

Christie's Spyder X80

An Arachnid of Epic Multi-Windowing

By Jim Hutchison

Spyder X20 x 4, Plus More

Spyder X80 from Christie has four times the capabilities of its older cousin, the Spyder X20, with individual 4K 60Hz processing on both inputs and outputs. Users and programmers of the X20 can move seamlessly onto the X80 due to its familiar control interface. With a pixel canvas of 80 million pixels, up to 24 inputs and 16 outputs, each with a DisplayPort 1.2, HDMI 2.0, and 12G SDI connectors, Spyder X80 is the rig that will give you large-scale magic for your large-scale designs.

Christie Spyder xX80

PROS

- Massive multi-windowing processing power
- Multiple input and output connections individually
- HDR Capability
- 4K/60Hz input and output, simultaneously
- No latency issues
- Easy-to-use GUI

CONS

None

FEATURES

- Up to 6 input modules each with 4 inputs
- User may define the number of modules required from 1 to 6
- Outputs: Up to 4 output cards each with 4 outputs; User may define the amount of modules required from 1 to 4
- Each input supports 3 connections: DisplayPort 1.2, HDMI 2.0, 12G-SDI
- Each output supports 3 connections: DisplayPort 1.2, HDMI 2.0, 12G-SDI
- Resolution: Horizontal up to 4096 and vertical up to 2400 within pixel clock
- Scan Rates: Up to 120Hz dependent on pixel clock rate maximum
- Bit Depth: Support for 8/10/12
- Frame Lock: Via a dedicated BNC, Passive black burst loop or tri level signals
- Control and networking: RS-232 in/out, Ethernet (10/100/1000)

STATS

Physical space required	6RU
Operating Voltage	90-264 VAC @ 50/60Hz
Operating Current	14A max, Power 1680W
Size	23.54 x 17.36 x 10.28" (LxWxH)
Weight	79.75 lbs. fully loaded
Manufacturer	Christie
More Info	christiedigital.com

Whenever a new piece of gear is introduced to the field, the major question that gets asked is "what shows is it on, who's using it?" It seems like a large market share of our industry is employing the Spyder X80 multi-screen windowing processor from Christie — for controlling multiple inputs and routing them to multiple displays across all types of connections, resolutions, and refresh rates, all single point and single cable. Users are making absolutely incredible multi-surface experiences for their clients using the Spyder X80 as the main backbone.

The particular piece of equipment in question for this Road Test is the 80 million-pixel Christie Spyder X80 multi-screen windowing processor. The features Spyder X80 brings to the market make your job easier by making it reliable, along with making tasks short and sweet. It also stands alone at the envelope of processing power — nothing is as powerful as the drive train of the X80.

The events that Spyder X80 make happen are equally stunning. It's powering the largest sports video display board in North America, the 360° surrounding video wall at Mercedes-Benz Stadium in Atlanta. The X80 has also been powering many of the largest events in North America, including annual medical, software and media conferences for DaVita Medical Group (a.k.a. Village-wide), Tableau (where 90 million pixels of 4K content was displayed), Cvent Connect, the Adobe Summit and Turner Upfront, as well as international events including Screenforce Days in Germany and Game XP in Rio de Janeiro.

Across the world, the Spyder X80 is powering multi-display live events, televised events, corporate production of all sizes and shapes and concert staging, among other departures into video production. The X80 attracts genius level video professionals to contend with the kinds of designs these artists create because it gives them confidence and removes worry, and for all of the users of the Spyder X20 system out there, the workflow between the X80 and X20 is exactly the same, so there is little adaptation to jump from one system to the next. The X80 isn't a new jet replacing the Spyder X20, it's just a faster, bigger one. It drives the same — your interface is similar.

It's several times more powerful than the competition across the class in the video production world. The canvas of the X80 gives you 80 million pixels' worth of space to concoct groups of destinations and picture-in-picture display; all that can be cued up and scripted how you need them. Within this canvas, you can have multiple pixel spaces made of a mix of sources with a seemingly infinite amount of destinations — single displays, arrayed displays like video walls or groups of flat panels, blended projection, projection mapping, signage, advertising, just to name some well-used examples.

Spyder X80 is a powerhouse multi-windowing video processor with enough secret sauce to create incredible experiences for any production; it's also well suited to the higher resolution imagery of today's market and artistry, having the processing power to



push through multiple 4K sources without latency issues. Regardless of the application, the Spyder X80 is ready for anything, whether it's a massive House of Worship stage, a broadcast set, post production suites, extensive corporate lobby displays, and any size of corporate convention center ballroom or auditorium with lots of signal routing. Spyder X80 is a box of pure fire.

Look and Feel

The Spyder X80 takes up six rack units, as to be expected for a device with the capabilities of this one, and weighs in around 76 pounds fully loaded. It's a well-engineered box as well, with a solid feel to both connections and casing. Putting the Spyder X80 into a rack gives you confidence that you're not going to have a damaged engineering rack when our stagehand brothers and sisters bounce it across the dock, up the freight elevator, and across thousands of miles of ballroom bumps. The unit has a slick, sleek design, and the front of the unit includes two interactive screens onboard. One screen is packed with look presets and shortcuts to important items like the input screen, outputs, administration and network. The second screen gives instant feedback for things like IP address, number of inputs and outputs, software version, temperature, genlock status, and graphic indications as to content playing and destinations configured. This processor also has four hot-swappable power modules, with redundancy. It's a powerhouse unit, and it also looks the part.

Non-Partisan Processing Power

This processor has a pretty wide scale of configuration, not only in the input/output options but in the input/outputs themselves. The Spyder X80 takes in three input connector styles per input: DisplayPort 1.2, HDMI 2.0, and 12G SDI feeds. Perhaps one of the most impressive features of this processor is that each of those inputs on each of those port styles can take 4K video at 60Hz and route it to any output at 4K at 60Hz, simultaneously, across the pixel canvas, without latency issues. Each output also has a DisplayPort 1.2, HDMI 2.0, and 12G SDI connection.

The Spyder X80 is configurable in inputs and outputs, modularly, as you would expect such a unit to be adaptable for size and

scale of production. The unit can accept up to six of its input cards, each with four inputs (in the three-connection input style) and can process up to four of its output cards, each with four outputs, again with the three-connector trifecta. In essence, you can have a four input/four output Spyder X80 (one card each input and output), or you can have a 24 input/16 output Spyder X80 (six input cards and four output cards, a full load) and each step in between. A notable feature on outputs is the DisplayPort output splitting — you can take one 4K input on any of your inputs and break it into four HD feeds, courtesy of DisplayPort's MST technology. Add another useful feature, any output on the Spyder X80 can be rotated, individually — your video podium cover or other portrait-orientation source is quick work.

Signal and color depth are also very important touch points for this processor. Spyder X80 will do 8, 10, and 12-bit depth on color, what Christie calls Deep Color Mode. At 8-bit depth, the pixel space is 80 million pixels; if you wanted deeper bit depth sources, you're given a canvas of 53 million pixels at 12-bit color depth.

Interface

Accessing the Spyder X80 is done in a number of ways with multiple options. X20 programmers will recognize the GUI software, Spyder Studio, where configuration, inputs/outputs, the pixel canvas and your pixel spaces, among other key features, can be found. The device also integrates with the Christie Widget Designer software, part of the Pandoras Box family, for creating vast arrays of linking and control, like connecting to lighting consoles, or taking in feedback from scenic motion control and interpreting that input to the Spyder's control and creativity. Using the network ports or serial ports, Spyder X80 can be controlled via a network to a number of third-party devices, like the Montage control surface, or via a remote terminal in another part of the venue. Frankly, the Widget Designer tool piqued my curiosity in this processor; with the state of tracking and automation in today's Entertainment industry, so much of how a device interacts with its surroundings can make or break its reputation, and Christie produced a powerful contender in the Spyder X80.