Software Release Notes

Spyder-S · Spyder Studio software

Spyder-S is the 5th generation of the Spyder Windowing Video Processor — a platform designed by industry leaders, built on two decades of market innovation. Built on FPGAs and purpose-built hardware rather than general-purpose computing, Spyder-S delivers deterministic 1–2 frame latency and guaranteed availability. Consistent performance, every show.

What sets it apart is the Modular Distributed Architecture. The market standard is an expensive, monolithic chassis. Spyder-S is built differently — a fleet of compact 1RU Frames that link together to form a single processing system. Start with a single Frame and scale to sixteen, reaching more than 200 million pixels on a single canvas, all from one software stack and one operator workflow. The result: more flexibility, more scalability, the highest performance — at a better total cost of ownership.

This document provides the release history for Spyder-S and the Spyder Studio control software. Releases are listed newest first.

Latest release: 6.1.3 (August 18, 2026)
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6.0.0 — September 17, 2025 Initial product release

6.1.3 — August 18, 2026

Maintenance release

- **Output synchronization —** When a new configuration is created, alternate output sync is now enabled by default for all output types (HDMI, DisplayPort, SDI, and SFP), keeping outputs correctly synchronized.
    - *Applies to new configurations: alternate output sync is set when a configuration is created. Existing configurations keep their previous settings; create and apply a new configuration to enable it on your outputs.*

6.1.2 — June 5, 2026

Maintenance release

- Fixed Configuration Manager background-source input crop and position settings resetting; cropped or repositioned background inputs now retain their geometry.

6.1.1 — June 1, 2026

Maintenance release

- Fixed the alternate channel not being disabled for 7680×2160 background sources.
- Background Source Inputs dropdown now shows the alternate input as disabled (not hidden) so operators can swap onto it.
- Fixed background input sizing in the OpMon preview when the signal resolution doesn't match the configuration; the preview now matches the program canvas.
- Known issue: ultra-wide background inputs may appear under-sized in the OpMon preview (for example, a single 7680×1080 PixelSpace with a 7680×1080 background) — a hardware preview-pipeline scaling limit; program output is unaffected.

6.1.0 — May 14, 2026

Feature release · Builds on 6.0.1

New features

FRAMES & INPUTS

- **DisplayPort 1.4 4×4 Frame —** A new frame type with four DisplayPort 1.4 connectors, including connection sensing and automatic input-format detection.
- **SFP 12G/HDMI 2.0 4×4 Frame —** A new SFP-based frame supporting 12G-SDI / HDMI 2.0 signal types in the 4×4 configuration.

PROCESSING & CONTROL

- **Mix Effect Function Keys & External API Control —** Drive Mix Effects from a physical control surface (such as a Stream Deck) or an external controller. New function keys assign a source to an ME bus, trigger an ME transition, and assign an ME to a layer, alongside new external API commands. Previously, Mix Effects could only be driven from the desktop client.
- **Discrete & Dynamic Global Link Layer Modes —** Choose how layers are provisioned across a multi-frame system: Global Linking (default — a layer spans all frame groups), Discrete, or Discrete with Auto-Linking.

OUTPUTS, SYNC & CONFIGURATION

- **Test Patterns, Generator, Stills & Outputs —** Built-in test-pattern generation, including loading patterns and stills to outputs for setup and verification.
- **Sync & Timing — Genlock Output —** Spyder-S can now generate a genlock reference (black-burst / tri-level sync) for downstream equipment, with a genlock override option. Version 6.0.1 supported genlock input only.
- **Free Form Configuration Manager, with Calculator —** A new free-form configuration workflow, with an enhanced numeric control that accepts arithmetic (for example, 1920×4) and a built-in calculator for resolution and area entry.

Enhancements

INPUTS & BACKGROUND SOURCES

- **Wide background inputs up to 7680×1080 @60 Hz (DP & HDMI) —** Background inputs now accept resolutions up to 7680×1080 @60 Hz (previously up to 4K in 6.0).
- **Wide background inputs up to 7680×2160 @60 Hz (DP, 4:2:2 10-bit) —** DisplayPort background inputs now accept resolutions up to 7680×2160 @60 Hz (previously up to 4K in 6.0).
- **EDID enhancements — DisplayPort support & custom resolutions —** EDID management extended to the HDMI 4×4 and DisplayPort 1.4 frames, with input override for custom resolutions.
- **Background Source configuration & properties enhancements —** A redesigned background-source configuration experience, including input configuration and input override directly in the Background Group properties.

COMPOSITING & MONITORING

- **Multiviewer support for Background Sources and Mix Effects —** Tiled and Operator's Monitor (OpMon) multiviewer tiles can now display individual background-source inputs and Mix Effects, with live program/preview follow, in addition to sources and stills.
- **Mix Effect enhancements — No Source option & Program (PGM) guard —** Mix Effect improvements including a No Source option and a program-side guard that prevents accidental replacement of on-air content.
- **OpMon & Tiled Output configuration enhancements —** Operator's Monitor interface optimizations and background-source preview support in the OpMon.

HELP

- **Dynamic Help — Mix Elements & Background Inputs —** Expanded in-application help coverage for Mix Effects and background inputs.

Fixed

Release 6.1.0 includes numerous stability, performance, and usability fixes across configuration, Mix Effects, multiviewer / OpMon, background sources, and output handling.

Compatibility & upgrade notes

- **Configuration —** The system configuration format advances to version 5. Existing configurations upgrade automatically, so no manual action is required.
- **Hardware —** Adds support for the new DisplayPort 1.4 4×4 and SFP 12G/HDMI 2.0 4×4 frames, alongside existing SDI 12G and HDMI 2.0 frames.
- **Backup & restore —** Confirm Spyder Studio and frame firmware are on matching 6.1 builds before restoring 6.1 configurations.

6.0.1 — October 20, 2025

Maintenance release

- Sources are no longer loaded onto all Mix Effects at startup; all Mix Effects now default to Source 1.
- Configuration Manager now includes guardrails to prevent bandwidth over-allocation during configuration.
- Fixed Layer mode not creating AUX Mix Effects after applying the configuration.
- Fixed HD Mix Effect count not loading when loading the current configuration.
- Fixed background source not freezing when the background mixer is set to freeze.
- Fixed background stills being removed during a new configuration when background settings were not changed.
- Fixed sources on Output 4 being cut in half when Output 3 is set to Tiled mode.
- Fixed the last source name appearing for all inputs in OpMon when Patch Sources is enabled.
- Fixed Preview keyframes resizing instead of cropping.
- Fixed the 'Lock front panel' global parameter being incorrectly displayed.
- Fixed the Next button remaining disabled after an invalid configuration was corrected.
- Fixed the system attempting to use layers hidden by background sources; hidden layers are now locked by default when applying a new configuration.
- Fixed background stills not drawing into the pixelspace on systems with more than four background outputs.
- Fixed video noise in the program portion of the OpMon.
- Fixed a potential memory issue between Linux and the R5 that could cause an HDMI node to crash.

6.0.0 — September 17, 2025

Initial product release

Welcome to Spyder-S — Christie's modular, distributed image processing platform. Version 6.0.0 is the first shipping release; every capability below is new to the product.

New features

PLATFORM & ARCHITECTURE

- **Modular, distributed architecture —** Scale the system from 1 to 16 frames as your canvas and source requirements grow. Frames interconnect with QSFP28 link cables delivering 200 Gbps bidirectional connectivity, so the system behaves as one cohesive processor regardless of size.
- **4.8 Gigapixel processing —** Dedicated pixel-processing power across the canvas and Mix Effects.
- **Massive canvas scale —** A single frame group drives up to 8× 4K (approximately 66 Megapixels). Across multiple frame groups, canvas capacity scales to 3–4× that and beyond.
- **Per-frame I/O —** Each frame provides 4 inputs and 4 outputs, with every connector supporting up to 4K (UHD) @60 Hz. Each frame also supports 4 layers (or 4 aux outputs) with 4 clones per frame.

INPUTS

- **SDI 12G inputs —** Native 12G-SDI support in the 4×4 frame configuration, supporting up to 4K@60 per input.
- **HDMI 2.0 inputs —** HDMI 2.0 support in the 4×4 frame configuration, supporting up to 4K@60 per input, including high-frame-rate and HDR formats.
- **EDID management —** Per-channel factory EDID with override (persistent across power-down and firmware updates), one-click return to factory default, and copy-EDID-from-output-to-input so an input can impersonate the downstream display.
- **Automatic input format sensing —** Inputs detect and report resolution, frame rate, and color sampling on connection.
- **Background Sources for video & stills —** Dedicate inputs as Background Sources that contribute full-canvas content; group them to behave as a single channel, auto-arranged to fill the canvas.

SIGNAL & SYNC

- **Sync source — Genlock or Freerun —** Lock Spyder-S to an external black-burst or tri-level Genlock reference at the master frame, distributed across all frames to keep every output frame-locked system-wide; or run on the internal Freerun timing generator. (PTP is not supported.)
- **System time —** Nodes have no battery-backed real-time clock; date/time is set automatically from the connected Spyder Studio client, keeping log and backup-file timestamps accurate. (No NTP/PTP server time.)

PROCESSING & COMPOSITING

- **UHD & HD Mix Effects —** Both UHD and HD Mix Effects for mixed-resolution workflows.
- **Source Streams with cloning —** A single input in Source mode can contribute to both UHD and HD streams simultaneously and feed multiple Mix Effects at once, with independently controlled mixing.

OUTPUTS & MONITORING

- **Configurable output modes —** Every frame provides 4 outputs, each supporting up to 4K@60, and each can be set to one of the following modes:
  - **Normal —** Composited canvas with sources dragged on as layered windows. (All 4 outputs.)
  - **Aux —** Route a Mix Effect or source stream directly to a display, unscaled. (All 4 outputs.)
  - **Tiled / Multiviewer —** Display multiple sources as a grid; 4 tiles at standard resolution, up to 16 at UHD. (Outputs 3 and 4.)
  - **Operator's Monitor (OpMON) —** Program and preview regions for confidence monitoring. (Output 4.)

SYSTEM & CONFIGURATION

- **Enhanced Spyder Studio for Spyder-S —** The Spyder Studio control software, evolved from the 5.4.0 platform and adapted for Spyder-S, manages and operates the entire system, with updated OSD theme options.
- **New All-In-One Configuration Wizard —** A single guided place to determine the best configuration for your modular system and apply it to the hardware in one step.

Compatibility & upgrade notes

- **Initial release —** No upgrade path from a prior Spyder-S version.
- **Backup & restore —** Available in Spyder Studio for capturing and restoring full system configurations.

Technical support

Technical support for Christie Enterprise products is available at:

- North and South America: +1-800-221-8025 or *Support.Americas@christiedigital.com*
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