

GV Live Alchemist Live – Modes of Operation



Version History

Date	Version	Release by	Reason for Changes
01/04/2020	1.0	J Metcalf	Initial release
02/02/2021	1.1	J Metcalf	Add Orbit Lite link. Remove Belden branding.

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1. Introduction

The Alchemist Live video frame rate conversion solution is capable of converting any resolutions from SD up to UHD/4K. Frame rate conversion is achieved using Grass Valley's high quality Ph.C algorithm.

The Alchemist Live Ph.C algorithm offers near transparent frame rate conversion. Built on the experience of legacy Alchemist variants over the last 25 years, the Alchemist Live improved algorithm offers the best frame rate conversion possible. Ph.C achieves the goal where by viewing audiences are unaware that frame rate conversion has taken place.

Depending upon the requirements, Alchemist Live can be either configured to support 4k/UHD resolutions, in which case a single transmission path is available, or alternatively Alchemist Live can be configured to support up to 3G resolutions, in which case three transmission paths are available.

With regard to the Alchemist Live SDI, when configured as a 3 channel system, there is a constraint in that all three channels will be configured to have the same frame rate output. The applied inputs must also be the same frame rate:



3 Channel Mode (SDI) Input frame-rates same / Output frame-rates same

With regard to Alchemist Live IP this constraint is not present. Each channel can be independently configured to any supported frame rate:

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3 Channel Mode (IP)

2. Configuring Alchemist Live

Alchemist Live is controlled via RCP (RollCall Control Panel), or via an HTML5 web service (see Appendix D of the Alchemist Live User guide - <u>Alchemist Live User Guide - download</u>).

RollCall can be run either within the RollCall Application, or as a plugin within GV Orbit.

The following procedures describe controlling Alchemist Live via RCP running within the RollCall suite.

RollCall Lite is available as a free download from the GV website, here:

RollCall Download

Orbit Lite is also available as a free download from the GV website, here:

GV-Orbit Lite Download

2.1 Configuring Alchemist Live as a single channel UHD converter

2.1.1 Configuring the Agent

In the GV File Template, in the Agent Configuration field, using the dropdown menu select the option:

1x Alchemist Live (supporting UHD/4K processing)

🧧 GV Live 4000:01:00 - Live H	ost
Agent Configuration Time Sync Configuration SNMP Logging Setup	Voit Status Agents Running : 1 Agents Disabled: 0 Agents Failed : 0 License Server OK
Agent Configuration	
Licenses Type: Alchemist Live EID:	
r Available Agents 01:01 - Alchemist Live	Selected Agent Product: Alchemist Live Status: Running Process ID: 4526 Licenses: 0 / 3
	Allow Reset RESET STOP ALL

Note that when configured in this way, the number of Agents will be: **1** In the **Available Agents** pane, only a single Agent is listed.

Note that in the 1x Alchemist Live (up to UHD/4K) mode, that three licenses are consumed.

2.1.2 Starting the Agent

The Agent is started from within the Available Agent pane:

3x Alchemist Live (up to 10) 1x Alchemist Lite (up to UH 3x Alchemist Lite (up to 10)	30 p) D) 30p)	
Available Agents		
:01:01 - AlchemistLive	Selected Agent Product Alchemist Live Status: Disabled Process ID: N/A Licenses: 8 / 12	
	START STOP	START ALL

The Agent can be started by either pressing the Start button, or the Start All button:



Once the Agent is started, confirmation will be displayed in the **Unit Status** pane, where the Agent will be described as **Running**:

GV Live 4000.01.00 - Live Host Agent Configuration Time Sync Configuration Logging Setup System	Vnit Status Agents Running : 1 Agents Disabled: 0 Agents Failed : 0 License Server OK

2.1.3 Launching the Alchemist Live Template

Once the Agent is running, the **GV Live RollCall** tree can be expanded and the **Alchemist Live** template will appear:



The tree will now expand to include Alchemist Live:

RollCall Control Panel				
🛛 🚓 👔 📑 🔑 🖉 🔜 🌶	(🙉 🗟 🐽 📑	t 📰 🖛 🔿 🗃 📰 🖬 💋		
localhost	GV Live 2000:01:00 - Live H	ost		
🖄 🖽 陸 🗄 📲 🐗 🏄 📗	Agent Configuration	Unit Status		
Alchemist Live 1	Time Sync Configuration	Agents Running : 1 Agenta Disabled: 0		
Alchemist Live (1)	SNMP	Agents Failed : 0		
	Setup	License Server OK		
	Automotive and the second seco			

Double clicking on Alchemist Live (1) will launch the Alchemist Live template:



2.2 Configuring Alchemist Live as a three channel 3G converter

2.2.1 Configuring the Agents

In the GV File Template, in the Agent Configuration field, using the dropdown menu select the option:

3x Alchemist Live (up to 3G)

Note that when configured in this way, the number of Agents will be: **3** In the **Available Agents** pane, three Agents will be listed.

2.2.2 Starting the Agents

The Agents are started from within the Available Agent pane:

3x Alchemist Lite (up to 108		
- Available Agents :01:01 - Alchemist Live :01:02 - Alchemist Live :01:03 - Alchemist Live	Selected Agent Product Alchemist Live Status: Disabled Process ID: NIA Licenses: 8 / 12 START STOP Allow Reset RESET	START ALL

An individual Agent can be started by pressing the **Start** button, or all three by using the **Start All** button: Once the Agents have started, confirmation will be in the **Unit Status** pane, where the Agents will be described as **Running**:

GV Live 4000:01:00 - GV Live Ho Agent Configuration Logging Setup System	Unit Status Agents Running : 3 Agents Disabled: 0 Agents Failed : 0 License Server OK	
Agent comiguration		

2.2.3 Launching the Alchemist Live Templates

Once the Agents are running, the **GV Live RollCall** tree can be expanded and the **Alchemist Live** template will appear:



Double clicking on any of the Alchemist Live links will launch the respective Alchemist Live template:

RollCall Control Panel				
Elle Edi Vew Bollcall Look & Feel Mindow Help				
i 🔩 🛢 🎜 🖉 🛃 🔏	🕸 👩 🕸 🗄	🕄 🗔 🖛 🛤		01: Alchemist Live (1) (Ak
172 19 216 155	AlchemistLive (1)	0000:01:01 - Alchemist Liv		
************************************	Input Output Conversion Utilities	Unit Status SYS: Running LIC: Valid INF: OK CUT: OK	Input Status Video: SDI 1080 501 Acdio: SDI 18 Channels Last Changed: 10.17.49.UTC 27.01.20	Output Status Videa: 501 1000 501 Audio: 900 1E Channels Latency: 261 ms
	Warningt Changes to any of			
1	RTP Dest Flows			
Connected Units Custom Groups				
💥 🚀 😳 📄 🗐 👘 🖷 🛬 🎕				

All three Alchemist Live templates can be opened at the same time, allowing easy navigation between them.

