

Zenith 100

Ref. ZEN100



Powerful multi-screen, multi-layer 4K60 presentation switcher and videowall processor with thirteen inputs, four outputs and one dedicated Multiviewer: a perfect fit for medium to large-scale live events and permanent LED video wall installations requiring the highest reliability and performance



Versatile connectivity

The **Zenith 100** is a powerful 4K60 multi-screen and multi-layer presentation switcher equipped with thirteen inputs, including eleven 4K60 inputs (six HDMI 2.0, three DisplayPort 1.2 and two 12G-SDI) and two 1080p inputs with user-selectable HDMI and SDI connectors. The **Zenith 100** also features four independent 4K60 outputs, each with mirrored HDMI and SDI connectors. Two of these outputs are additionally equipped with SFP+ connectors compatible with Analog Way's fiber optic or ST2110 SFP modules. The **Zenith 100** comes also standard with a dedicated Multiviewer output to control all connected sources and screens.

Countless functionalities

The **Zenith 100** offers all the advanced real-time video processing features you need to deliver outstanding presentations: true seamless switching on all layers, elegant borders and transitions, alpha channel support, Luma and Chroma keying, custom output formats, AOI ... In addition, audio can also be easily de-embedded from the video sources, and re-embedded on the physical video outputs to be sent to a display or recording device. An option is also available to add support for Dante audio networking (32 ch.). The **Zenith 100** also offers livestreaming functionality, allowing to stream any input or output to an online web service such like YouTube and Twitch.tv, or directly send the content to software like OBS Studio for recording or custom livestreaming.

Class-leading image processing

Like the award-winning LivePremier and Midra 4K products, the **Zenith 100** is based on the class-leading Analog Way's 5th generation scaling engine, featuring ultra-low latency 4K60 10-bit 4:4:4 image processing, uncompromising video quality, and HDCP 2.2 compatibility. Up to 3 video outputs can be freely configured as single screens or edge-blended widescreens, and the remaining unused outputs (2 max.) can be turned into scaled auxiliary 1080p60 outputs to display any input or screen. Each screen can be composed of a background with native resolution (live source or still image) and up to 6 resizable layers plus a still image foreground layer. The **Zenith 100** also incorporates the latest Analog Way's innovations, including advanced color correction with custom 3D LUTs, real-time SDR/HDR conversion or high frame rate processing at up to 144 Hz.

Built for reliability

Based on an extremely robust and stable FPGA-based hardware platform, the **Zenith 100** is ideal for the most demanding environments, from major live events to 24/7 permanent LED wall control. With the highest quality components selected for their proven reliability, optimized airflow management and a cleanable dust filter, the **Zenith 100** is exceptionally quiet and offers reliable operation with maximized uptime and reduced maintenance.

13 Inputs	4 outputs	4:4:4 10-bit	1 Multi- viewer	HDR & 3D LUTs	Live Stream	up to 6 layers	HDMI 2.0	DP 1.2	12G-SDI	SFP+
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Zenith 100 at a glance

- ▶ 3RU rugged chassis
- ▶ Thirteen inputs (11x 4K60 + 2x 1080p inputs)
- ▶ Four 4K60 multiplug outputs (2x HDMI/ SDI/ SFP + 2x HDMI/SDI)
- ▶ Dedicated multiviewer with 27 resizable widgets
- ▶ Real-time 10-bit 4:4:4 video processing compliant with HDR
- ▶ Live background + up to six 4K split layers (or three 4K mixing layers)
- ▶ RTMP-based livestreaming of any input or output up to 1080p30
- ▶ Intuitive HTML5-based user interface with live source thumbnails
- ▶ Advanced audio processing and dynamic routing
- ▶ Optional analog and Dante™ audio networking card (32x32 channels)

	Alta 4K models	Zenith 100	Zenith 200
Inputs		13	16
Outputs		4	6
Dedicated multiviewer		✓	✓
Max. PGM Screens		3	4
Max. Auxiliary Screens		2	4
Hard/Soft Edge mode		✓	✓
Background layer		live or still image	live or still image
4K split layers per system		6	8
4K foreground layer (still image)		✓	✓
IP RTMP Livestreaming		✓	✓

Key features

13x inputs including 11x 4K60 inputs and 2x 2K60 inputs

4x 4K60 outputs

Versatile 4K connectivity: HDMI 2.0; DP 1.2; 12G-SDI; SFP+

Up to 3 outputs configurable as independent screens or as multi-output widescreens

Unused outputs configurable as auxiliary outputs at 1080p60 (2 max)

Up to 6x 4K split layers or 3x 4K mixing layers

Seamless crossfade on all mixing layers, on all 13 sources

Live or still image background available on all PGM outputs

Additional still image foreground layer available on all screens

4x 4K concurrent still images available per screen

1 dedicated multiviewer with resizable widgets, including clocks, countdown and timers (max. resolution 2560x1600@60)

4K60 10-bit 4:4:4 ultra-low latency processing (16 msec @60Hz)

Support of HFR, up to 240Hz for inputs and 144Hz for outputs

Compliant with HDR10 and HLG - Built-in SDR/HDR converters

Advanced color correction with custom external 3D LUTs

RTMP-based livestreaming of any input or output

Advanced EDID management on every input and output

Web RCS: highly intuitive, lightning-fast web-based user interface

Easy to control ...

The **Zenith 100** features an elegant and easy-to-learn HTML5-based user interface (**Web RCS**) designed to allow for the best ease of setup and to ensure flawless control of multi-screen presentations. The Web RCS offers dozens of unique features that simplify configuring and operating, such as live resizable program/preview workspaces with high-resolution dynamic thumbnails of connected sources, multi-operator collaboration with password protection, keyword search and much more... The **Zenith 100** presentation switcher can also be conveniently operated by a comprehensive range of control solutions from compact presets shot boxes to the powerful event controller RC400T, but also by many third-party solutions or controller such as Companion, Universe or SKAARHOJ Air Fly Pro.



Live video thumbnails shown on GUI

HTTP for standard connection or HTTPS for secure connection

Built-in SNMPv2-MIB

Multi operator real-time collaboration

Fully configurable from the front panel menu

Advanced audio processing and dynamic routing

Optional Analog and Dante™ audio networking card with 32 ch.

Unique 'Quick Preset' feature

Custom output formats for non-standard display applications

Area of Interest feature to customize active areas of outputs

Freeze of inputs, layers and screens

Easily create and recall memories on your screen and AUX outputs

Fully functional simulator for offline configuration and practice

Dedicated BNC with loop for Genlock, Blackburst and tri-level sync

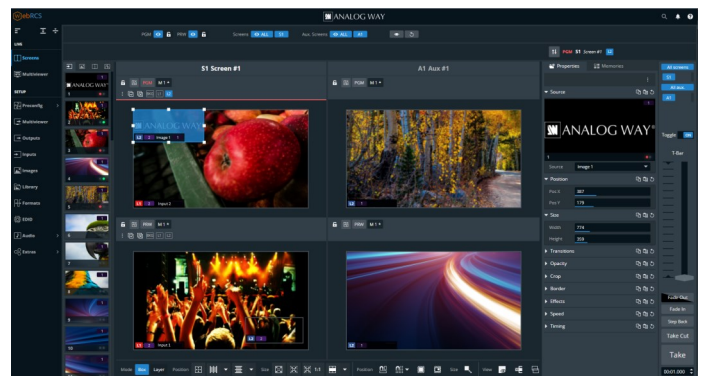
I/O connector status LEDs for easy troubleshooting

Remote services and maintenance

Backup and restore functions

Rugged 3RU chassis with cleanable dust filter

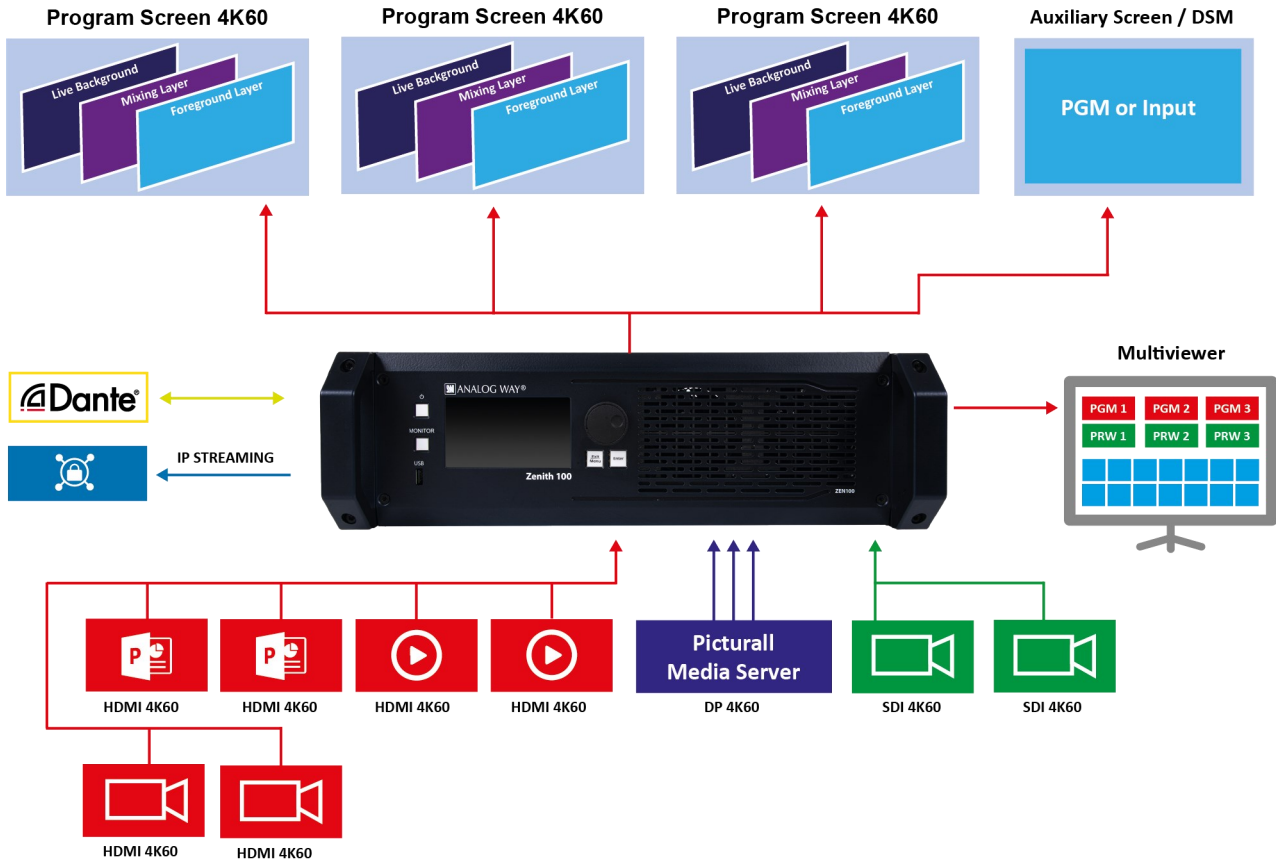
Quiet: 45dB average noise at 1m



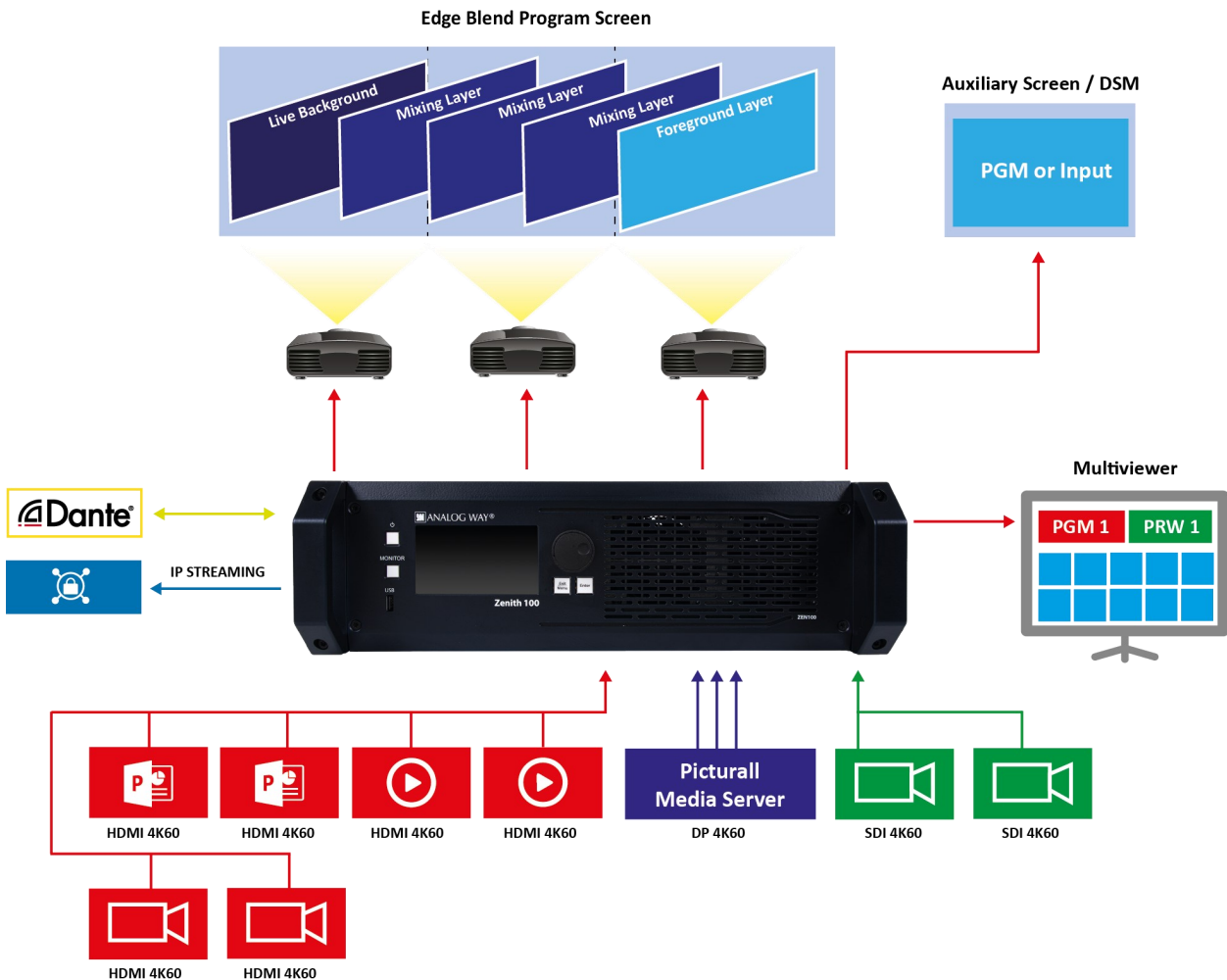
.. and easy to integrate into your ecosystem

To ease the integration into a fixed installation, the **Zenith 100** offers TCP/IP control and SNMP management via a standard Ethernet connection as well as free Crestron driver. And for even more advanced integration, Analog Way offers the VideoCompositor solution, which gives end customers easy access to the powerful video compositing capabilities of the **Zenith 100** presentation switcher directly within any Crestron application. Finally, a complete off-line simulator allows you to train yourself or to prepare your configuration and presets in advance. It also allows developers to implement and test their application or driver before having access to the **Zenith 100** device.

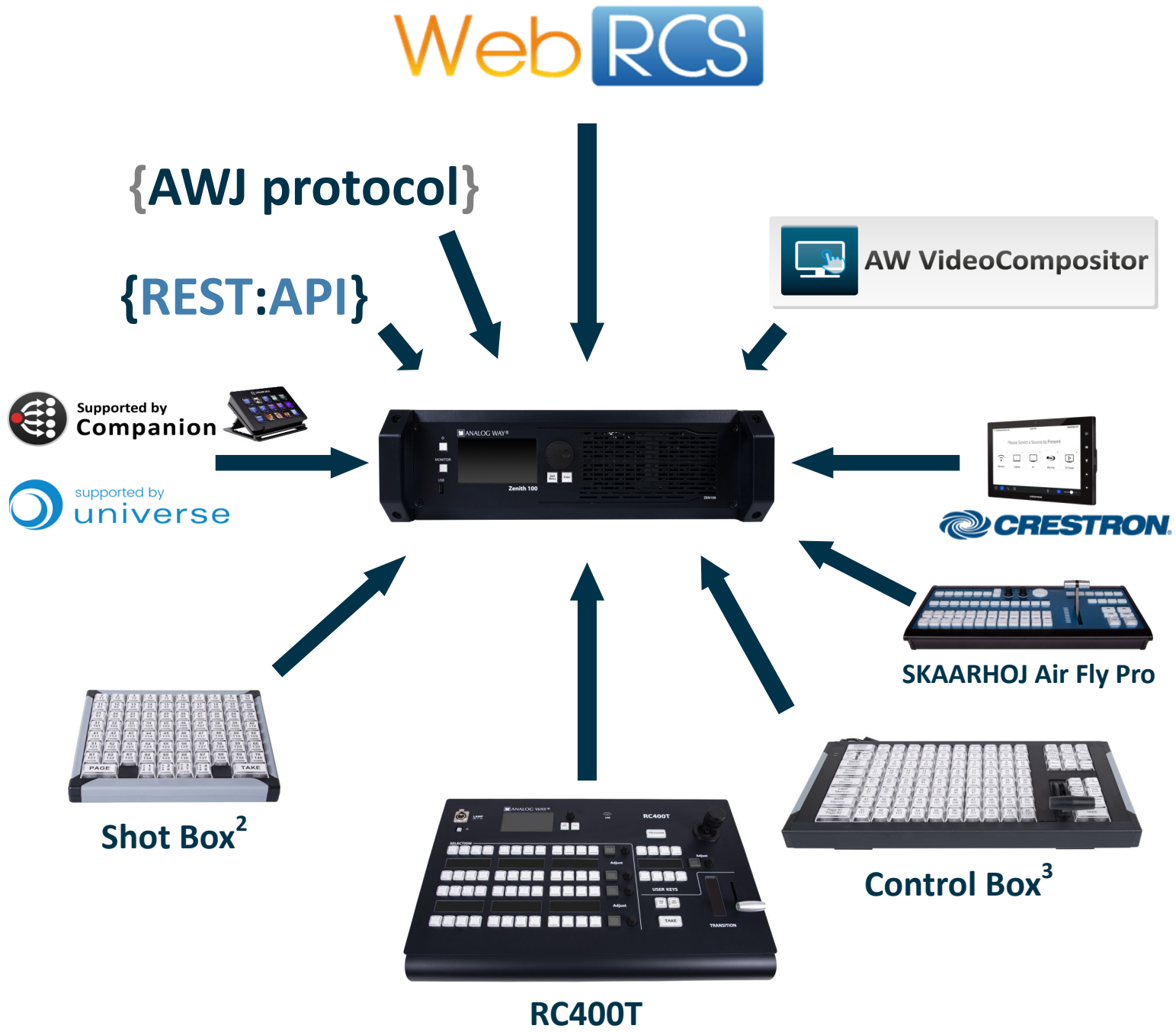
Zenith 100 - 3 independent 4K60 Screens + AUX



Zenith 100 - Multi-Projector 4K60 Edge Blending + AUX



Zenith 100 has an extensive ecosystem for control and management



Optional Analog and Dante™ audio networking card

- ▶ De-embed audio from sources and route directly to Dante™ network
- ▶ Re-embed audio from external audio processor for sending to display
- ▶ 32x32 Dante™ channels @48 kHz
- ▶ Dual redundancy Ethernet ports
- ▶ 2 analog stereo mini jack line inputs 1/8" (3.5 mm)
- ▶ 2 analog stereo mini jack line outputs 1/8" (3.5 mm)



Technical specifications

13 INPUTS

6x HDMI 2.0 ▶ up to 4K60 8-bit 4:4:4 or 4K60 12-bit 4:2:2

3x DisplayPort 1.2 ▶ up to 4K60 10-bit 4:4:4 or 4K60 12-bit 4:2:2

2x 12G/6G/3G-SDI (level A & B) ▶ up to 4K60 10-bit 4:2:2

2x HDMI 1.4 or 3G-SDI (user selectable input plug)

▶ up to 2K60 10-bit 4:4:4 (HDMI) or 2K60 10-bit 4:2:2 (SDI)

Support custom input formats up to 4096 width / height

4 OUTPUTS

2x HDMI 2.0 + 2x mirrored 12G-SDI connectors

▶ up to 4K60 8-bit 4:4:4 or 4K60 12-bit 4:2:2 (HDMI)

▶ up to 4K60 10-bit 4:2:2 (SDI) - level A & B

2x HDMI 2.0 + 2x mirrored 12G-SDI + 2x mirrored SFP+ connectors

▶ up to 4K60 8-bit 4:4:4 or 4K60 12-bit 4:2:2 (HDMI)

▶ up to 4K60 10-bit 4:2:2 (SDI and SFP+) - level A & B

Support custom output formats up to 4096 width / height

1 MULTIVIEWER OUTPUT

1x HDMI 1.4 + 1x mirrored 3G-SDI up to 2560x1600@60 8-bit 4:2:2

27 resizable widgets - customizable layouts with 20 memories

Monitor the Program, Preview, auxiliary screens and all the inputs

Built-in clocks, countdown and timers

PROCESSING

Based on Analog Way exclusive 5th generation scaling engine

Native 4K60 10-bit 4:4:4 ultra-low latency video processing

BT.709 and BT.2020 color spaces support

Advanced EDID management

Area of Interest and advanced output/screen test patterns

HDR processing including real-time SDR/HDR conversion

Advanced color correction with custom external 3D LUTs

High Frame Rate up to 144Hz

Compatible with HDCP 1.4 and HDCP 2.2

SCREENS AND LAYERS

Outputs configurable as up to 3x 4K60 PGM outputs

Unused outputs configurable as scaled auxiliary 1080p outputs

Up to 6 split layers (or 3 mixing layers)

Live or still image background available on all PGM outputs

Additional still image foreground layer available on all screens

LIVESTREAMING

RTMP/RTMPS livestreaming of any input or output

Compatible with various Web video platforms (Youtube, Twitch.tv...)

Compatible with local clients such as OBS software

H.264 video encoding (1080p30, up to 6 Mbps) & audio stereo (AAC)

TRANSITIONS & EFFECTS

Seamless transitions for mixing layers and foregrounds - Multiple transition effects

Layer border effects and colors with separate shadow

Layer effects: H/V Flip, Transparency, Crop and Mask

Color effects: B&W, Negative, Sepia and Solarize

STILL IMAGES

4x concurrent still images per screen for the foreground layer

4x concurrent still images per screen for the background layer

Alpha-channel support - Still image library with 50 memories

Multi-file download/upload via Web RCS

Capture live content from any input or output

ADVANCED AUDIO PROCESSING

De-embed/embed audio channels on all inputs/outputs (PCM)

▶ 8 channels per HDMI 2.0, 12G-SDI or DisplayPort 1.2 input

▶ 4 channels per 3G-SDI input and 2 channels per HDMI 1.4 input

▶ 8 channels per active output

Level control, Mute, Balance, Delay, 1kHz Sinus Pattern features

1 VU meter display of a selected input on the multiviewer

Fixed or dynamic routing (breakaway or top layer)

Optional Analog and Dante™ audio networking card

▶ 2 analog stereo mini jack line in and line out 1/8" (3.5 mm)

▶ 32x32 Dante™ audio channels @48kHz

▶ Dual redundancy Ethernet ports - AES67 support

QUICK PRESET

3 Quick Preset modes : Fade to Black, Image or Master Preset

Audio routing configurable to follow the Quick Preset mode

CONTROL

Large color TFT LCD display (480x272 pixels) with full-featured menu

Web RCS: on-board intuitive web-based user interface

HTTPS for secure connection with downloadable certificate and key

Shot Box² / Control Box³: Cost effective control solutions

RC400T: Ergonomic event controller

Compatible with SKAARHOJ Air Fly Pro controller

Compatible with Companion and Universe control solutions

Simple REST API (HTTP/S) and advanced JSON TCP protocol

Creston drivers

AW VideoCompositor (Premium Creston GUI)

OTHER FEATURES

Live monitoring of inputs & PGM on the front panel TFT LCD display

200 user definable screen memories and 50 master memories

Dedicated BNC with loop for Genlock, Blackburst and tri-level sync

I/O connector status LEDs for easy troubleshooting

USB host type A: firmware update, configuration import/export...

Fully functional simulator for offline configuration & practice

Gigabit Ethernet via Neutrik RJ45

Dimension (in Rack Units - RU)

▶ 3RU

Dimension (without rack ears & mounting)

▶ W 17.32" x H 5.24" x D 19.25"

▶ L 440 mm x H 133 mm x P 489 mm

Dimension (with handles)

▶ W 19" x H 5.24" x D 21"

▶ L 482.5 mm x H 133 mm x P 533.5 mm

Weight without accessories

▶ 11.70 kg / 25.79 lbs

Shipping weight (accessories included)

▶ 17.80 kg / 39.24 lbs

Operating conditions

▶ Temperature: 0 to 40°C (32 to 104°F)

▶ Humidity: 10% to 80%, non condensing

Noise (@1,6m height @25°C)

▶ Front: 45 DBa@1m

▶ Rear: 45 DBa@1m

Thermal dissipation

▶ 580 BTU/hr

Warranty

▶ 3-year warranty on parts and labor back to factory. Broken connectors are not covered by warranty

Power Supply

▶ 100-240 VAC, 7A 50/60Hz

▶ Fuse cartridge T8AH 250VAC 5x20mm

▶ Max consumption: 170W

Safety compliance

▶ IEC/UL/EN 62368-1, CSA22.2#62368-1, UL Listed E359143

EMC & Environmental Compliance

▶ EN55032, EB55024, EN61000, FCC part15, ICES

Supplied with

▶ 1x Power supply cord

▶ 1x Remote Control Software (Web RCS)

▶ 1x Rackmount kit

▶ 1x Ethernet cross-cable

▶ 1x Quick Start Guide including safety instructions



Specifications subject to change without prior notice

ZEN100_EN-09/09/2023