

Aquilon C

Ref. AQL-C



Fully modular and scalable 4K/8K multi-screen presentation system and videowall processor with up to 16x 4K60p inputs, 16x 4K60p outputs and 8x 4K mixing layers



Outstanding Performances

Like all the products of the **LivePremier™** series, **Aquilon C** offers 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. Totally configurable, **Aquilon C** can be tailored to suit any application, including large scale auditoriums, conference rooms, staging live events, houses of worships, corporate lobbies and sports venues. Thanks to its future-proof hardware architecture, **Aquilon C** is ready to meet the evolving needs of your customers, such as 8K, higher framerates and more.

Smart Functionalities

Aquilon C 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, real-time LUT based SDR/HDR conversion and color correction, flying layer movement, advanced cut and fill, cutting edge keying engine... **Aquilon C** 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.

Flexible System Configuration

Aquilon C's modular design allows you to configure the system to accommodate a variety of connectivity arrangements and match your source and display requirements. In its largest configuration, **Aquilon C** features up to 16x 4K60p seamless inputs and up to 16x 4K60p outputs, configurable as single screens, edge-blended widescreens or scaled auxiliary outputs, 2 dedicated Multiviewer outputs, up to 8x 4K or 16x HD freely assignable mixing layers, as well as powerful features that will allow you to handle any creative display configuration, such as Captive PiPs, custom output formats, output rotation, AOI, bezel compensation and pixel pitch management.

Industrial Grade Reliability

Aquilon C 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 C** delivers uninterrupted 24/7 performance and peace of mind!

Up to 16 inputs	Up to 16 outputs	4K60 4:4:4 10-12 bit	2 multi-viewers	HDR & 3D LUTs	HFR up to 144Hz	Dante	HDMI2.0 DP1.2	12G-SDI SFP+	Optical fiber	AvolP: SDVoE, NDI
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- ### Aquilon C at a glance
- ▶ Industrial grade reliability
 - ▶ Fully modular and scalable architecture
 - ▶ Future proof design with a full set of field swappable I/O cards: HDMI, DP, SDI, SFP+, Optical fiber, SDVoE, IP/SDI (input only) and more to come
 - ▶ Up to 16x seamless 4K60p inputs and 16x 4K60p active outputs
 - ▶ Ultra-low latency 10/12-bit 4:4:4 video processing
 - ▶ Up 80 Megapixels throughput on Program at 10-bit 4:4:4 @60Hz
 - ▶ Up to 8x 4K or 16x DL/2K mixing layers (+ live backgrounds)
 - ▶ High Frame Rate up to 144Hz
 - ▶ Real-time LUT based SDR/HDR10/HLG conversion and color correction
 - ▶ Highly intuitive web-based GUI with live source thumbnails
 - ▶ Native DANTE audio networking hardware and support

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
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)

Up to 16x 4K60p inputs and up to 16x 4K60p active outputs

Field-installable input & output connector cards to accommodate a variety of connectivity arrangements

Full set of field swappable I/O cards available separately (DP 1.2, 12G-SDI, HDMI 2.0, SFP+, Optical, SDVoE, IP/SDI) for any connectivity arrangements

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

Ultra-low latency 10 and 12-bit processing

High Frame Rate processing (up to 144Hz) for Dual/2K signals

Real-time SDR/HDR10/HLG conversion and color correction based on 3D LUTs (no additional latency)

Support 4K60p input and output as single, double or quad plugs

Compatible with Analog Way DPH104 video processor: easily convert one 4K DP 1.2 output to 4 independent full HD outputs (requires a DP output card)

Up to 80 Megapixels throughput at 10-bit 4:4:4 on Program, without restricting Preview or Multiviewer

Almost limitless video canvas space and free positioning of outputs

Up to 8x 4K or 16x DL/2K mixing layers per system (16x 4K or 32x DL/2K split layers), depending on the screens setup

Up to 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 (Region Captive PiPs)

Seamless crossfade on all mixing layers, on all sources

Scaled 4K60p AUX feature for all non-PGM outputs

Ability to create layers on AUX outputs without using processing resources

Inboard clocks, timers and countdowns for screens or auxiliary outputs

2x configurable 4K Multiviewers with 64x resizable widgets

Advanced pixel pitch management for LED wall applications

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

Rotation capability on each output (increment of 90°)

Independent output rates

Framelock or internal sync. generator

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

HTTP for standard connection or HTTPS for secure connection

Live video thumbnails shown on GUI

Multi operator real-time collaboration

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 supporting variable alpha-channels for transparent background on logos

Cut and Fill

Fully functional simulator for offline configuration and practice

EDID management on every input and output

Compatible with HDCP 1.4 and HDCP 2.2

Future proof modular design

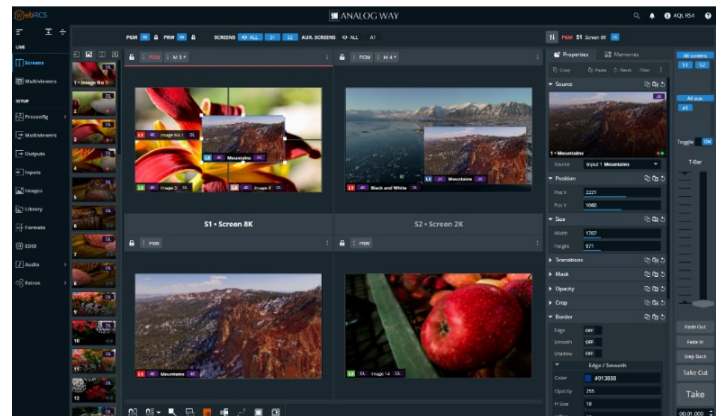
Quiet: 49dB average noise at 1m

Remote services and maintenance

Backup and restore functions

Unrivalled Ease of Use

For the best ease of setup and to ensure flawless control of multi-screen presentations, **Aquilon C** 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 resizable program/preview workspaces with high-resolution dynamic thumbnails of connected sources, multi-operator collaboration with password protection, keyword search and much more...



Powerful and Flexible Control Options

In addition to the powerful Web RCS, **Aquilon C** features IP (Ethernet) control via a standard TCP/IP socket connection supported by all major third-party control systems. It can also be controlled by the free Crestron® driver as well as by **AW VideoCompositor**, a unique solution that gives system integrators and Crestron® developers all the tools they need to easily incorporate the power of LivePremier™ image processors video compositing into a single point of control Crestron® touch-screen application. Additionally, **Aquilon C** can be controlled by a comprehensive range of remote control solutions from the **Shot Box²** and the **Control Box³** to the powerful standalone event controller, the **RC400T**, featuring premium buttons with dynamic LCD labels, a T-Bar and a Joystick, that will streamline your control of the LivePremier™ series...



Technical Specifications

COMPREHENSIVE SET OF INPUT AND OUPUT CARDS

4x HDMI 2.0 input card / 4x HDMI 2.0 output card
 4x Optical Fiber input card / 4x Optical Fiber Output card
 4x SDVoE input card / 4x SDVoE input card

- up to 4K60p 8-bit 4:4:4
- up to 4K60p 12-bit 4:2:2
- up to 4K30p 12-bit 4:4:4

- up to 2560x1440 144Hz 8-bit 4:4:4
- up to 1920x1080 144Hz 10-bit 4:4:4

4x DisplayPort 1.2 input card / 4x DisplayPort 1.2 output card

- up to 4K60p 10-bit 4:4:4
- up to 4K60p 12-bit 4:2:2
- up to 4K30p 12-bit 4:4:4

- up to 2560x1440 144Hz 8-bit 4:4:4
- up to 1920x1080 144Hz 10-bit 4:4:4

4x 12G-SDI input card / 4x 12G-SDI output card
 4x SFP+ cage input card / 4x SFP+ cage output card

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

- up to 2048x1080 120Hz 10-bit 4:2:2

4x 12G-SDI + 1x 2.5GbE NDI-enabled input card

12G-SDI: same as 4x12G-SDI input card +NDI Full bandwidth (2.5GbE network ,TCP):

- Up to 4x 2160p30 8-bit 4:2:2
- Up to 3x 2160p60 8-bit 4:2:0

- Up to 4x 1080p60 8-bit 4:2:2 w/ alpha

INPUTS

8 or 16 seamless 4K60p inputs via 2 or 4 field swappable input connector cards

Support 4K60p input as single, double or quad plugs (incl. 4x 3G-SDI 2SI)

Support custom input formats such as "8k x 1k" on a single connector

Connector status LEDs for easy troubleshooting

OUTPUTS

Up to 16 active 4K60p outputs via 4 field swappable output connector cards

Support 4K60p output as single, double or quad plugs

Support custom output formats such as "8k x 1k" on a single connector

Connector status LEDs for easy troubleshooting

STILL IMAGES

Optional still image processing card, supporting 12x 4K or 24x 2K concurrent still images

Fully resizable still images supporting alpha-channel

Still image library with 100 memories, with multi-file download/upload via Web RCS

Capture from live inputs, outputs and multiviewers

MULTIVIEWER OUTPUTS

2 references of Multiviewer cards either with or 2x DP 1.2 outputs compatible with AW DPH104 video processor (ref. DPH104) or 2x HDMI2.0 outputs

2 dedicated outputs configurable as :

- up to 2x 4K30p
- up to 1x 4K60p + 1 duplicated
- up to 2x 2560x1440@60p

64 resizable widgets on each output

Customizable layouts with 50 memories

Monitor inputs, still images, screens (PGM & PVW) and inboard clocks, timers and countdowns

LAYERS & BACKGROUND

Mixing layers (true seamless transitions) and split layers (Cut or Fade To Black transitions) configurable per screen

Up to 2 video processing cards, each supporting 4x 4K or 8x Dual/2K mixing layers (x2 if split layers) depending on screens setup

Layer sources: live inputs, still images, screens (split layers only), inboard clocks, timers and countdowns

One unscaled background mixer per output, with seamless transitions

Background sources: live inputs, still images

SCREENS

Outputs configurable as single screens or edge-blended widescreens

Up to 16x Dual/2K60p program outputs or up to 8x 4K60p program outputs cloneable to any other unused outputs

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

Flexible layer management: various content sizes (2K, 4K, ...), Region Captive PIPs for resource optimization, screens without layers (background only)

500 master memories, 1000 screen memories and 50 layer memories

Advanced pixel pitch management & bezel compensation

SCALED AUXILIARY OUTPUTS

Any unused output configurable as a scaled auxiliary output

Up to 16x 4K60p scaled auxiliary outputs

Can display any input, screen (1:1 or scaled) or inboard clocks, timers and countdowns

Ability to create resizable layers on AUX outputs without using processing resources (using adjacent outputs to increase the layer count)

Technical Specifications

VIDEO PROCESSING

Based on Analog Way exclusive 5th generation scaling engine

Ultra-low latency, as low as 1 frame in proper configuration

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

High Frame Rate processing up to 144Hz for Dual/2K signals

Real-time SDR/HDR10/HLG conversion and color correction based on 3D LUTs for all inputs and outputs

High-end input keying algorithms: Luma-Key, Chroma-Key and 3D LUT based CremaTTe 3D (requires AW CremaTTe 3D software available on the website)

Compatible with HDCP 1.4 and HDCP 2.2

Compatible with Analog Way DPH104 video processor (ref. DPH104 - available separately)

AUDIO PROCESSING

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

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: Transparency, Cropping, H&V Flip, Cut and Fill

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

CONTROL

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

HTTPS for secure connection with downloadable certificate and private key

Shot Box² (ref. SB80-2)/Control Box³ (ref SB124T-3): Cost effective control solutions

RC400T (ref. RC400T): Ergonomic event controller

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

Crestron driver & AW VideoCompositor (Premium Crestron® GUI)

OTHER FEATURES

Tally/GPI-O - EDID management on every input and output

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

Fully functional simulator for offline configuration & practice

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

- ▶ 29.8 kg / 65.69 lbs

Shipping weight (accessories included)

- ▶ 48.8 kg / 107.58 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

- ▶ 2525 BTU/hr

Power Supply

- ▶ 100-240 VAC, 12-7A 50/60Hz
- ▶ Swappable redundant power supplies (1+1)
- ▶ Max consumption: 740 W

EMC & Environmental Compliance

- ▶ EN55032, EB55024, EN61000, FCC part15, ICES

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

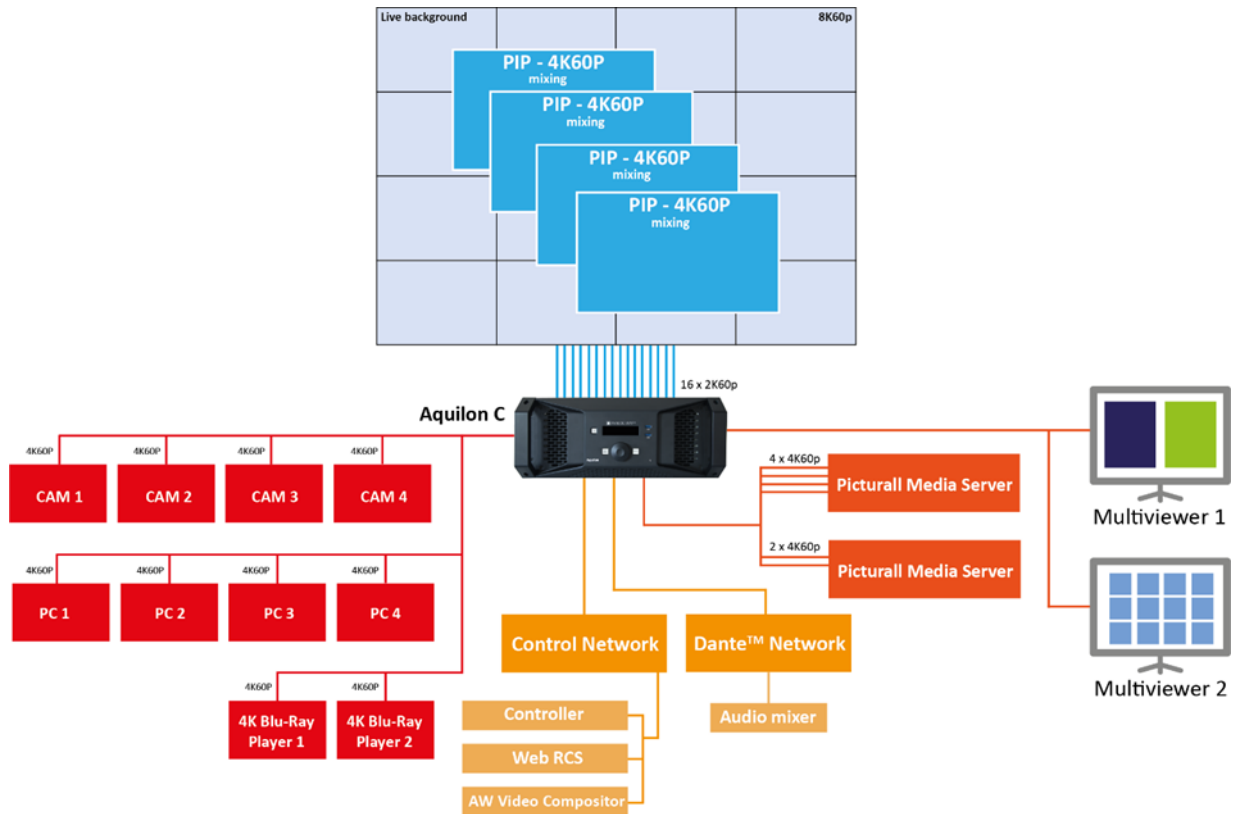
Safety Compliance

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

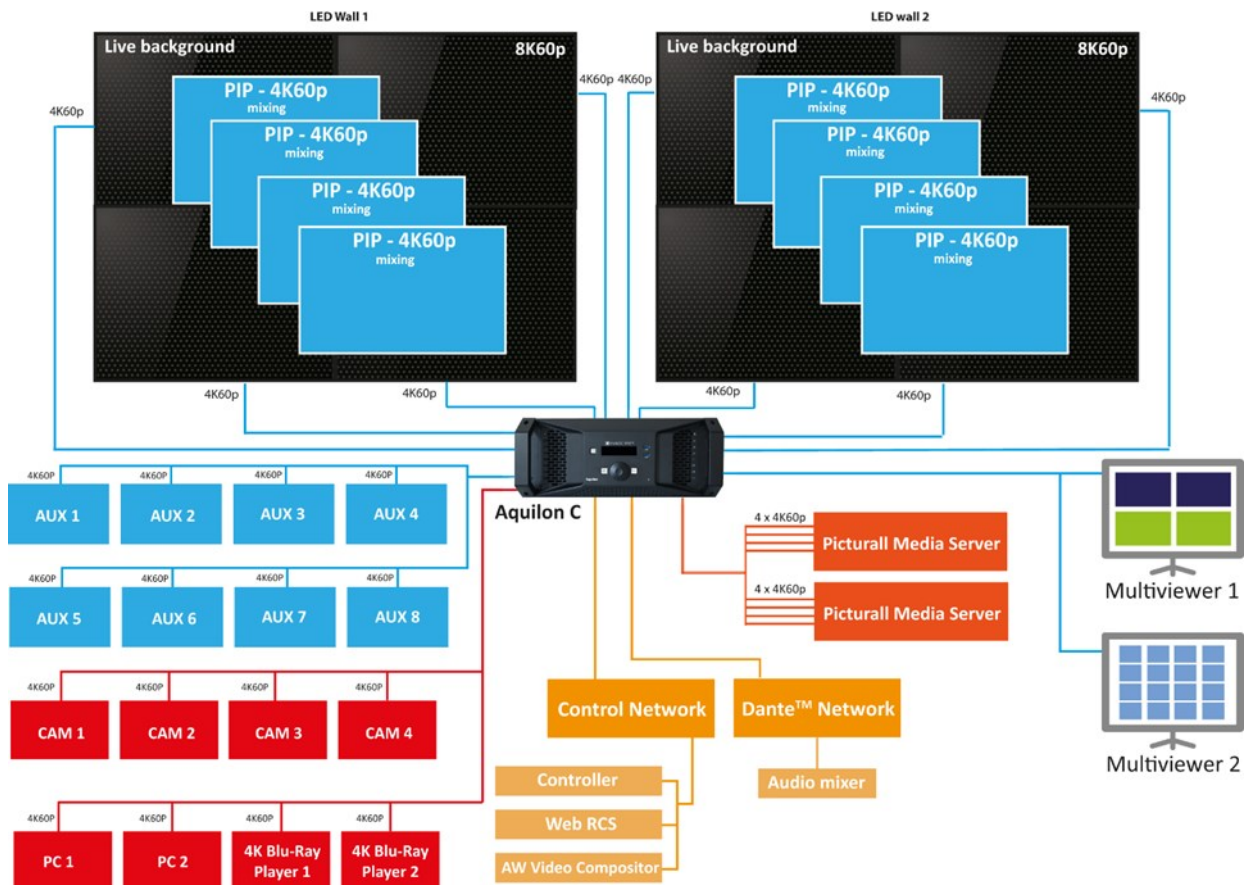
Supplied with:

- ▶ 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 + safety instructions

A single fully loaded Aquilon C can drive a video wall with 16x 2K60p outputs



A single fully loaded Aquilon C can drive 2x 8K60p LED walls and 8x 4K60p AUX outputs



Aquilon C has an extensive ecosystem for control and management

