USER MANUAL

LivePremier unit (V1.1)

References:
AQL-RS-ALPHA, AQL-RS1, AQL-RS2,
AQL-RS3, AQL-RS4, AQL-C, AQL-C+

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Pioneer in Analog, Leader in Digital

Contents

1 Disclaimer

The information in this document is subject to change without notice, while every effort is made to be accurate. Analog Way cannot be held liable for any kind of loss whatsoever that may be caused by the use of or reliance in this manual.

1.1 Copyrights

The software installed in the LivePremier remains the sole property of Analog Way unless stated otherwise in a separate licensing agreement. Any attempt to copy or alter the software is prohibited and will render any warranties void.

1.2 Warranty

The LivePremier has been tested in various applications and is deemed to be suitable for uses described in this manual. This product is provided "as is", including all or any 'perceived' or possible faults. The Licensor grants no warranty regarding the utility or contents of the software. Analog Way will warrant the hardware for three years from the date of purchase. The method of warranty is Return to Base (transport costs from and to us are the owner's responsibility). In case of hardware fault please contact your local distributor or us (www.analogway.com).

While not an exhaustive list, the following are provided for guidance. Warranty claims will be invalidated in these circumstances:

- A hardware failure is caused by inappropriate handling of hardware such as dropping the image processor, using the image processor without proper ventilation, exposing the unit to water, other liquids or dust.
- The software has been loaded or there has been an attempt to load software onto the unit in any way other than described in the manual or recommended by Analog Way.
- The hardware has been modified by someone other than a certified Analog Way dealer.

1.3 Liability

Analog Way shall not be liable for any loss or damage, be it direct or indirect in regards to the utility or contents of the software or hardware, except to the extent provided by law. Notwithstanding the above, liability for indirect, special, incidental or consequential loss or damage that may arise in respect of the software or hardware, is expressly excluded.

1.4 Force Majeure

Liability of Analog Way is excluded in all cases that constitute Force Majeure circumstances, namely, circumstances beyond the control of Analog Way.

2 Terms and Definition

Auxiliary Screen or Aux: A specific Screen composed of a single scaled output with a format up to 4K@60. Aux Screens consume zero processing resources. The content displayed can be an input, an image or a Screen's Program.

Background: Input or Image source displayed behind all other layers. The background consumes zero processing resources and can display unscaled content on the whole screen.

Capacity: Unit used in the WebRCS to ensure inter-operability between all the internal elements of a LivePremier unit. One level of capacity refers to Dual-Link bandwidth 2560x1600@60.

Cut & Fill: Feature that allows a layer to be displayed with perfect keying to give it a specific shape. One content is used to cut another content in the same layer (via Luma keying).

Hard edge: Technology used to display continuous content using multiple outputs without any covering area. The outputs are "side by side", they do not overlap or share pixel information. (Opposed to **Soft Edge** where some parts of the image are overlapping while projected on multiple displays.)

Image: Englobes all non-animated images. Images are imported through the WebRCS and used as content in layers.

Keying: Electronic process where a video image is electronically superimposed over another source by dynamically removing a portion of the first image. For example, removing all content of a certain color (such as green or blue) is called **Chroma Key** and removing content based on its luminance levels is called **Luma Key**. Keying is typically used for titles, logos and special effects.

Layer: Item displaying one content (Live inputs, Image or Screen Program). Layers can overlap, depending on their visual priority. Layers can be repositioned, resized, displayed with borders, etc.

Multiviewer: Dedicated output used to monitor content in widgets. LivePremier units have two 4K Multiviewer outputs, each one able to display up to 24 widgets.

Picture in Picture (PIP): Often used as a synonym to layer. Displaying a content over another content.

Preview (PRW): The content in Preview is not displayed on output Screens. All Preview screens replace their corresponding Program screens during transition (or Take). Preview Screens are meant to load layers and content before transitioning to Program.

Program (PGM): The content in Program shows what is currently displayed on Screens. It is possible to make changes directly in the Program screens (drag and drop content in layers, layer size and position, etc.). It is also possible to lock the Program screens to only edit the Preview screens.

Screen: Destination where the picture will be displayed. For example, a single display or a projection surface which can be composed of one or multiple outputs. Each screen is composed with of one or multiple layers.

Soft edge blending: Technology used to compensate for the covering area when two (or more) video projectors are combined to display a continuous content across one screen. The resulting image will appear as a single unified picture.

WebRCS: User interface to setup and operate the LivePremier. It is a web browser based Remote Control Software designed by Analog Way.

Widget: Multiviewer item displaying one content (Input, Image, Timer, Preview or Program Screen). Similar to a Layer but without visual priority, widgets are displayed on same level and cannot overlap.

3 Hardware Specifications

3.1 Safety instructions

3.1.1 English

All of the safety and operating instructions should be read before the product is operated and should be maintained for further reference. Please follow all of the warnings on this product and its operating instructions.

• **WARNING**: To prevent the risk of electric shock and fire, do not expose this device to rain, humidity or intense heat sources (such as heaters and direct sunlight). This equipment is not suitable for use in locations where children are likely to be present.

• **INSTALLATION**: Slots and openings in the device are provided for ventilation and to avoid overheating. Make sure the device is never placed near a textile surface that could block the openings. Also keep away from excessive dust, vibrations and shocks.

• **POWER**: Connect earth before connecting to supply. Use an earth cable to earth a screw of the unit's chassis. Only use the power supply indicated on the device of the power source. Devices equipped with a grounding plug should only be used with a grounding type outlet. In no way should this grounding be modified, avoided or suppressed. Connection of equipment to main supply must be after branch circuit breaker of the building installation.

• **POWER CORD**: The device can be equipped with 2 or 3 detachable power cords, to remove mains, disconnect them at appliance coupler.

> **Caution**: The power cords constitute the only mean to completely disconnect the equipment from the main power.

Use the following guidelines:
- The equipment connected to the network must have a release system easily accessible and located outside the unit.
- Unplug the power cords; do not pull on the power cords but always on the plug itself.
- The outlet should always be near the device and easily accessible.
- Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.

If one of the power supply cords is damaged, unplug the device. Using the device with a damaged power supply cord may expose your device to electric shocks or other hazards. Verify the condition of the power supply cords periodically. Contact your dealer or service center for replacement if damaged.

• **CONNECTIONS**: All inputs and outputs (except for the power input) are Electrical energy source class 1 (ES1) as defined in IEC/UL 62368-1 edition 2.
ES1 limits: 60Vdc or 30V rms/ 42.4V peak.

• **SERVICING**: Disconnect all power supply cords from main before servicing.
According to IEC 62368-1 standard, an ordinary person is authorized to:
- Open the front panel cabinet and clean the air filter
- Change a removable power supply

Do not attempt to service this product yourself by opening or removing covers and screws since it may expose your device to electric shocks or other hazards. The internal Lithium cell battery is not replaceable. In case of problem, contact your supplier or Analog Way.

• **OPENINGS**: Never push objects of any kind into this product through the openings. If liquids have been spilled or objects have fallen into the device, unplug it immediately and have it checked by a qualified technician.

3.1.2 French

Afin de mieux comprendre le fonctionnement de cet appareil nous vous conseillons de bien lire toutes les consignes de sécurité et de fonctionnement avant utilisation. Conservez les instructions de sécurité et de fonctionnement afin de pouvoir les consulter ultérieurement. Respectez toutes les consignes marquées dans la documentation, sur le produit et sur ce document.

• **ATTENTION** : Afin de prévenir tout risque de choc électrique et d'incendie, ne pas exposer cet appareil à la pluie, à l'humidité ou à des sources de chaleur intense. Cet équipement ne convient pas pour une utilisation dans des endroits où des enfants sont susceptibles d'être présents.

• **INSTALLATION** : Mise à la terre obligatoire avant branchement. Utiliser un câble de terre pour relier une vis du châssis de l'appareil à la terre. Veillez à assurer une circulation d'air suffisante pour éviter toute surchauffe à l'intérieur de l'appareil. Ne placez pas l'appareil sur ou à proximité d'une surface textile susceptible d'obstruer les orifices de ventilation. N'installez pas l'appareil à proximité de sources de chaleur comme un radiateur ou une poche d'air chaud, ni dans un endroit exposé au rayonnement solaire direct, à des poussières excessives, à des vibrations ou à des chocs mécaniques. Ceci pourrait provoquer un mauvais fonctionnement et un accident.

• **ALIMENTATION** : Ne faire fonctionner l'appareil qu'avec la source d'alimentation indiquée sur l'appareil. Les appareils doivent être obligatoirement connectés sur une source équipée d'une mise à la terre efficace. En aucun cas cette liaison de terre ne devra être modifiée, contournée ou supprimée. Raccordement des équipements à l'alimentation principale doit être postérieur au disjoncteur de branchement de l'installation électrique du bâtiment.

• **CORDONS D'ALIMENTATION** : Les appareils peuvent être équipés de 2 ou 3 cordons d'alimentation détachables, la mise hors tension se fait en débranchant ces cordons de l'appareil.

Attention : Les cordons d'alimentation constituent le seul moyen de débrancher l'appareil totalement de l'alimentation secteur. Déconnecter tous les cordons d'alimentation.

Appliquer les consignes suivantes :

- Le matériel relié à demeure au réseau, doit avoir un dispositif de sectionnement facilement accessible qui doit être incorporé à l'extérieur de l'appareil.

- Débrancher les cordons d'alimentation de la prise murale si vous prévoyez de ne pas utiliser l'appareil pendant quelques jours ou plus.

- Pour débrancher les cordons, tirez-les par la fiche. Ne tirez jamais sur les cordons proprement dit.

- Les prises d'alimentation doivent se trouver à proximité de l'appareil et être aisément accessibles.

- Ne laissez pas tomber les cordons d'alimentation et ne posez pas d'objets lourds dessus.

Si un des cordons d'alimentation est endommagé, débranchez-le immédiatement de la prise murale. Il est dangereux de faire fonctionner un appareil avec un cordon endommagé ; un câble abîmé peut provoquer un risque d'incendie ou un choc électrique. Vérifiez les câbles d'alimentation de temps en temps. Contactez votre revendeur ou le service après-vente pour un remplacement.

• **CONNEXIONS** : Toutes les entrées et sorties (exceptée l'entrée d'alimentation) sont des sources d'énergie électrique de classe 1 (ES1) tel que défini dans IEC/UL 62368-1 édition 2.

ES1: Electrical energy source class 1 (limites : 60Vdc ou 30V rms/ 42.4V peak).

• **RÉPARATION ET MAINTENANCE** : Débrancher les cordons d'alimentation avant toute maintenance.

Selon la norme IEC 62368-1, une personne ordinaire est autorisée à :

- Ouvrir la face avant pour nettoyer le filtre à air

- Changer un bloc d'alimentation

L'utilisateur ne doit en aucun cas essayer de procéder aux opérations de dépannage, car l'ouverture des appareils par retrait des capots ou de toutes autres pièces constituant les boîtiers ainsi que le dévissage des vis apparentes à l'extérieur, risquent d'exposer l'utilisateur à des chocs électriques ou autres dangers.

La pile bouton au Lithium présente à l'intérieur de la machine n'est pas remplaçable. En cas de problème, contactez le service après-vente, votre revendeur ou adressez-vous à un personnel qualifié uniquement.

• **OUVERTURES ET ORIFICES** : Les appareils peuvent comporter des ouvertures (aération, fentes, etc.), veuillez ne jamais y introduire d'objets et ne jamais obstruer ses ouvertures.

Si un liquide ou un objet pénètre à l'intérieur de l'appareil, débranchez immédiatement l'appareil et faites-le contrôler par un personnel qualifié avant de le remettre en service.

3.1.3 Italian

Allo scopo di capire meglio il funzionamento di questa apparecchiatura vi consigliamo di leggere bene tutti i consigli di sicurezza e di funzionamento prima dell'utilizzo. Conservare le istruzioni di sicurezza e di funzionamento al fine di poterle consultare ulteriormente. Seguire tutti i consigli indicati su questo manuale e sull'apparecchiatura.

• **ATTENZIONE**: Questo apparecchio non e' adatto all'utilizzo da parte di bambini. Al fine di prevenire qualsiasi rischio di shock elettrico e d'incendio, non esporre l'apparecchiatura a pioggia, umidità e a sorgenti di eccessivo calore.

• **INSTALLAZIONE**: Assicuratevi che vi sia una sufficiente circolazione d'aria per evitare qualsiasi surriscaldamento all'interno dell'apparecchiatura. Non collocare l'apparecchiatura in prossimità o su superfici tessili suscettibili di ostruire il funzionamento della ventilazione. Non installate l'apparecchiatura in prossimità di sorgenti di calore come un radiatore o una fuoruscita d'aria calda, né in un posto esposto direttamente ai raggi del sole, a polvere eccessiva, a vibrazioni o a shock meccanici. Ció potrebbe provocare un erroneo funzionamento e un incidente.

• **ALIMENTAZIONE**: Collegare la terra prima di collegarla all'alimentazione. Utilizzare un cavo di terra per mettere a terra la vite del telaio dell'unità. Far funzionare l'apparecchiatura solo con la sorgente d'alimentazione indicata sull'apparecchiatura. Le apparecchiature queste devono essere obbligatoriamente collegate su una sorgente fornita di una efficiente messa a terra. In nessun caso questo collegamento potrà essere modificato, sostituito o eliminato. Connessione delle apparecchiature alla rete elettrica deve essere successiva interruttore di circuito dell'impianto dell'edificio.

• **CAVI DI ALIMENTAZIONE**: Il dispositivo è dotato di due o tre cavi di alimentazione removibile, per rimuovere le alimentazioni scollegare i cavi dalla Presa.

> **Attenzione**: i cavi di alimentazione sono l'unico di disconnettere l'apparecchio all'alimentazione.

Seguire le instruzioni seguenti:

- Il materiale collegato a residenza alla rete, deve avere un dispositivo di sezionamento facile da raggiungere e che deve essere inserito all'esterno del apparecchio.

- Scollegare l'apparecchiatura dalla presa a muro se si prevede di non utilizzarla per qualche giorno.

- Per disconnettere il cavo, tirare facendo forza sul connettore.

- La prese d'alimentazione deve trovarsi a prossimità dell'apparecchiatura ed essere facilmente accessibile.

- Non far cadere il cavo di alimentazione né appoggiarci sopra degli oggetti pesanti. Se il cavo di alimentazione é danneggiato, spegnere immediatamente l'apparecchiatura.

E' pericoloso far funzionare questa apparecchiatura con cavi di alimentazione danneggiati, cavi graffiati possono provocare un rischio di incendio o uno shock elettrico. Verificare spesso i cavi di alimentazione. Contattare il vostro rivenditore o il servizio assistenza per una sostituzione.

• **CONNESSIONE**: Tutti gli ingressi e le uscite (ad eccezione per l'ingresso di alimentazione) sono sorgenti di energia in classe 1 (ES1) come definito nelle normative IEC/UL 62368-1 edizione 2. Limiti ES1: 60Vdc or 30V rms/ 42.4V di picco.

• **RIPARAZIONI E ASSISTENZA**: L'utilizzatore non deve in nessun caso cercare di riparare l'apparecchiatura, poiché con l'apertura del coperchio metallico o di qualsiasi altro pezzo costituente la scatola metallica,

nonché svitare le viti che appaiono esteriormente, poiché ció puó provocare all'utilizzatore un rischio di shock elettrico o altri rischi. Non sostituire le batterie a bottone presenti all'interno dell'unita'.

• **APERTURE DI VENTILAZIONE**: Le apparecchiature possono comportare delle aperture di ventilazione, si prega di non introdurre mai oggetti o ostruire le sue fessure. Se un liquido o un oggetto penetra all'interno dell'apparecchiatura, disconnetterla e farla controllare da personale qualificato prima di rimetterla in servizio.

3.1.4 German

Um den Betrieb dieses Geräts zu verstehen, raten wir Ihnen vor der Inbetriebnahme alle Sicherheits und Betriebsanweisungen genau zu lesen. Diese Sicherheits- und Betriebsanweisungen für einen späteren Gebrauch sicher aufbewahren. Alle in den Unterlagen, an dem Gerät und hier angegebenen Sicherheitsanweisungen einhalten.

• **ACHTUNG**: Nicht für Kinder geeignet. Um jegliches Risiko eines Stromschlags oder Feuers zu vermeiden, das Gerät nicht Regen, Feuchtigkeit oder intensiven Wärmequellen aussetzen.

• **EINBAU**: Eine ausreichende Luftzufuhr sicherstellen, um jegliche Überhitzung im Gerät zu vermeiden. Das Gerät nicht auf und in Nähe von Textiloberflächen, die Belüftungsöffnungen verschließen können, aufstellen. Das Gerät nicht in Nähe von Wärmequellen, wie z.B. Heizkörper oder Warmluftkappe, aufstellen und es nicht dem direkten Sonnenlicht, übermäßigem Staub, Vibrationen oder mechanischen Stößen aussetzen. Dies kann zu Betriebsstörungen und Unfällen führen.

• **STROMVERSORGUNG**: Zuerst das Gerät erden bevor die Spannungsversorgung hergestellt wird. Verwenden Sie Erdungskabel und eine Schraube auf der Rückseite des Gehäuses, um das Gerät zu erden. Das Gerät nur mit der auf dem Gerät bezeichnete Stromquelle betreiben. Gerät mit geerdeter Hauptstromversorgung muss an eine Stromquelle mit effizienter Erdung angeschlossen werden. Diese Erdung darf auf keinen Fall geändert, umgangen oder entfernt werden. Anschluss von Geräten ans Stromnetz muss nach Abzweigschalter des Gebäudes Installation.

NETZKABEL: Das Gerät ist mit zwei oder drei lösbaren Netzkabel ausgestattet; um es völlig vom Netz zu trennen, ziehen Sie bitte die Netzkabel aus der Kaltgerätebuchse.

Achtung: Das Netzkabel stellt die einzige Möglichkeit dar, das Gerät vollständig vom Netzanschluss zu trennen.

Bitte beachten Sie die folgenden Hinweise:

- Wenn Geräte dauerhaft am Netz bleiben, müssen sie über eine leicht zugängliche Trennvorrichtung verfügen, die außen am Gerät angebracht sein muss.
- Das Kabel mittels des Steckers herausziehen. Niemals am Stromkabel selbst ziehen.
- Die Steckdose muss sich in der Nähe des Geräts befinden und leicht zugänglich sein.
- Das Stromkabel nicht fallen lassen und keine schweren Gegenstände darauf stellen.

Wenn eines der beiden Stromkabel beschädigt ist, das Gerät sofort abschalten. Es ist gefährlich, das Gerät mit einem beschädigten Stromkabel zu betreiben; ein abgenutztes Kabel kann zu einem Feuer oder Stromschlag führen. Die Stromkabel regelmäßig untersuchen. Für Ersatz wenden Sie sich an Ihren Verkäufer oder eine Kundendienststelle.

• **ANSCHLÜSSE**: Alle Eingänge und Ausgänge (ausgenommen der Stromversorgung) entsprechen der der ES1 Klassifizierung entsprechend der IEC/UL 62368-1 Edition 2. ES1 max. Auslegung: 60Vdc oder 20V rms / 42,4V Spitze.

• **REPARATUR UND WARTUNG**: Der Benutzer darf keinesfalls versuchen das Gerät selbst zu reparieren, die Öffnung des Geräts durch Abnahme der Abdeckhaube oder jeglichen anderen Teils des Gehäusessowie die Entfernung von außen sichtbaren Schrauben zu Stromschlägen oder anderen Gefahren für den Benutzer führen kann. Die Knopfzelle der Einheit darf nicht getauscht werden. Wenden Sie sich an Ihren Verkäufer, Ihre Kundendienststelle oder an qualifizierte Fachkräfte.

• **ÖFFNUNGEN UND MUNDUNGEN**: Die Geräte können über Öffnungen verfügen (Belüftung, Schlitze, usw.). Niemals Gegenstände in die Öffnungen einführen oder die Öffnungen verschließen. Wenn eine Flüssigkeit

oder ein Gegenstand in das Gerät gelangt, den Stecker herausziehen und es vor einer neuen Inbetriebnahme von qualifiziertem Fachpersonal überprüfen lassen.

3.1.5 Spanish

Para comprender mejor el funcionamiento de este aparato, le recomendamos que le acuidadosamente todas las consignas de seguridad y de funcionamiento del aparato antes de usarlo. Conserve las instrucciones de seguridad y de funcionamiento para que pueda consultarlas posteriormente. Respete todas las consignas indicadas en la documentación, relacionadas con el producto y este documento.

• **CUIDADO**: No recomendado para niños. Para prevenir cualquier riesgo de choque eléctrico y de incendio, no exponga este aparato a la lluvia, a la humedad ni a fuentes de calorintensas.

• **INSTALACIÓN**: Cerciórese de que haya una circulación de aire suficiente para evitar cualquier sobrecalentamiento al interior del aparato. No coloque el aparato cerca ni sobre una superficie textil que pudiera obstruir los orificios de ventilación. No instale el aparato cerca de fuentes de calor como radiador o boca de aire caliente, ni en un lugar expuesto a los rayos solares directos o al polvo excesivo, a las vibraciones o a los choques mecánicos. Esto podría provocar su mal funcionamiento o un accidente.

• **ALIMENTACIÓN**: Conecte la toma de tierra antes de conectar el equipo al suministro eléctrico. Utilize un cable para conecta cualquier tornillo del chasis, con la toma de tierra de la instalación. Ponga a funcionar el aparato únicamente con la fuente de alimentación que se indica en el aparato. Los aparatos deben estar conectados obligatoriamente a una fuente equipada con una puesta a tierra eficaz. Por ningún motivo este enlace de tierra deberá ser modificado, cambiado o suprimido. Conexión del equipo a la red eléctrica debe ser posterior del interruptor de circuitos derivados de la instalación del edificio.

• **CABLES DE ALIMENTACION**: El equipo puede ser equipado de 2 o 3 cables de alimentación, si desconectamos los cables dejamos al equipo sin alimentación.

Atención: Los cables de alimentación constituyen el único medio de desconectar el aparato totalmente de la red eléctrica.

Aplicar las siguientes consignas:

- El material conectado a residencia a la red informática, debe de tener un dispositivo de seccionamiento fácilmente accesible que debe de ser incorporado al exterior del aparato.

- Desconectar el aparato del enchufe mural si no piensa utilizarlo durante varios días.

- Para desconectar los cables, tire de la clavija. No tire nunca de los cables propiamente dichos.

- El enchufes de alimentación debe estar cerca del aparato y ser de fácil acceso.

- No deje caer los cables de alimentación ni coloque objetos pesados encima de ellos.

Si uno de cables de alimentación sufriera algún daño, ponga el aparato inmediatamente fuera de tensión. Es peligroso hacer funcionar este aparato con un cable averiado, ya que un cable dañado puede provocar un incendio o un choque eléctrico. Verifique el estado los cables de alimentación de vez en cuando. Póngase en contacto con su distribuidor o con el servicio de posventa si necesita cambiarlo.

• **CONEXIONES**: Todas las entradas y salidas (excepto la entrada de corriente) son de nivel eléctrico clase 1 (ES1) tal como se define en la norma IEC / UL 62368-1 2. Límites de ES1 60 VCC ó 30 V rms / 42,4 V de pico.

• **REPARACIÓN Y MANTENIMIENTO**: Por ningún motivo, el usuario deberá tratar de efectuar operaciones de reparación, ya que si abre los aparatos retirando el capó o cualquier otra pieza que forma parte de las cajas o si destornilla los tornillos aparentes exteriores, existe el riesgo de producirse una explosión,choques eléctricos o cualquier otro incidente. No reemplace la pila de botón, presente en la unidad. Contacte el servicio de posventa, a su distribuidor o dirigirse con personal cualificado únicamente.

• **ABERTURAS Y ORIFICIOS**: Los aparatos pueden contener aberturas (aireación, ranuras, etc.). Nointroduzca allí ningún objeto ni obstruya nunca estas aberturas. Si un líquido o un objeto penetra al interior del aparato, desconéctelo y hágalo revisar por personal cualificado antes de ponerlo nuevamente en servicio.

3.1.6 Environmental specifications for all LivePremier models

General:
• Cooling air flows from front side to rear.
• Max ambient operating temperature: < 40°C (< 104°F).
• Operating temperature: 0 to +40°C / +32°F to +104°F
• Storage temperature: -40 to +70°C / -40°F to +158°F
• Operating humidity: 10 to 80% (non condensing)
• Input voltage range: 100-240 VAC autosensing, 50/60 Hz

Safety standard:
• IEC/EN/UL 62368-1
• CSA C22.2#62368-1

Electromagnetic compatibility:
• EN55032
• EN55024
• EN61000-3-2
• EN61000-3-3
• CFR47 Part 15
• ICES-003

Environment:
• RoHS
• WEEE

Caution: Should the unit lose power unexpectedly; unsaved settings may be lost.

3.2 Package Contents

The LivePremier sales package includes:

- One LivePremier unit
- Two or Three Power cords depending on the LivePremier model
- One Rackmount kit
- One Ethernet cross cable
- One USB memory stick
- One Quick start guide*

*The latest versions of the User manual and Quick start guide are also available on **www.analogway.com**

3.3 Rack mount information

All LivePremier units are equipped with 4 handy anti-slip rubber feet and can be used directly on a table.
For rack mount installation, see document *LivePremier – Rack mount.pdf* attached to this manual.

4   Introducing LivePremier™

Before setting up the LivePremier for the first time, please read through all of the documentation to become familiar with its powerful features. The LivePremier can be used in multiple configurations, which results in a versatile video production tool for live event staging and fixed installation applications. LivePremier is not limited by pixel canvas size and can process up to 120 Megapixels throughput at 10 bits 4:4:4 @60Hz.

4.1   LivePremier – Modular architecture

LivePremier is designed to be modular. Input and Output cards can be replaced and every card is composed of four identical slots. Fixed models have been created for users looking for stable preconfigured units (Freelance, Rental or Staging). All other units are considered Custom versions.

The LivePremier product range includes five fixed models and two customizable models:

Aquilon Models	RS alpha	RS1	RS2	RS3	RS4		C	C+
4K60p inputs	8	16	16	24	24		0 to 16	4 to 24
4K60p outputs	4	8	12	12	16		0 to 16	4 to 20
Max 4K60p PGM outputs	4	4 + 4 Aux	8 + 4 Aux	8 + 4 Aux	12 + 4 Aux		8 + 8 Aux	12 + 8 Aux
Max DL/2K60p mixing layers	8	8	16	16	24		up to 16	up to 24
Simultaneous 4K image channels	12	12	12	24	24		up to 12	up to 24
Rack units	4RU	4RU	4RU	5RU	5RU		4RU	5RU

Table 1 - LivePremier family

A fixed unit that has been modified becomes a Custom unit.
For more information on input/output cards, see *4.4 Input / Output cards* page 18.

4.2 Front panel

It is composed of one OLED display, two USB ports, three buttons (Power, Enter and Exit) and a coder.
The front panel can be used for admin features or information (Firmware update, Network settings, Import/Export configuration, Factory Reset and Status check).

Fig. 1 - LivePremier 4RU and 5RU front panels

The front panel displays information such as device IP address, firmware version, or CPU and GPU status.

- Press the **Next/Status button** to wake the display and show device information.
- Press again to cycle through the next pages.

The display automatically goes off after 3 minutes of inactivity.

4.3 LivePremier rear panels
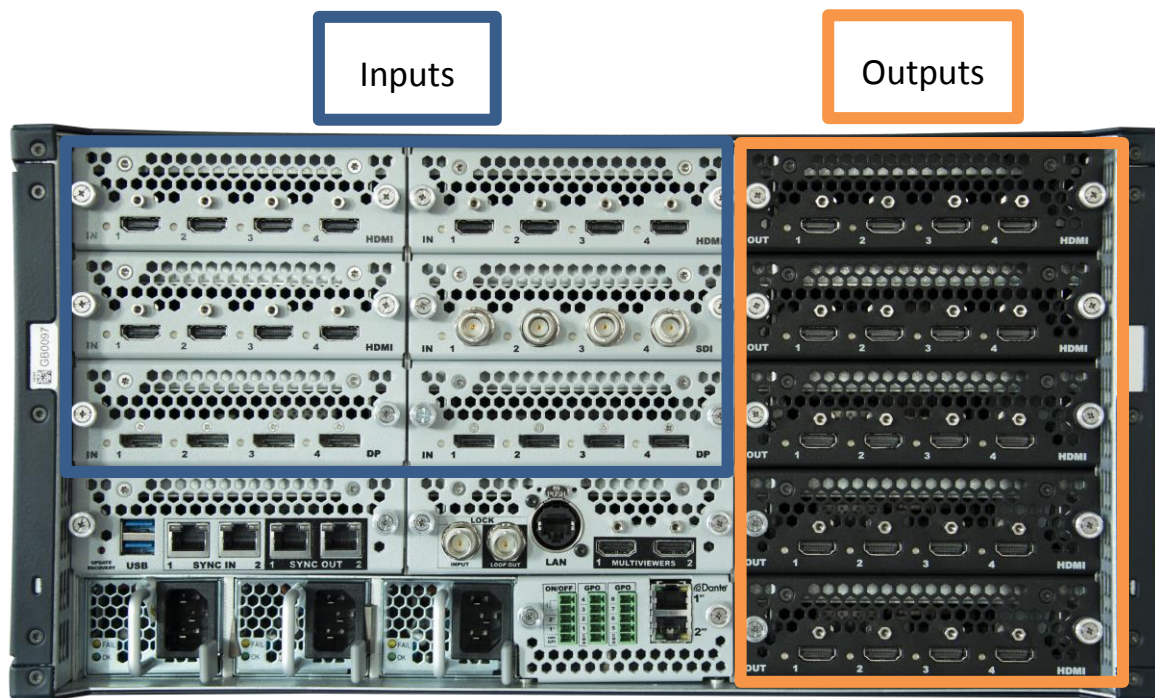
Fig. 2 - LivePremier rear panel (Aquilon RS4)

4.4 Input / Output cards

4.4.1 Available cards

Input and output cards can be replaced on field and every card is composed of four identical connectors. Each connector represents one input/output and supports formats up to 4K 60Hz 4:4:4.

Option	Description
Input and output cards	4 x DisplayPort 1.2
	4 x HDMI 2.0
	4 x 12G-SDI
	4 x 12G-SFP non MSA*

Table 2 - LivePremier optional input and output cards

*12G-SFP input and output cards can receive SFP modules either for *SDI over Fiber* of for *SDI over IP / SMPTE*.

For more information, visit **www.analogway.com** or contact Analog Way support.

4.4.2 Change an input / output card

Warning: - Input / output cards are NOT hot swappable. The unit must be turned off and disconnected from power.
- Input cards cannot be used as output cards and vice versa.
- Do not force cards in places other than slots specified in *Fig. 2 - LivePremier rear panel* (Aquilon RS4) page 17.
- Do not remove cards other than input and output cards.

Installation rules: - Cards must be installed from top to bottom.
- LivePremier units must have 2, 4 or 6 input cards (no odd numbers).

Tip: Input and output cards have different size and colors. Note that output cards are black.

Tools required: one cross-head screwdriver.

1. Turn off the LivePremier unit and disconnect all power supply.
2. Locate the card to change.
3. Loosen the screws on both sides of the card, use the screwdriver if needed.
4. Carefully place the card in the box provided.
5. Put the new card in place, keep a straight axis and pay attention to the rails.
6. Push the new card until mechanical stop to ensure the connection is correct.
7. Tighten the screws on both sides of the card, use the screwdriver.
8. Reconnect the power supplies and turn on the LivePremier unit.
9. Open the WebRCS to check the new card is correctly installed. If needed, update the LivePremier unit.

4.5   Fixed parts

The following parts are fixed and available on all LivePremier units (except the second Power supply unit on 4RU units).

Warning: - All parts other than input and output cards are fixed and should not be removed.

Fig. 3 -   Fixed parts on all LivePremier units

4.5.1 USB and sync ports

All LivePremier units are equipped with four USB ports (two on the front panel, two on the rear panel).
The sync ports can be used to synchronize LivePremier units with other devices.

Note: All sync ports are independent and can be used equally.

4.5.2 Framelock

A Framelock is used to synchronize the frame rate of multiple devices with a physical connection.

- The Framelock input is used to synchronize the LivePremier unit with an external reference.
- The Framelock loop connector is then used to send the sync signal to other devices.
- The Framelock output can also be used alone (as a sync signal generator).

4.5.3 GPIO

All LivePremier units are equipped with 3x MCO 5 pin connectors:
- 1x On/Off
- 2x GPI
- 8x GPO

Note: For more information on GPIO settings, see *13.3 GPIO* page 68.

4.5.4 Dante audio connectors

All LivePremier units are equipped with two dedicated Dante connectors to support up to 64 (8x8) audio input channels and 64 (8x8) audio output channels at 48 kHz.
Dante audio can only be controlled from the Dante ports used as primary & secondary connections.
The Dante network is a network dedicated to audio and separated from the LivePremier network.

Note: For more information on Audio settings, see *13.1 Audio* page 65.

4.5.5 Power supply units

Recommendation: Use all powers supply units to optimize performance and redundancy.

LivePremier units can be equipped two or three Power supply units (PSU):
- 4RU units include 2 PSUs.
- 5RU units include 3 PSUs.

In nominal use there is power load balancing between the PSUs for optimized performance.
One PSU can fail without impacting performance (redundancy 1+1 or 2+1).
A 5RU LivePremier unit cannot function with only one PSU working.

4.5.5.1   Power supply compatibility

Caution: - Only use power supplies provided or recommended by Analog Way.
- Ensure that all power supplies present on the unit are from the same type (type 1 or type 2).
- Do not use different types of power supplies in the same unit as it may damage the unit.

Because the LivePremier is modular, the power supplies can be removed and swapped between units. However, the LivePremier product line uses two different models for the power supplies (type 1 and type 2). Please note that they are not compatible with each other.

4.5.5.2   Power supply noise on standby

When a LivePremier unit is connected to power, some power supply fans will start running to cool down. Please note that this noise is normal even if the unit is on standby.

4.5.5.3   Power supply noise on start up

When starting the LivePremier, some power supplies might be noisy depending on the reference. Please note that this noise is normal though it should not exceed 20 seconds. If needed, Power supplies status can be checked in the WebRCS.

4.6 Power on and off

4.6.1 Start the LivePremier

To start the LivePremier unit safely and correctly:

1. Connect all inputs and outputs.
2. Connect the power cables to the unit and then plug them into a mains socket.
3. Press the power button on the front panel.

4.6.2 Power off

> **Tip**: - The following procedure is the recommended method to safely turn off the LivePremier unit.
> - Saving the configuration before powering off is not necessary. The unit saves the current configuration in real time.

4.6.2.1 Power off from the Front panel

To turn off the LivePremier unit, press the Power button then press the Enter button to confirm.

4.6.2.2 Power off from the WebRCS

Click in the WebRCS top bar, then click **Standby** and confirm.

4.6.3 Forced shutdown

> **Caution**: Use forced shutdown only if the unit has crashed. Using forced shutdown regularly is not recommended.

If the LivePremier unit crashed, turn off the power by Forced shutdown.

- Press and hold the Power button on the front panel until shutdown.

4.7 Precautions when mounting a LivePremier unit

> **Warning**: - For safety reasons, it is recommended to earth the unit. Use an earth cable (not provided) to earth a screw of the unit's chassis.
> - Follow these precautions to avoid risks for products and users.
> - Do not put a magnetic plate in contact with the upper part of the unit as it may block the fans of the unit.

When mounting the LivePremier unit, ensure proper air flow and consider the following points on safe use.

- Always use the handles built on the sides of the chassis for easy mounting into any standard rack or flight case.
- Remove the front and back panels of the flight case during operation to provide sufficient air flow through the unit and prevent overheating.
- Place the unit preferably in a cool and dry environment.
- The fans inside the unit expel the heat through the front and rear panels. Therefore, it is crucial that both the front and the rear are unobstructed at all times. A minimum of 50 cm (20 in.) of clear space at the front and rear of the unit is recommended.
- Do not block the ventilation.
- Do not place any fluid above or near the unit.
- Do not place any magnetic equipment on or near the unit.
- Do not apply any pressure against the chassis or the connectors.

5 Using the WebRCS
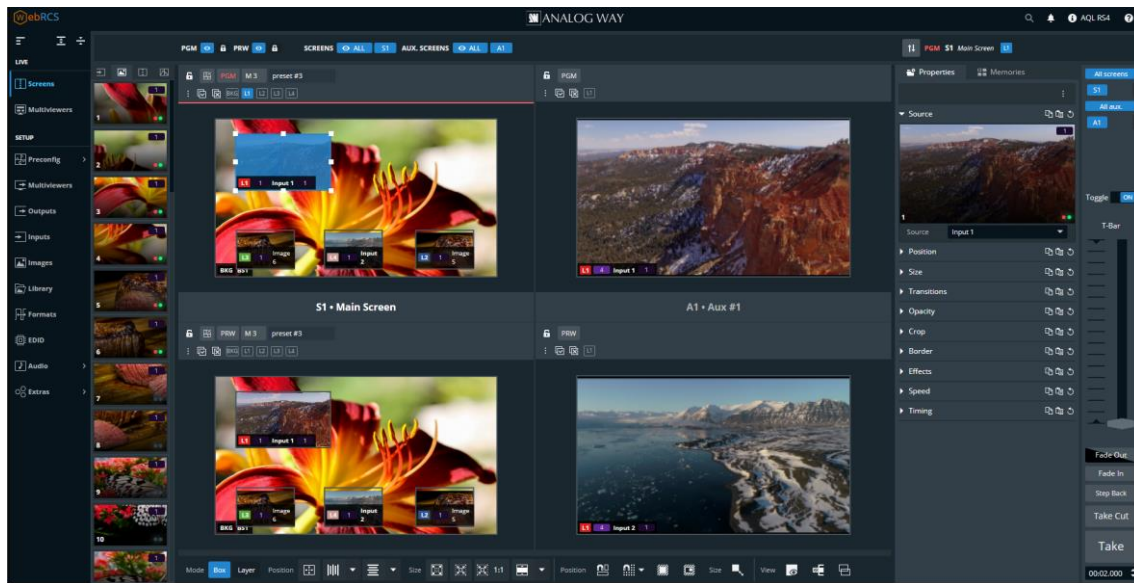
Fig. 4 -   WebRCS Interface

The **WebRCS** is the main controller for the LivePremier. It is embedded in all units and compatible with all operating systems. LivePremier can be operated from any computer via wired network connection without installing any software.

LivePremier can also be controlled from their specific controller currently under development (coming in 2020).

Note: Control can also be integrated into automation and control systems, for more information, contact your local technical support.

5.1 Run the WebRCS

5.1.1 WebRCS requirements

- 1Gb Ram
- 200Mb of free space
- 100Mb Network adaptor or above
- 1920x1080 is the minimum and optimized screen resolution

Operating system:

- Windows 7 or above
- Mac OS v10.7 or above
- Ubuntu v10 or above
- Linux OS 11 or above

Web browser:

- Chrome (Recommended)
- Firefox
- Edge
- Opera
- Safari

Recommendation: Use the latest version of the web browser and keep it up to date.

The **WebRCS** is based on HTML5 and does not require Flash. It is optimized for Chrome web browser in full screen mode.

5.1.2 Default network settings

Connect a computer to the LivePremier unit via LAN connection. Use a crossover cable if connecting directly to the unit, or use straight cables if connecting through a switch or hub.

Tip: All connections should be done before starting the LivePremier unit.

Default network settings:

IP Address: 192.168.2.140

Subnet Mask: 255.255.255.0

Port: 80

Note: Make sure that ports 80, 10606 and 10691 are available on your network and/or not blocked by firewall.

To connect to this address, a computer needs to be configured to use a unique IP address on the same network. If this setup is part of a larger network with other devices, please check with your network administrator before plugging these devices into the network to avoid any IP address conflicts.

Example of static IP address on one computer:

Computer IP address: 192.168.2.50

Computer Subnet Mask: 255.255.255.0

5.1.3 Connection

To access the **WebRCS**, launch a web browser and enter the LivePremier IP address in the address bar. It is possible to connect multiple computers to the same LivePremier unit for real-time collaboration.
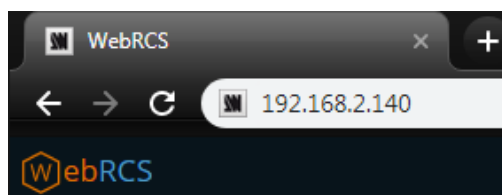
Fig. 5 -   WebRCS connection

All devices default IP addresses are **192.168.2.140**.

Tip: Computers using energy saving mode may turn off the network adaptor during periods of inactivity. Disable the energy saving mode to ensure the connection remains active.

5.2   General tips

5.2.1 Web browser features

The WebRCS is fully browser integrated and behaves like any web site.
It manages browser features such as:

- Previous page / Next Page
- Multi-selection of items using the Ctrl or Shift keys
- Open in new tab / Open in new page
- Enter direct URL
- Bookmark any page
- Supports browser-based language translators

5.2.2 Mobile version

Prerequisite: to access the LivePremier with a mobile device, a wi-fi router must be connected on the same network as the LivePremier unit.

A lighter version WebRCS is also available on iOS and Android mobile devices without any installation needed. To access the WebRCS from a mobile device, launch a web browser and enter the LivePremier IP address in the address bar.

This mobile version is simplified and has less features (no Preconfig or setup):

- Check rear panel connection status
- Check input video signals
- Load Screen memories and Multiviewer memories
- Trigger transitions

Tip: For an optimized interface, do not display the mobile browser in Desktop mode.

5.2.3 Section buttons (copy, paste and reset)

On multiple pages of the WebRCS, the following buttons appear:

: Copy the settings   : Paste copied settings   : Reset the settings

These buttons are associated to a specific section. Use these buttons to quickly copy, paste or reset the settings of one section. Paste works when similar settings are currently copied (i.e. layer position copied to a different layer in a different screen).

5.2.4 Set a number value

In the WebRCS, the fields for number values can be set and adjusted in different ways:
- Click and enter a number value
- Click the field and hold then move the mouse left or right
- Click and use the scroll wheel for small adjustments (mouse must remain in the field)
- Click the *Up* and *Down* arrows at the end of the field for single unit adjustment

5.2.5 Search bar

In the top bar, use the search bar to simply access a feature or setting.

1. Click the search bar.
2. Enter a keyword to search (ex: Input, Pattern, Keying).

   The search results are displayed.

3. Click a result to open the corresponding page.

5.2.6 Alarms and notifications

In the top bar, alarms and notifications display when the following events occur:

- A component is missing or not detected
- A component is not compatible with the current firmware version
- A high temperature has been measured (card, fan, or device alarm)
- Pending changes are waiting to be applied

Open the history log to check history of alarms and notifications.
It is possible to mark notifications as read or clear them all.

5.2.7 **Back panel shortcuts**

In the top bar, click ⓘ to show the virtual Back panel.

Click the connectors to access their settings directly.

5.2.8 **Standby / Restart**

In the top bar, click ⓘ then **Standby** or **Restart** and confirm.

5.3 Dashboard - System settings

In the **Dashboard**, check device status and modify general system settings.

In the top bar, click ⓘ then any sub item of the Dashboard to enter the Dashboard menu.

Click on Dashboard items on the left panel to open the corresponding settings on the right panel.
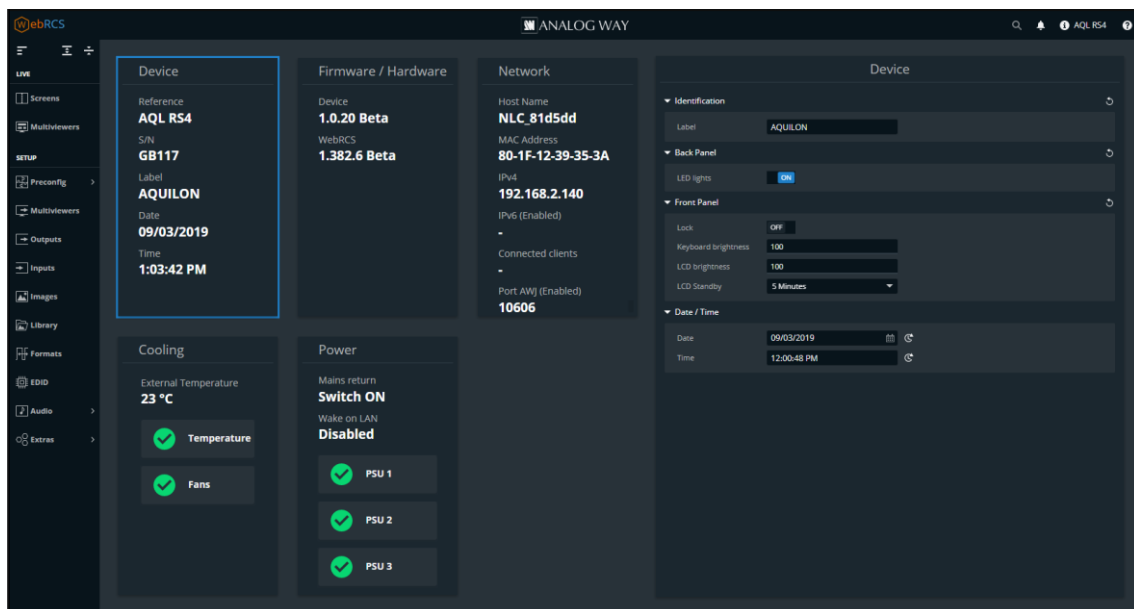
Fig. 6 -   Dashboard

5.3.1 **Dashboard – Device**

1. In **Identification**, enter a name for the device.
2. In **Back Panel**, toggle the LED lights button to enable/disable the LEDs on the unit back panel.
3. In **Front Panel**,
    a. Toggle the **Lock** button to lock the Front panel keys.
    b. Set the Keys buttons Brightness.
    c. Set LCD screen Brightness.
    d. Set the LCD screen timeout before standby.

4. In **Date / Time**, set the device Date and Time. Click ⟳ to use local computer date or time.

5.3.2 Dashboard – Firmware / Hardware (Firmware Update)

Prerequisite: Go to **www.analogway.com** and download the latest LivePremier updater.

Note: In some cases, updating the LivePremier unit may reset the Configuration (check the Release notes).

Tip: Export a configuration to recover it after the update (see Import and Export configuration page 18).

5.3.2.1   Update Firmware from WebRCS

1. Go to **Dashboard** > **Firmware / Hardware**.
2. Load the updater file in the WebRCS using the file explorer or drag and drop.
3. Click **Extract selected file**.

The updater files are extracted and verified.

4. Click **Install**.

After the installation, the LivePremier unit reboots.

5. If needed, import saved Configuration.

5.3.2.2   Update Firmware from the front panel

It is possible to update the firmware from the front panel using a USB drive.

1. Load the updater file on a USB drive (root).
2. Connect the USB drive to the front panel.

The LivePremier unit automatically detects updater files on the USB drive.
If the updater file is not detected, go to Control > Scan USB device using the front panel buttons.

3. Select **OK** to continue.
4. The available updater files are displayed, select a file.

The updater files are extracted and verified.

5. Select **Update**.

After the installation, the LivePremier unit reboots.

6. If needed, import saved Configuration.

5.3.2.3   Reinstall current Firmware

When a firmware is installed, the LivePremier unit saves the installer of the current firmware in its memory.
It is possible to reinstall the current firmware if needed (ex: update an input/output connector card).

1. Go to **Dashboard** > **Firmware / Hardware**.
2. Click **Extract current version**.

The updater files are extracted and verified.

3. Click **Install**.

After the installation, the LivePremier unit reboots.

4. If needed, import saved Configuration.

5.3.2.4   Hardware status

The Hardware status is available if needed for System check or Technical support.

5.3.3 Dashboard – Network

1. Go to the **Dashboard** > **Network**.
2. In **Adapter**, set Host name.
3. In **IPv4**, manage DHCP, set IP address, Netmask and Gateway.
4. Click **Apply**.
5. If needed, enable and set **IPv6** and click **Apply**.

5.3.4 Dashboard – Cooling

Caution: If the device temperatures are too high, the device will automatically shutdown to prevent damages.

Check the internal and external temperature. Two level alarms can appear if any temperature is too high: "abnormally high" and "dangerous".

Recommendation: - In case of alarms, check that nothing is covering the unit and that the air flow is not blocked.

- Maintain the air filter regularly to prevent dust from blocking the air flow. For more information, see *17.1 User Maintenance – Air filter* page 91.

5.3.5 Dashboard – Power

Caution: always use same model of power supply units. If a new one is needed, be careful to use the same model.

1. Go to the **Dashboard** > **Power**.
2. In **Mode**, set the device to Switch ON or Stay OFF when connected to power or after a power failure.
3. Enable / disable Wake on LAN.

5.4   Save / Load Configuration

Tip: Saving the configuration before powering off is not necessary. The unit saves the current configuration in real time.

The LivePremier units are able to export and import device configurations.
In addition to these features, the LivePremier units also have two embedded memory slots to save and load configurations internally.
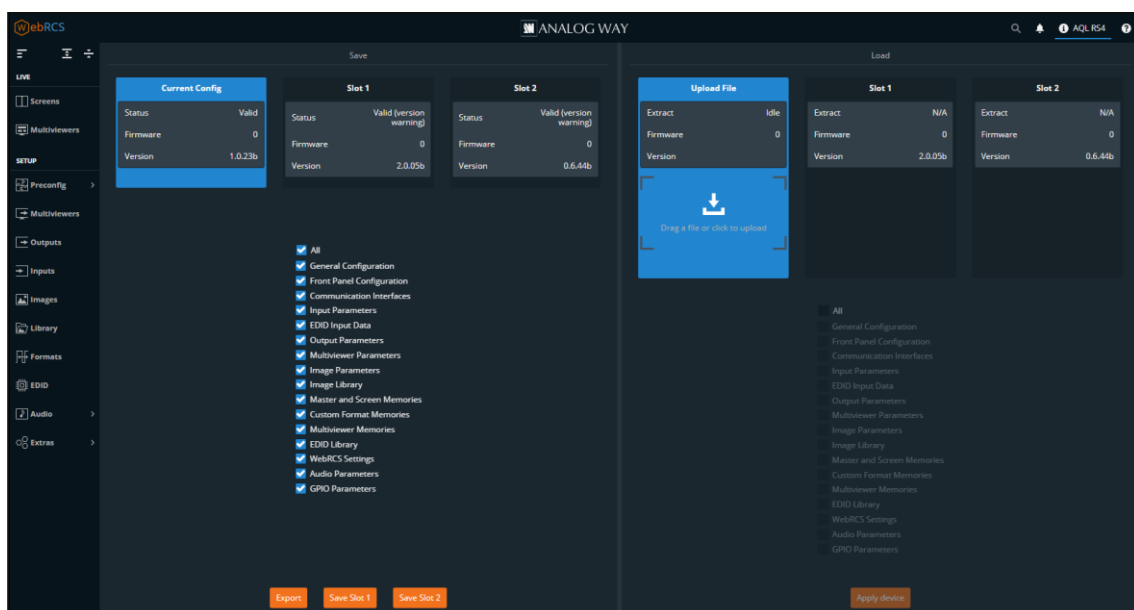
Fig. 7 -   Save / Load Configuration

5.4.1 Save the current Configuration in a Slot

1. In the top bar, click ⓘ , then **Save / Load**.
2. In the **Save** panel, click **Current Configuration**.
3. In the filters, select the settings to save.
4. Click **Save to Slot 1** or **Save to Slot 2**.

The configuration is saved in the selected memory slot.

5.4.2 Load a Configuration from a Slot

1. In the top bar, click ⓘ , then **Save / Load**.
2. In the **Load** panel, select the slot to load.

The configuration is extracted and conflicting settings are grayed out in the filters (version incompatibility, obsolete information, device logs).

3. In the filters, select the settings to load.
4. Select how to merge the images in the Library.

Merge and replace	Merge and replace frames in non-empty slots
Merge without replacing	Merge but keep frames in non-empty slots
Replace current Image Library	Replace the entire device library with the import library
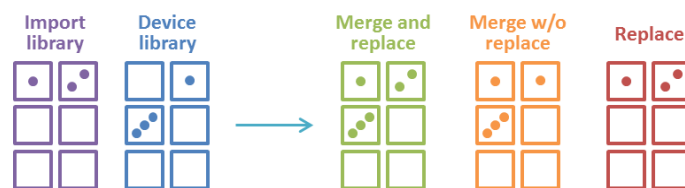
5. Click **Load**.

The configuration is loaded to the WebRCS and applied to the current configuration.

5.4.3 Export a Configuration to the computer

1. In the top bar, click ⓘ , then **Save / Load**.
2. In the **Save** panel, select the configuration to export (**Current Configuration, Slot 1** or **Slot 2**).
3. In the filters, select the settings to export.

Note: Filtering is possible only if exporting the Current Configuration.

4. Click **Export**.

The configuration file is downloaded to the computer.

5.4.4 Import a Configuration

1. In the top bar, click ⓘ, then **Save / Load**.

2. In the **Load** panel, click **Upload file** and select the configuration file to import.
   Or Drag and drop the configuration file from the computer file explorer to the **Upload file** area.
   The configuration is extracted and conflicting settings are grayed out in the filters (version incompatibility, obsolete information, device logs).

3. In the filters, select the settings to import.

4. Select how to merge the images in the Library:

Merge and replace	Merge and replace frames in non-empty slots
Merge without replacing	Merge but keep frames in non-empty slots
Replace current Image Library	Replace the entire device library with the import library
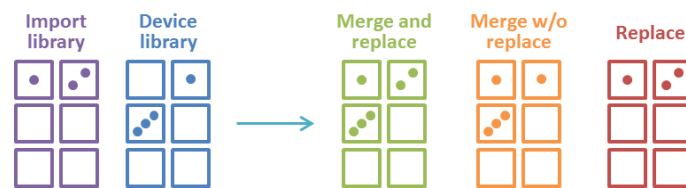
5. Click **Load**.

The configuration is loaded to the WebRCS and applied to the current configuration.

5.5 Reset configuration

1. In the top bar, click ⓘ, then **Reset**.

2. Select the reset mode:

Default Reset	Select the settings to be reset to default value.
Out of the box	Factory reset. All settings are reset to default value.

3. Click **Reset**.

The LivePremier unit resets.

6   LivePremier concepts

6.1   What is "Capacity"?

A capacity is the maximum bandwidth allocated to an item. Allocating a max capacity for every item ensures the interoperability between all the internal elements of a LivePremier unit.

The range of the capacity is from **1** to **8**. The minimum capacity (**1**) refers to dual-link bandwidth.
Each following capacity adds the resource equal to dual-link bandwidth.
The maximum capacity (**8**) refers to 8K bandwidth.

6.1.1   Standard formats capacity

Here is a table showing some commonly used formats and their corresponding capacity:

Capacity 1	Capacity 2
1920 x 1080 @ 60Hz (HDTV 1080p60)	3840 x 2160 @ 30Hz
2048 x 1080 @ 60Hz	4096 x 2160 @ 30Hz
1920 x 1200 @ 60Hz	3840 x 2160 @ 60Hz (UHDTV 2160p60)
2560 x 1600 @ 60Hz	4096 x 2160 @ 60Hz
Any format below 2560 x 1600 @60Hz	Any format above 2560 x 1600

6.1.2   Elements using capacity

Capacities are set in the Preconfig menu in the WebRCS.

Inputs	Image presets	Layers	Screen outputs
Capacity **1**	Capacity **1**	Capacity **1**	Capacity **1**
Capacity **2**	Capacity **2***	Capacity **2**	Capacity **2**

*Setting an image preset to capacity **2** disables the next image preset.

6.1.3 Content and layer compatibility

An input or image with capacity **1** can be used in a layer with capacity **1** or **2**:

Full HD
1920x1080
Content with capacity **1**

Full HD
1920x1080
Layer with capacity **1**

Full HD
1920x1080
Layer with capacity **2**
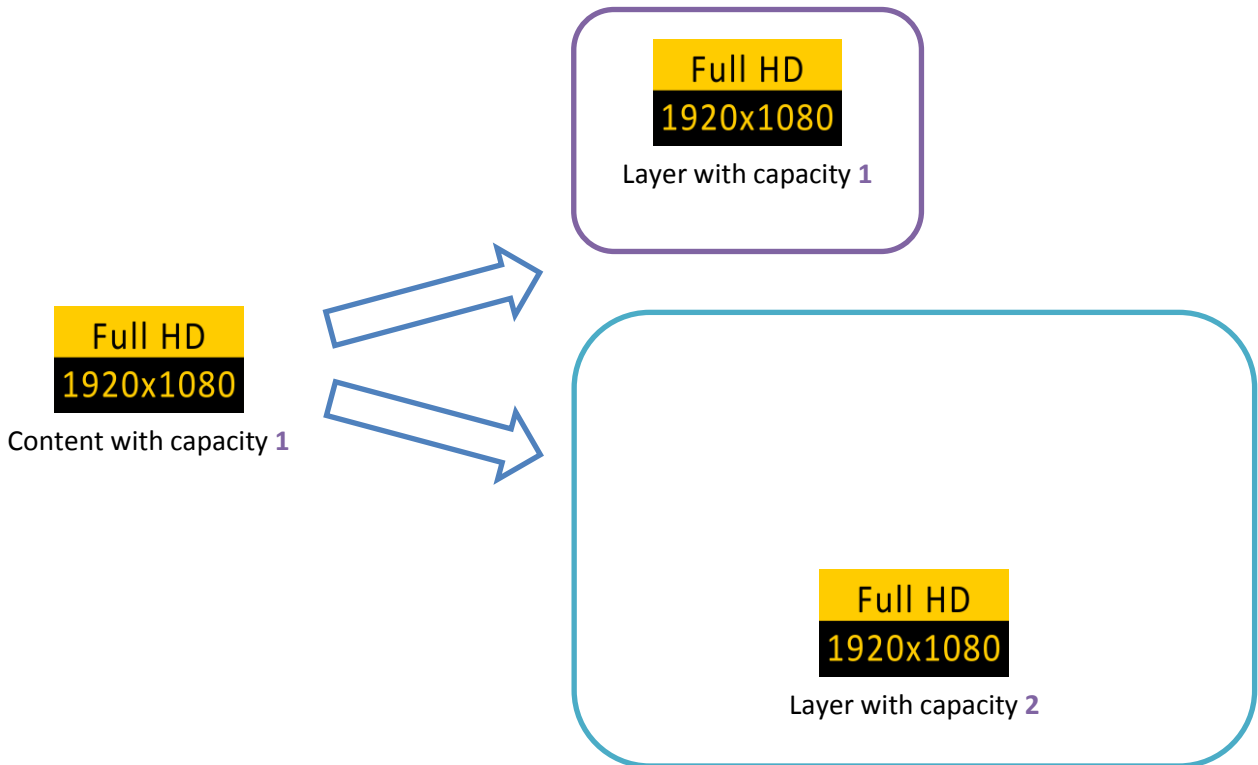
The content is displayed correctly but the resources are not optimized.

An input or image with capacity **2** can only be used in a layer with capacity **2**:

4K
Ultra HD
Content with capacity **2**

Layer with capacity **1**

The content cannot be displayed due to insufficient layer capacity.

4K
Ultra HD
Layer with capacity **2**
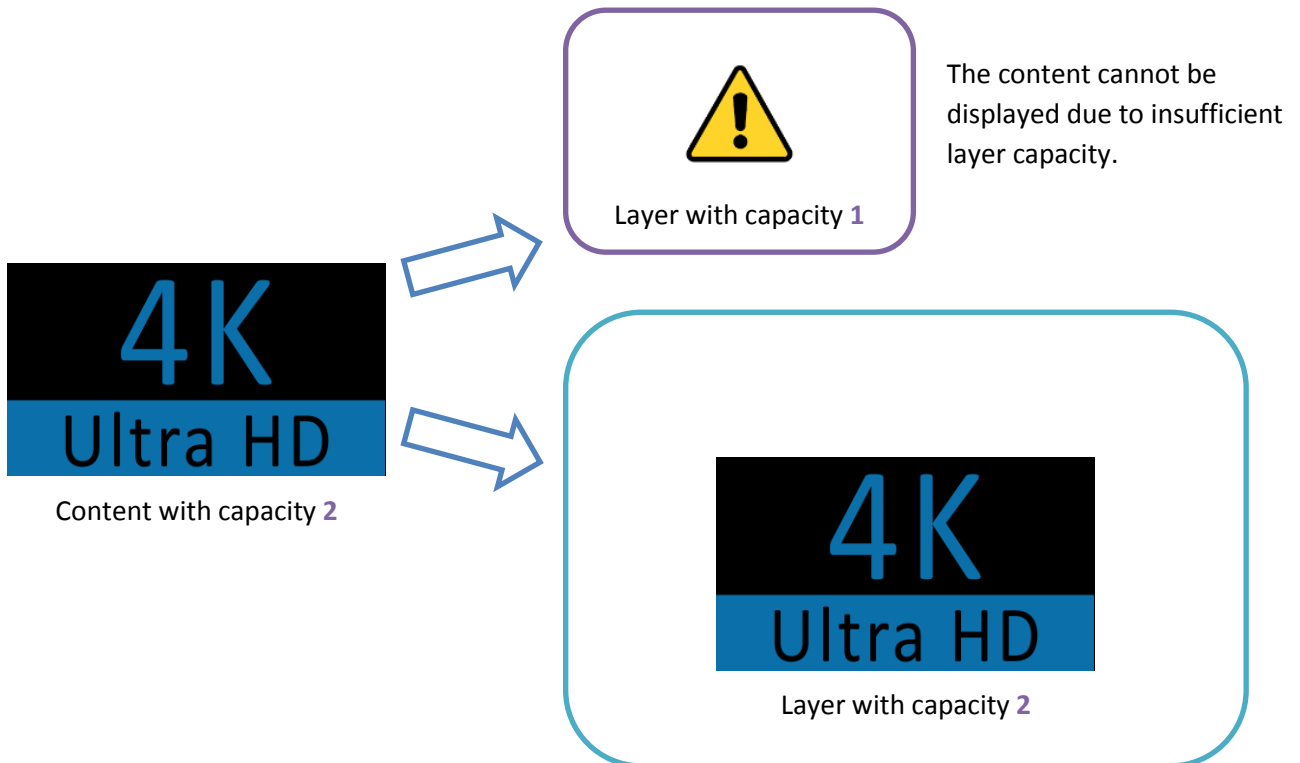
Note: If a 1920x1080 content is set to capacity **2**, it will on be displayed in a layer with capacity **2**.

6.1.4 **Aux outputs capacity**

Outputs used in Screens have a maximum capacity of **2**. Outputs used in Aux Screens can be set to a capacity higher than **2**, but doing so disables the next output plugs on the card as it uses their resources.

Aux outputs
Aux do not have capacity **1**
Capacity **2** (can display a 4K Screen)
Capacity **4** (can display a 2x 4K Screen but disables the next output slot)
Capacity **6** (can display a 3x 4K Screen but disables the next two output slots)
Capacity **8** (can display a 4x 4K Screen but disables the next three output slots)

Tip:
- Only outputs 1, 5, 9, 13 and 17 can be set as Aux Screens with capacity 8 as this uses the resources of the next three outputs of the card. Connect outputs according to these limitations.
- An Aux set to capacity **8** has enough bandwidth to display an 8K Program, but the output plug format is still limited to 4K60.

6.2 **Mixing layers and split layers**

Layers are assigned to Screens in the Preconfig menu of the WebRCS. LivePremier features two layers modes: Mixing layers and Split layers.

Note: A Screen contains either mixing layers or split layers. But never a combination of both.

6.2.1 **Mixing layers**

This is the default layers mode for LivePremier units as well as most Analog Way products. This offers the most spectacular transition effects which made the reputation of Analog Way.
Mixing layers allow cross transitions with both contents visible at the same time during the transition (seamless transition).

Note: A mixing layer cannot display a Program Screen.

6.2.2 **Split layers**

Layer mode that consumes half the processing resources compared to mixing layers and doubles the number of layers available on Screen. Split layers are created by pairs with same resource consumption (capacity **1** or **2**, use of Cut & Fill).

In split layers mode:

- A Program Screen can be displayed in a layer (may use resources of following layers and preempt them).
- Seamless transitions are not possible, one content will disappear before the new one is visible.
- When using a Multiviewer to view the Preview of a Screen using split layers, only layer wireframes are displayed.

6.3 LivePremier Processing

6.3.1 VPUs and Scaling engines

The main processing components of LivePremier are the Video Processing Units (VPU). VPUs create the layers and allocate them to one or multiple outputs. Understanding VPU concept is the key for optimized performance.

Each VPU contains 8 source links and 8 outputs links.

Capacity **1** uses one link and capacity **2** uses two links. Each VPU supports:

- 8 mixing layers (or 8 pairs of split layers) spread over 8 outputs, in capacity **1**.
- 4 mixing layers (or 4 pairs of split layers) spread over 4 outputs, in capacity **2**.

Representations of a VPU

VPU with full capacity **1**

VPU with full capacity **2**
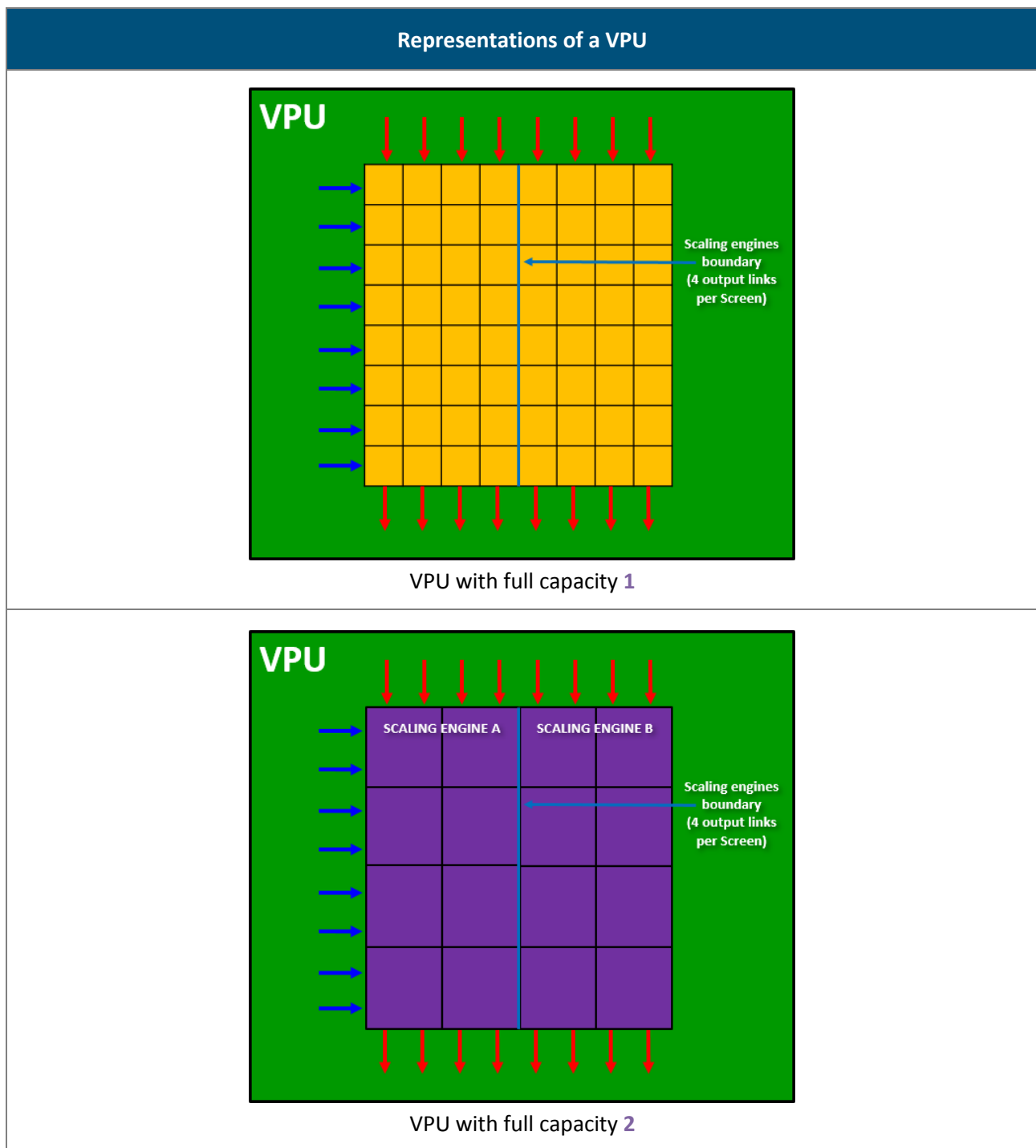
6.3.2 Self-rearrangement

A VPU has a modular architecture and rearranges its links depending on the Screen configuration:
- Number of outputs in the Screen
- Number of layers in the Screen
- Capacity of the links between layers and outputs

VPU configuration examples
One VPU can manage up to 8 Screens, each Screen using 1 output and 1 mixing layer.
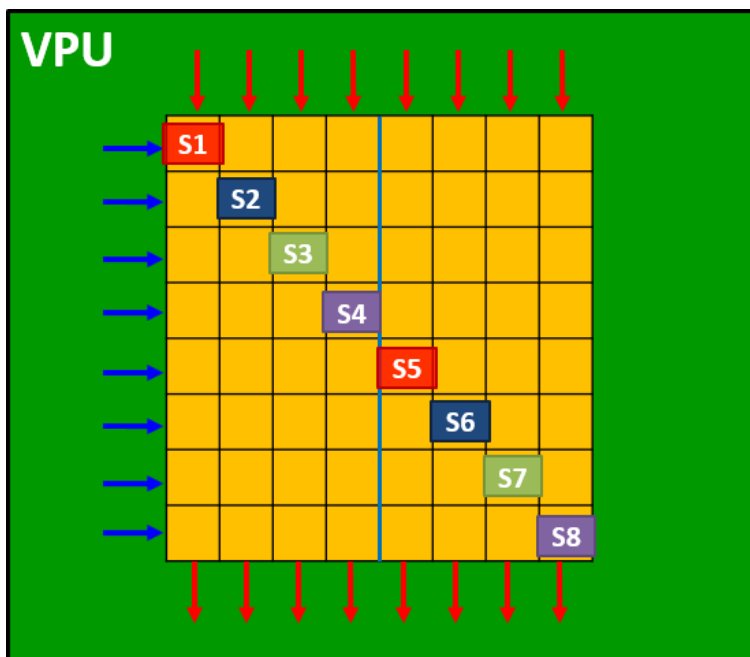
One VPU can manage various combinations within the 8x8 links limits:
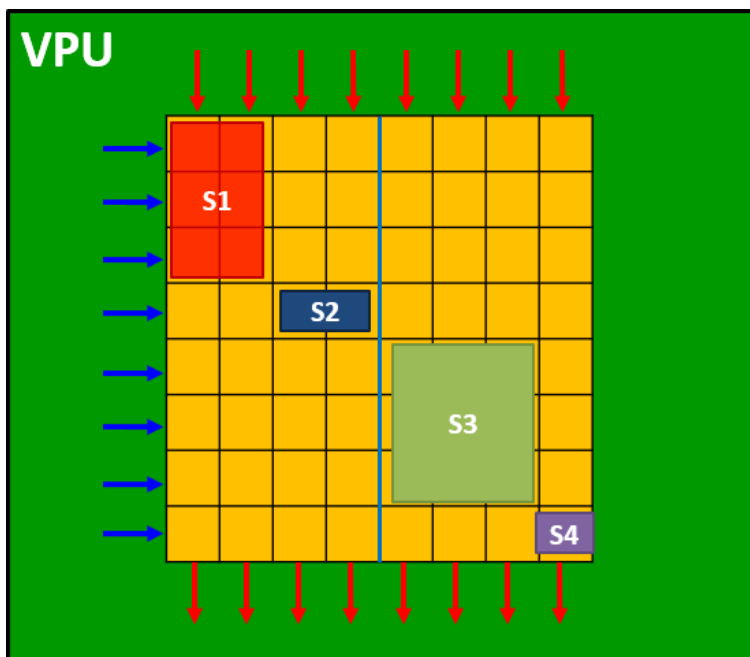
6.3.1 A VPU can support both capacities at the same time

One Screen cannot support mixing and split layers at the same time. However, VPUs and Screens can support layers of capacity **1** and **2** at the same time, in any order.
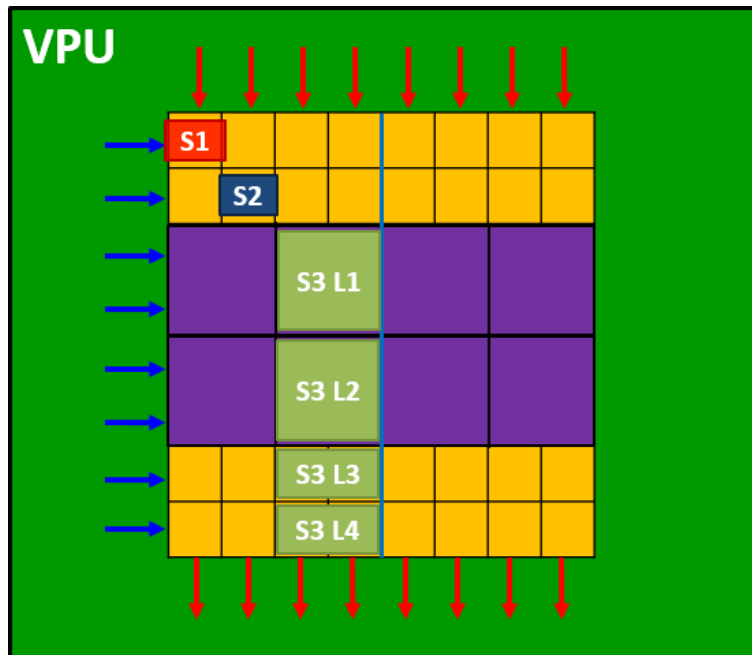
Screen 1 (1 output and 1 mixing layer capacity **1**)

Screen 2 (1 output and 1 mixing layer capacity **1**)

Screen 3 (2 outputs and 2 mixing layers capacity **2** and 2 mixing layer capacity **1**)

6.3.2 Scaling engine boundary

A VPU is optimized to spread layers over up to 4 output links. A layer spread over more than 4 output links uses another layer link.
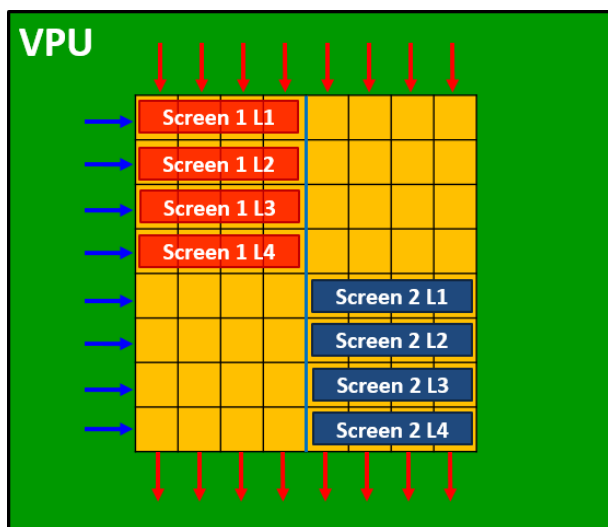
Two Screens of 4 outputs with 4 mixing layers each
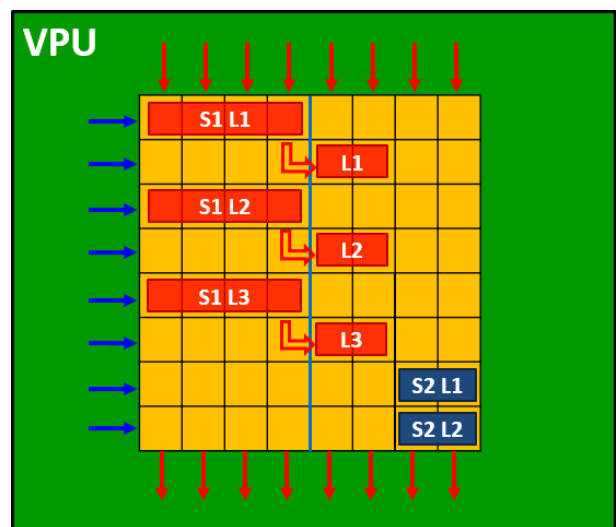
Screen 1 (6 outputs and 3 mixing layers)

Screen 2 (2 outputs and 2 mixing layers)

6.3.3 Combined VPUs

A Screen using more than 8 outputs uses another VPU.

In the following example, each mixing layer of Screen 1 uses 3 layer links:

Screen 1 (12 outputs and 4 mixing layers)

Screen 2 (4 outputs and 4 mixing layers
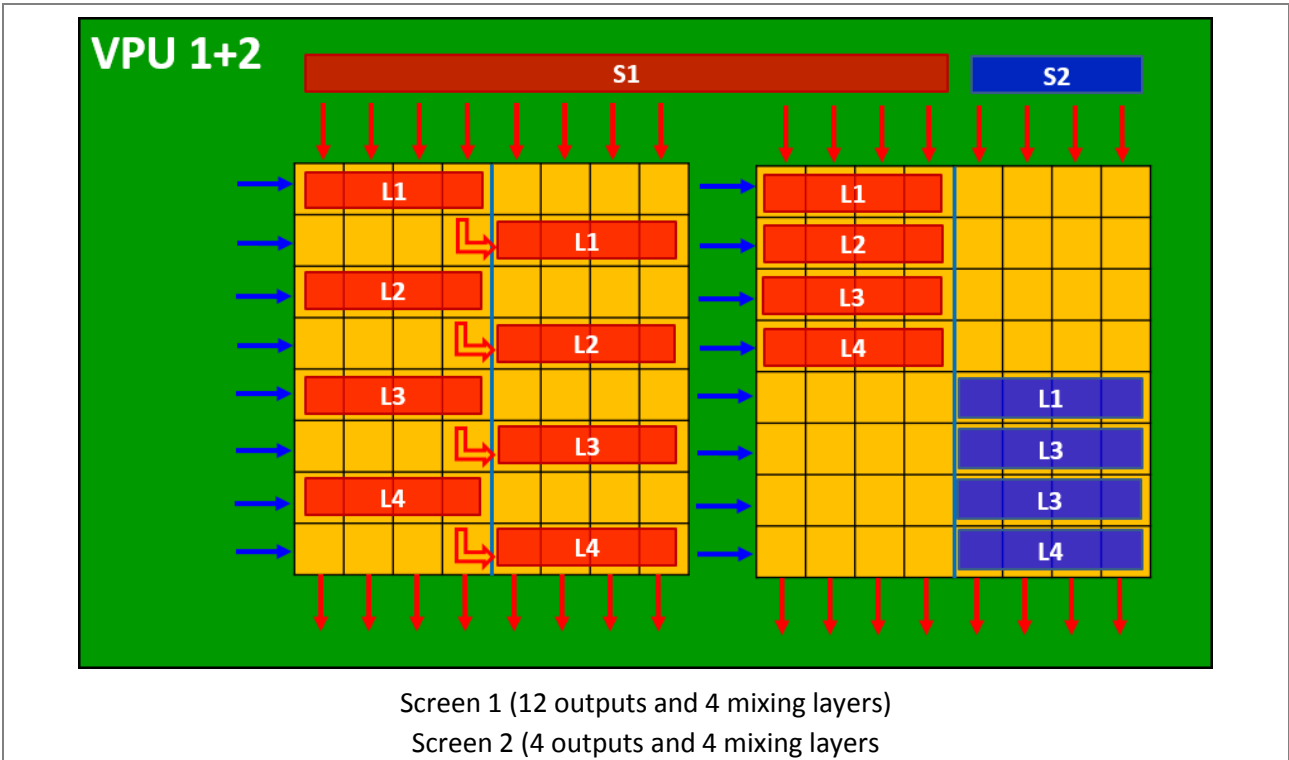
6.3.4 Optimized mode

An Optimized mode is enabled for the whole VPU when one Screen uses at least 5 outputs links and at least one layer of capacity **2**. The Optimized mode removes the 4 links boundary and configures the links to bring the best performance for layers of capacity **2**.

Recommendation: When Optimized mode is enabled in one Screen, use only layers of capacity **2**.

Without Optimized mode	With Optimized mode
Screen 1 (5 outputs and 2 mixing layers capacity **1** and 1 mixing layer capacity **2**)	Screen 1 (5 outputs and 4 mixing layers capacity **2**)
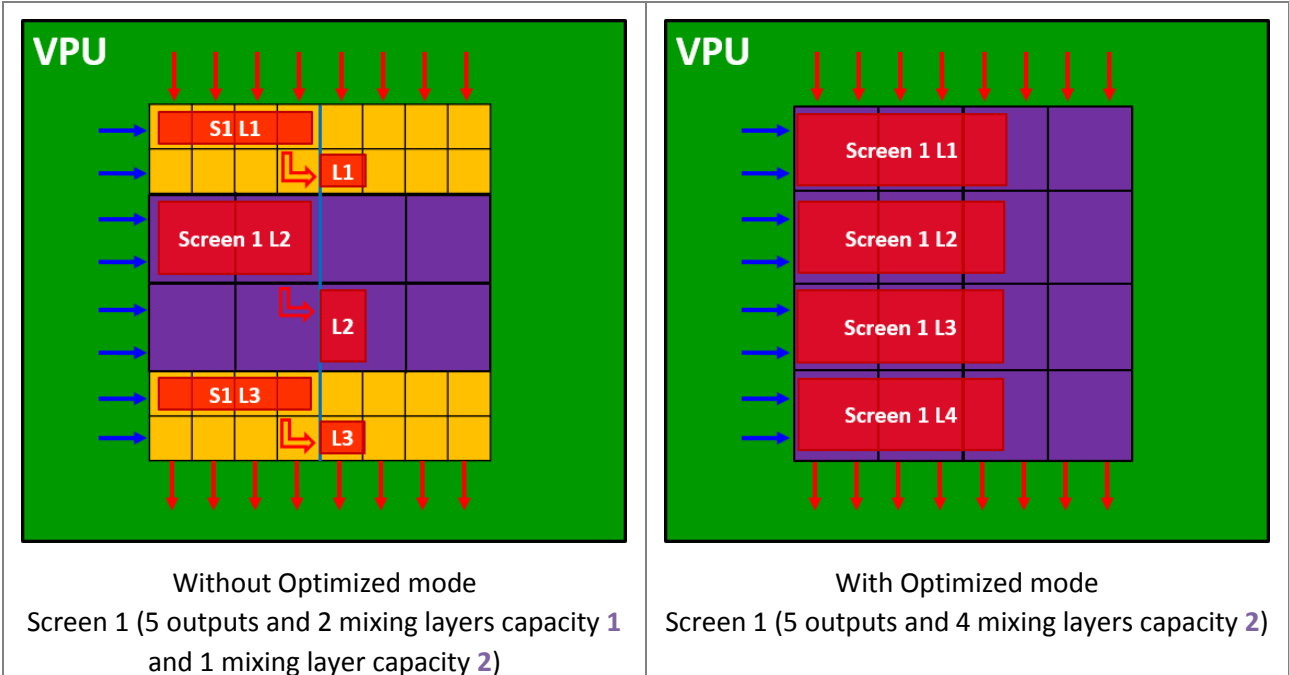
6.3.5 Cut & Fill resources

The Cut & Fill effect is enabled for a layer and doubles the resources needed for that layer.

Screen 1 (4 outputs and 2 mixing layer capacity **1**;
1 mixing layer capacity **1** with Cut & Fill; 1 mixing layer capacity **2** with Cut & Fill)
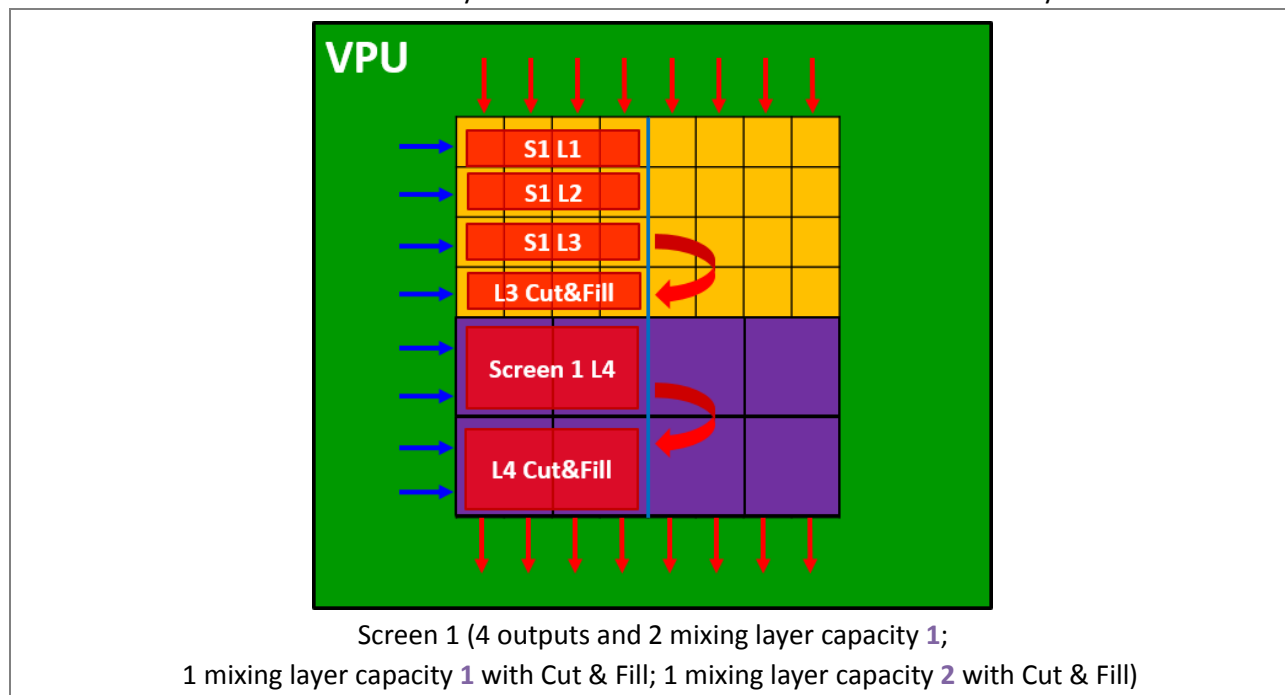
6.3.6 How many VPUs per model?

LivePremier units are equipped with up to 3 VPUs.

Aquilon Models	RS alpha	RS1	RS2	RS3	RS4	C	C+
VPUs	1	1	2	2	3	up to 2	up to 3
Output connectors	4	8	12	12	16	up to 16	up to 20
Max 4K60 PGM outputs (capacity 2)	4 Screens + 0 Aux	4 Screens + 4 Aux	8 Screens + 4 Aux	8 Screens + 4 Aux	12 Screens + 4 Aux	8 Screens + 8 Aux	12 Screens + 8 Aux
Max 4K60 mixing layers (capacity 2)	4	4	8	8	12	up to 8	up to 12
Max DL split layers (capacity 1)	16	16	32	32	48	up to 32	up to 48

Note: VPUs are automatically joined together just like scaling engines depending on the Screen configuration.

6.3.7 IPUs

VPUs create video content for layers while image content is created by Image Processing cards (IPUs).
One IPU supports:
- up to **24** simultaneous images of capacity **1** displayed on Program.
- up to **12** simultaneous images of capacity **2** displayed on Program.

Note: - Images of capacity **1** and **2** can be displayed at the same time.

- When an image preset is set to capacity **2**, it uses the resources of the next preset and preempts it.

Aquilon Models	RS alpha	RS1	RS2	RS3	RS4	C	C+
IPUs	1	1	1	2	2	0 or 1	Up to 2
Simult. 4K image channels	12	12	12	24	24	0 or 12	Up to 24

7 Preconfig Menu
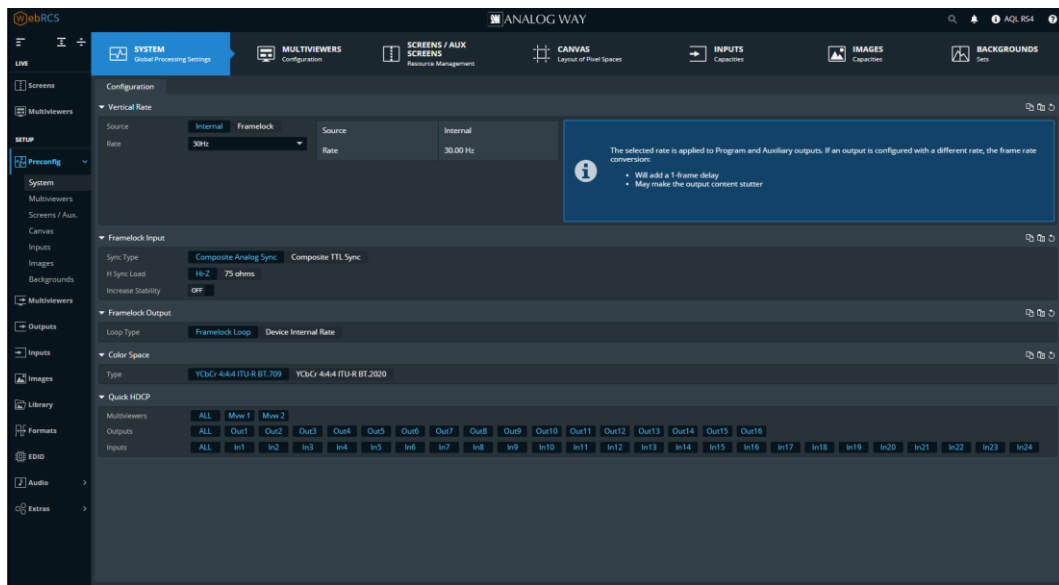
Fig. 8 - Preconfig Menu

Preconfig is composed of the following submenus:

- System
- Multiviewers quantity (one or two)
- Screens / Aux Screens
- Canvas
- Inputs
- Images
- Backgrounds

Click **Preconfig** to display the submenus.

7.1 Preconfig > System

In **Preconfig** > System, set internal rate, framelock, color space and quick HDCP.

7.1.1 Vertical rate

Vertical rate sets the overall internal operating frame rate of the unit, which defines the frame rate of all Program outputs. Vertical rate can be set manually, or by following a Genlock or Framelock as a reference.

Tip: Using Framelock is useful to eliminate the "tearing effect" which may be visible as an artifact of the framelocking process.

7.1.1.1 Set defined rate

1. Go to **Preconfig** > System.
2. In **Vertical Rate** > **Source**, click **Internal**.
3. In **Rate**, select the refresh rate.

7.1.1.2   Set relative rate

Caution: Make sure the reference input is a reliable source. Any disruptions in the reference signal may cause visible glitches on the output, even if the selected framelock reference input is not being displayed.

1. Go to [icon] **Preconfig** > System.
2. In **Vertical Rate** > **Source**, click **Framelock**.
3. In **Reference**, select Genlock or the Input to be the refresh rate reference.

7.1.1.3   Framelock input settings

These settings are applied when Framelock is set as Vertical rate.
Set the framelock sync settings according to your video sync setup.

Setting name	Description / Setting selection
Sync Type	**Composite Analog Sync** or **Composite TTL Sync**
H sync Load	**Hi-Z** or **75 ohms**
Increase stability	On/Off toggle. Increase the frequency tolerance of the Framelock input.

7.1.1.4   Framelock output settings

Set the Framelock output to Loop the Framelock or to output the internal rate of the unit.

7.1.2 **Set Color space**

Set the color space used for the device internal processing.

Tip: **BT.709** is recommended for HD and **BT.2020** is recommended for UHD.

1. Go to [icon] **Preconfig** > System.
2. In Color Space, select **YCbCr 4:4:4 ITU-R BT.709** or **YCbCr 4:4:4 ITU-R BT.2020**.

Note: The output color space is set per output in the Output menu. For more information, see *9.2.1 Output signal* page 52.

7.1.3 **Quick HDCP**

From [icon] **Preconfig** > System, quickly enable / disable HDCP for all inputs and outputs in the same page.

Note: Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP inputs will not be displayed anymore.

7.2 Multiviewers quantity

A Multiviewer is a dedicated output displaying a user customizable selection of Widgets as display resources. A Widget is an element containing a program, preview, input or image. One Multiviewer can display up to 24 Widgets.

A LivePremier unit can use One Multiviewer (24 Widgets in total) or Two Multiviewers (48 Widgets in total).

In [icon] **Preconfig** > [icon] Multiviewers, choose to enable **One Multiviewer** or **Two Multiviewers screens**.

Two Multiviewers	- Max output resolution per Multiviewer is 2560x1600@60 or 4K@30
	- Up to 48 widgets
One Multiviewer	- Max output resolution is 4K@60
	- Up to 24 widgets

Note: - By default, Two Multiviewers are enabled.

- After making changes, click **Apply** to save the new configuration.

7.3 Preconfig > Screens / Aux Screens
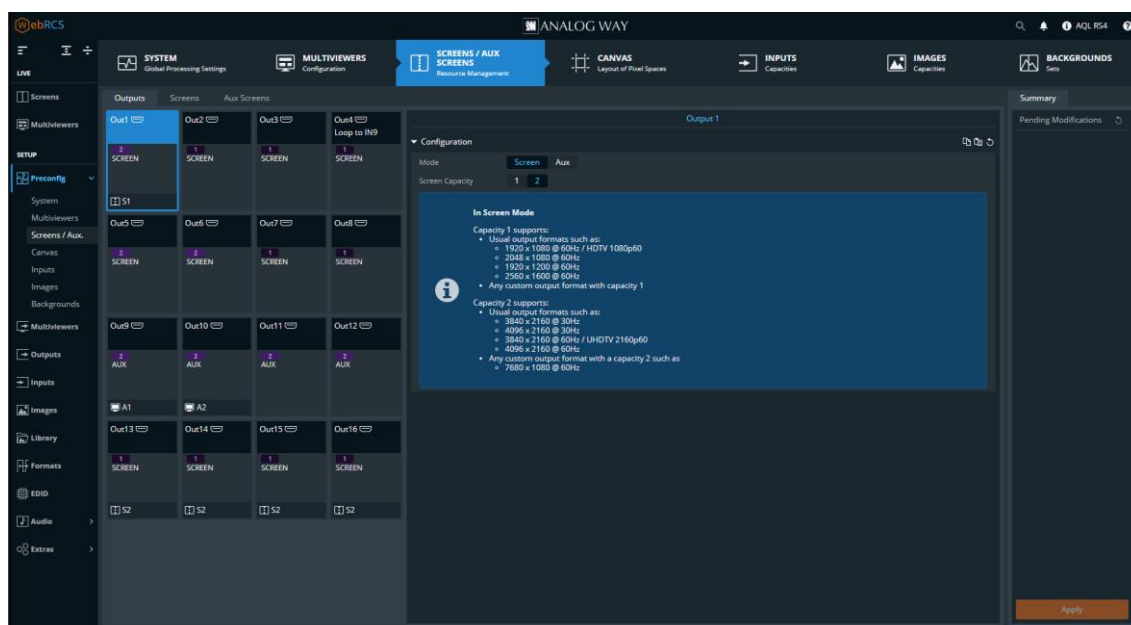
Fig. 9 -   Preconfig – Screens / Aux Screens

In [icon] **Preconfig** > [icon] Screens / Aux Screens:

- Set output capacity

- Enable Screens and assign outputs to Screens (and Aux Screens)

- Set Screen Layer mode (Mixing or Split)

- Set the layers quantity and capacity (1/2; Cut & Fill)

Note: - The Cut & Fill effect is set for a layer (or pair of split layers) during the layer allocation as it requires VPU resources.

- After making changes, click **Apply** to save the new configuration.

7.3.1 Output capacity – The 4-4 rule

A LivePremier unit is equipped with one, two or three Video Processing cards (VPU).

Output resources are impacted by format (resolution and rate). LivePremier units have a limited number of Program outputs depending on the capacity set for these outputs.

Tip: - One VPU supports **4x** capacity **2** program outputs AND **4x** capacity **2** mixing layers

- The remaining outputs that are not used as Program can be used as Aux.

Aquilon Models	RS alpha	RS1	RS2	RS3	RS4	C	C+
VPUs	1	1	2	2	3	up to 2	up to 3
Output connectors	4	8	12	12	16	up to 16	up to 20
Max 4K60 PGM outputs (capacity 2)	4 Screens + 0 Aux	4 Screens + 4 Aux	8 Screens + 4 Aux	8 Screens + 4 Aux	12 Screens + 4 Aux	8 Screens + 8 Aux	12 Screens + 8 Aux
Max 4K60 mixing layers (capacity 2)	4	4	8	8	12	up to 8	up to 12
Max DL split layers (capacity 1)	16	16	32	32	48	up to 32	up to 48

7.3.2 Set Output capacity

In **Preconfig** > Screens / Aux Screens > Outputs tab, set capacity for each output.

1. Click an output.
2. Set if this output is used as Screen or Aux.
3. Select the output capacity.

7.3.3 Screens

7.3.3.1 Create a Screen

In **Preconfig** > Screens / Aux Screens > Screens tab, click a Screen to show more options:

Note: An output must be set to **Screen** mode to be assigned in a Screen.

- Enable/disable the Screen
- Select the Layer mode (Mixing layers or Split layers)
- Use drag and drop to assign Outputs to a Screen.

- Use to unassign an Output.

- In **Layers**, use the **Add layer** and buttons to set the Layer quantity.
- Click **Apply** to save new configuration.

The number of remaining layers is indicated, it depends on layers capacity and the use of Cut & Fill .

Note: For more information about using Cut & Fill, see *14.2.3 Cut & Fill effect* page 76.

Tip: - All pending changes are identified with a * and listed in the Summary. If needed, click ↺ to cancel pending changes.

- The Optimized notifier shows when the Optimized mode is enabled.

- It is possible to modify layers capacity after creation without removing all layers.

7.3.4 Aux Screens

An Auxiliary Screen (Aux) is a special Screen displaying one layer in full screen. The content displayed in an Aux can be an input, an image or a Program Screen.

Create an Aux Screen:

In ⧉ **Preconfig** > ▯ Screens / Aux Screens > Aux Screens tab, click an **Aux Screen** to show more options.

Note: An output must be set to **Aux** mode to be assigned in an Aux Screen.

 - Use drag and drop to assign one Output to an Aux Screen.

 - Use 🗑 to unassign the Output.

Note: After making changes, click **Apply** to save the new configuration.

Tip: All pending changes are identified with a * and listed in the Summary. If needed, click ↺ to cancel pending changes.

7.3.5 Rename a Screen

By default, all Screens are named *S1*, *S2*, or A1, A2 and so on.

To rename a Screen:

1. In ⧉ **Preconfig** > ▯ Screens / Aux Screens, click a Screen or Aux Screen on **Enter Label…**
2. Enter a screen name.

7.4   Preconfig > Canvas

In ⧉ **Preconfig** > ⊡ Canvas, set the pixel space and the outputs settings for each screen (custom rate, position, AOI, pitch size, blending, etc.).
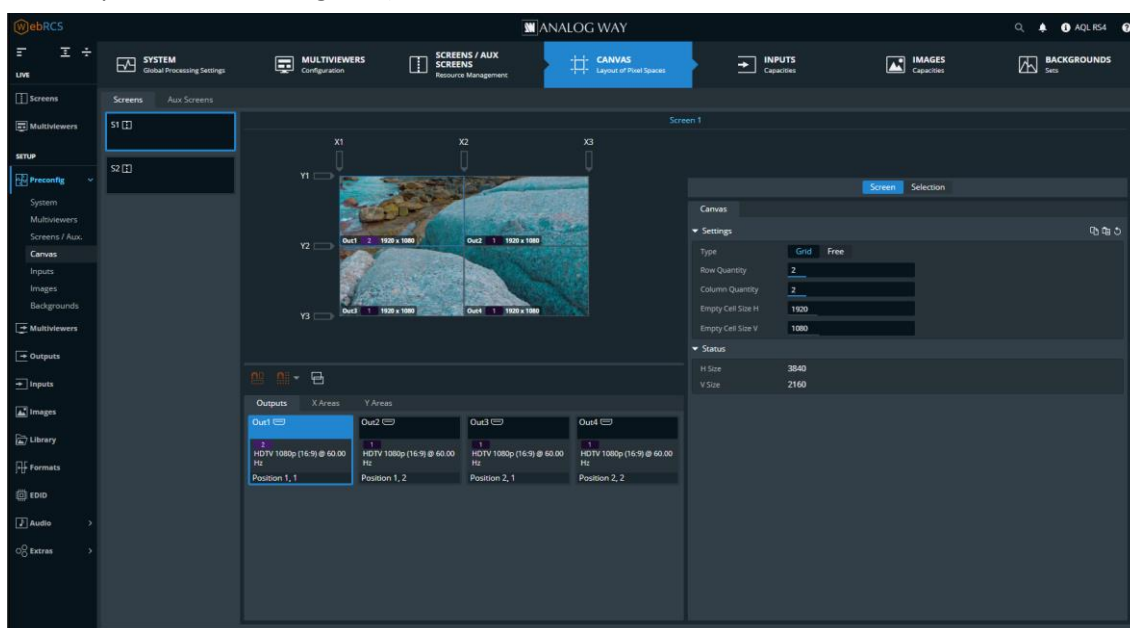
Fig. 10 -   Preconfig - Canvas

By default, all outputs are stacked and the screen size is the same as the assigned output with the highest resolution.

The Screen canvas are separated in two types:

Grid type	Recommended for standard shows (single output screen, same format displays aligned horizontally or vertically, 2x2, etc.). Covering and gap are simplified in Grid with the X and Y areas.
Free type	Recommended for more specific shows that require manual adjustments for each output. Covering is set manually for each output.

Note: - Canvas settings are applied to the selected Screen.

- Grid and Free type have their own settings and switching between types does not keep the current configuration.

7.4.1 Patterns

Display patterns to test and control how outputs are displayed in Screens.

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in output
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used or the AOI
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)

Fig. 11 -   Patterns

Tip: - Remember to enable and disable patterns on all outputs.

- The patterns *Grid Custom*, *Crosshatch* and *Checkerboard* are customizable patterns with units in pixels.

7.4.2 Grid canvas

7.4.2.1   Create a Grid canvas

In **Grid** type, create a grid and assign outputs to corresponding cells to create the Screen canvas.

1. In ⊞ **Preconfig** > ⊡ Canvas, select a Screen.
2. Select the **Grid** canvas type.
3. Enter the number of rows and columns for the Screen Grid.
4. Enter the size for every cell of the grid (in pixels).

The virtual canvas is updated with the corresponding values and the total Screen size is indicated.

5. In the Outputs tab, click an output.
6. In the right panel, click **Selection**.
7. Set a format for the selected output.
8. If needed, go to **Pattern / Raster** to identify the outputs.
9. Enter the position in the grid (ex: row 1 and column 1).
    Or use drag and drop in the virtual canvas.
10. Repeat steps 7 and 9 for all outputs.

7.4.2.2   Create a covering in Grid canvas (blending)

Edge blending is a feature that gradually fades out the overlapping area from both projectors to create a seamless projection. For an effective blending, align the projected images so they are square with each other. In **Grid** type, use X and Y areas to create coverings between outputs.

Note: In Grid type, coverings are equals for all outputs of the same row / column.

1. In ⊞ **Preconfig** > ⊡ Canvas, select a Screen with **Grid** canvas type.
2. Select the X or Y area where the covering will be created.
3. In the right panel, click **Selection**.
4. In **Configuration**, select Covering and enter the size in pixels.

The virtual canvas is updated with the corresponding values.

5. If needed, in **Blending Curve**, enable the blending and set the Gamma or Bezier curve.
6. If needed, set the black area and black levels.

7.4.2.3   Create a gap in Grid canvas (bezel)

In **Grid** type, use X and Y areas to create gaps between outputs.

Note: In Grid type, gaps are equals for all outputs of the same row / column.

1. In ⊞ **Preconfig** > ⊡ Canvas, select a Screen with **Grid** canvas type.
2. Select the X or Y area where the gap will be created.
3. In the right panel, click **Selection**.
4. In **Configuration**, select Gap and enter the size in pixels.

The virtual canvas is updated with the corresponding values.

7.4.3 Free canvas

Free type is separated in two modes:

Auto mode	Set the position of each output freely. The canvas size is automatically computed and optimized for the created Screen.
Custom mode	Set the Screen size then position each output inside the created Screen.

7.4.3.1   Bottom bar buttons – Output position

In Free type, it is possible to use drag and drop in the virtual canvas to position the outputs.

Use the bottom buttons to help positioning outputs in the virtual canvas.

All bottom bar buttons are On/Off Toggle buttons.

Button	Button description
	Snap to Screen border and other outputs borders.
	Snap to grid cells. Click the arrow to set the grid (rows and columns).
	Hide content to display only layers wireframe.

7.4.3.2   Create a canvas in Auto mode

In **Auto** mode, select outputs and enter their H position and V position or use drag and drop to create the Screen canvas.

Auto mode is recommended for complex shows with unknown canvas size.

In **Preconfig** > Canvas, select a Screen.

1. Select the **Free** canvas type and **Auto** size mode.
2. Select an output.
3. In the right panel, click **Selection**.
4. Set a format for the selected output.
    The virtual canvas is updated with the selected resolution.
5. If needed, go to **Pattern / Raster** to identify the outputs.
6. In Position, enter H and V position for the selected output (in pixels).
    Or use drag and drop in the virtual canvas.

    The canvas size is updated to match the position settings.

7. Repeat steps 4 and 6 for all outputs.

Tip: Use the tools in the bottom bar to snap to a custom grid and/or other outputs.

7.4.3.3   Create a canvas in Custom mode

In **Custom** mode, enter a H and V size to create the custom Screen canvas. Then enter position or use drag and drop to position each output inside the canvas.

Custom mode is recommended for complex shows where the canvas size is known.

In [icon] **Preconfig** > [icon] Canvas, select a Screen.

1. Select the **Free** canvas type and **Custom** size mode.
2. Click **H Size** and **V Size** to enter canvas size.

The canvas size in the virtual screen is updated to match the settings.

3. Select an output.
4. In the right panel, click **Selection**.
5. Set a format for the selected output.
6. If needed, go to **Pattern / Raster** to identify the outputs.
7. In Position, enter H and V position for the selected output.
    Or use drag and drop in the virtual canvas.

The virtual canvas is updated with the selected resolution.

8. Repeat step 5 and 7 or all outputs.

Tip: Use the tools in the bottom bar to snap to a custom grid and/or other outputs.

7.4.3.4   Create a covering in Free canvas (blending)

Recommendation: only use manual blending in Free canvas for complex shows. If a blending is needed for a standard show (ex: 2x2 or 3x1 Screen configuration), it is recommended to use Grid canvas.

Edge blending is a feature that gradually fades out the overlapping area from both projectors to create a seamless projection. For an effective blending, align the projected images so they are square with each other.

1. In [icon] **Preconfig** > [icon] Canvas, select a Screen with **Free** canvas type.
2. Select an output where the covering will be created.
3. In the right panel, click **Selection**, then **Areas**.
4. Select a side of the output to apply covering.
5. In **Configuration**, select enter the covering size in pixels.

The virtual canvas is updated with the corresponding values.

6. If needed, in **Blending Curve**, enable the blending and set the Gamma or Bezier curve.
7. If needed, set the black area and black levels.
8. If needed, repeat for other outputs.

7.4.4 **Advanced output settings (in Preconfig > Canvas)**

Note: Output settings are applied to the selected output.

These following settings are specific to outputs and can be used in all canvas types.

7.4.4.1 Create an area of interest (AOI)

The AOI is a cropped area of the display in the output format. Use AOI to remove unseen or useless display areas and operate exclusively on the output area actually displayed.
The AOI can be set with Overscan size or Custom size.

1. In [icon] **Preconfig** > [icon] Canvas, select a Screen.

2. Select an output.

3. In AOI, click **Overscan** and set the overscan.

    Or click **Custom** and set the size and position of the AOI.

Tip: Use arrows for fine adjustment.

7.4.4.2 Pitch compensation

Some Screens using multiple outputs can have outputs with different pitches, especially LED video walls.
Using pitch compensation corrects the outputs with different pitches for a screen with homogeneous scaling.

1. In [icon] **Preconfig** > [icon] Canvas, select a Screen.

2. Select an output to set a different pitch.

    The reference output should use a 1:1 pitch.

3. In Pitch, set the H and V ratio of the output compared to the reference output.

7.5 **Preconfig > Inputs**

In [icon] **Preconfig** > [icon] Inputs, set input capacity according to the resources needed for that input and assign inputs as output backgrounds.

7.5.1 **Set input capacity**

1. In [icon] **Preconfig** > [icon] Inputs, select one or more inputs.

2. In the right panel, select the capacity.

Note: - The input cannot be displayed if the capacity is not sufficient for the input format.

- An input with capacity **2** can only be displayed in a layer with capacity **2**.

7.5.2 Add input to output backgrounds

Note: The input and output capacities must match.

An output has a pool of assigned images and inputs to be used as background content.
Add inputs to the output pool before they can be used as a background content for that output.
Multiple inputs can be assigned to the same output background sets.

1. In 🧩 **Preconfig** > ➡ Inputs, select one or more inputs.
2. In the right panel, in **Allow in Background Sets**, select one output.

The selected inputs can now be used as background content for the selected outputs.

7.6 Preconfig > Images

In 🧩 **Preconfig** > 🖼 Images, set image capacity according to the resources needs for that image and assign images as output backgrounds.

7.6.1 Image presets

The number of available image presets displayed at the same time depends on the number of IPU of the unit and the image presets capacity.

Number of IPUs	Image presets available
1	24 image presets at capacity **1**
	12 image presets at capacity **2**
2	48 image presets at capacity **1**
	24 image presets at capacity **2**

Note: - Images of capacity **1** and **2** can be displayed at the same time.

- When an image preset is set to capacity **2**, it uses the resources of the next preset and preempt it.

For more information on LivePremier units and IPUs, see IPUs, page 37.

7.6.2 Set images preset capacity

1. In 🧩 **Preconfig** > 🖼 Images, select one or more image presets.
2. In the right panel, set the capacity.

Note: An image capacity is set for the preset and stays the same when changing the image in the preset.

7.6.3 Add images to output backgrounds

Note: The image preset and output capacities must match.

An output has a pool of assigned images and inputs to be used as background content.
Add images to the output pool before they can be used as a background content for that output.
Multiple images can be assigned to the same output background sets.

1. In 🧩 **Preconfig** > 🖼 Images, select one or more Images.
2. In the right panel, in **Allow in Background Sets**, select one output.

The selected images can now be used as background content for the selected outputs.

7.7 Preconfig > Backgrounds

In [icon] **Preconfig** > [icon] Backgrounds, create background sets for each Screen.

7.7.1 Background sets

Each Screen is composed of one or more outputs. Assign input and images to these outputs to create background sets. Eight Background sets can be saved per screen.
An output has a pool of assigned images and inputs to be used as background content.

Inputs and images to be used as backgrounds are set in [icon] > [icon] Inputs and [icon] > [icon] Images.

7.7.2 Background set for a screen with one output

Note: The content and output capacities must match. Otherwise, it is not possible to assign it to the background set.

For example, Screen 1 is a single output screen using Output 1.

1. In [icon] **Preconfig** > [icon] Inputs, add inputs to the background pool for Output 1.

2. In [icon] **Preconfig** > [icon] Images, add images to the background pool for Output 1.

3. In [icon] **Preconfig** > [icon] Backgrounds, select **Screen 1**.

4. Select **Background Set 1** (Output 1 is automatically selected).

5. Select the content to use in *Background Set 1*.
   Background set 1 is set and saved.

6. Repeat steps 4 and 5 for other Background Sets.

7.7.3 Background set for a screen with multiple outputs

Note: The content and output capacities must match. Otherwise, it is not possible to assign it to the background set.

For example, Screen 1 is a 4x1 screen using Outputs 1, 2, 3 and 4.

1. In [icon] **Preconfig** > [icon] Inputs, add inputs to the background pool for Output 1.

2. In [icon] **Preconfig** > [icon] Images, add images to the background pool for Output 1.

3. Repeat for other outputs.

4. In [icon] **Preconfig** > [icon] Backgrounds, select **Screen 1**.

5. Select **Background Set 1**.

6. Select **Output 1**.

7. Select the source to use in *Background Set 1*.

8. Repeat for other outputs.
   Background set 1 is set and saved.

9. Repeat steps 6 to 8 for other Background Sets.

8 Multiviewers

A Multiviewer is an output displaying a user customizable selection of Widgets as display resources. A Widget is a Multiviewer layer containing a program, preview, input or image. One Multiviewer can display up to 24 Widgets.

In ⤳ **Multiviewers**, set the Label, Signal parameters, Patterns and Image correction.

Note:

- Go to ⊞ Preconfig > Multiviewers to enable **One Multiviewer** or **Two Multiviewers screens**.

- Go to ▭ Multiviewers to set the Multiviewers layout and Widgets.

8.1 Multiviewers settings

In ⤳ **Multiviewers**, click a Multiviewer output to open its settings. The selected output is highlighted in the interactive rear panel.
   - On the interactive rear panel, hover on an output connector to display information about this output.
   - On the interactive rear panel, click an output to open its settings.

8.2 Multiviewers signal

In ⤳ **Multiviewers**, select one Multiviewer. In **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Label	Rename the Multiviewer
Mode	Set to follow internal rate or select a custom rate in the list
Format	Set the format for the Multiviewer display
Color Space	**Auto** or **RGB** (Full or Limited), **YCbCr** (**4:4:4**, **4:2:2** or **4:2:0**) and **ITU-R BT.** (**709** or **2020**)
Color Depth	**8 bits**, **10 bits** or **12 bits**
DVI mode	Enable to change DisplayPort signal into DVI signal if using a DVI connector on the Multiviewer display.
HDCP	**Disable***; **Auto**; **HDCP 1.x**; **HDCP 2.x Type 0** or **HDCP 2.x Type 1**.

Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

8.3   Multiviewers pattern

In Multiviewers, select one Multiviewer. In **Pattern / Raster**, the following settings are displayed:

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in Multiviewer
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used or the AOI
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)
Raster Box	
Format	Click to enable raster box on whole format
AOI	Click to enable raster box on AOI

Note: For more information on pattern types, see *7.4.1 Patterns* page 43.

8.4   Multiviewers adjustment (image correction)

In Multiviewers, select one Multiviewer. In **Adjustments**, the following settings are displayed:

Setting name	Description / Setting selection
Colorimetry	Adjust Brightness, Contrast, Saturation and Hue
User Gain	Adjust Red, Green and Blue
Temperature	Adjust Temperature
Gamma	Adjust Gamma level
Flicker	Adjust Flicker level (only when using interlaced format)

9   Outputs

In ⇥ **Outputs**, set the Label, Signal parameters, Patterns and Image correction.

> Note:
>
> - Go to ⧉ Preconfig > ⊞ Screens / Aux Screens > Outputs to set output resources.

9.1   Outputs main screen

Go to ⇥ **Outputs**, the outputs main screen displays all outputs in a Grid view.

The following information are displayed per output:
- Resolution
- Format and rate (on hover)
- Output capacity
- Output number
- Output label
- Screen number using that output

9.2   Output settings

In ⇥ **Outputs**, click an output to open its settings. The selected output is highlighted in the interactive rear panel.

- Click **Outputs** to return to the outputs Grid.
- On the interactive rear panel, hover on an output connector to display information about this output.
- On the interactive rear panel, click an output to open its settings.
- Click **Blink LED** to identify the selected output connector on the physical rear panel of the unit.

9.2.1   Output signal

In ⇥ **Outputs**, select an output. In **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Label	Rename the output
Mode	Set to follow internal rate or select a custom rate in the list
Format	Set the format for the output display
Color Space	**Auto** or **RGB** (Full or Limited), **YCbCr** (**4:4:4**, **4:2:2** or **4:2:0**) and **ITU-R BT.** (**709** or **2020**)
Color Depth	**8 bits**, **10 bits** or **12 bits**
DVI mode	Enable to change signal into DVI signal if using a DVI connector on the display
HDCP	**Disable***; **Auto**; **HDCP 1.x**; **HDCP 2.x Type 0** or **HDCP 2.x Type 1**

*Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When output HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

9.2.2 Output pattern

In [→] **Outputs**, select an output. In **Pattern / Raster**, the following settings are displayed:

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in output
Patterns	Select the pattern to display
Area	Set the pattern to fit the format used or the AOI
Raw Colors	On/Off toggle. Using raw colors disables all **Adjustments** settings (ex: Colorimetry, User Gain, etc.)
Raster Box	
Format	Click to enable raster box on whole format
AOI	Click to enable raster box on AOI

Note: For more information on pattern types, see *7.4.1 Patterns* page 43.

9.2.3 Output adjustment (image correction)

In [→] **Outputs**, select an output. In **Adjustments**, the following settings are displayed:

Setting name	Description / Setting selection
Colorimetry	Adjust Brightness, Contrast, Saturation and Hue
User Gain	Adjust Red, Green and Blue
Temperature	Adjust Temperature
Gamma	Adjust Gamma level

10   Inputs

In [icon] **Inputs**, set the Label, Signal parameters, Patterns, Image correction, Aspect and Keying.

> Note:
>
> - Go to [icon] Preconfig > [icon] Inputs to set input resources.

10.1 Inputs main screen

In [icon] **Inputs**, the inputs main screen displays all inputs in a Grid view.

The following information are displayed per input:
- Resolution
- Signal Type (on hover)
- Input capacity
- Input number
- Input label
- The tallies turn red and green if the input is used in a **Program** and/or **Preview** Screen ● ●.
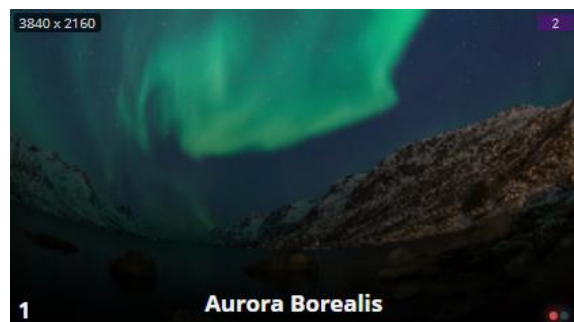
10.2 Input settings

In [icon] **Inputs**, click an input to open its settings. The selected input is highlighted in the interactive rear panel.

   - Click **Inputs** to return to the inputs Grid.
  - On the interactive rear panel, hover on an input connector to display information about this input.
  - On the interactive rear panel, click an input to open its settings.

General buttons are available on top of input settings:
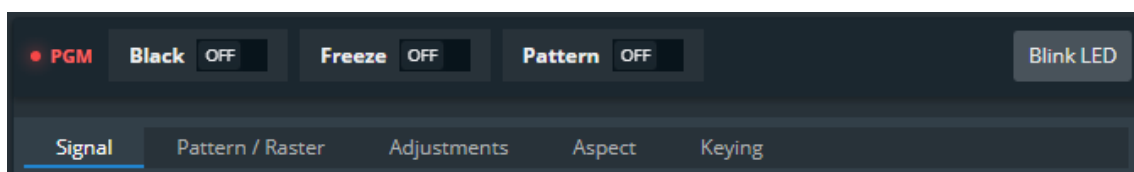
Fig. 12 -   Input settings

  - **PGM** turns red if the input is used in a Program screen.
  - Toggle **Black** to display a black image in all layers using this input.
  - Toggle **Freeze** to pause the content in all layers using this input (this does not pause the playback of a media).
  - Toggle **Pattern** to replace the content with a pattern (see *10.2.2 Input pattern* page 55)
  - Click **Blink LED** to identify the selected input connector on the physical rear panel of the unit.

10.2.1 Input signal

In ⬆️ **Inputs**, select an input. In **Signal**, the following settings are displayed:

Setting name	Description / Setting selection
Label	Rename the Input
Signal Type	**Auto**, **YUV**, **RGB Full** (0-255) or **RGB Limited** (16-235).
HDCP	**None***; **Default**; **HDCP 1.x Only** or **HDCP 1.x and 2.x**
Black	On/Off toggle. Display Black in place of the selected input.
Freeze	On/Off toggle. Freeze the input (useful for Color correction, Cropping or Keying).

Disabling HDCP reduces possible problems when the content is not fully HDCP compliant. When input HDCP is disabled, HDCP-protected inputs are not displayed.

Recommendation: Always use high quality cables to prevent connection and bandwidth errors when using HDCP.

10.2.2 Input pattern

When enabled, a pattern overrides any input signal. Most patterns offer adjustment to isolate a particular color for easier troubleshooting and calibration.

In ⬆️ **Inputs**, select an input. In **Pattern / Raster**, the following settings are displayed:

Setting name	Description / Setting selection
Patterns	
Enable	On/Off toggle. Display the pattern in input
Patterns	Select the pattern to display

Note: For more information on pattern types, see *7.4.1 Patterns* page 43.

10.2.3 Input adjustment (image correction)

In ⬆️ **Inputs**, select an input. In **Adjustments**, the following settings are displayed:

Setting name	Description / Setting selection
Colorimetry	Adjust Brightness, Contrast, Saturation and Hue
User Gain	Adjust Red, Green and Blue
Sharpness	**Low**, **Medium** or **High**
PullDown	**2:2** and **3:2** On/Off toggles

10.2.4 **Input Aspect**

In ➡️ **Inputs**, select an input. In **Aspect**, set the Aspect ratio or set input crop.

Note: Aspect ratio and Crop replaces the input content and affects every layer using it. If needed, use crop at layer level in Live or duplicate the input with a splitter.

10.2.4.1 Set input aspect ratio

Change the input aspect ratio in all layers. Use these settings to correct the input aspect ratio if needed.

Note: Change aspect ratio at layer level to keep the input unchanged.

Setting name	Description / Setting selection
Aspect Ratio	
Content ratio	Force an aspect ratio for the input if it needs correction (non-square pixels) (**Native**; **5:4**; **4:3**; **16:10**; **15:9**; **16:9**; **21:9** or **64:27**)
Transform to	Set the final aspect ratio for the input. This will be the native aspect ratio in the layer. (**Native**; **5:4**; **4:3**; **16:10**; **15:9**; **16:9**; **21:9** or **64:27**)
Layer fill option	**1:1**; **Centered**; **Fullscreen** or **Cropped**

10.2.4.2 Set input crop

Crop input (ex: black bars) and keep only wanted area in layers.

Setting name	Description / Setting selection
Crop	
Finder	On/Off toggle. Display cropping area in output, use during setup and disable Finder to show the crop result output.
Top, Bottom, Left, Right	Enter cropping values (in pixels)

10.2.5 **Input Keying**

In [icon] **Inputs**, select an input. In **Keying**, key the content using Chroma Keying or Luma Keying.

  - Use Chroma Keying to key a color (or hue).
  - Use Luma Keying to key a Luma level (or brightness).

10.2.5.1 Set Chroma Keying

1. In [icon] **Inputs**, select one input and click Keying and **Chroma** mode.

2. Enable Freeze on the content.
3. In Value, select the Hue to Key (color).
4. Or use the assistant to pick directly from the content:
    a. Enable the assistant.
    b. Select the area to pick in the preview.
    c. Click **Pick** to get the Hue value from the content.
    d. Disable the assistant.
5. Enable the **Color** mask.
    The content becomes blue, gray and red.
6. In Tolerance, adjust the settings until the Keying is correct:

    The preserved content is displayed blue.
    The keyed content is displayed red.

7. In Colorimetry, adjust the Color Correction to fade the selected hue.
8. Enable/Disable Freeze and Color mask to view the keying result and adjust settings until satisfied.

Note: The **Black and White** mask is similar with the preserved content displayed in white and the keyed content in black.

10.2.5.2 Set Luma Keying

1. In [icon] **Inputs**, select one input and click Keying and **Luma** mode.

2. Enable Freeze on the content.
3. In Value, select the Luma to Key (Brightness level).
4. Or use the assistant to pick directly from the content:
    a. Enable the assistant.
    b. Select the area to pick in the preview.
    c. Click **Pick** to get the Luma value from the content.
    d. Disable the assistant.
5. Enable the **Color** mask.
    The content becomes blue, gray and red.
6. In Tolerance, adjust the settings until the Keying is correct:

    The preserved content is displayed blue.
    The keyed content is displayed red.

7. Enable/Disable Freeze and Color mask to view the keying result and adjust settings until satisfied.

Note: The Black and White mask is similar with the preserved content displayed in white and the keyed content in black.

11   Images and Library

Image management is separated in two menus:

- 📁 **Library**: transfer images to the LivePremier unit.

- 🖼️ **Images**: assign uploaded image to image preset to be used in layers.

11.1 Library

> **Note**: LivePremier units can store up to 200 images.

In 📁 **Library**, all imported images are displayed in a Grid view.

The following information are displayed per image:
- Resolution
- Image recommended capacity
- Image number (in Library)
- Image file name

- Download to PC (in ⋮)

- Delete from library (in ⋮)
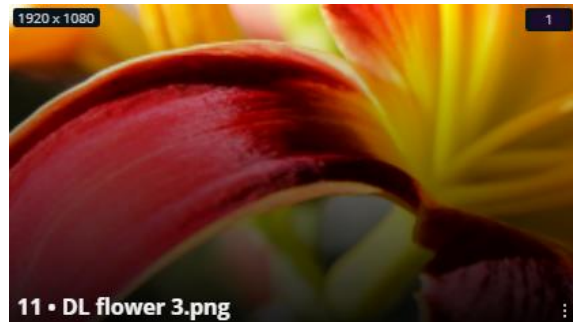
11.1.1 Image formats

LivePremier units support the following image formats:

- BMP	- PBM
- GIF (not animated)	- PGM
- JPG	- PPM
- PNG	- XBM
- SVG	- XPM
- TIF	

> Note: Animated images are not supported (ex: animated GIF)

11.1.2 Image specifications

- Maximum width: 16 384 pixels
- Maximum height: 8 192 pixels
- Maximum width x height: 8 847 360 pixels (= 4096x2160)
- Maximum file size: 35 MB

> Note: Images cannot be resized or renamed in the Library. If needed, download the image, modify it and then re-upload it.

11.1.3 Transfer images from the computer to the unit

Note: It is possible to import only one folder at a time.

1. In 📁 **Library**, select one or multiple image files (or a folder) on the computer file browser.
2. Drag and drop the selection in the **Drop images or folder of images** block.
3. Or click the block to open the file explorer and select image files to transfer.
   The number of files to be imported is displayed.
4. Click **Upload Images**.

The selected images are imported in the Library and can be loaded as image presets.

11.1.4 Download an image file from the unit

1. In 📁 **Library**, click ⋮ on the bottom-right corner of an image.
2. Click **Download**.

The selected image is downloaded to the computer.

11.1.5 Delete an image file from the unit

1. In 📁 **Library**, click ⋮ on the bottom-right corner of an image.
2. Click **Delete**.

The selected image is deleted from the Library.

11.1.6 Manage Library from the Front panel

It is also possible to manage Library images from the front panel in the **Export** menu:
- Download images from a USB drive to the Library (one at a time).
- Download images from the Library to a USB drive (one at a time).
- Delete one or all images from the Library.
- It is also possible to Export and Import the entire Library by exporting the Device configuration and filtering only Images.

11.2 Images

In **Images**, all images presets are displayed in a Grid view.

The following information are displayed per image preset:
- Resolution
- Preset capacity
- Preset number
- Preset label
- The tallies turn red and green if the image preset is used in a **Program** and/or **Preview** Screen ●●.
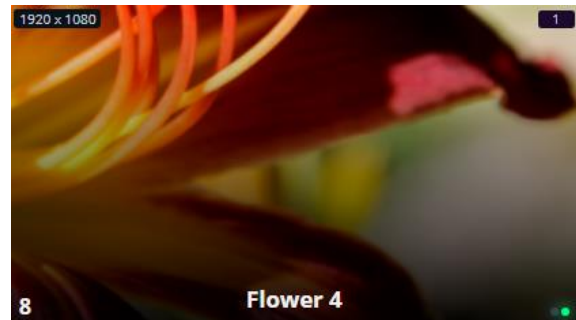
Note: - LivePremier units can use up to 48 image presets.

- Up to 48 images can be displayed simultaneously in layers.

- Image presets have a capacity set in **Preconfig** > Images. For more information, see *7.6 Preconfig* **>** *Images* page 48.

11.2.1 Downscale to capacity

When an image resolution is higher than the image preset capacity, the unit can either resize the image to fit the capacity or display nothing.
This option named *Downscale to capacity* is available for each image preset.

11.2.2 Assign an imported image as image preset

Tip: Click image presets or use the arrows to browse through the image presets.

1. In **Images**, click an image preset.

   The image preset settings are displayed.
2. In Identification > Label, enter a label to rename the Image preset.
3. In Option, enable Downscale to capacity to resize the image when the image preset capacity is too low for the image resolution.
4. In Source, select an image from the Library to be used in this image preset.

The selected image is now loaded as an image preset and is ready to be displayed in layers.

11.2.3 **Image Aspect**

In ![icon] **Images**, select an image preset. In **Aspect**, set the Aspect ratio or set image crop.

Note: - Aspect ratio and Crop replaces the image preset content and affects every layer using it. If needed, use crop at layer level in Live.

- Aspect ratio and Crop set for an image preset remain when changing the image source.

11.2.3.1 Set image aspect ratio

Change the image aspect ratio in all layers. Use these settings to correct the image aspect ratio if needed.

Note: Change aspect ratio at layer level to keep the image unchanged.

Setting name	Description / Setting selection
Aspect Ratio	
Transform to	Set the final aspect ratio for the input. This will be the native aspect ratio in the layer. (**Native**; **5:4**; **4:3**; **16:10**; **15:9**; **16:9**; **21:9** or **Custom ratio**)
Layer fill option	**1:1**; **Centered**; **Fullscreen** or **Cropped**

11.2.3.2 Set image crop

Crop image (ex: black bars) and keep only wanted area in layers.

Setting name	Description / Setting selection
Crop	
Finder	On/Off toggle. Display cropping area in output, use during setup and disable Finder to show the crop result output.
Top, Bottom, Left, Right	Enter cropping values (in pixels)

12 Formats and EDID

12.1 Formats

In **Formats**, create and manage up to 16 custom formats. Custom formats are very useful for LED wall applications and non-standard display applications (ex: pixel frequency over 165MHz or Dual-link outputs with single link formats 2400x700@60Hz).

Custom formats can also be used to create custom EDIDs and then reset or request the preferred EDID of connected outputs and inputs.

Custom format creation is separated in two modes:

- In **CVT mode**, set the width, height and rate of the format and indicate if the format has reduced blanking intervals. The system computes the remaining format parameters according to the CVT 1.1 standard.

- In **FULL mode**, set all the parameters of the format (H&V front porch, H&V sync, H&V back porch, width, height, sync polarity, ...).

12.1.1 Create a custom format

1. Go to **Formats**.
2. Select a Template format to prefill the settings.
3. Enter a label for the new custom format
4. Select CVT or Full mode.
5. Enter the format settings (use the help in the right panel).
6. Click **Check** to verify if the custom format is valid and can be processed by the unit.

    The format validity and format capacity are returned.

7. If format is valid, click **Save as** then select a memory slot.
8. Click **Save**.

The custom format is added to the formats library and can be used as a format preset.

12.1.2 Edit a custom format

1. Go to **Formats**.
2. Select the Custom format memory slot to edit as Template.
3. Edit the format settings.
4. Click **Check** to verify if the custom format is valid and can be processed by the unit.
5. If format is valid, click **Save as** then select the same memory slot.
6. Click **Overwrite**.

12.1.3 Delete a custom format

1. Go to **Formats**.
2. Click a Custom format and keep the mouse on it.

    The icon appears.

3. Click to delete the custom format.

12.2 EDID
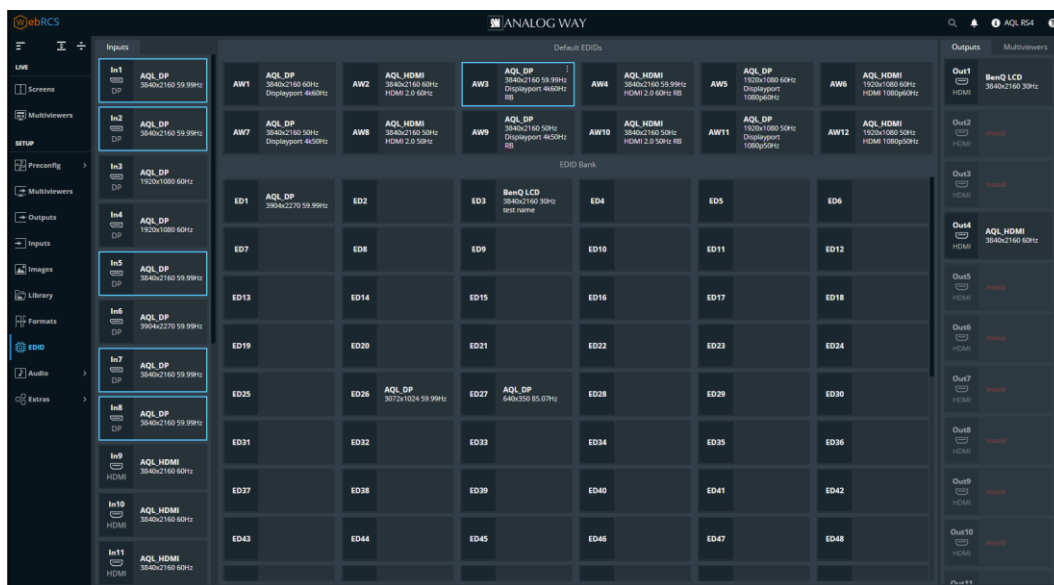
Fig. 13 - EDID menu

EDID is a metadata format used by displays to indicate their preferred format. A LivePremier unit receives EDIDs from connected inputs and outputs. It is possible to store these EDIDs in a memory called EDID bank. It is then possible to overwrite the preferred format of inputs and outputs.

12.2.1 EDID bank

LivePremier units have 12 preinstalled EDIDs by default which correspond to standard formats for DisplayPort and HDMI outputs. In addition, the EDID bank can store up to 100 EDID memories saved from connected input/outputs, custom formats or EDIDs files imported from computer.

12.2.2 Save an EDID from inputs and outputs

To save EDIDs in the EDID bank, drag and drop EDIDs from inputs and outputs to the EDID bank.

12.2.3 Change an Input EDID

To set a new preferred format on an Input, drag and drop an EDID from the bank to the input slot.

To reset an input preferred format, hover on the input and click the reset icon ↻.

12.2.4 Create an EDID from a custom format

It is possible to create an EDID with the settings of a created Custom format.

1. In ⊞ **EDID**, drag and drop any EDID to an empty slot in the bank to create an EDID.

2. Hover on the created EDID and click ⋮ in the top right corner to show more settings.
3. Click **Custom format** and select the memory to use as EDID.
4. Click **Apply to EDID**.

The EDID with custom format is now usable as an input preferred format.
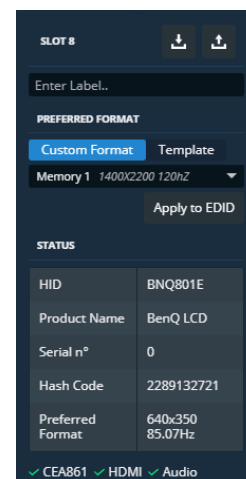
12.2.5 Export an EDID to computer

1. In EDID, hover on an EDID and click in the top right corner to show more settings.

2. Click to download the EDID to the computer.

12.2.6 Import an EDID from computer

1. In EDID, hover on an EDID and click in the top right corner to show more settings.

2. Click and select the EDID file to upload from the computer to the unit.

13   Audio and Extras

13.1 Audio

LivePremier units are able to manage audio routing with and without Dante audio network. Using the Dante audio, LivePremier can manage up to 64 input channels and 64 output channels at 48 kHz.

In [♪] **Audio** > Dante, check the status of the card, the channels and the networks.

In [♪] **Audio** > Routing, assign audio channels from inputs and Dante receivers to outputs and Dante transmitters.

Note: - LivePremier is able to manage Dante routing. For Dante control, use Dante software.

- Dante audio can only be controlled from the Dante ports.

- Dante primary & secondary connections have a dedicated LAN separated from LivePremier control.

13.1.1 Reboot or reset the Dante audio card

In [♪] **Audio** > Dante:

- Click Reboot to restart the Dante card.
- Click Factory Reset to reset the firmware of the Dante card.

Tip: The update of the Dante card is integrated in the firmware update of the LivePremier unit.

13.1.2 Audio routing

In [♪] **Audio** > Routing, assign audio channels from receivers to transmitters.

LivePremier units can mix all audio channels. It is possible to route inputs to outputs, inputs to Dante, Dante to outputs and Dante to Dante.
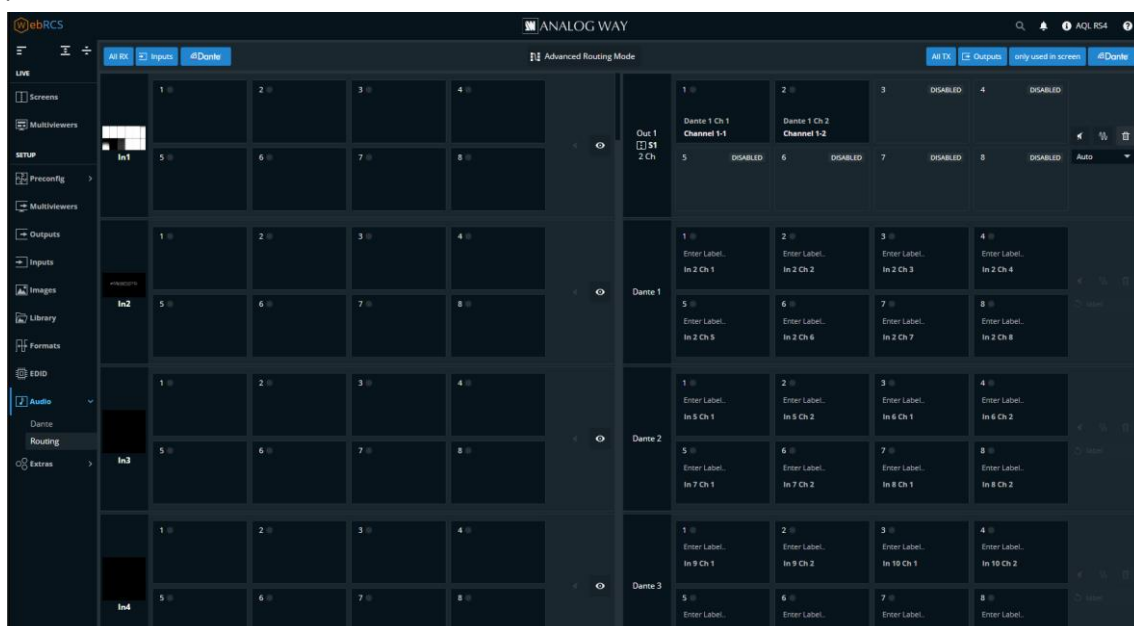
Fig. 14 -   Audio routing menu

Audio routing menu:

Channel receivers (Inputs and Dante IN audio channels) are located in the left panel:

- Click 🔇 to mute the selected audio channels.
- Click 👁 to highlight transmitter channels using this receiver channels.

Channel transmitters (Outputs and Dante OUT) audio channels are located in the right panel:

- Click 🔇 to mute the selected audio channels.

- Click 〰 to send audio test tone.

- Click 🗑 to delete the audio routing.

- Set the number of channels to send (outputs only)
- Enter (or reset) channel labels (Dante only)

In the top bar:
- Use the filter buttons to show/hide audio channels.
- Enable **Advanced Routing Mode** for single channel routing.

13.1.3 Default audio routing

Default audio routing assigns all audio channels of a receiver to the audio channels of a transmitter.

1. In 🎵 **Audio** > Routing, drag and drop a receiver channel to a transmitter channel.

   All audio channels of the receiver are routed to all audio channels of the transmitter.
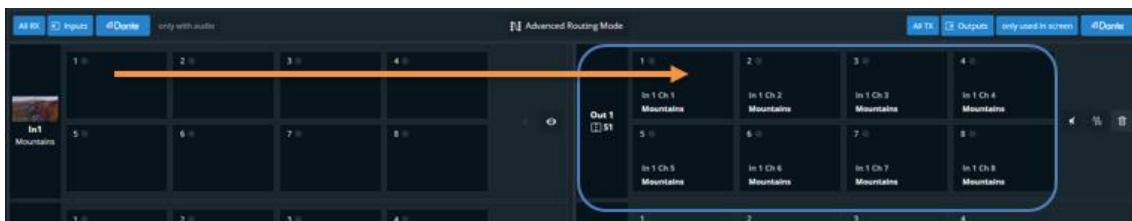
Fig. 15 -   Default audio routing

13.1.4 Advanced audio routing (single channel)

Advanced audio routing assigns one single audio channel of a receiver to one audio channel of a transmitter.

1. In 🎵 **Audio** > Routing, in the top bar, enable **Advanced Routing Mode**.

2. Drag and drop a receiver channel to a transmitter channel.

   The selected audio channel of the receiver is routed to the selected audio channels of the transmitter.
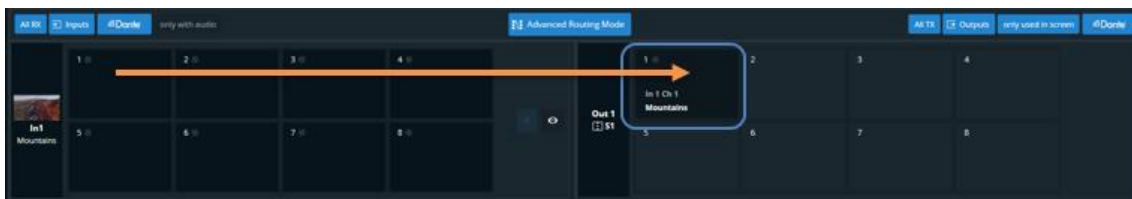
Fig. 16 -   Advanced audio routing (single channel)

13.2 Timers

Timers are time-based Widgets to be displayed in Multiviewers for monitoring purposes. LivePremier units can generate up to three timers and three different modes.
There are three types of timers:
- Current time
- Count down
- Count up (Stopwatch)

13.2.1 Create a timer

1. In ⬡ **Extras** > Timers, select a timer slot to use.

2. If needed, enter a label.

3. Select the timer type:
   a. In **Current time** mode, select the display format and set timer offset if needed.
   b. In **Count down** mode, select the display format and set the countdown duration.
   c. In **Count up** mode, select the display format.

4. For Count down and Count up modes, use the buttons to run, pause and stop the counters.

Note: Current time displays the device time set in Dashboard > Device.

13.2.2 Control counter timers in Multiviewers

It is possible to run, pause and stop the counters directly in the source panel in Live > Multiviewers.

1. In ⬚ **Multiviewers**, open the timers source panel.

2. Hover a timer and click ⋮ to show control options.

3. Click Setup to enter timer settings
   Or use the buttons to run, pause and stop the counter.
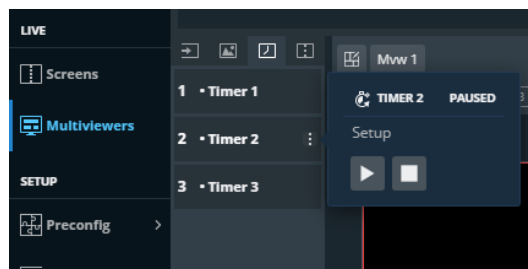
Fig. 17 -   Timer controls in Multiviewer

13.3 GPIO

LivePremier units are equipped with 2x GPI and 8x GPO.

In ⬡⬡ **Extras** > GPIO, set the GPI and GPO actions.
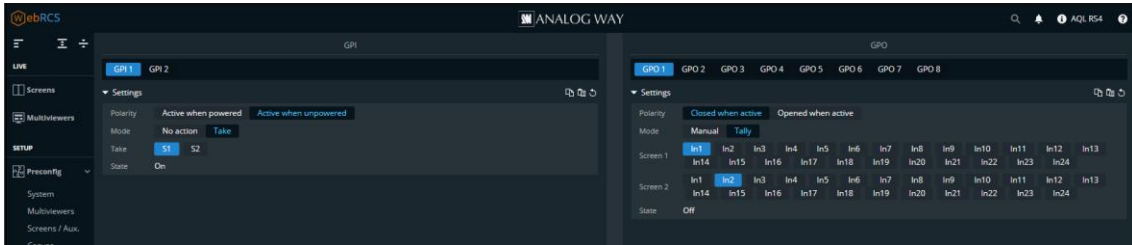
Fig. 18 -   GPIO

13.3.1 **GPI settings**

Setting name	Description / Setting selection
Polarity	Set when the GPI connector is active (**when powered** or **when unpowered**)
Mode	Select **Take** and associate a Screen to trigger the transition when using the GPI
Take	In **Take** mode, select the Screen to take when triggering the GPI
State	Check if the GPI is currently **On** or **Off**

13.3.2 **GPO settings**

Setting name	Description / Setting selection
Polarity	Set the GPO connector status when active (**Closed** or **Opened**)
Mode	Select Manual or Tally mode
Screen X (one line per enabled Screen in Tally mode)	Select one input per Screen to return in the tally
State	In **Manual** mode, set if the GPO is currently **On** or **Off** In **Tally** mode, check if the GPO is currently **On** or **Off**

14   Screens

🎞 **Screens** is the main page for controlling a show after all pre-configurations are set:

- Display content in layers in Screens and Aux
- Create dynamic layer transitions
- Transition Preview to Program
- Save and Load Screen memories and Master memories
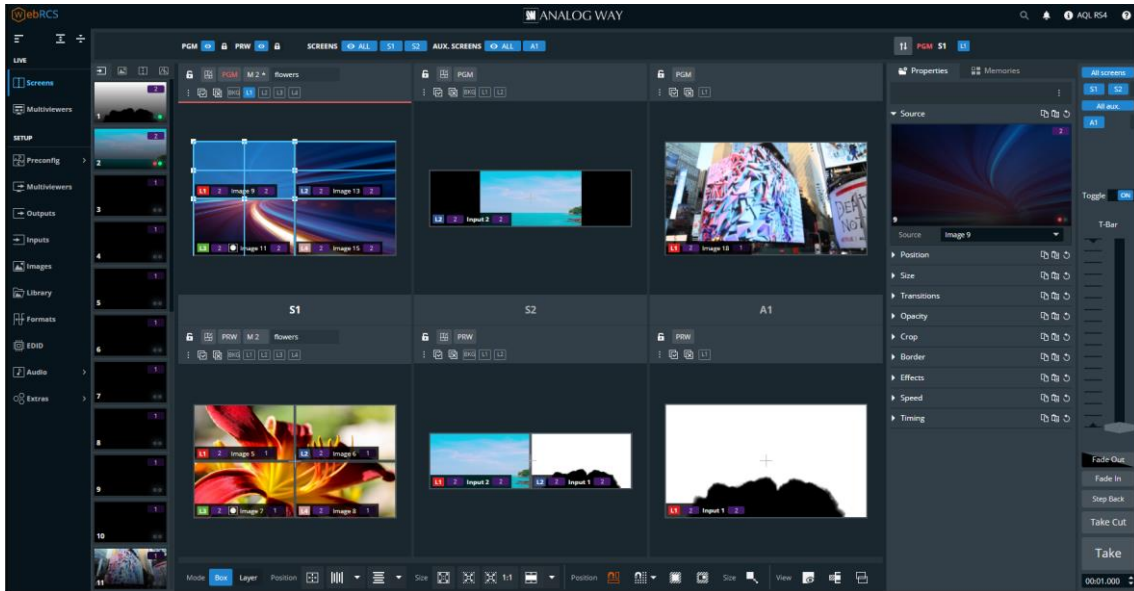
Fig. 19 -   Live – Screens menu

14.1 Screens menu interface

14.1.1 Program and Preview

🎞 **Screens** is composed of **Program** (PGM) and **Preview** (PRW) windows for each screen, as well as access to sources, layer properties, memories and transition panel. Program windows are always displayed on top of Preview windows.

14.1.2 View filters – Top bar buttons

Fig. 20 -   View filters

Setting name	Description / Setting selection
👁	Toggle to show/hide Screens. Use the scroller when displaying more than five Screens.
🔒	Toggle to lock the Screen. Prevent edits during Live, or lock Program to only edit in Preview. Layers cannot be modified but Memories can be loaded and transition can be triggered.

Note: Showing and hiding Screens do not affect the Transition.

14.1.3 Sources - Left panel

The Sources are located in the left panel. Click the icons to show the corresponding sources:

Screen sources			
Inputs	Image presets	Program Screens	Background sets
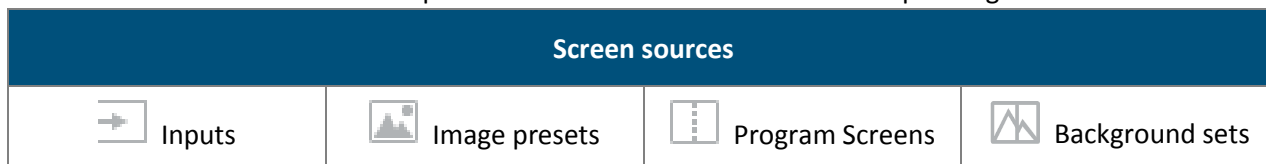
Note:

- Program Screens can only be used as content for Aux Screens and Split layers.

- Background sets can only be used in Background layers.

The following information are displayed per source content:
- Resolution (for inputs)
- Source capacity
- Source number
- Source label
- The tallies turn red and green if the content is used in a
Program and/or **Preview** Screen ●●.
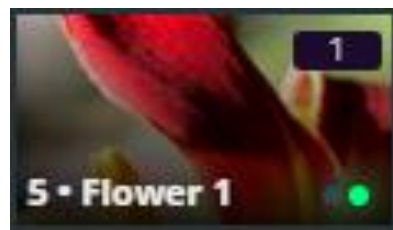
- Click ⋮ on the bottom-right corner of a source thumbnail to open options (ex: Freeze an input or access

the setup menu for the selected source).

14.1.4 Layer selection

This bar shows tools and all available layers for the corresponding Screen.
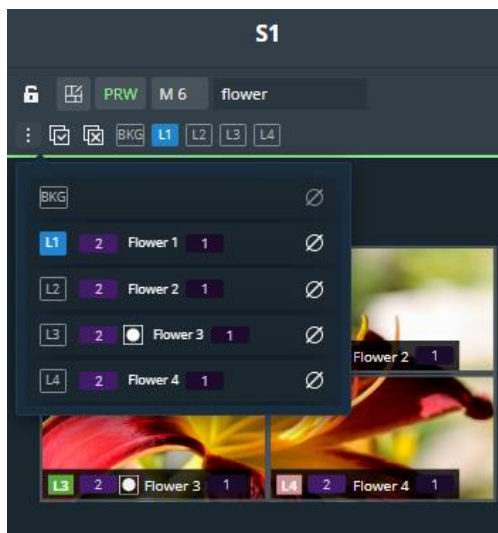
Setting name	Description / Setting selection
🔓 or 🔒	Toggle to lock the Screen. Layers cannot be modified but Memories can be loaded and transition can be triggered.
⊡	Open the layout editor, see *14.1.5 Layout editor* page 71.
PGM or PRW	Open the Screen options, see 14.1.6 *PGM and PRW buttons* page 71.
⋮	Open a detailed view of all layers in the selected Screen (layer capacity, source number and source capacity). Click ⊘ to empty the layer content and keep other properties
☑	Select all layers in this Screen
☒	Deselect all layers in this Screen
Layer letter	Select a layer (hold **Ctrl** or **Shift** to select multiple layers)

14.1.5 Layout editor

Click [icon] to open the layout editor, a smart tool to place layers in the Screen easily.
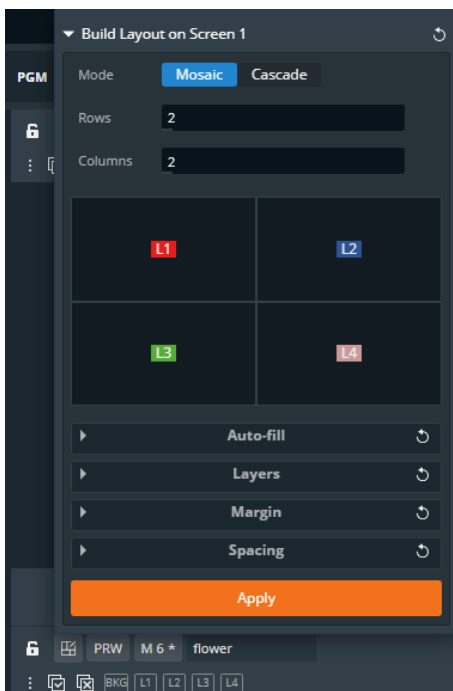
Setting name	Description / Setting selection
Mode	**Mosaic** places layers in custom grid. Mosaic layout automatically arranges the layers in rows. The last slot is empty if the number of layers is odd. **Cascade** places all layers in cascade except Layer 1 in Fullscreen.
Rows & Columns	Create a custom grid for the Mosaic mode
Autofill	Select the source content to put in layers
Layers	Select layers to include/exclude from this layout
Margin	Reduce the area of this layout (ex: **Top: 50%** will ignore the top half of the Screen
Spacing	In Mosaic mode, set gaps between columns and/or rows

14.1.6 PGM and PRW buttons – Screen controls

Click the **PGM** or **PRW** button in any Screen to open options.
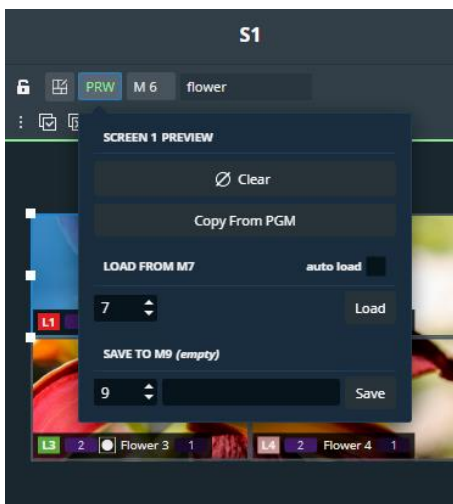
Setting name	Description / Setting selection
⊘ Clear	Empty the layers content and keep other properties for this PGM or PRW Screen
Copy from PGM	Copy layers settings from the corresponding PGM Screen (PRW only)
Load from	Load the Layer settings from a selected Screen Memory. Enable auto load to display on Screen directly when selecting the Screen memory
Save to	Save the current Layer settings for this PGM or PRW Screen in a selected Screen memory
Label	Rename the selected Screen memory

14.1.7 Bottom bar buttons

In addition to the layout editor, use the buttons in the bottom bar to help setting the layers in Screens.

Button	Button description
Action buttons	
Mode	**Box mode**: the layer selection is considered as a box (ex: Middle center position puts the center of the box in the center of the Screen). **Layer mode**: all selected layers will be affected (ex: Middle center position puts the selected layers overlapped in the center of the Screen)
	Place the layer selection in the middle of the Screen
	Align the layer selection (**Left**, **Center**, or **Right**)
	Align the layer selection (**Top**, **Center** or **Bottom**)
	Scale the layer selection to full screen
	Set layer size to source ratio (reduce size to cancel empty area of the layer)
1:1	Set layer size to content size
	Set layer size to an aspect ratio
Assist buttons (On/Off toggle buttons)	
	Snap to Screen border and other layer borders.
	Snap to grid cells. Click the arrow to set the grid (rows and columns).
	Force layers outside of Screen to snap to Screen borders.
	Force layers to stay inside of Screen borders.
	Keep aspect ratio.
Interface buttons (On/Off toggle buttons)	
	Hide empty and preempted items (layers and sources).
	Hide content outside of Screen borders.
	Hide content to display only layers wireframe.

14.1.8 Transitions - Right panel

Setting name	Description / Setting selection
Screen selection	Select the Screens and Aux affected by transition (by default, all Screens and all Aux are selected).
Preset Toggle	Copy Program to Preview after the transition. If Preset Toggle is enabled for a Screen, the layers in PGM replace the layers in PRW during a **Take** or **Take Cut** ("swap" effect). If Preset Toggle is disabled, the layers in PRW are copied to PGM and remain in PRW Screens during a **Take** or Take **Cut**.
T-Bar	Transition the selection manually
Fade Out	Fade the selected screens to black
Fade In	Fade the selected screens from black to
Step Back	Revert the last change in layer settings. Does not work with a deletion.
Take Cut	Instant transition. Replace PGM layers with the PRW layers for the selected Screens with an immediate cut effect. The Global transition duration and the layers settings for Transitions, Speed and Timing are Not applied.
Take	Replace the PGM layers with the PRW layers for the selected Screens. Set the Global transition duration under the Take button (minutes:seconds.milliseconds). The layers settings for Transitions, Speed and Timing are applied to the **Take**.

14.2 Layer properties

When a layer is selected, the following layer settings are displayed in the Properties tab:

Setting name	Description / Setting selection
Source	Select a content for this layer.
Position/Size	Set layer Vertical and Horizontal position in pixels. Set layer Height and Width in pixels.
Transitions	Set Opening and Closing transition during Take.
Cut & Fill	Set Cut & Fill. Displayed if enable at layer level in Preconfig. For more information, see *14.2.3 Cut & Fill effect* page 76.
Opacity	Set layer transparency.
Crop	Set layer cropping in pixels (top, bottom, left and right) and layer aspect (None; 1:1; Centered; Fullscreen; Cropped).
Border	Set a layer border and layer shadow.
Effects	Set color filters (Black and white; Negative; Sepia; Solar) and Horizontal or Vertical flip.
Speed	Set the acceleration curve for the transition during Take.
Timing	Set the timings for delayed layer transition during Take.

14.2.1 Layer position and size

14.2.1.1 Set layer position with the layout editor

Layouts are predefined templates arranging layers automatically in one Screen.

1. In ⬚ **Screens**, click ⬚ in the selected Screen to open the layout editor.
2. Create a custom layout in Mosaic or Cascade mode.
3. Auto-fill the layers with a type of source.
4. Select layers to include/exclude from the layout.
5. Apply the layout on Screen.

All the Screen layers are arranged automatically. For more information, see *14.1.5 Layout editor,* page 71.

14.2.1.2 Set layer position and size manually

1. In ⬚ **Screens**, select a layer.

The selected layer is highlighted.

2. Use drag and drop on the layer to move it in the Screen.
3. Use drag and drop on a layer border point to change its size.

It is also possible to use the Properties panel:

4. Go to Properties, click **Position/Size** to show the corresponding settings.
5. Set the Position and Size by entering values or using drag and drop.

Tip: Use bottom bar buttons (Keep aspect ratio, snap to items) to have layers of equal size or alignment. When enabling snap to item, layer borders are automatically attracted to other objects (Screen border, layer border, grid snap point) to match their position or size.

14.2.2 **Layer source**

14.2.2.1 Assign content to a layer

1. In ⬚ **Screens**, click a source icon in the left panel.
2. Select a Layer or make sure it is available for drag and drop.
3. Drag a content and drop it in the layer.

The content thumbnail is displayed in the layer with the source label and capacity at the bottom.

Tip: It is also possible to assign a content in other ways:
- Drag and drop the selected content into the layer letter icon on the top of each screen.
- Select a Layer then go to Properties > Source and select the content in the dropdown list.

14.2.2.2 Set a colored layer

1. In ⬚ **Screens**, select a layer.
2. In **Properties**, click **Source** to show the corresponding settings.
3. In the Source dropdown list, select Color.
4. In Color, enter the hexadecimal color code or click the color preview to open the color picker.

14.2.2.3 Assign content to a Screen backgrounds

1. In ⬚ **Screens**, click the Background sets icon ⬚ in the left panel.
2. Drag a Background set to a Screen background layer or BKG icon.

The Background set content is displayed in the Screen background.

Note: For more information on Background sets, see *7.7.1 Background sets* page 49.

14.2.2.4 Set a colored background

In addition to the eight background sets, each Screen is able to display a color in the background layer.

1. In 🗔 **Screens**, select background layer (BKG).

2. In **Properties**, click **Source** to show the corresponding settings.
3. In the Source dropdown list, select None.
4. In Color, enter the hexadecimal color code or click the color preview to open the color picker.

Note: - The background color is always present and can be displayed during a background set Crossfade.

- By default, all Screens display a background with black color (#000000).

14.2.2.5 Remove a content from a layer

1. In 🗔 **Screens**, select one or multiple layers.

2. Press the **Del** key to remove all layer's content (this cannot be reversed).
    The selected layers are empty but other properties are kept.

Tip: It is also possible to remove a content in other ways:

- Use the PGM or PRW buttons to clear the entire Screen

- Click ⋮ next to the layer letter icons then click ⊘ to clear the corresponding layer.

- Go to Properties > Source, then click ↺ or select None in the source dropdown list.

14.2.3 **Cut & Fill effect**

Cut & Fill keys the content of a layer using an input or an image as the alpha channel. Usually, the Cut content (or mask), is a grey level content: the darker the grey level, the more transparent the Fill content.

Note: If a colored content is used as Cut, the Luma level of the content is used to key the Fill content.

Layer with Fill content	Cut content	Layer with Cut & Fill ◉

14.2.3.1 Cut & Fill uses resource

The Cut & Fill feature must be enabled in the Preconfig as it uses the resources of two layers of same capacity.

If needed, go to 🧩 **Preconfig** > 🗔 Screens / Aux Screens > Screens tab to add the Cut & Fill feature ◉ to the corresponding layer. Only this layer will be able to use Cut & Fill.

Note: For more information on layer creation in Preconfig, see *7.3.3.1 Create a Screen* page 41.

14.2.3.2 Set Cut & Fill in layer

1. In ⬛ **Screens**, select a layer with Cut & Fill ◉.
2. Assign a content in the layer.
3. In **Properties**, click **Cut&Fill** to show the corresponding settings.
4. Toggle the Enable button.
5. In **Source**, click the dropdown list and select the Cut content.

The Cut & Fill effect is set.

6. If needed, use the Curve setting to adjust the transparency level of the Cut & Fill.
7. If needed, enable the Negative filter to invert the cutting levels (bright content becomes transparent).
8. If needed, set flipping or cropping for the Cut content.

14.2.4 Set layer opacity

1. In ⬛ **Screens**, select a layer.

2. In **Properties**, click **Opacity** to show the corresponding setting.
3. Set the transparency level with a value from 0 to 256.

14.2.5 Set layer crop and aspect

Layer crop is set for a layer and only affects the content used in this layer without changing the native content. Layer crop is set in percentage so the crop ratio stays the same even with content with different resolutions.

1. In ⬛ **Screens**, select a layer.

2. In **Properties**, click **Crop** to show the corresponding settings.
3. Set the cropping per side in percentage (the value in pixels is indicated for the current content).
4. In **Aspect**, set how the content is filling the layer (**1:1**; **Centered**; **Fullscreen, Cropped** or **None**).

Note: The aspect set at layer level overrides the aspect set at content level (input or image).

14.2.6 Set layer border

1. In ⬛ **Screens**, select a layer.

2. In **Properties**, click **Border** to show the corresponding settings.
3. Toggle **Edge** to apply layer border settings.
4. **In Edge / Smooth**, enter the hexadecimal color code or click the color preview to open the color picker.
5. Set the H size, V size and Opacity.
6. Toggle **Smooth** to create a fading effect on the borders.
7. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

14.2.7 Set layer smooth border

Setting a smooth border without enabling **Edge** creates a smooth effect around the content.

1. In [icon] **Screens**, select a layer.

2. In **Properties**, click **Border** to show the corresponding settings.
3. Keep the **Edge** toggle disabled.
4. Toggle **Smooth** to create a fading effect around the content.
5. In **Edge / Smooth**, set the H size, V size and Opacity.
6. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

14.2.8 Set layer shadow

1. In [icon] **Screens**, select a layer.

2. In **Properties**, click **Border** to show the corresponding settings.
3. Toggle **Shadow** to apply layer shadow settings.
4. Set the X and Y positions for the shadow direction.
5. Set the shadow Opacity level.
6. If needed, toggle **Round** to apply round corners settings and set the round corner radius.

14.2.9 Set layer color filter

1. In [icon] **Screens**, select a layer.

2. In **Properties**, click **Effects** to show the corresponding settings.
3. In **Filter**, toggle the On/Off buttons to enable the corresponding effects (**Black and White**; **Negative**; **Sepia**; **Solar**).

14.2.10   Set layer Horizontal and Vertical flip

1. In [icon] **Screens**, select a layer.

2. In **Properties**, click **Effects** to show the corresponding settings.
3. In **Transform**, toggle the On/Off buttons to enable the corresponding effects (**H flip** and **V flip**).

14.3 Layer transition

The transition is the animations of the layers during **Take**. Each layer can be defined by an opening and a closing transition. The opening effect is triggered when the layer switches from one source to another or when the layer appears on Screen. The closing effect is triggered if the layer is not used in the new screen. The global transition Timing is set under the **Take** button.

Note: Transition effect, timing and speed are not applied when using the **Take Cut** button.

14.3.1 Set layer transition effect

1. In ⬚ **Screens**, select a layer.

2. In **Properties**, click **Transitions** to show the corresponding settings.
3. In **Opening**, select a transition type and transition direction.
4. In **Closing**, select a transition type and transition direction.
5. If needed, disable Cross effect and Cross depth.

Cross Effect	Seamless effect between two contents (ex: Crossfade). If disabled, the first content disappears before the next one appears.
Cross Depth	Same content changing Layer (ex: L1 to L4). The layer moves in depth to reach new z-position. If disabled, the transition is done inside the Layers. The content closes inside one layer and opens in the new layer.

Note: Cross effect and Cross depth are seamless features that only applies to mixing layers.

14.3.2 Set layer transition timing

1. In ⬚ **Screens**, select a layer.

2. Set the global transition timing under the **Take** button.
3. In **Properties**, click **Timing** to show the corresponding settings.
   The Opening and Closing graphs display the timings for all the layers in the selected Screen.
4. In **Opening**, enter a starting time and an ending time for the selected layer.
5. In **Closing**, enter a starting time and an ending time for the selected layer.
   It is also possible to use drag and drop directly on the graphs.

14.3.3 Set layer transition speed

1. In ⬚ **Screens**, select a layer.

2. In **Properties**, click **Speed** to show the corresponding settings.
3. Toggle **Linear** to use a linear speed and hide the other settings.
   If Linear is Off, the Speed curve is displayed.
4. Set the starting and ending speed to create a custom speed.

15   Memories

Memories are used to save layers settings.

| Screen memory | Saves/loads the layers settings for one Screen. |
| Master memory | Group of Screen presets. It loads multiple Screen memories at once (one per screen). |

The LivePremier is able to save up to 1000 Screen memories and 500 Master memories.
A Screen memory can be saved from and loaded to a PGM or a PRW Screen.

15.1 Master Memories

15.1.1 Save a Master memory from current Screens

Master memory is the default saving mode and can be used alone as it loads settings on all Screens. A Master memory saves the selected Screens in the current settings. Using Filters, select which Screens, Aux, Layers and Layer settings to save in the Master memory. By default, all Layers and all Layer settings are selected.

A Master memory is made of multiple Screen memories. Saving a Master memory actually saves one Screen memory per Screen. These Screen memories can be accessed when using the **Screen** mode.

1. In **Screens**, click the **Memories** tab in the right panel.
2. Select **Master** mode and click **Save** to open the Master memory saving window:
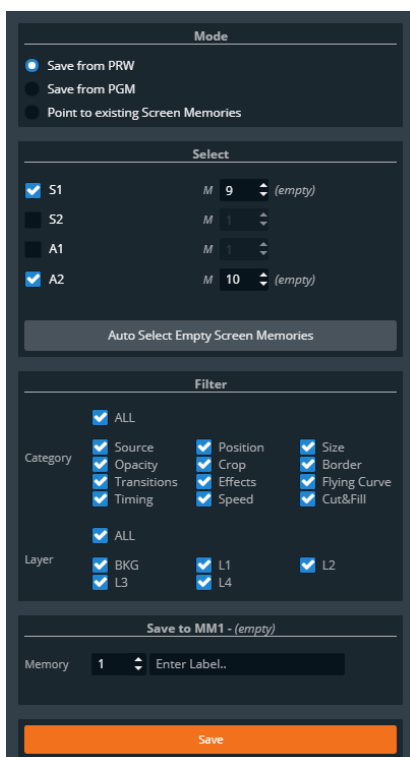
Setting name	Description / Setting selection
Mode	Select to save the current layers settings from Program or Preview Screens.
Select	Select the Screens and Aux to include/exclude from the Master Memory. Select the Screen Memory slots used the save the corresponding Screens. Click **Auto select…** to use the first empty slots.
Filter	Select the layer settings to include/exclude from the Master Memory. Select the layer to include/exclude from the Master Memory.
Save to	Select the Master Memory slot to use. Enter a label for the Master Memory.

3. Select the settings to save in the Master memory using the table above.
4. Click **Save**.

Note:
- Selecting existing Screen memories and Master memories slot will overwrite them.
- Changing (and deleting) a Screen memory also affects a Master memory using it. If needed, create a duplicate of the Screen memory before making changes.

15.1.2 Save a Master memory from existing Screen memories

Because a Master memory is made from Screen memories. It is also possible to create a Master memory by pointing to existing Screen memories.

1. In ▢ **Screens**, click the ▢ **Memories** tab in the right panel.
2. Select **Master** mode and click **Save** to open the Master memory saving window:
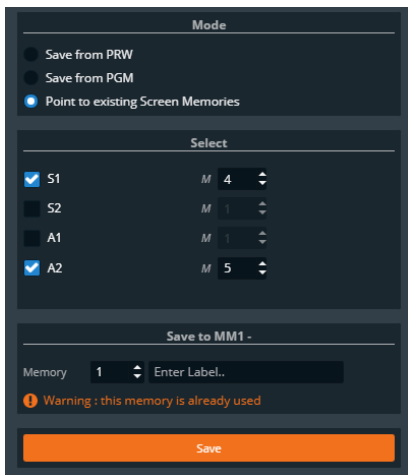
Setting name	Description / Setting selection
Mode	Select **Point to existing Screen Memories**
Select	Select the Screens and Aux Screens to include/exclude from the Master Memory. Select the Screen Memory slots used the save the corresponding Screens.
Save to	Select the Master Memory slot to use. Enter a label for the Master Memory.

3. Select the Screen memories to use in the Master memory.
4. Click **Save**.

Note: Changing (and deleting) a Screen memory also affects a Master memory using it. If needed, create a duplicate of the Screen memory before making changes.

15.1.3 Load a Master memory

1. In ▢ **Screens**, click the ▢ **Memories** tab in the right panel.
2. Select **Master** mode and click **Load**.
3. If needed, enable **Auto Scale** to adapt the loaded memories to fit the Screens.
4. Click a layer in Program or Preview.
5. Click a Master memory slot.

The Master memory is loaded to all Screens in Program or Preview.

Tip: It is also possible to drag a memory slot to a Program or Preview Screen.

15.1.4 Edit a Master memory

1. Load a Master memory.
2. Click **Save** to open the Master memory saving window.
3. Select the settings to save.
4. Select the existing Master memory slot to edit.
5. Click **Save** to overwrite the previous Master memory.

15.2 Screen memories

15.2.1 Save a Screen memory

A Screen memory saves the selected Screen in the current settings.
Using Filters, select which Layers and Layer settings to save in the Screen memory. By default, all Layers and all Layer settings are selected.

1. In ⬚ **Screens**, click the ⬚ **Memories** tab in the right panel.
2. Select **Screen** mode.
3. Click **Save** to open the Screen memory saving window:
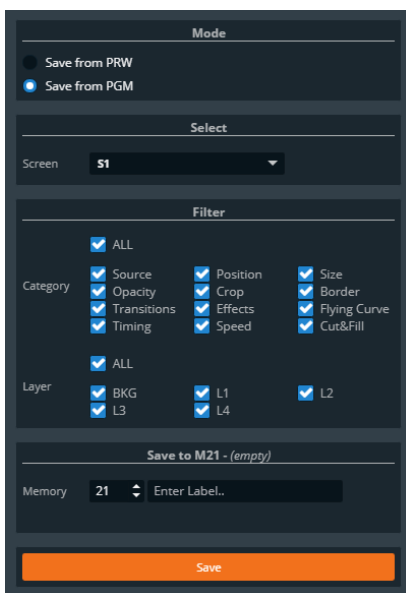
Setting name	Description / Setting selection
Mode	Select to save the current layers settings from Program or Preview Screen.
Select	Select the Screen to save
Filter	Select the layer settings to include/exclude from the Master Memory. Select the layer to include/exclude from the Master Memory.
Save to	Select the Screen Memory slot to use. Enter a label for the Screen Memory.

4. Select the settings to save in the Screen memory using the table above.
5. Click **Save**.

15.2.2 Load a Screen memory

1. In ⬚ **Screens**, click the ⬚ **Memories** tab in the right panel.
2. Select **Screen** mode and click **Load**.
3. If needed, enable **Auto Scale** to adapt the loaded memory to fit the Screen.
4. Click a layer in Program or Preview.
5. Click a Screen memory slot.

The Screen memory is loaded to the selected Screen in Program or Preview.

Tip: It is also possible to drag a memory slot to a Program or Preview Screen.

15.2.3 Edit a Screen memory

1. Load a Screen memory.
2. Click **Save** to open the Screen memory saving window.
3. Select the settings to save.
4. Select the existing Screen memory slot to edit.
5. Click **Save** to overwrite the previous Screen memory.

15.2.4 Quick overwrite or revert

When a Screen memory is loaded in a Screen, a button with the memory slot number appears.
If changes are made to the Screen, a * appears next to the memory slot number.

1. Click the memory button to show more options.
2. Click **Save** to overwrite the Screen memory with the new layer settings.

   Or click **Revert** to reload the Screen memory.

15.3 Rename a Memory

1. In ⬚ **Screens**, click the ⬚ **Memories** tab in the right panel.

2. Select **Master** or **Screen** mode.

3. Click **Edit**.

4. Click ⁝ in the top right corner of the memory slot to open the **Label** field.

5. Enter a new name for the memory slot.

15.4 Reorder memories

1. In ⬚ **Screens**, click the ⬚ **Memories** tab in the right panel.

2. Select **Master** or **Screen** mode.

3. Click **Edit**.

4. Drag a memory slot to a new place to organize the memory slots in a custom order.

Note: - Reordering memory slots does not change the memory slot number and does not impact shot boxes.

- Reordering Screen memories does not impact Master memories.

Tip: To reset to default order, click ⁝ on top of the Memory slots and click **Reset order**.

16   Multiviewers

Tip: Go to **Multiviewers** after all pre-configurations are set.

A Multiviewer is an output displaying a user customizable selection of Widgets as display resources. A Widget works like a layer and can display a program, preview, input, image or timer. One Multiviewer can display up to 24 Widgets.

In **Multiviewers**, set the Multiviewers layout and Widgets. This menu displays one or two Multiviewers screens, depending on what is set in Preconfig > Multiviewers.

Note:

- Go to Preconfig > Multiviewers to enable One Multiviewer or Two Multiviewers.

-Got to Setup Multiviewers to set the Label, Signal parameters, Patterns and Image correction.

16.1 Tips and recommendations

- Widgets cannot be placed on top of each other (overlap error).
- The same source cannot be used in more than one widget per Multiviewer.
- Two widgets using the same source in both Multiviewers are displayed at the same resolution (smallest widget).

16.2 Multiviewers menu interface

The menu **Multiviewers** behaves much like the menu **Screens**:

- Sources on the left panel: Inputs; Images; Timers and Screens.

- Widget letter icons and Bottom bar icons.
- Widget properties and Memories on the right panel.

Note: There are no transition or Program/Preview features in Multiviewers.

16.2.1 **Sources - Left panel**

The Sources are located in the left panel. Click the icons to show the corresponding sources:

Multiviewers sources			
Inputs	Image presets	Timers	Screens
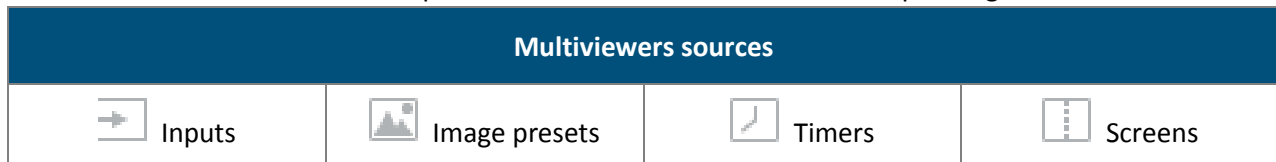
The following information are displayed per source content:
- Resolution (for inputs)
- Source capacity
- Source number
- Source label
- The tallies turn red and green if the content is used in a **Program** and/or **Preview** Screen ●●.

- Click ⋮ on the bottom-right corner of a source thumbnail to open options (ex: Freeze an input or access the setup menu for the selected source).

16.2.1.1 Control counter timers in Multiviewers

It is possible to run, pause and stop the counters directly in the source panel in Live > Multiviewers.

1. In 🖥 **Multiviewers**, click ⟋ Timers in the source panel.

2. Hover a timer and click ⋮ to show control options.

3. Click Setup to enter timer settings
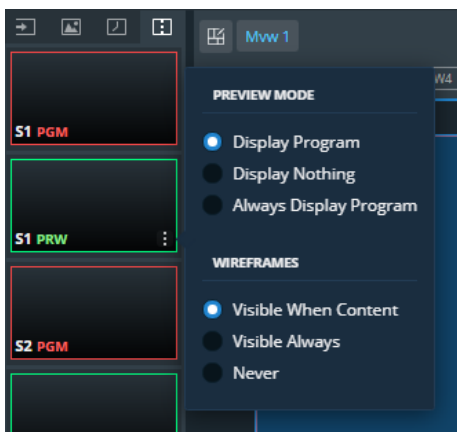   Or use the buttons to run, pause and stop the counter.
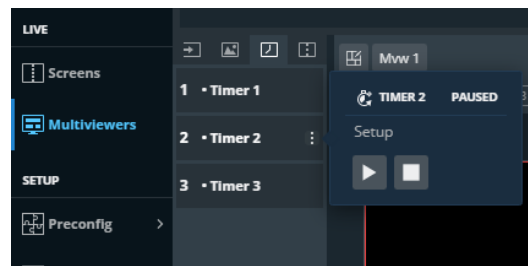
Fig. 21 -   Timer controls in Multiviewer

16.2.1.2 Set Preview mode for Preview Screen widgets

1. In **Multiviewers**, click Screens in the source panel.

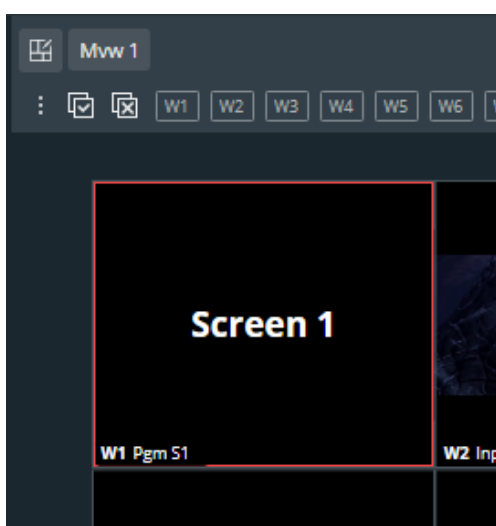2. Hover a Preview Screen and click to show preview options:

Setting name	Description / Setting selection
Preview Mode	Select what is displayed in the Preview widget: - **Display Program** during transitions - **Display Nothing** during transitions - **Always Display Program** content in the Preview widget
Wireframes	Select the visibility of the wireframes of the Preview Screen layers: - Layers wireframes displayed when content - Layers wireframes are always displayed - Layers wireframes are never displayed

Tip: It is possible to monitor both Program and Preview of a Screen in one Widget by using Always Display Program content and display Preview layers wireframe.
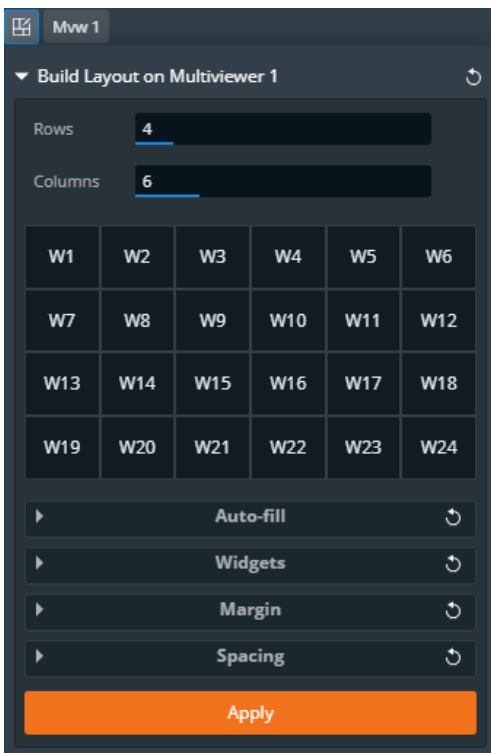
16.2.2 Widget selection

This bar shows tools and all available layers for the corresponding Screen.

Setting name	Description / Setting selection
	Open the layout editor, see *16.2.3 Layout editor* page 87.
	Open a detailed view of all widgets in the selected Multiviewer (source number). Click to empty the widget content and keep other properties
	Select all widgets in this Multiviewer
	Deselect all widgets in this Multiviewer
Widget letter	Select a widget (hold **Ctrl** or **Shift** to select multiple widgets)

16.2.3 **Layout editor**

Click to open the layout editor, a smart tool to place widget in the Multiviewers easily.

Setting name	Description / Setting selection
Rows & Columns	Create a custom grid
Autofill	Select the source content to put in layers
Widgets	Select widgets to include/exclude from this layout
Margin	Reduce the area of this layout (ex: **Top: 50%** will ignore the top half of the Multiviewer
Spacing	Set gaps between columns and/or rows

16.2.4 **Bottom bar buttons**

Button	Button description
Assist buttons (On/Off toggle buttons)	
	Snap to Multiviewer border and other widgets borders.
	Snap to grid cells. Click the arrow to set the grid (rows and columns).
	Keep aspect ratio.
Interface buttons (On/Off toggle buttons)	
	Hide content to display only widgets wireframe.
	Hide empty and preempted items (layers and sources).

16.3 Widget properties

When a widget is selected, the following widget settings are displayed in the Properties tab.

Setting name	Description / Setting selection
Widget	**Enable**: Toggle to show/hide the widget. **OSD**: Toggle to show/hide On Screen Display information on the widget.
Source	Select a content for this widget.
Position/Size	Set widget Vertical and Horizontal position in pixels. Set widget Height and Width in pixels.

16.3.1 Widget position and size

16.3.1.1 Set widget position with the layout editor

Layouts are predefined templates arranging widgets automatically in one Multiviewer.

1. In **Multiviewers**, click in the selected Multiviewer to open the layout editor.
2. Create a custom layout in Mosaic or Cascade mode.
3. Auto-fill the widgets with a type of source.
4. Select widgets to include/exclude from the layout.
5. Apply the layout on Multiviewer.

All the Multiviewer widgets are arranged automatically. For more information, see *14.1.5 Layout editor* page 71.

16.3.1.2 Set widget position and size manually

1. In **Multiviewers**, select a widget.

The selected widget is highlighted.

2. Use drag and drop on the widget to move it in the Screen.
3. Use drag and drop on a widget border point to change its size.

It is also possible to use the Properties panel:

4. Go to Properties, click **Position/Size** to show the corresponding settings.
5. Set the Position and Size by entering values or using drag and drop.

Tip: Use bottom bar buttons (Keep aspect ratio, snap to items) to have widgets of equal size or alignment. When enabling snap to item, widgets borders are automatically attracted to other objects (Multiviewer border, widget border, grid snap point) to match their position or size.

16.3.2 Widget source - Assign content to a widget

1. In [icon] **Multiviewers**, click a source icon in the left panel.

2. Select a widget or make sure it is available for drag and drop.
3. Drag a content to the widget.

The content thumbnail is displayed in the widget with the source label at the bottom.

Tip: It is also possible to assign a content in other ways:

- Drag and drop the selected content into the widget letter icon on the top of each Multiviewer.

- Select a widget then go to Properties > Source and select the content in the dropdown list.

16.4 Multiviewers memories

A Multiviewer memory saves the selected Multiviewer in the current settings. All widgets settings are saved/loaded. The LivePremier is able to save up to 50 Multiviewer memories.

16.4.1 Save a Multiviewer memory

1. In [icon] **Multiviewers**, click the [icon] **Memories** tab in the right panel.

2. Click **Save** to open the memory saving window.
3. Select the Multiviewer to save.
4. Select the memory slot and enter a label.
5. Click **Save**.

16.4.2 Load a Multiviewer memory

1. In [icon] **Multiviewers**, click the [icon] **Memories** tab in the right panel.

2. Click **Load**.
3. If needed, enable **Auto Scale** to adapt the loaded memory to fit the Multiviewer.
4. If needed, select a Multiviewer.
5. Click a Multiviewer memory slot.

The Multiviewer memory is loaded to the selected Multiviewer.

Tip: It is also possible to drag a memory slot to a Multiviewer.

16.4.3 Edit a Multiviewer memory

1. Load a Multiviewer memory.
2. Click **Save** to open the memory saving window.
3. Select the Multiviewer to save.
4. Select the existing Multiviewer memory slot to edit.
5. Click **Save** to overwrite the previous Multiviewer memory.

16.4.4 **Rename a Memory**

1. In **Multiviewers**, click the **Memories** tab in the right panel.

2. Click **Edit**.

3. Click ⋮ in the top right corner of the memory slot to open the **Label** field.

4. Enter a new name for the memory slot.

16.4.5 **Reorder memories**

1. In **Multiviewers**, click the **Memories** tab in the right panel.

2. Click **Edit**.

3. Drag a memory slot to a new place to organize the memory slots in a custom order.

Note: Reordering memory slots does not change the memory slot number and does not impact shot boxes.

Tip: To reset to default order, click ⋮ on top of the Memory slots and click **Reset order**.

17   User Maintenance and Troubleshooting

17.1 User Maintenance – Air filter

Tip: For optimal performance, this air filter must be cleaned by the user regularly (once a year).

The LivePremier unit is equipped with a removable air filter at the front of the unit.

Tools: Phillips screwdriver size 2, duster or vacuum.

1. Turn the unit off and unplug mains.
2. Remove the four screws on the front panel.
3. Using both hands, gently pull the front panel on a straight axis.
4. Gently tilt it down until mechanical stop.

The front panel is in safe still position.

5. Pull the air filter and take it out from the unit.
6. Carefully clean the air filter with a duster or vacuum.
7. When the air filter is clean, gently put it back in place.
8. Gently tilt up the front panel until it is aligned.
9. Gently push the front panel back in place on a straight axis.
10. Set the screws back in place.

The air filter is cleaned and the unit is ready for use.

17.2 Troubleshooting

The Web browser cannot access the WebRCS

-   Make sure to use correct network cables and that they are free from defects. (Crossover or straight cable as required).
-   Check the IP address of the control computer. It must have a unique IP address on the same network as the LivePremier unit.
-   Temporarily disable any other networks on the computer, such as turning off the Wi-Fi connection.
-   Refresh the browser.
-   Close and restart the browser.

APPENDICES

Appendix A. LivePremier control options

The WebRCS is the main controller for LivePremier. In addition, it can be used with other control options. LivePremier units are compatible with the Analog Way **Shot Box²** and **Control Box²** and also with **Companion** installed on a Stream deck.

Shot Box²	Control Box²	Stream deck + Companion

Tip: A new controller specifically designed for LivePremier is currently under development.

A.a. Use the Shot Box² and Control Box² with LivePremier

Analog Way Shot Box² and Control Box² can be used to recall Memories and trigger transitions.

To use these controllers:

1. Connect the controller directly to the LivePremier unit via USB ports.
2. On the unit front panel, go to Control > Controllers:
    a. Go to Status to check the detected Controllers.
    b. Enable Identify to display ID on the controller (1 or 2).
3. Select the controller to open its settings:

| Controller setting	Description
Enable	Enable or disable the controller
Backlight	Set the keyboard brightness (in %)
Mode*	Choose to recall Screen Memories or Master Memories
Screen*	Choose the Screen
Destination*	Choose to interact with Program or Preview
Autoscale	Enable to rescale Memory to applied Screen canvas size
Take on load	Enable to automatically trigger the transition when loading a Memory on Preview
Reset	Reset the controller configuration

*only available with the ShotBox².

4. Use the keys of the controller to recall Memories and trigger transitions.

A.b. Use the Stream deck with Companion with LivePremier

Companion is a software that transforms the Elgato Stream deck as a shot box that can be used with LivePremier units. For more details, please refer to Companion documentation.

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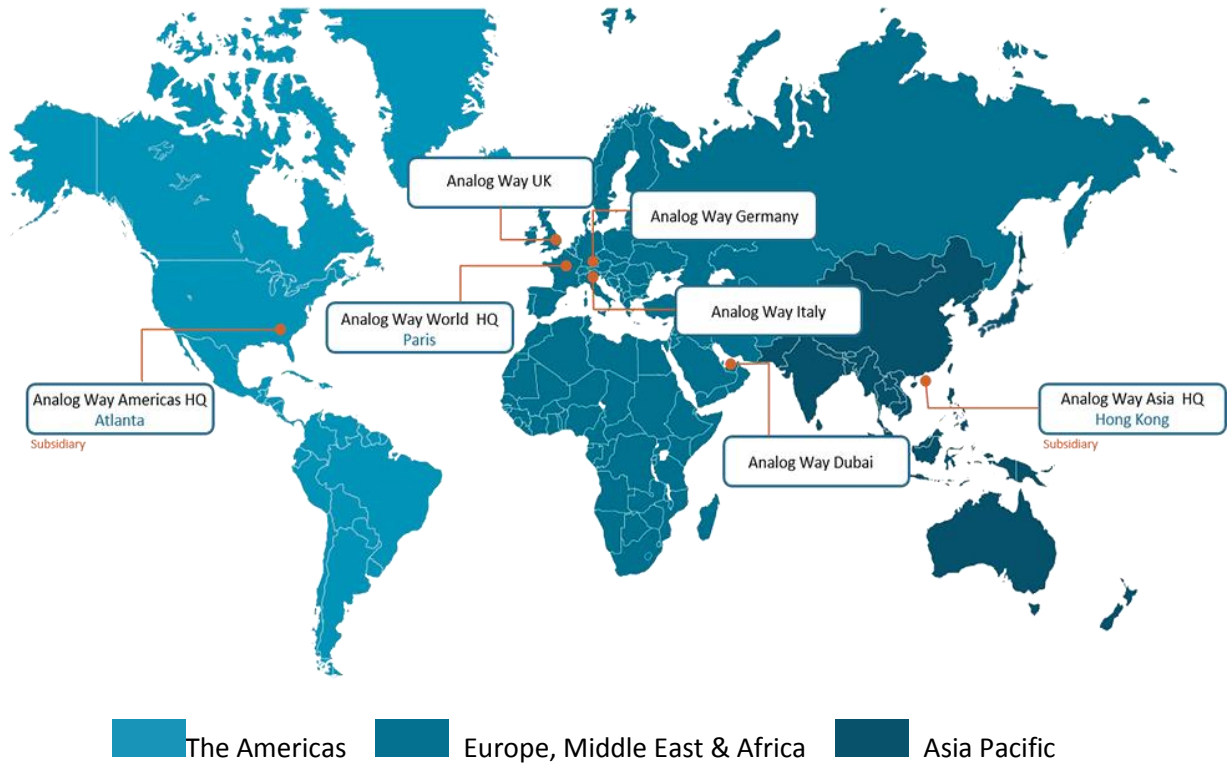
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Document version 1.1.1

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