Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	February 8th, 2021
Version	4.02.77
Web Remote Control Software (Web RCS)	4.02.09

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

This firmware is not mandatory. It is recommended when operating a LiveCore System using the Web RCS with the Mac OS version of AW Browser.

New features:

- None.

Evolutions:

- None.

Bugs:

- In the Web RCS, double-clicks don't work with AW Browser making impossible to access some settings. All double-clicks are replaced by single-clicks.

PREVIOUS VERSIONS

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	January 14th, 2021
Version	4.02.76
Web Remote Control Software (Web RCS)	4.02.08

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

This firmware is not mandatory. It is recommended when operating a LiveCore System using the Web RCS with the Mac OS version of AW Browser.

New features:

- None.

Evolutions:

- None.

Bugs:

- Impossible to edit the content of combo box/ sliders in the Web RCS when using the Mac OS version of AW Browser.

Products	*Not concerned: NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K* SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	February 20th, 2020
Version	4.02.75
Web Remote Control Software (Web RCS)	4.02.06

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions:

- None.

Bugs:

- When activating the 4K 4:2:0 during the Preconfiguration, some of the 4 outputs may deliver content with wrong colors.
- With linked two units, activating 4K 4:2:0 on the slave device causes the loss of one or several outputs

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	May 28, 2018
Version	4.02.71
Web Remote Control Software (Web RCS)	4.02.06

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions:

- Modification of the map in the menu page SERVICES/TECHNICAL SUPPORT (new addresses).

Bugs:

- After about 50 days of non-stop operating, a LiveCore device may crash.

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	January 26, 2018
Version	4.02.60
Web Remote Control Software (Web RCS)	4.02.05

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions:

- None.

Bugs:

- When connecting linked ASC1604-4K-LOE016-4K to a Vertige remote console, the LOE016-4K indicates it is downgraded in spite of the fact it is not.
- Missing formats in the EDID prefered format list for DVI inputs 2, 6 and 10: 1080x1920@60 and 1200x1920@60.
- Sometimes, the content of the Native Background is displayed with vertical stripes of corrupted data.
- When using Vertige, the lastly modified AOI settings may not be effective.
- When using an upstream matrix on the DP inputs, switching sources with different resolutions (4K➔2K➔4K) causes the DP input to work incorrectly (wrong format detection).
- When synchronizing several units, the 4K input content may not be displayed synchronously depending on the outputs.
- When requesting many auto fade requests, some of them may be lost.
- In the LAN connection settings, the Gateway Address may not be effective or may be lost after rebooting the unit.

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	July 31, 2017
Version	4.02.39
Web Remote Control Software (Web RCS)	4.02.04

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions

- None

Bug Fix

- Frames/Logos were not properly re-loaded (LINK mode only)

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	July 25, 2017
Version	4.02.38
Web Remote Control Software (Web RCS)	4.02.04

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions

- Overall enhancement of the reliability of the Link procedure (no user interface modification)

Bug Fixes

- Sometimes, the AOI size is not applied
- It is impossible to load Master Memories whose index is greater than 16
- The Power button of the front panel may not trigger the Shutdown prompt
- When using an independent rate for the Monitoring output, some Dual-Link formats are declared as invalid
- Linked units may wake up with a Link Error status

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	March 6, 2017
Version	4.02.23
Web Remote Control Software (Web RCS)	4.02.03

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions

- None

Bug Fixes

- In version 4.02.21, it is impossible to synchronize units using Vertige (Ref. VRC-300)
- When importing a Configuration file created with AW Simulator, the configuration is not fully restored.

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	February 22, 2017
Version	4.02.21
Web Remote Control Software (Web RCS)	4.02.03

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- None.

Evolutions

- None

Bug Fixes

- When the output rotation is enabled for 4RU LiveCore units equipped with 4K outputs and the angle is different from 0°, some artifacts (pixels) appear.

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 /SMX12x4-4K / ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC3204-4K-PL / ASC4806 / ASC4806-4K / ASC4806-4K-PL / LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE032-4K-PL / LOE048 / LOE048-4K / LOE048-4K-PL
Date	February 13, 2017
Version	4.02.20
Web Remote Control Software (Web RCS)	4.02.03

The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

- LiveCore backup system and AW Simulator 2.0 are now compatible: it is now possible to configure or modify the configuration of your LiveCore unit offline thanks to AW Simulator.
  - A LiveCore backup file can be exported to AW Simulator
  - A Backup file created with AW Simulator can be exported to your LiveCore unit.

Evolutions

- New input formats where added to the EDID preferred format list:
  - 3840x1080 @23.976Hz
  - 3840x1080 @24Hz
  - 3840x1080 @29.97Hz
  - 3840x1080 @59.94Hz

Bug Fixes

- It is impossible to import a Single Frame into the library properly when its height is greater than 2048. The new limit is 2160.
- When linking two heterogeneous units together, if the output #8 is configured as a Confidence monitor then there is no background color for this output.
- Soft-Edge Black levels don’t work with output formats 2048x1080 and 2048x1152.
- For NeXtage 0802 and NeXtage 1604: preview frames are not displayed if Output #1 is assigned to Screen #2.
- On a Confidence output, one screen may not be complete (one output of the screen is not displayed).
- If too many resources are affected to an output of a screen, this screen is not displayed correctly on the Monitoring output.
- Computer B&W signals are not detected.
- When linking two units
  - the "Fit Screen" Monitoring Option excludes Output #8
  - Monitoring screen doesn't display the right output when resources are switched
- The device may not boot and remains stuck in step "Initializing PCIE Bus"

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K/ LOE048-4K-PL
Date	November 9, 2016
Version	4.01.51
Web Remote Control Software (Web RCS)	4.01.31

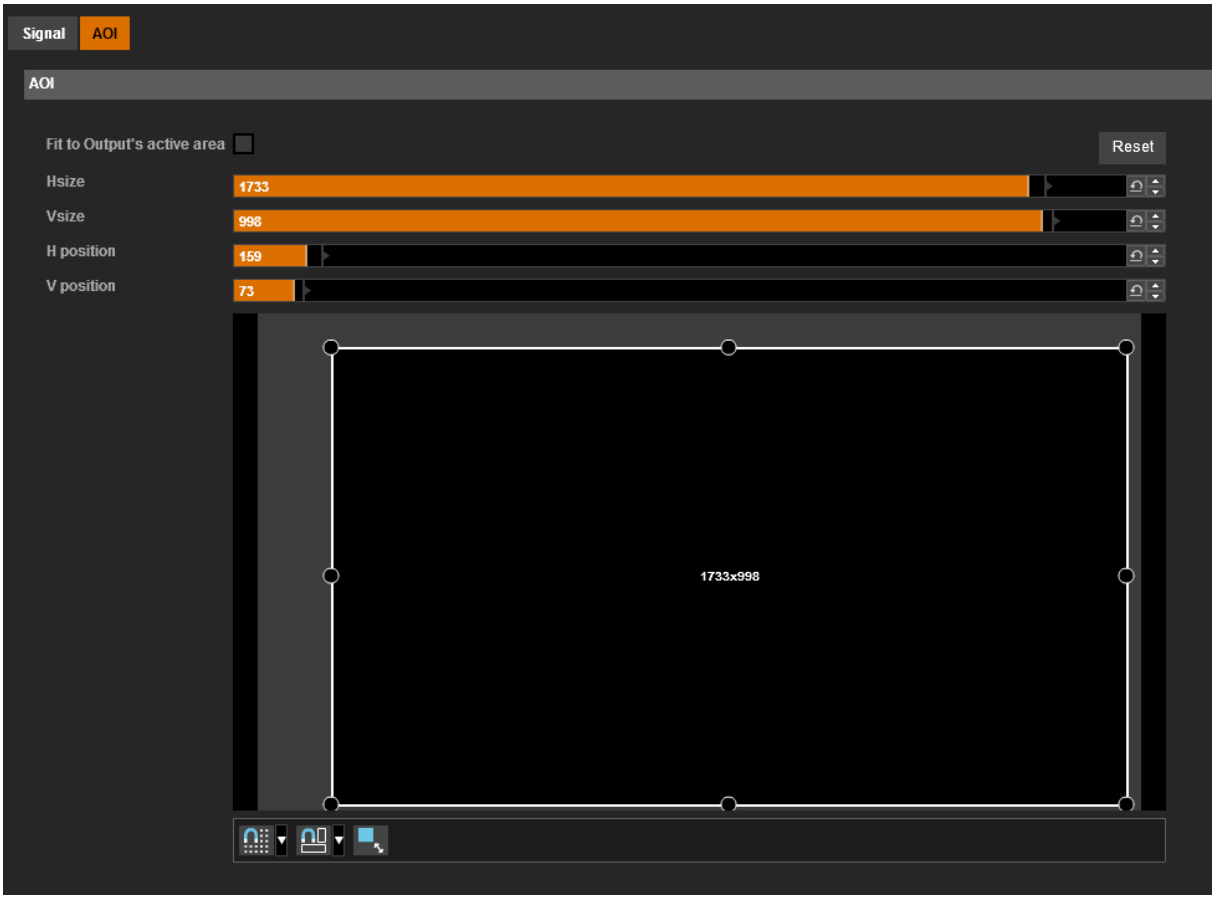
The version (s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

New features:

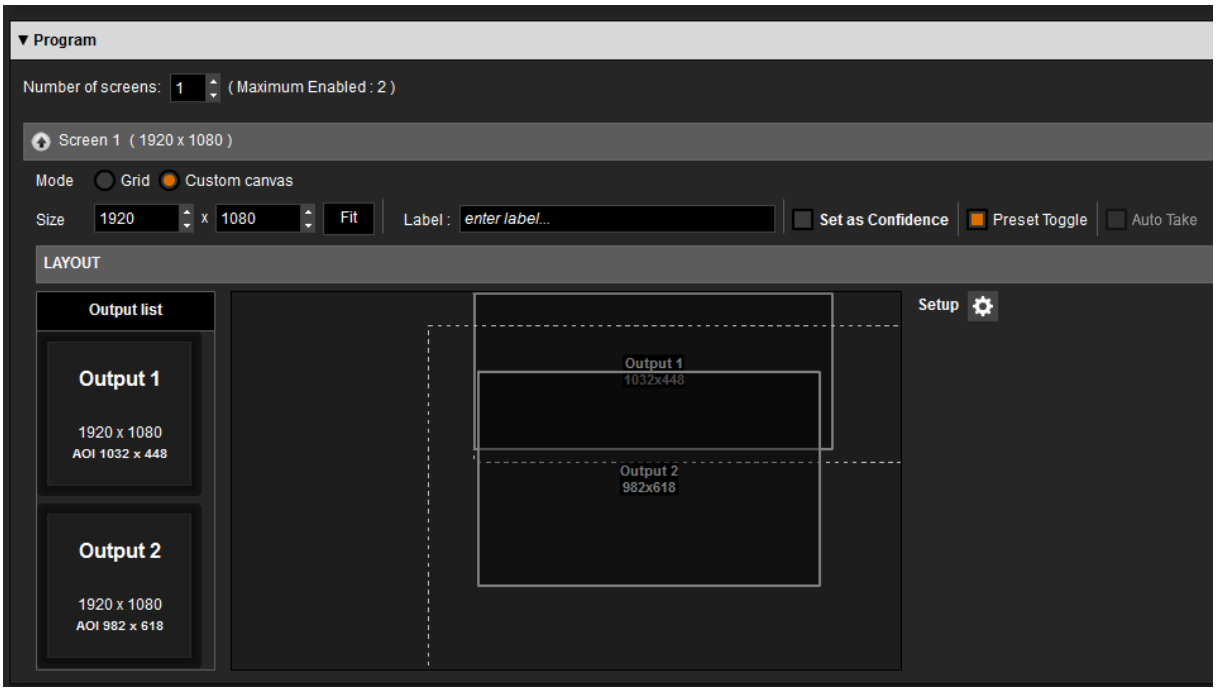
- Added support for output AOI:

  To quickly set up the output AOI (**A**rea **O**f **I**nterest), select the **Setup : OUTPUTS** page then select the output for which you want to configure the AOI (especially useful when using LED wall configurations). Select the **AOI** button then adjust the size and position of the AOI to remove unseen or useless display areas and operate exclusively on the actually displayed output area:

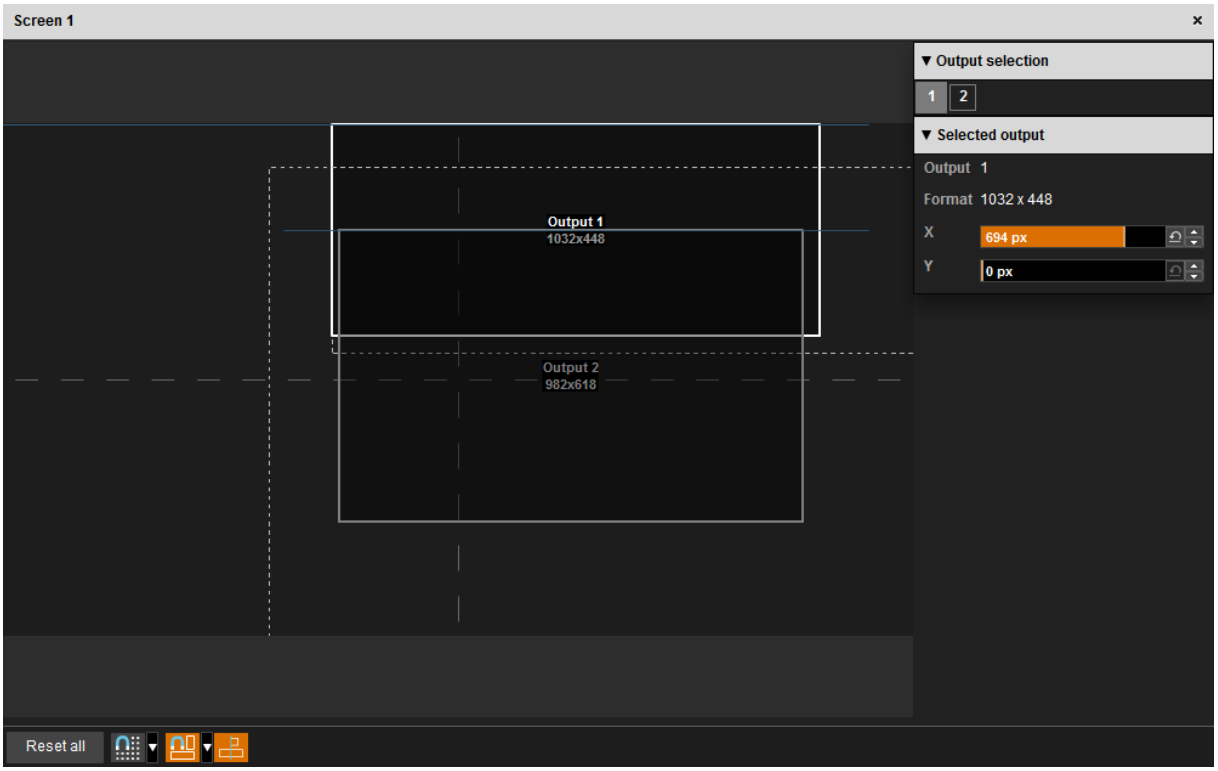


- Added support for custom canvas mode:

  To freely combine outputs into a specific screen pixel area (for example in Hard-Edge / LED wall configurations, or when combining different output formats), select a screen and check the **Custom Canvas** mode. Specify the total viewable screen size in pixels (can be large) and then drag and drop the required output(s) to the screen's Layout: **Output List**:



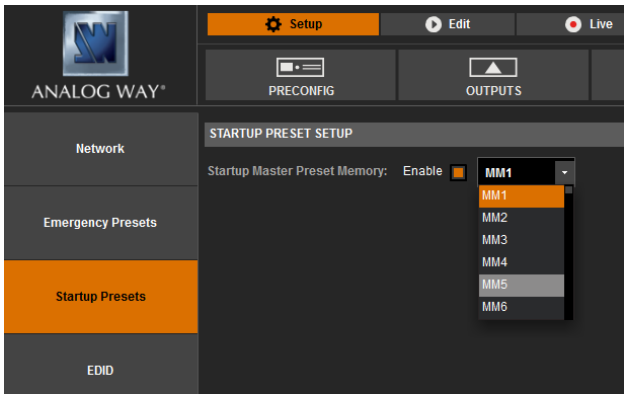
  Finally, click on the layout **Setup** button to position the output(s) in the screen:



Evolutions

- Added an option to recall a Master Preset at system startup:

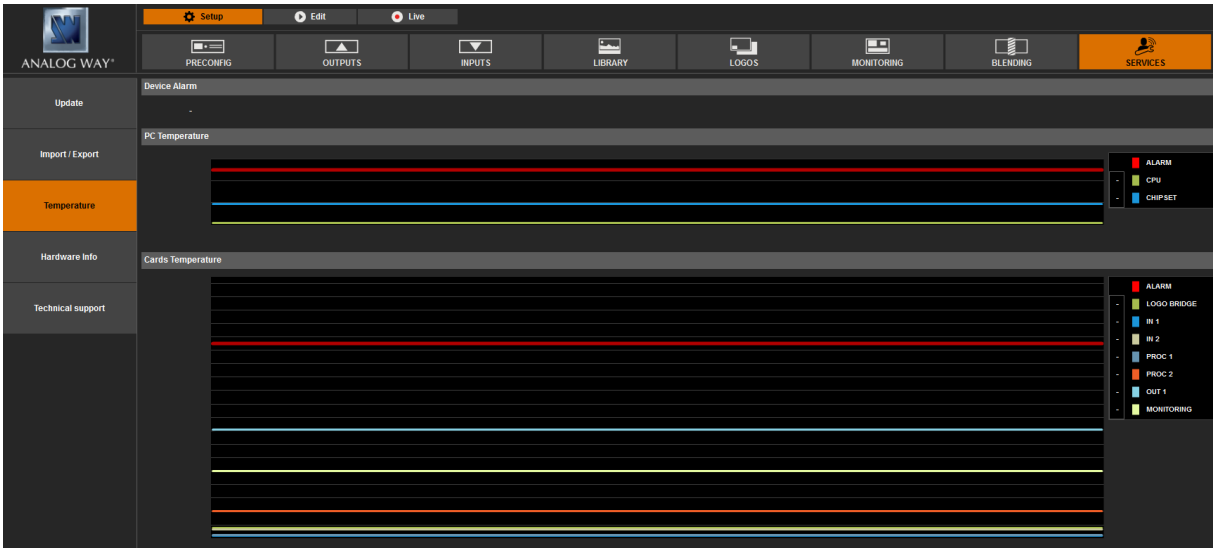
  In the **Setup** : **CONTROL** : **Startup Presets** page, select a previously created Master Memory that will be loaded when the system powers on.



- New cooling management:

  Un-needed fans have been disabled and will only run for a one minute test every 4 hours, or if the chip temperature reaches an extreme temperature. A core set of fans will continue to cool the unit and fan speed will be throttled based on the ambient temperature. The results of the last fan test can be found on the **SERVICES** : **Temperature** page. Any critical fan failure will produce a warning via pop-up message in the WebRCS.

- New system temperature graph with limits:



- Added a 360° setting to enable rotation latency on some outputs:

  The **Enable Rotation** status tells you whether the screen has rotation processing enabled or not. Rotation processing is automatically enabled on all outputs of a screen when any one of the screen's outputs uses rotation. This ensures the same latency on all screen outputs, including non-rotated outputs. To ensure the same latency between rotated and non-rotated screens (required in sync mode), enable rotation processing on each non-rotated screen by selecting the 360° rotation option of one of its outputs

- Added EDIDs with 'rotation' including 1080x1920

Bug Fixes

- 2K@60Hz SDI Output is not well formatted
- SDI output content may be shifted right at start-up
- Output card stop working when soft edge pattern is displayed on 4K outputs screen

Known issues

- No preview rectangle frame are displayed when output 1 is on screen 2
- AOI Horizontal size on interlaced output is limited to half total line size

Horizontal size for Dual Link and Wide single custom output format is limited to modulus 4 value

Products	NXT0802 / NXT0802-4K / NXT1604 / NXT1604-4K / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K/ LOE048-4K-PL
Date	SEPTEMBER 12, 2016
Version	4.00.59
Web Remote Control Software (Web RCS)	4.00.19

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

Technical Notes:

Evolutions

- None

Bug Fixes

- **Only for NXT0802 + OPT-4K-NXT0802 / NXT0802-4K / NXT1604 + OPT-4K-NXT1604 / NXT1604-4K :**
  - Computer formats delivered by the outputs are not stable causing sync loss.

Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	JUNE 22nd, 2016
Version	4.00.58 Web RCS : V4.00.19

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- None

Bug Fixes

- When creating a custom format using the Full mode, the rate is not used properly to compute the status. The last memorized value of the rate is used instead. This may generate valid status for formats that are not supported by the LiveCore unit.
- When setting the size of the soft-edge blending overlap areas of a screen, a specific couple of values can trigger an endless reboot of the device.
- Payload is missing on the SDI plugs of the outputs #2 and #4.

Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	APRIL 14th, 2016
Version	4.00.54 Web RCS : V4.00.19

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- None

Bug Fixes

- When the soft-edge blending settings (coverage size for example) are modified, the output format is systematically computed and generated again causing sync loss by the display.
- When an input with a SDTV signal is used as a reference for the internal rate, it is not processed properly. The image is displayed twice without overscan.
- The output signal is not stable when the output format type is “computer” and an interlaced SDI signal is used as a reference for the internal rate.
- When a3- SDI level B source is unplugged from a SDI input plug, this input plug can’t detect any other signals than 3G-SDI level B anymore.
- On the output#2 of a NeXtage 08 /NeXtage 16 with the 4K option, it shouldn’t be possible to use a dual resolution with an output rate different from the internal rate.

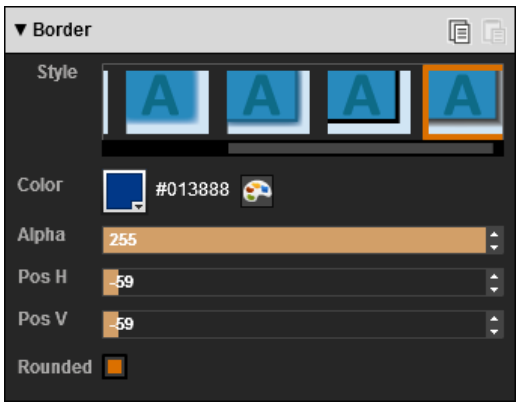
Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	APRIL 11th, 2016
Version	4.00.51 Web RCS : V4.00.19

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

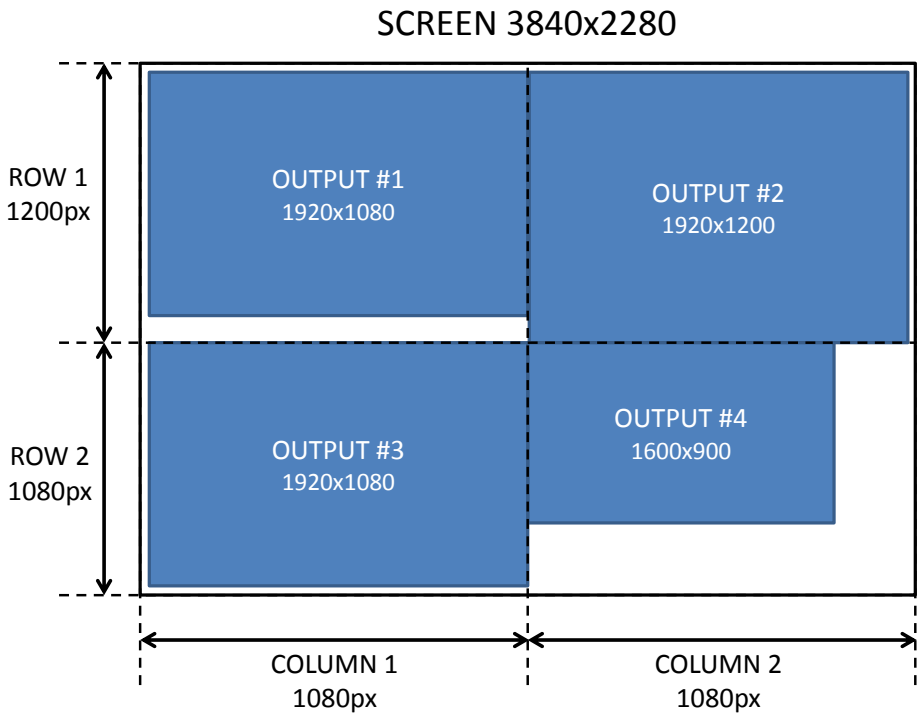
▶ Technical Notes:

Evolutions

- **Management of the frames and logos of linked slave device**: when linking two LiveCore units together, 8 frames and 8 logos resources are available (instead of 4 until now).The use of frames for native background is significantly simplified.
- **Reduced latency**: When the internal rate is generated by the "follow mode" of an input, all the inputs that are synchronized with this reference have a minimal latency of 1 frame at the output of the LiveCore unit (instead of 2 until now).
- **Confidence presets can be included in the Master Presets memories**: when saving a master preset, it is possible to include the confidence monitor preset. The next time the master preset memory is recalled, the confidence monitor is modified accordingly.
- **Independent output rates (except NXT0802 and NXT1604):** only available on the 4 output LiveCore units, the feature enables to set a rate different from the internal rate to an output. Please note that the latency of the concerned outputs will be increased by one frame due to the additional frame rate conversion.
- **Dual formats available on HDMI output plug:** all formats (including custom formats) requiring a bandwidth greater than can be delivered by the 4K HDMI output plugs (output #2, for 4-output units: output #4). Before version 4.00, only format until 2K/2048x1152 60Hz and 4K/UHD formats could be delivered.
- **New Layer border:** the LiveCore series now includes Smooth shadow border
  - A **new smooth shadow border** is available.
  - A round corner option is available to change the aspect of the border corners.



- **Screen with different output sizes:** It is now possible to use outputs whose resolutions are different in the same screen. When placing the output in the screen grid, each row has the height of the tallest output in the row and each column ha the width of the largest output in the column. It is a first step to the next version that will handle free size screens and output Areas Of Interest (AOI).



- **Web RCS:**
  - All steps of the pre-configuration menu can be accessed independently without prior access to previous steps
  - Confidence and monitoring overviews are available just like it is for preset memories

Bug Fixes

- After 2 On/Off cycles, input labels are not recalled on the monitoring output.
- For the non 4K input cards, Dual Link formats are not available as preferred format of the EDID of the DVI input#2.
- Native 4K Inputs and 4K Frames don't work on an output whose format is 4K 60Hz 4:2:0.
- When a cropped 4K source is displayed on an output whose format is 4K 60Hz 4:2:0, some quadrants may be incorrect (bad content, blink).
- The EDID Preferred format 4096x1080 should not exist. The EDID standard doesn't allocate enough bits for the preferred format field: this format must be specified in the CEA-861 Extension.
- 720p 24/23.97Hz signals are not detected properly by SDI inputs.
- Layers whose position is negative (X or Y) are shifted when loading a memory with the Auto-Scale option enabled.
- The label of an input signal is still displayed in the monitoring widget even if the input signal is disconnected.
- The Drag and Drop feature is not available for confidence and monitoring presets.
- Sometimes, the list of valid output formats is empty.
- Output patterns are corrupted when a dual-link output format is used.
- When linking two units, the slave device can't be switched off from the front panel button anymore if the shutdown request is sent to the master via the LAN interface.
- The unit doesn't boot if the still library has too many 4K frames.

- Web RCS:
  - In the Preconfig>Screens page: When modifying the screen size settings, the graphic component keeps the focus even if the user clicks outside the control (mouse wheel is still active).
  - The widget in a Confidence screen is not deselected when the monitoring or screen pages are selected.
  - When linking two units, if the monitoring ID pattern is activated from the quick setup panel, only the master unit displays the pattern on its monitoring output
  - When linking two units, in page Services>Temperature: only the cards labels of the master device are displayed, those of the slave unit are missing.
  - Using Microsoft Edge web browser, popup windows are not displayed on the foreground when the full screen mode is enabled.
  - No alarm flag is indicated on the WebRCS when a fan problem is detected.
- Perspective layers
  - When the Perspective Layers mode is enabled for a hard-edge screen, the preview of this screen is not displayed properly on the confidence output.
  - When using a frame as a native background on a Perspective Layer screen, a flash occurs during transitions if the Z-mixing is activated.
  - When linking two units, Native content is not displayed properly on a 4-resource output belonging to a Perspective Layers screen with the Z-mixing activated.
  - When linking two units, the Preview frames of a perspective screen are not displayed properly on the Monitoring output of the slave device.

Known issues:

- None

Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	NOVEMBER 18th, 2015
Version	3.02.33 Web RCS : V3.02.12

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- None

Bug Fixes

- It is impossible to Link a LiveCore Output Expander to a SmartMatriX Ultra (ref. SMX12x4) and a SmartMatriX Ultra equipped with the 4K option (ref.SMX12x4 + OPT_4K_SMX12x4): the link is not available.

- Problems when the internal rate of the unit is inferior to 25Hz :
  - The device can't deliver 4K output signals.
  - Displaying Dual format in the monitoring output produces artefacts

  Rates below 25Hz are now handled properly

Known issues

- When linking two devices, the preview frames of perspective screens are not displayed properly on the Monitoring output of the slave unit.

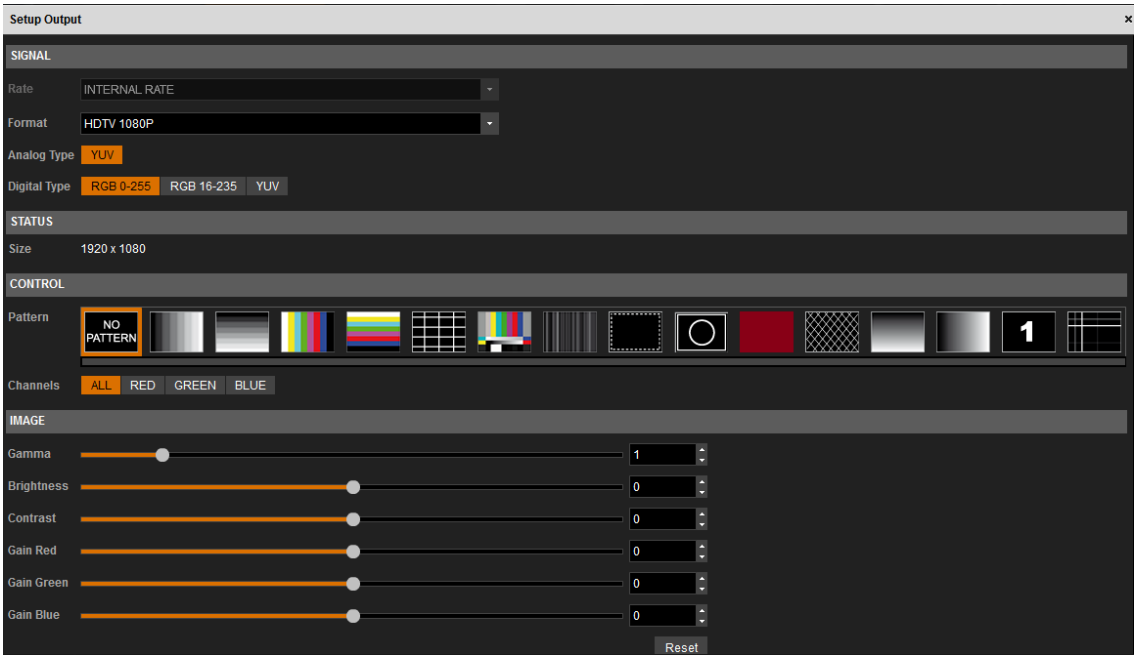
Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	NOVEMBER 9nd, 2015
Version	3.02.30 Web RCS : V3.02.12

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

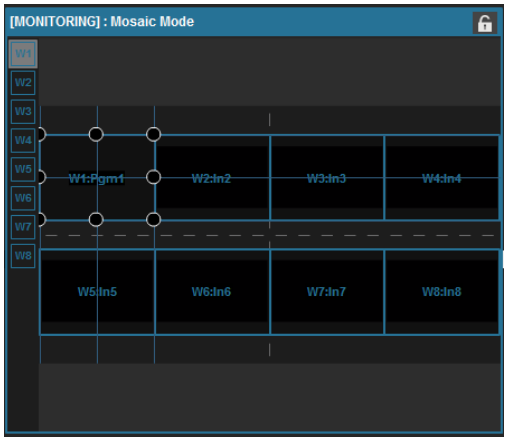
▶ Technical Notes:

Evolutions

- **New output color adjustments**: new settings were implemented to adjust the output color: Brightness, Contrast, Red Gain, Green Gain and Blue Gain. These settings are independent for each output and a Reset button was added.



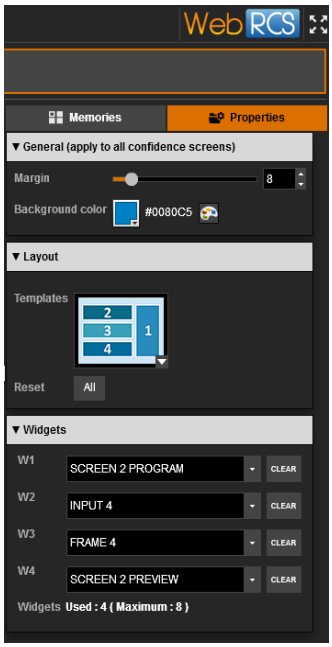
- **Monitoring Screen Widget edge to edge positioning**: the snap to other widgets borders is now possible so it is much easier to align them together.



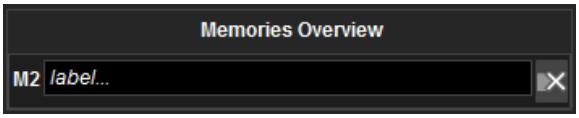
- **New edition tools for the Monitoring/Preview edition panel**: these tools (alignment, snap to grid/layer ...) make easier the design of layouts for the monitoring output.

- **New Confidence edition panel**: The Confidence screens are not managed in the SETUP section anymore (except indicating that a screen is used as a confidence monitor). They are now managed as the monitoring output in the EDIT and LIVE sections:

An edition panel is available on the right side. This panel contains two tabs : one for the properties and one for the memories (for further details about memories, please read the next item)

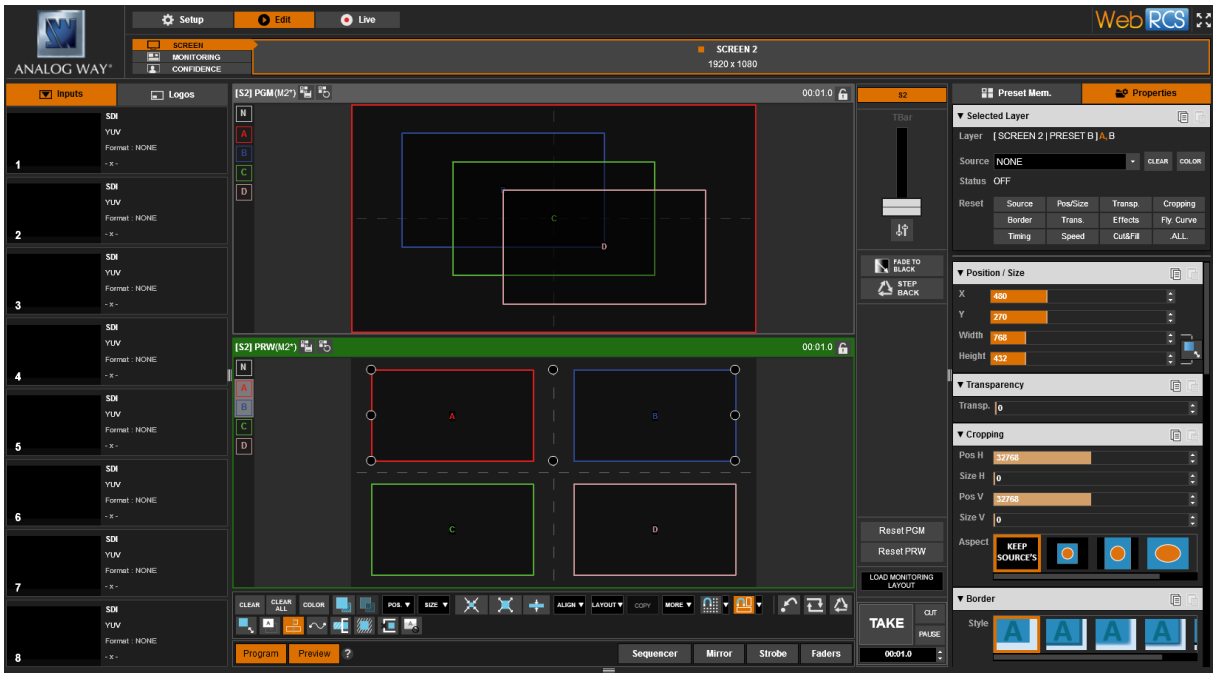


- **Confidence Memories**: up to 16 memories are available to store the configuration of the confidence screens. Saving a configuration can be achieved by clicking the SAVE MODE button and then selecting the memory slot. Each memory can be labelled so the operator easily remembers the content of each memory.



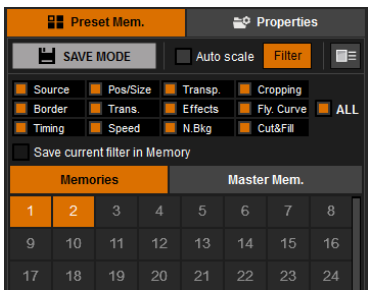
These memories can also be recalled clicking on the memory slot.

- **Multi-Layer selection to allow the change of layer parameters**: It is now possible to modify the properties of a multi-layer selection. Select a layer and then add a new layer by SHIFT+clicking: the properties can be edited in the Properties tab for all the selected layers at the same time. Please note that some properties like position will be set to the value of the firstly selected layer and then modified.



- **Wide resolutions carried on Single Link Custom Format**: When creating a wide custom format whose width is larger than 2048 pixels but whose pixel frequency is lower than 165MHz, the signal is now carried as a Single-Link DVI stream. Please note that the outputs using this format still require twice the number of resources as the format is wide.

- **Filters can be saved in a preset memory**: It is now possible to include a preset filter in the memory to recall specific preset elements only (all except native background). A checkbox with the label “Save current filter in Memory” enables/disables this feature.



Bug Fixes

- Overall optimization of locking time on the framelock signal: the locking time of the framelock signal was significantly reduced.

- Locking time optimization for HD-SDI input signals: locking time for 1080i signal on SDI may be too long and causing problem with inputs connected to a SDI matrix. It was dramatically reduced to a mean value of 3,5s. Please note that for SD-SDI and 3D-SDI, the mean locking time is about 1s.

- Cropping a 4K source with more than 50% freezes the layer containing this source: the cropping now has no impact on 4K source, even if the crop finder is close to the left/right edge or if the size is inferior to 1920.

- The Device downgrade is not reset by the Factory (Out of the box) reset: now when resetting a downgraded unit to its Out-Of-The-Box state, the unit retrieves its real type.

- Capturing a Single Frame with more than 1600 lines crashes the system: capturing a frame whose height is more important than 1600 lines (limit of 2560x1600 dual-link format) crashes the system.

- Unused outputs don't use unnecessary resources on the Monitoring Mosaic view.

- In the edition panel of the sequencer, the list of Frames and Logos now displays valid information

- Resetting the Effects doesn't disable the Smooth Move feature anymore.

- The Predefined Cropped setting is no longer modified when the Left cropping setting is adjusted.

- Layers B, D, F… are now masked on the Preview/Monitoring outputs when the Cut and Fill feature is enabled.

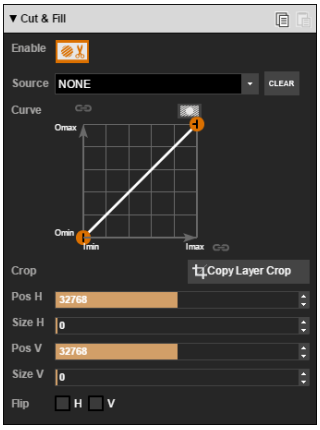
Products	NXT0802 / NXT1604 / SMX12x4 ASC1602 / ASC1602-4K / ASC3204 / ASC3204-4K / ASC4806 / ASC4806-4K / ASC4806-4K-PL LOE016 / LOE016-4K / LOE032 / LOE032-4K / LOE048 / LOE048-4K
Date	SEPTEMBER 08th, 2015
Version	3.01.60 Web RCS : V3.01.28

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

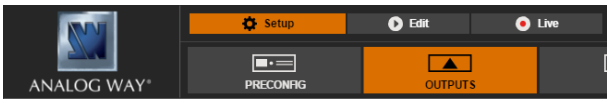
Evolutions

- **New Layer Cut and Fill feature:** the Cut & Fill feature allows keying the content of a layer using an input or a still picture (frame or logo) as the alpha channel. Usually, the Cut content (the mask), is a grey level content: the darker the grey level, the more transparent the Fill content. If a colored content is used as Cut content, the Luma level of the Cut content is used to key the Fill content. As the Cut&Fill feature requires two layers (one for the Cut and one for the Fill), only layers A, C, E… can be cut.
    - To enable the Cut&Fill feature for a layer, go to the Edit/Live tab of the Web RCS and select a layer. Enable the feature in the Layers properties panel (on the right side of the Web RCS). A small area appears in the top right corner of the layer, indicating that the feature is activated.



    - Then select the source for the Cut using the right side panel or just drag-n-dropping the source to the small area in the Layer. A snapshot of the Cut source appears in this area.
    - Others parameters such as cropping, flip and luma level thresholds are available.
    - This feature cis based on layer parameters that are included in the preset memory: it means that these settings can be different from a preset to another one. For example, using a static frame as Cut content and playing with the thresholds allows creating dynamic transition effects.

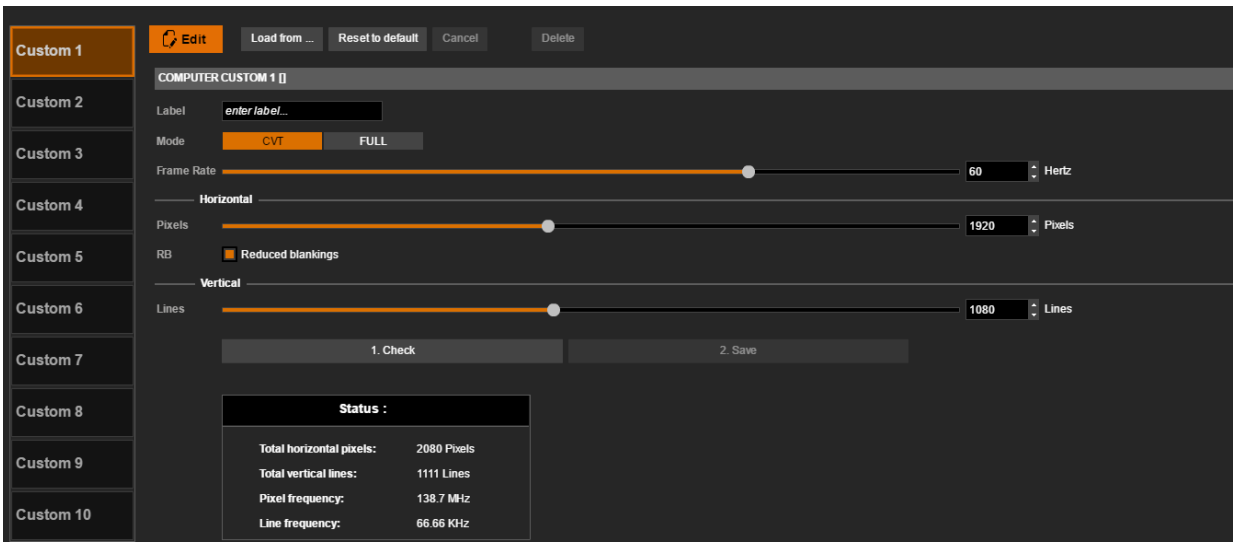
- **Custom Output Formats:** Using one of the two available modes (CVT or full), operators can now create their own output format. This feature is very useful for LED wall applications and nonstandard industrial display applications.
    - To access the Custom Formats, go to the SETUP > OUTPUT section of the Web RCS



    - Select the Custom Formats on the left side.

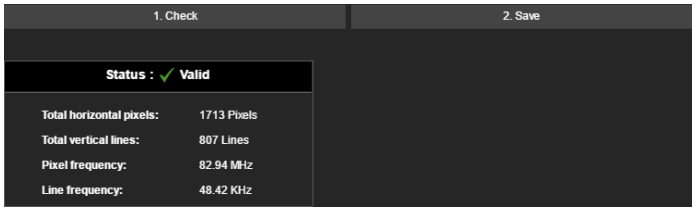
- LiveCore units offer 10 memories to store the user custom format. To modify one of the 10 formats, just select it and enter the Edit mode by click the dedicated button. Then choose the mode to create/modify the custom format

  - In **the CVT mode**, the operator only has to set the width, height and rate of the format and to indicate if this format has reduced blanking intervals. The LiveCore unit will compute the format parameters according to CVT 1.1 formulas.

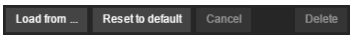


  - In the **Full mode**, the operator can access and set all the parameters of the format (H&V front porch, H&V sync, H&V back porch, width height, sync polarity…)

- Once the settings are achieved, the operator must check it to be sure that it fits with the unit capabilities (pixel frequency, line frequency…). If the format is valid, it can be saved.



- Additional actons can be achieved in the Edit mode of the Custom Formats

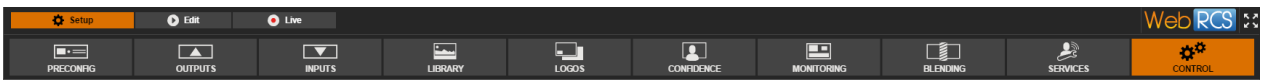


  - **Load from**: pre-load the settings of a custom format with those of another memory.
  - **Reset to default**: reset all the setting to their default values
  - **Cancel**: quit the Edit mode without saving the changes.
  - **Delete**: delete all the setting of the memory slot and tag it as free (will not appear in the list of available output formats)
- When setting the format of an output, the custom formats appear in the list of the available formats only if their rate equals the Internal Rate of the unit.

- **4K Frames:** It is now possible to import or capture 4K frames. Just like for Dual frames, a 4K frame must be declared as 4K and requires two frame slots. A 4K frame can be assigned to frame slot #2 or #4. When using a 4K frame in a layer, the adjacent layer is disabled; only layer A, C, E… can be used.

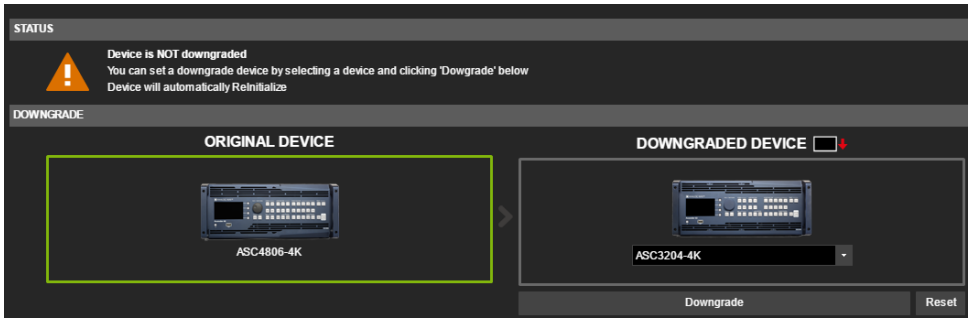
- **Heterogeneous Link support (WebRCS only):** Using the Web RCS, it is now possible to link any kind of Ascenders together. Just like for a link between two similar units, the operator must to connect the cables between the two different units and to start the Web RCS of the device that will used as the master unit. The rules for the heterogeneous link are :
  - **The two units must have the same firmware version (at least 3.01.XYZ)**
  - 4K units can be linked to non-4K units
  - 4K Perspective Layers can be linked to non 4K non Perspective Layers units
  - No downgrade of the most powerful unit is necessary.
  - The limitations of the screens are linked to the output capabilities :
    - A screen containing several outputs with different number of layers will be limited to the capabilities of the weakest output. For example: linking an ASC4806 to an ASC3204, a screen made of 2 outputs coming from both units will be limited to 4 layers. However the remaining outputs of the ASC4806 still have 6 layers
    - A screen containing outputs supporting Perspective Layers and others without this feature can't be declared as Perspective Layers
  - Please note that the SmartMatriX Ultra (ref. SMX12x4) is not concerned and can only be linked to another SMX12x4.

- **Device temporary Downgrade (to be used with Vertige controller)**: ASC4806, ASC3204 and NXT1604 can be downgraded to a lower model (This feature is not available for ASC1602, SMX12x4 and NXT0802). This feature can be useful to work with the Vertige controller that only supports assemblies with same type units.
  - To downgrade a LiveCore unit, go to the SETUP > CONTROL section of the Web RCS.

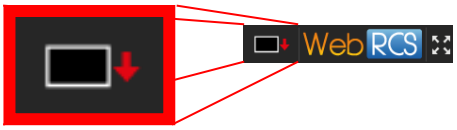


  - Select Downgrade on the left side.

- Select the downgraded device to obtain. Click the Downgrade button and confirm to start the downgrade procedure. The device will reboot.



- Once the unit has rebooted, a small icon indicate in the top right border of the Web RCS that it works as a downgraded unit.



- To cancel the downgrade of a unit just go back to the Downgrade page, click the Reset button and confirm.

- **For Soft-Edge Blending purpose, the maximum horizontal covering size set to 2048px:** to fit with new 4K output format, the maximum horizontal size of the overlapping area is set to 2048 pixels

- **New output formats 3840x1080 and 4096x1080 (up to 60 Hz):** these formats are supported by the Dual-Link DVI output plugs of the LiveCore units. For devices with four outputs, these formats can be used to create 4K screens with Top-Bottom output configuration.

Bug fixes

- Perspective Layers didn't work properly when using rotated output
- An error message was displayed during a shutdown initiated from the front panel
- Soft-edge black level management was not correct for a 4K 4:2:0 output
- Soft-edge black zone was shifted 4 pixels to the right side
- The Image "Sharpness" setting of the inputs is now saved properly
- The locking time from HDTV output format was dramatically reduced
- A NTSC black burst connected to the Frame-lock input can be used a reference for the internal rate

Restrictions
None

Known issues
None

Products	NXT0802 - NXT1604 - SMX12x4 - ASC1602 - ASC3204 - ASC4806 - LOE016 - LOE032 - LOE048
Date	JULY 15th, 2015
Version	3.00.105 Web RCS : V3.00.103

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- **Abort of device synchronization (Associative modularity)**: It is now possible to abort the synchronization between units from the Web RCS and the unit front panel.
    - For Web RCS, just click the button close to the Sync Status icon :

    - From the front panel, go to the CONTROL menu and select the last item “Link/ Sync abort”. A message will ask the operator to confirm the abort. Please note that this menu also works when two units are linked (Additive modularity)
- **General improvement of network performance:** this improvement increases the reliability of the connection with the VRC-300 console (Vertige™).

Bug fixes

- Improvement of reliability of the device synchronization (associative modularity) with the VRC-300 console : in some cases, the synchronization failed,
- Correction of 3G-SDI Level B decoding: fixed according to the SMPTE standard,
- The front panel dashboard works properly for NXT0802 and LOE48-PL,
- The SP_TAKE command sent on TPP port causes the re-initialization of the system.

Restrictions

- The Associative mode must be used with a Vertige™ controller only.

Known issues

- The Perspective Layers feature doesn’t work properly when using rotated outputs.

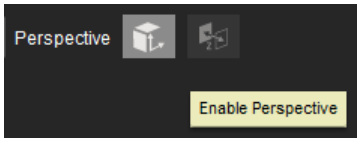
Products	NXT1604 -SMX12x4 – ASC1602 - ASC3204 - ASC4806
Date	MAY 26th, 2015
Version	3.00.88

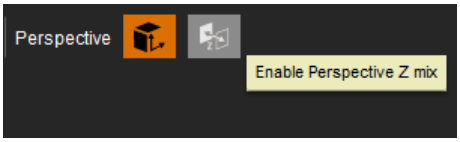
The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

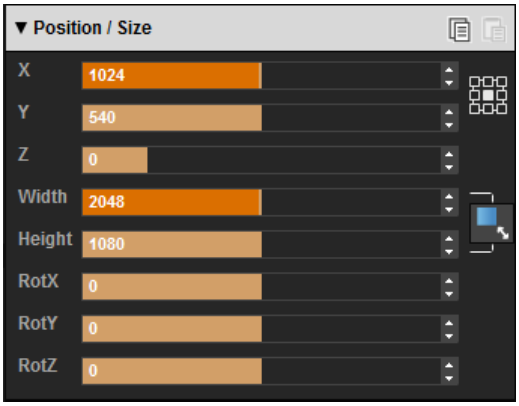
Evolutions

- **New Perspective Layers feature**: only available for ASC4806 equipped with option OPT-4K-ASC4806-PL, this feature enables to handle layers in a 3D space. Using Advanced Layer Management, up to 12 perspective layers can be displayed on the same screen.
  - Each screen can be declared as Perspective Layers independently in the Setup>SetupAssistant>Screens menu. When declaring a screen as Perspective Layers, the operator can also enable/disable the Z-mixing
    - When enabled, all the layers are in the same space can be depth switched using the Z dimension.
    - When disabled, the layers order remains unchanged : A, B, C, D…Changing the Z dimension acts like zooming.



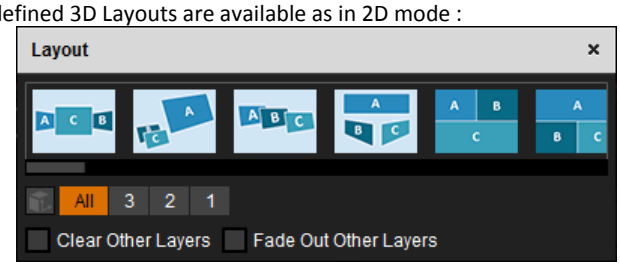


  - Compared to standard 2D layer controls, specific layer settings are available
    - Z, Rot X, Rot Y, Rot Z
    - Anchor Point: each layer has an anchor point that is used as a reference to apply position and rotation settings. The operator can select among nine position for the anchor points. Please note that changing the anchor point of a layer will also change its position in the screen (settings applied with another reference)

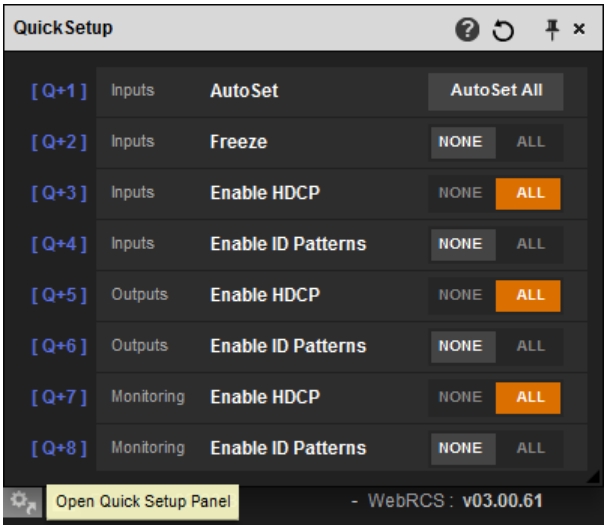


9 positions for the anchor points are available :
- Top: left, centered, right
- Middle : left, centered, right
- Bottom : left, centered, right

  - Predefined 3D Layouts are available as in 2D mode :

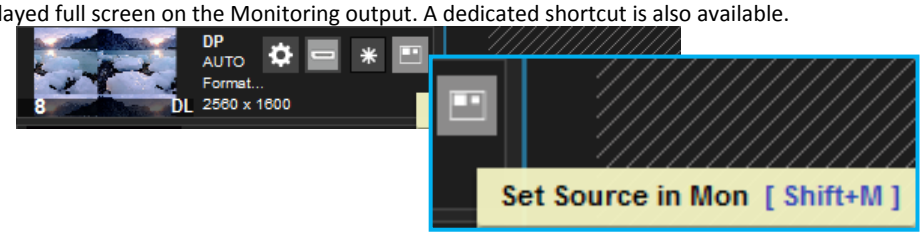


- Web RCS :
  - **A new Quick setup panel gives direct access to global functions** : enable /disable HDCP on inputs/outputs, display ID Pattern, input auto-set.



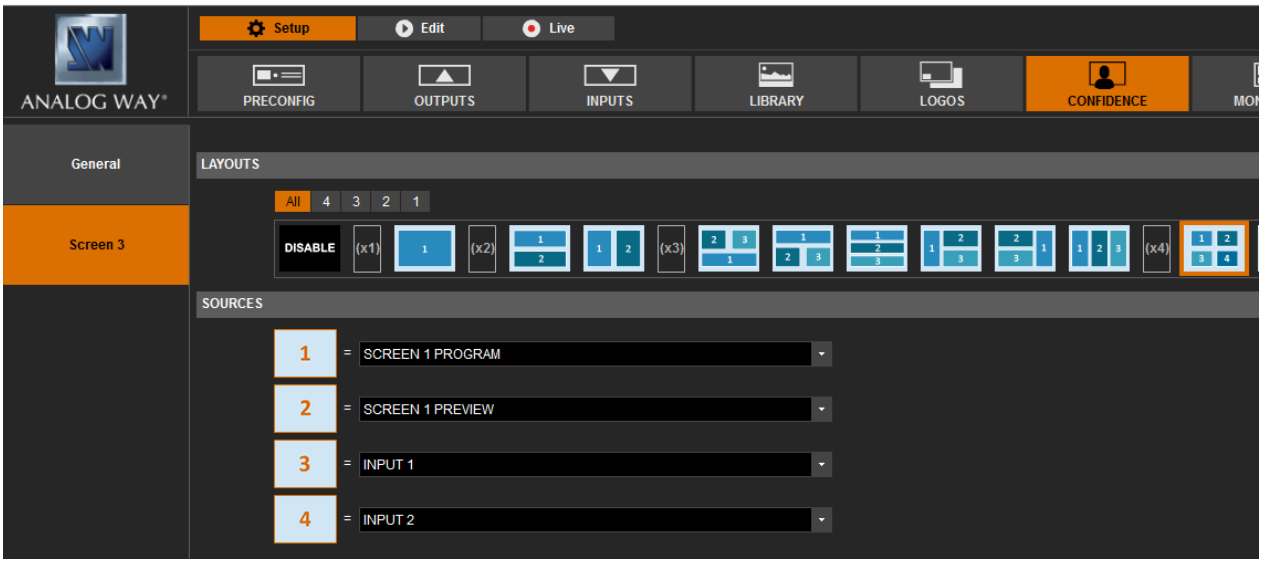
  - **The display of confirmation messages is modified.** The former ergonomics displayed the message at the center of the display and locked the entire screen until the action was confirmed. Now when clicking a button for an action needing confirmation, the button starts blinking and a small pop up window is displayed centered at the bottom of the Web RCS. Simply click again the button (not the pop-up window) to confirm the action. Example : when resetting the Program in the Edit/Live modes the following message is displayed :

  - In the Edit/Live modes, a button is added to sources (inputs, frames and logos) so they can be directly displayed full screen on the Monitoring output. A dedicated shortcut is also available.



  - In the Edit/Live modes, **tallies are added to sources** (inputs, frames and logos) so the operator knowns if they are display on the Program (Red), the Preview (Green) or both (Red and Green).

- **Preview screens can be displayed on screens declared as confidence monitors** (clean preview only). Please note that preview overlay can't be displayed.



- **Two new formats are supported to create 4K screens with two side by side outputs**. These formats are 1920 x 2160 and 2048 x 2160.They can be used at 30Hz and 60Hz. Please note that at 60 Hz, the input or output must be configured as Dual-Link.

Bug fixes

- Correction of Native Background management for dual sources (Dual input on Screen 2x1): the correct half of the input is assigned to each output.
- Using the Web RCS, the T-bar is managed like Vertige T-bar on multiple screens.
- The input is captured properly when the Aspect In is applied.
- A layer containing a keyed input is now mixed properly according to its alpha content: before correction, transparent part of the keyed input tended to be darker that they should be.

Restrictions

- Native sources must have the same size as the outputs in Perspective Screen using Z-Mixing mode.
- Dual Link and 4K sources can't be used in Perspective Layers.
- If the internal rate is greater than 30Hz, 4K30Hz sources can't be used as native backgrounds in screens with Z-Mixing enabled.

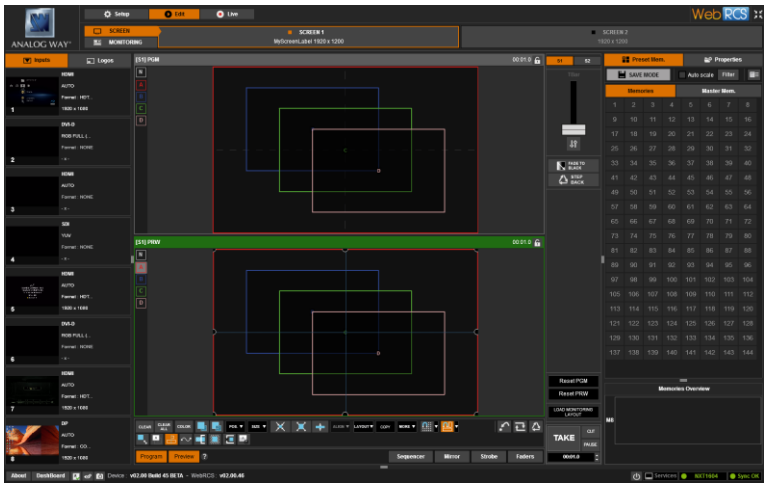
Products	NXT1604 -SMX12x4 – ASC1602 - ASC3204 - ASC4806
Date	MARCH 27th, 2015
Version	2.00.46

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

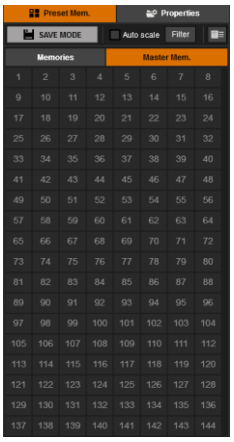
▶ Technical Notes:

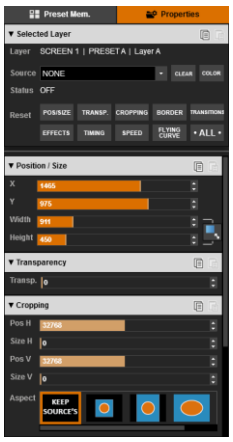
Evolutions

- **The Web RCS was redesigned to provide more efficiency and to enhance the user experience:**
  - It uses a **Flat Design** interface, much legible and much simple for the PC graphic board to draw. As a consequence, the interface is up to **30% more reactive** than before and the PC memory usage was dramatically improved. The switching between EDIT and LIVE tabs is now instantaneous.

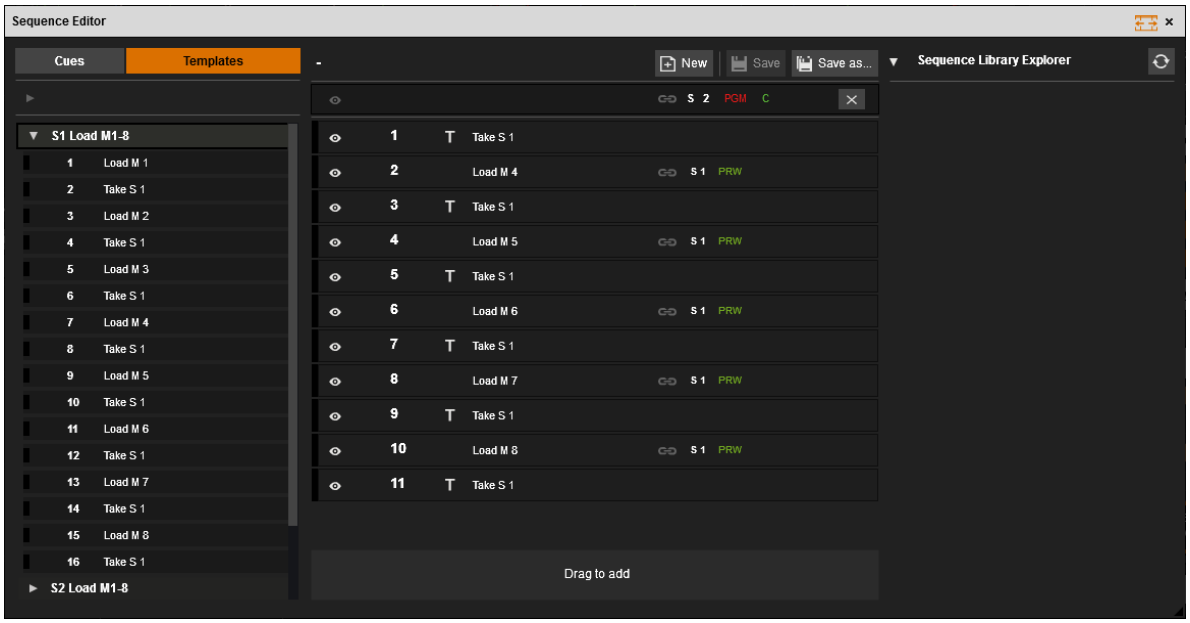


  - The new design is also more compact and more adapted for smaller screen resolutions.
  - Although they still have their own specificities, the EDIT and LIVE modes now share many features to provide more efficiency. For example, the Memories and Layers Managements have been unified. The EDIT mode displays one screen at a time, whereas the LIVE mode displays all the screens simultaneously.



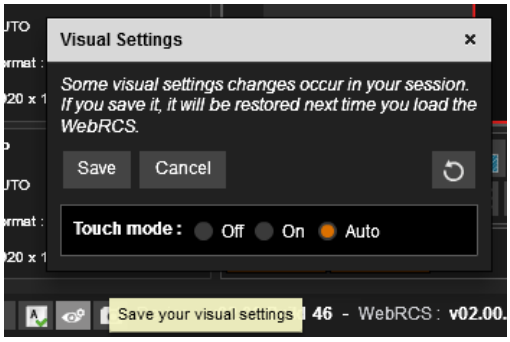


- **New Cue Sequencer:** this new version integrates a brand new cue sequencer with enhanced functionalities. It comes with a built-in editor to easily create and edit cue sequences as well as a new player to control the playback of a sequence. The number of cues in a sequence was increased to 128. Several types of cues are available (mostly based on Web RCS shortcuts). For a better readability and understanding, cues can be grouped into cue stacks (up to ten).

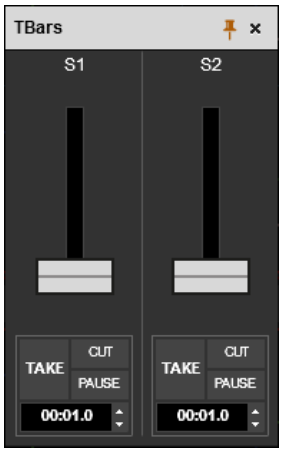


- I**n the EDIT and LIVE tabs, the screen label is displayed in the selection button**: the screen label, entered in the SETUP>PRECONFIG>SCREEN menu, is available in the EDIT and LIVE tabs.

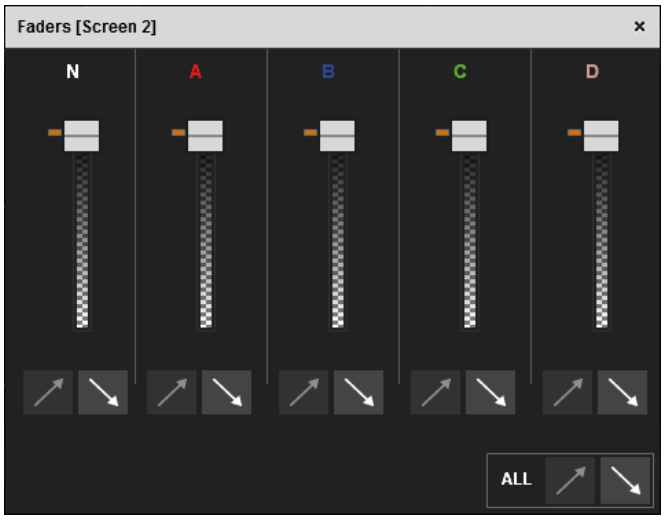
- **The Web RCS environment is managed with the new Visual Settings feature:**
  - It is now possible to save the visual setting: ”Save” saves the Visual Settings, “Cancel” reloads the latest saved configuration and “Reset” sets the settings to the default values.
  - The Web RCS can be finger-operated with touchscreen devices. Some user interface elements were adapted to best suit the touchscreen interface.



- **The new T-bars panel is pinnable**: it remains opened as long as the operator needs performs.



- **The Faders panel is now accessible in the LIVE tab.**

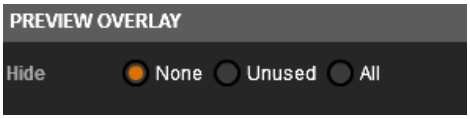


- **The LiveCore™ unit equipped with the 4K option (except NeXtage 16 – ref.NXT1604) can deliver 4K content at 60Hz on a single HDMI cable using the 4:2:0 chromaticity sub-sampling**: for further information about 4K, please read the white paper dedicated to 4K, available on our website.

- **A 4K 30Hz input format can now be used with an internal rate above 30Hz:** this limitation is over. It is now possible to use a 4K30p signal with a 60Hz internal rate. For further information about 4K, please read the white paper dedicated to 4K, available on our website.

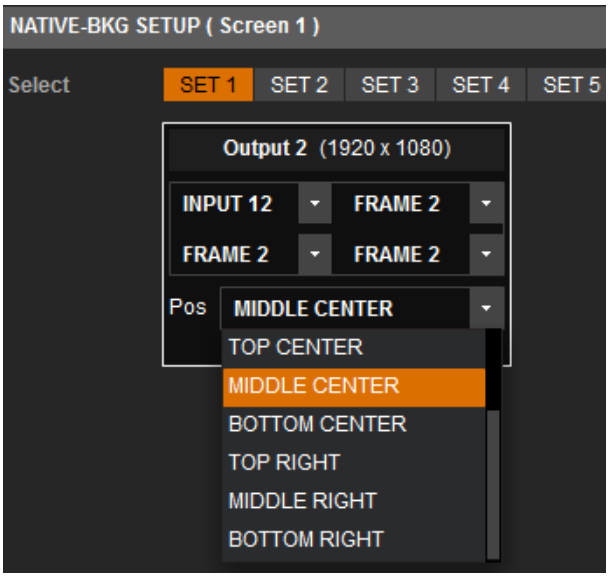
- **The 3G-SDI inputs now supports 3G-SDI level B sources:** mainly used in broadcast applications, the 3G-SDI level B standard is now supported by LiveCore™ SDI inputs.

- **New control to remove the layer frames on Monitoring/Preview Output (Clean Preview):** in the SETUP>MONITORING menu, it is possible to partially or totally remove the layer frame on the Monitoring/Preview Output: the operator can display a Clean Preview.



- **Reset Image Settings feature is now accessible through a button in the input settings panel:** it is possible to reset the Image Settings of an input directly from its setting panel.

- **Better Native Background management for screen using 4K outputs:** the position of the frame/input can be adjusted.



Bug fixes

- **Bursts of T-bar modifications using TPP protocol may reboot the device:** sending too many T-Bars values with the Third Party protocol may reboot the LiveCore™ unit.

- **When linking two units, Dual Frames are not displayed correctly on the monitoring output of the slave device**: this problem was caused by a bad communication between the master unit and the slave unit.

- **When linking two units, the layer movements on the outputs of the slave device are not synchronized with those on the outputs of the master uni**t: this problem was caused by a bad communication between the master unit and the slave unit.

- **When linking two units, in the Setting panel of the outputs #6 and #8, the Output Digital Mode control (HDMI/DVI) has no effect on the Slave output**: this problem was caused by a bad communication between the master unit and the slave unit.

- **Sometimes, when the device rate is frame-locked to an input, the outputs may not deliver any signal**: when both the reference input format and the output format were HDTV, the frame-lock process didn't work and the output didn't deliver any signal.

- **Frame-locking the device internal rate to a 4K 30Hz input doesn't work**: The reference 4K 30Hz input signal was described as invalid.

- **The input EDID preferred format list is not properly filled depending of the input plug type (Dual, 4K compliant …):** some input formats were proposed as EDID preferred format for a plug in spite of the fact this plug couldn't support them.

- **Input RGsB computer signals are not recognized and centered properly**: due to bad analysis of the composite sync, the RGsB (SOG) signals were not detected properly and the active area was not centered properly because of a blanking shift.

- **The front panel HMI may send commands on the Program instead of Preview:** A bad analysis of the internal T-bar position applies changes to the Program instead of the Preview.

- **The SETUP>BLENDING page is not updated according to output position changes in the screen**: when changing the position of an output in the screen (SETUP>PRECONFIG>SCREENS), the blending page should be updated accordingly.

- **An "Invalid output format" warning is raised on the Web RCS although this output is disabled:** a disabled output shouldn't generate a warning message.

- **A nasty seam column appears when cropping a dual frame**: when cropping a dual frame in the SETUP> LOGO> FRAMEx>CROPPING menu, a scratched content appeared.

- **On the EDIT/LIVE>MONITORING page, the number of displayed resources is not refreshed properly when the widget source is modified**: depending of the source assigned to the widget, the number of used resources should be updated.

- **Dual inputs are not handled properly when they are unplugged:** sometimes it is not possible to recover the input.

- **The content displayed by analog video outputs is cropped:** in spite of the fact the output format was generated properly, the content was cropped (one line missing at the bottom, and a few pixel column on the right side). The content was displayed properly on the digital output.

- **On the Web RCS, the layer content is not refreshed properly when the logo/frame resource is empty:** the output layer was updated properly, but the Web RCS preview snapshot of the former source was still present. Corrected.

- **On the Web RCS, when switching selection from Program to Preview, the Layer status related controls are not refreshed:** some properties in the right side panel are not updated properly.

- **It should not be possible to activate the Dual button when uploading an image as a logo:** the dual property should only be available for frames.

- **In the SETUP>PRECONFIG>SCREENS menu, dropping an output over itself on the Unused Outputs section causes the output to disappear:** this was an HMI bug (workarounds were: coming back and forth to the menu or simply restarting the Web RCS).

- **In the screen configuration, "Load template" doesn't work if the outputs are in the Unused Outputs area:** loading a template was not working as the outputs in the Unused Output section were not assigned to the screens.

Restrictions

- **4K outputs cannot be rotated.**

- **2048x1152 output format cannot be rotated.**

- **No 4K frame available to be used with 4K 30Hz 4:4:4 output**: Frames can only be used for 4K 60Hz 4:2:0 output: it requires the use of four 2K Frames.

Products	NXT1604 -SMX12x4 – ASC1602 - ASC3204 - ASC4806
Date	12 DEC 2014
Version	1.06.16

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- **4K 30Hz input and output formats are supported by 4K devices:** when a LiveCore unit is equipped with its dedicated 4K option, it can support 4K 30Hz 4:4:4 source of the HDMI plugs of input #2,#6 and #10. Moreover, it can output 4K 30Hz 4:4:4 format on the DVI connectors of output #2 and #4. Please note that:
  - These output DVI connectors are HDMI compliant
  - When using either a 4K 30Hz input or output, the internal rate (and therefore the output rate) must be 30Hz. This limitation will be removed in the forthcoming updater version 2.00.xx.

Bug fixes

- **Screens without protected content (HDCP) are still displayed with grey on a Confidence screen**: when displaying a confidence screen on a non-HDCP display, if a program mixed HDCP and non-HDCP contents, the program was totally greyed. This is now corrected: only layers with HDCP content are greyed.
- **No dual link output format available on slave monitoring output**: when linking to LiveCore units together, it was not possible to select a dual-link format on the monitoring output of the slave device.
- **Input Aspect ratio is not managed in a confidence screen**: the input aspect ratio was not applied when a source was displayed in a confidence monitor.
- **1920x1080p Input DisplayPort signal is sometimes seen as a 3840x1080p signal**: 1080p formats were sometimes not detected properly by the DisplayPort inputs. This may cause a wrong detection status “Unknown format 3840x1080p” and the content may not be displayed.

Products	NXT1604 -SMX12x4 - ASC3204 - ASC4806
Date	28 OCT 2014
Version	1.05.64

The version(s) indicated here above has (have) been tested and validated by the Technical Support Department.

▶ Technical Notes:

Evolutions

- Input capture
- Dual-size Frame (4.8Mpx)
- Customizable Shortcuts
- New Preset effects (B&W, Negative, Sepia and, Solarize)
- Factory Reset (Out of the Box) + Default Value
- Snap to Grid and Snap to Border for WebRCS Edit panel
- Extended screen with up to 16 outputs (Vertige only)
- WebRCS Warning pop-up on Vertige connection,
- New COMPUTER 2560x1080 Output format
- Analog SDTV PAL and NTSC on the monitoring output
- Updater option [force] and [clean] inserted in the package file name
- About panel displays the Bios version

Bug fixes

- Enhanced edge processing for multiple outputs screen and dual-head/dual link sources
- User can drop Output in "Unused Outputs" area (WebRCS)
- Revised output format timings
- Revised monitoring output analog signal type management
- Better lock on follow input and framelock
- Auto-reboot in case of "Syncing bridge" error during start-up
- Correction of abnormal embedded CPU latency