

# Aquilon RS1

Ref. AQL-RS1



**Mission-critical 4K/8K multi-screen presentation system and videowall processor with 16 inputs and 8 outputs, delivering uncompromising presentation experiences to high-end staging and premium system integration**



## Outstanding Performances

Like its larger siblings of the **LivePremier™** series, **Aquilon RS1** offers versatile 4K digital connectivity, unmatched real-time 10/12-bit 4:4:4 video processing power, best-in-class image quality and pure 4K60p on each input and output with ultra-low latency. Ideally tailored to large scale auditoriums, conference rooms, staging live events, houses of worship, corporate lobbies and sports venues, **Aquilon RS1** offers almost unlimited possibilities for future applications and possesses enough bandwidth to support evolving requirements, such as 8K and higher framerates.

## Industrial Grade Reliability

**Aquilon RS1** was specifically engineered to perform to the highest standards in mission-critical applications and road-hardened to survive frequent shipping and tough live events. By combining a heavy-duty modular design, the highest quality components selected for their proven reliability, and features such as redundant swappable power supplies and smart thermal management, **Aquilon RS1** delivers uninterrupted 24/7 performance and peace of mind!

## Versatile for the Highest Flexibility of Configurations

**Aquilon RS1's** modular design allows you to easily swap I/O cards to accommodate a variety of connectivity arrangements and your match source and display requirements. **Aquilon RS1** offers 16 seamless inputs, 8 outputs configurable as single screens, edge-blended widescreens or scaled auxiliary outputs, 2 dedicated Multiviewer outputs, up to 4x 4K or 8x HD freely assignable mixing layers, as well as powerful features that will allow you to handle any creative display configuration, such as a custom output formats, output rotation, AOI, bezel compensation and pixel pitch management.

## Smart Functionalities

**Aquilon RS1** features state-of-the-art real time processing features that will help you to unleash all your creative potential and produce flawless, stunning shows: true seamless switching, flying layer movement, advanced cut and fill, cutting edge keying engine... **Aquilon RS1** also allows to remove external audio de-embedding boxes: In just a few easy clicks, audio can be de-embedded from video sources, routed directly using onboard Dante™ card and re-embedded from external audio processor for sending to display, recording device, or streaming.

## Best User Experience

Entirely re-imagined, the new web-based user interface is intuitive, simple, state-of-the-art and offer dozens of features you will love instantly and that make configuration and control a breeze.

16 inputs	8 outputs	4K60 4:4:4 10-12 bit	2 multi-viewers	HDR compliant	Dante	HDMI 2.0	DP 1.2	12G-SDI	HDCP 2.2
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### Aquilon RS1 at a glance

- ▶ Industrial grade reliability
- ▶ 16x 4K60p inputs and 8x 4K60p outputs - field swappable I/O cards
- ▶ Versatile 4K digital connectivity: HDMI2.0, DP1.2, 12G-SDI
- ▶ Real-time 10/12-bit 4:4:4 video processing
- ▶ 40 Megapixels throughput on Program at 10-bit 4:4:4 @60Hz
- ▶ Up to 4x 4K or 8x DL/2K mixing layers (+live backgrounds)
- ▶ HDR compliant with HDR10 and HLG (end 2019)
- ▶ Intuitive HTML5-based user interface with live source thumbnails
- ▶ Native DANTE audio networking hardware and support
- ▶ Future proof modular design

Aquilon Models	RS alpha	RS1	RS2	RS3	RS4	C	C+
4K60p inputs	8	16	16	24	24	up to 16	up to 24
4K60p outputs	4	8	12	12	16	up to 16	up to 20
Max 4K mixing layers*	4	4	8	8	12	up to 8	up to 12
Max DL/2K mixing layers*	8	8	16	16	24	up to 16	up to 24
Simul. 4K still image channels	12	12	12	24	24	up to 12	up to 24
Build-to-Order (BTO)						✓	✓
Rack units	4	4	4	5	5	4	5

\* doubled for split layers

## Key Features

Based on LivePremier™ platform

Highly ruggedized chassis with cleanable air filter

Swappable redundant power supplies (1+1)

16x seamless 4K60p inputs (8x HDMI 2.0, 4x DP 1.2, 4x 12G-SDI)

8x 4K60p active outputs (8x HDMI 2.0)

True 4K60p 4:4:4 performance on every I/O channel

Full set of field swappable I/O cards available separately (DP 1.2, 12G-SDI, HDMI 2.0) to accommodate any connectivity arrangements

Support 4K60p input and output as single, double or quad plugs (end 2019)

40 Megapixels throughput at 10-bit 4:4:4 on Program, without restricting Preview or Multiviewer

Up to 4x 4K or 8x DL/2K mixing layers per system (8x 4K or 16x DL/2K split layers), depending on the screens setup

12x 4K or 24x 2K concurrent still images

Unscaled seamless background mixer on each output (using instantaneous still images or live sources)

Flexible layer management

Seamless crossfade on all mixing layers, on all 16 sources

Scaled 4K60p AUX feature for all non-PGM outputs

Ultra-low latency 10 and 12-bit processing

Ability to place the outputs anywhere on an almost limitless video canvas space for special LED wall applications

Advanced pixel pitch management for LED wall applications

2x configurable 4K Multiviewer outputs with 24x resizable widgets on each, including clocks, countdown and timers

Native Dante™ audio networking hardware and support (64x64)

HDR compliant with HDR10 and HLG (end 2019)

Rotation capability on each output - manage portrait displays (end 2019)

Independent output rates

Framelock or internal sync. generator

Web RCS: highly intuitive, lightning fast web-based user interface based on HTML5

Live video thumbnails shown on GUI

Multi operator real-time collaboration

Password protection and user privileges (end 2019)

Easily create and recall preset looks on all your screens and auxiliary outputs

Custom output formats for non-standard display applications

Area of Interest feature to customize active areas of outputs

Still images support variable alpha-channels for transparent background on logos

Cut and Fill (using two sources or a source and a still image)

Fully functional simulator for offline configuration and practice

EDID management on every input and output

Compatible with HDCP 1.4. Compatible with HDCP 2.2 (end 2019)

Future proof modular design

Quiet: 49dB average noise at 1m

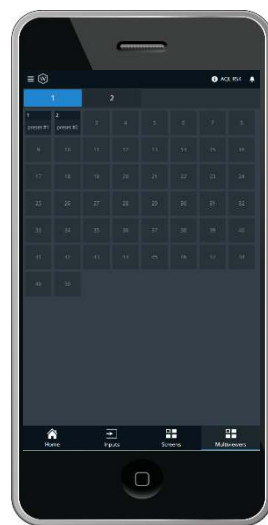
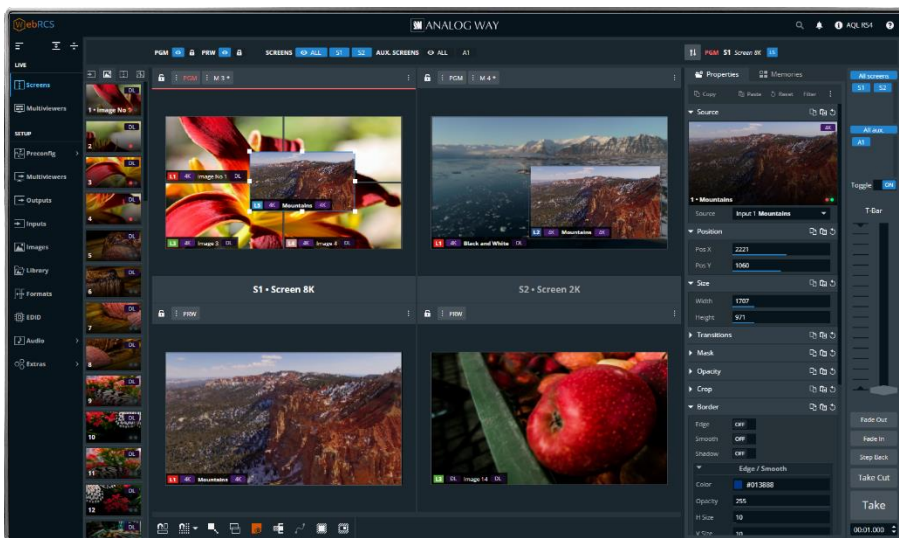
Remote services and maintenance

Backup and restore functions

## Web RCS: Unrivaled Ease of Use

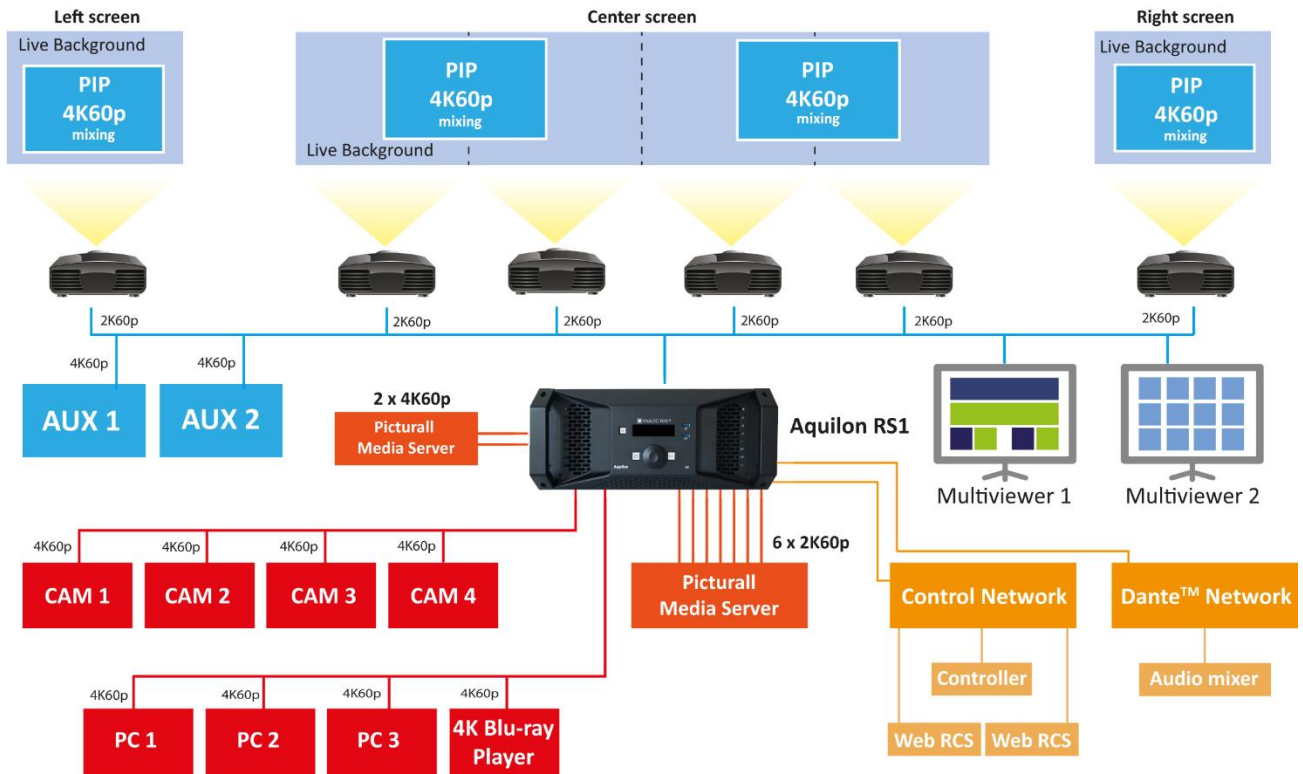
For the best ease of setup and to ensure flawless control of multi-screen presentations, the **LivePremier™** series features a totally new, cutting-edge HTML5-based user interface, the **Web RCS**, compatible with any device or platform including iOS and Android devices.

Conceived to greatly increase productivity and reduce learning curve, the **Web RCS** offers dozens of unique features that simplify configuring and operating, such as live program/preview workspaces with high-resolution dynamic thumbnails of connected sources, multi-operator collaboration with password protection and user privileges, walkthrough guides, keyword search, multi-language support and much more...

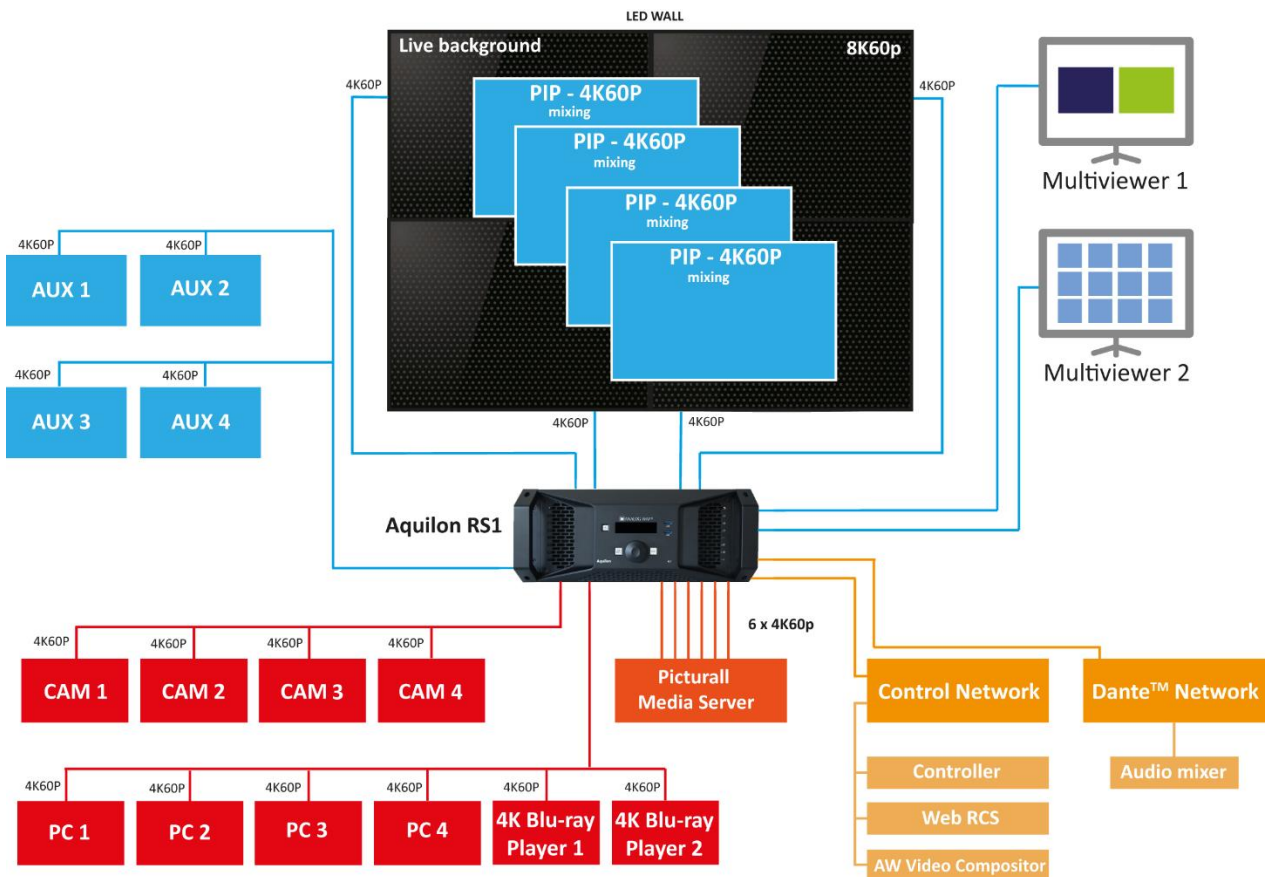


The Web RCS is compatible with any device or platform, including iOS and Android devices

**Aquilon RS1 can drive a widescreen with 4x 2K60p outputs, Left/Right 2K60p screens and 2x 4K60p AUX**



**Aquilon RS1 can drive one 8K60p LED wall and 4x 4K60p AUX outputs**





## Technical Specifications

### INPUTS

16 seamless 4K60p inputs via 4 field swappable input cards:

8x HDMI 2.0 (up to 4K60p 8-bit 4:4:4 or up to 4K60p 12-bit 4:2:2 or up to 4K30p 12-bit 4:4:4)

4x DisplayPort 1.2 (up to 4K60p 10-bit 4:4:4 or up to 4K60p 12-bit 4:2:2)

4x 12G-SDI (up to 4K60p 10-bit 4:2:2) - compatible with 3G-SDI and 6G-SDI

Support 4K60p input as single, double or quad plugs (end 2019)

Support custom input formats such as 8192x1080@60p or 1080x8192@60p (aka "8k x 1k") on a single connector

Connector status LEDs for easy troubleshooting

### OUTPUTS

8 active 4K60p outputs via 2 field swappable output cards:

8x HDMI 2.0 (up to 4K60p 8-bit 4:4:4 or up to 4K60p 12-bit 4:2:2 or up to 4K30p 12-bit 4:4:4)

Support 4K60p output as single, double or quad plugs (end 2019)

Support custom output formats such as 8192x1080@60p or 1080x8192@60p (aka "8k x 1k") on a single connector

Connector status LEDs for easy troubleshooting

### MULTIVIEWER OUTPUTS

2 dedicated HDMI 2.0 outputs configurable as up to 2x 4K30p or up to 2x 2560x1440@60p or 1x 4K60p

24 resizable widgets on each output

Customizable layouts with 50 memories

Monitor inputs, still images and screens (Program and Preview)

Built-in clocks, countdown and timers

### LAYERS & BACKGROUND

Supports mixing layers (true seamless transitions) and split layers (cut transitions)

Up to 4x 4K or 8x Dual/2K mixing layers per system (8x 4K or 16x Dual/2K split layers), depending on the screens setup

Layer source can be a live input, a still image or a screen

Each output has an unscaled background mixer supporting seamless transitions - background source can be still image or live source

### SCREENS

Outputs configurable as single screens or edge-blended widescreens

Up to 8x Dual/2K60p program outputs or up to 4x 4K60p program outputs

Ability to place the outputs anywhere on an almost limitless video canvas space for special LED wall applications

Flexible layer management: each screen gets dedicated layers of various sizes (2K, 4K, ...) using common-pool layer resources

1000 user definable screen presets and 500 master presets

### SCALED AUX OUTPUTS

Any unused output configurable as a scaled auxiliary output

Up to 8x 4K60p scaled auxiliary outputs

Can display any input or screen (1:1 or scaled)

### AUDIO

Audio de-embedding/embedding on every input & output (raw audio)

De-embed audio from sources and route directly to Dante™ network

Re-embed audio from external audio processor for sending to display 64x64 Dante™ channels @48 kHz or 32x32 Dante™ channels @96 kHz

Dual redundancy Ethernet ports - AES67 support

### PROCESSING

Based on Analog Way exclusive 5th generation scaling engine

Extremely low latency, as low as 1 frame in proper configuration

BT.601; BT.709; BT.2020; BT.2100 color spaces

Advanced pixel pitch management & bezel compensation

HDR compliant with HDR10 and HLG (end 2019)

Compatible with HDCP 1.4. Compatible with HDCP 2.2 (end 2019)

### TRANSITIONS & EFFECTS

True A/B Mix

Misc. layer border effects/colors and separate shadow

Transitions: Cut, Fade, Slide, Wipe, Circle, Stretch, Depth, Flying layer movement with programmable paths

Layer effects: Background Cut, Transparency, Luma/Chroma Key, DSK, H&V Flip, Cut and Fill

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

### STILL IMAGES

12x 4K or 24x 2K concurrent still images - fully resizable

Still images support alpha-channel

Still image library with 100 memories

Multi-file download/upload via Web RCS

Capture from live inputs

### CONTROL

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

Shot Box<sup>2</sup>/Control Box<sup>2</sup>: Cost effective control solutions

New controller (end 2019)

Simple REST API (HTTP & TCP) and advanced TCP protocol based on JSON

AMX/Crestron drivers & AW VideoCompositor (Premium Crestron® GUI)

### OTHER FEATURES

Tally/GPI-O

Dedicated BNC with loop out for Framelock, blackburst and tri-level sync

Fully functional simulator for offline configuration & practice (end 2019)

### EXPANDABILITY

Expansion via simple linking possible (future hardware upgrade)

#### Dimension (in Rack Units - RU)

▶ 4RU

#### Dimensions (without rack ears & rack mount)

▶ W 17.28" x H 6.97" x D 27.56"  
▶ L 439.8 mm x H 177 mm x P 700 mm

#### Dimensions (with handles)

▶ W 18.89" x H 6.97" x D 27.59"  
▶ L 482.4 mm x H 177 mm x P 701 mm

#### Weight without accessories

▶ 26.1 kg / 57.54 lbs

#### Shipping weight (accessories included)

▶ 45.1 kg / 99.42 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: 49 DBa@1m  
▶ Rear: 51 DBa@1m

#### Thermal dissipation

▶ 1842 BTU/hr

#### Warranty

▶ 3-year warranty on parts and labor back to factory excluding I/O connector cards which are warranted for 1 year  
▶ Broken connectors are not covered by warranty

#### Power Supply

▶ 100-240 VAC, 12-7A 50/60Hz  
▶ Swappable redundant power supplies (1+1)  
▶ Max consumption: 540 W

#### Safety Compliance

▶ IEC/UL/EN 62368-1, CSA22.2 #62368-1

#### Supplied with

▶ 2x Power supply cords  
▶ 1x Web-based Remote Control Software  
▶ 1x Rackmount kit  
▶ 1x Ethernet cross cable  
▶ 3x MCO 5 pin connectors  
▶ 1x User manual (PDF)  
▶ 1x Quick start guide including safety instructions

 Specifications subject to change without prior notice

AQL-RS1\_EN-11/04/2019