G-SDI video devices to SMPTE-2110 in the single converter. All 3 channels can be sent via a simple RS-45 style 10G Ethernet connection, so you can use common low cost CAT-6 Ethernet cables. This model also includes a reference video output that's timed to the PTP clock. There's also a front panel LCD for monitoring.

Blackmagic 2110 IP Mini IP to HDMI

This model is designed for connecting a large screen television or computer monitor into SMPTE-2110 IP systems. It's tiny design means you can mount it behind the display. It works in all SD, HD and Ultra HD video standards up to 2160p60. So it's future proof. It has a standard 10G RJ-45 Ethernet connection, so you can use regular CAT-6 Ethernet cables. The converter can be powered via Ethernet (PoE), so you don't even need to connect the power. Although a DC power supply is included.

Blackmagic 2110 IP Mini BiDirect 12G

This bi-directional 12G-SDI converter is designed to connect broadcast cameras to SMPTE-2110 IP systems. This means it handles the SDI camera feed and the SDI program return in the one converter. It's small size means it can be used in-line hand held. It also has a 5 pin XLR talkback headset connection. There's even talkback volume and a press to talk button. You get support for SD, HD and Ultra HD standards up to 2160p60. Plus it powers from the RJ-45 10G Ethernet or the included DC power supply.

Blackmagic 2110 IP Presentation Converter

This model is for podiums where speakers do presentations. It connects switchers to computers, projectors, microphones and PA systems. It has HDMI and USB-C inputs for video and the USB-C will even power a laptop. There is also an HDMI output for projectors. This output can be switched to the video input, or the 2110 IP return feed.

There are XLR mic inputs and XLR audio out for PA speakers. The RJ-45 10G Ethernet video connection can power the whole converter, even when charging a USB computer.

Blackmagic 2110 IP Converter 4x12G PWR

This converter is designed to add SMPTE-2110 IP video to 12G-SDI broadcast equipment. It features a 1RU design with 4 independent bidirectional 12G-SDI to SMPTE-2110 IP video converters using RJ-45 10G Ethernet connections. This means it can also supply high power to each 10G Ethernet connection guaranteed, so you can connect 4 Blackmagic Studio Camera 6K Pros, all at the same time. Each channel has a 12G-SDI input, but there's even a 12G-SDI program return input that sends to all channels.

Blackmagic 2110 IP Mini IP to HDMI SFP

This model connects large screen TVs, video projectors and computer monitors to optical fiber SMPTE-2110 IP systems. The small design can be mounted behind the display. It works in all SD, HD and Ultra HD video standards up to 2160p60. It has a standard SFP socket that supports a 10G optical fiber Ethernet module, so you can connect long distances. It also supports 3G, 6G and 12G optical fiber SDI models for regular SDI video compatibility. It powers from the included 12V DC power supply.

Blackmagic 2110 IP Mini BiDirect 12G SFP

This converter is bidirectional and allows 12G-SDI cameras to connect to SMPTE-2110 systems over long distances using optical fiber. That means it handles the SDI camera feed and SDI program return in the one converter. It also has a 5 pin XLR talkback headset connection with volume and press to talk buttons. Plus it supports all SD, HD and Ultra HD standards up to 2160p60. The SFP socket will accept 10G Ethernet, 3G-SDI, 6G-SDI or 12G-SDI optical modules. It also includes a 12 DC power supply.

Blackmagic 2110 IP Converter 8x12G SFP

This converter is designed to add SMPTE-2110 IP video to 12G-SDI broadcast equipment. It features a 1RU design with 8 independent bidirectional 12G-SDI to SMPTE-2110 IP video converters using SFP modules so it can use optical fiber Ethernet modules for long distances. Each channel has a 12G-SDI input, but there's even a 12G-SDI program return input that sends to all channels. This means you can send a single 12G-SDI input to all the connected devices from the single connection.

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 Smart Control can route sources to destinations on 2110 IP networks because it can act as an NMOS controller. 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 10G Ethernet can allow products to be remote powered. However, when using Ultra HD above 30fps, there is not enough bandwidth for uncompressed 10-bit video. Although all HD standards and Ultra HD at 30fps or less can be sent uncompressed in 10-bit. However, high frame rate Ultra HD needs a codec for 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.

Supports All SD, HD and Ultra HD Standards 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 Converter supports both 525i59.94 and 625i50 standards. In high definition, Blackmagic 2110 IP

Converter supports 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 on the rack mount models you can connect 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 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. The international power supply 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.

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