ISP / I.ISP Firmware

StormAudio

Release Notes

Version 3.5r7

Overview of ISP / I.ISP firmware installation

The ISP / I.ISP Firmware is a complete firmware package compatible with all products of the StormAudio Immersive and Integrated Immersive Sound Processor range:
- ISP 3D.16 ELITE, ISP 3D.20 ELITE
- ISP 3D.32 ELITE (Digital AES & AVB Edition, Analog Edition and Reference Edition),
- I.ISP 3D.16.12.

For a detailed information about the whole firmware upgrade process, please consult "**StormAudio - Firmware Upgrade - Quick Guide - 2018.08**.**pdf"** file that you can download from the Client Portal (http://www.stormaudio.com/en/private-access/login.html) using your login and password information. Please contact your distributor to obtain access information or email info@stormaudio.com.

Download information

The upgrade package can be downloaded from the StormAudio Support webpage of the Client Portal indicated above. File name will be: **isp_3.5r7_20191205.ssp** with an approximate size of 70 MB.

Upgrade information

Make sure to first do a backup of the configuration of your ISP / I.ISP. Check updated Installer Guide or Owner Manual for more information on Backup Configuration feature.

Upgrade from Firmware earlier than 2.1r0 requires specific actions.
Please contact our support team for further information (support@stormaudio.com).

Upgrading from 2.1r2, make sure the date is part of the file name, such as **isp_3.5r7_20191205.ssp.** If not add it.
Upgrade from 2.1r2 onward can be done using described process.

The upgrade can be done either via the Web User Interface Remote Upgrade function (by entering the Unit IP on a web browser and selecting the System tab) or via a USB dongle key connected in the back panel of the unit. We recommend the use of the Web User Interface.

Upgrade process

The upgrade process can be monitored either on the Web User Interface (banner on top of the page, green at the beginning and red during the upgrade) or on the Front Panel display. A step by step process will be shown.

Do not interrupt the process before reading the message:
"Update finished successfully, restart your unit".

Unit will restart automatically when upgrade is done through the Web User Interface.

Internal software versions overview

Following the upgrade of the ISP/I.ISP, you can verify that the system has been properly updated by checking each internal module versions. Click on "V3.5r7" firmware version indication in the System page of the Web User Interface and the below pop-up window will be shown.

HDMI 7+2   HDMI 7+2 eARC

FIRMWARE	3.5r7
MODEL	ISP ELITE
SERIAL NUMBER	
HOSTNAME	

SOFTWARE

BUILD DATE	Dec 5 2019
LINUX	4.4.8
OS	850 (0b51c7e)
PROCESSOR SOFTWARE	v3214 (42db37e)
WEB UI	v2 (7433ee5)
DATABASE	15
MAIN FIRMWARE	0x00000074
MAIN BOOTLOADER	0x00000002
FRONT PANEL FIRMWARE	v11.14
COPROCESSOR A	0x0000004A
COPROCESSOR B	0x00000022
COPROCESSOR C	0x00000022
COPROCESSOR D	0x00000022
FPGA A	0x00000011
FPGA B	0x00000014
DECODER	v2.2.6 8909 Oct 22 2018
HDMI FIRMWARE	v58r46r52

FIRMWARE	3.5r7
MODEL	ISP ELITE
SERIAL NUMBER	
HOSTNAME	

SOFTWARE

BUILD DATE	Dec 5 2019
LINUX	4.4.8
OS	850 (0b51c7e)
PROCESSOR SOFTWARE	v3214 (42db37e)
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COPROCESSOR A	0x0000004A
COPROCESSOR B	0x00000022
COPROCESSOR C	0x00000022
COPROCESSOR D	0x00000022
FPGA A	0x00000011
FPGA B	0x00000014
DECODER	v2.2.6 8909 Oct 22 2018
HDMI FIRMWARE	v1.20

Features not present in this release

- Zone2 audio in path for HDMI / AES aux.
- HMC-82 HDMI board, CEC command.
- HMC-82 HDMI board, AUX sound pass through (some format not routed).
- HSR-72Q HDMI board, CEC command and ARC / eARC.
- On Screen Display
- WebUI is not compliant with Internet Explorer (all versions).
- WebUI is not responsive (all browsers).

New features and enhancements

SYSTEM & CONTROL
- New upgrade scheme for audio decoder
- Support of new flash ID for W25q64 (J serie)
- Front panel
  - Fix issue with display settings lost at power down

HDMI
- HMC82 (7+2 eARC)
  - Fix issue with eARC/ARC audio extraction,
  - Fix HBR audio extraction issue affecting Apple TV Atmos enabled app (Neflix, AppleTV+)

Known bugs, issues and limitations

In the below part, we are listing issues that have been identified but not yet addressed in the proposed firmware release. These issues will be addressed in future release of the firmware. When an issue cannot be fixed, it will be listed as a limitation.

WARNING:

- With V3.5r4 (or onward) firmware version, downgrade to previous versions won't be possible anymore
- Switching off ISP from back panel if ISP is not in standby/sleep mode could create a very loud plop that can damage your speakers. Make sure to put the unit in standby by pressing the front panel prior switching off the unit in the back panel.
- Switching off and on the ISP / I.ISP from the back panel too quickly may lead to improper power up. It is recommended to wait about 30s before restarting the unit after a main switch off.
- Online website translation tools such as Google Translate must not be used when configuring the product with the Web User Interface, as this can affect the system names (audio profiles, input names...) inappropriately, leading to misbehavior of the unit and requiring a Factory Reset to recover.

Decoding and audio limitations

- HDMi content with audio sampling frequency above 96kHz may appear on the remote control to be 96kHz.
- DTS HD MA equal or higher than 96kHz cannot be upmixed to more than 7.1 with DTS Neural:X (limitation).
- 6.1 format are not supported and will be played in 5.1 (limitation), feeding the Center Back channel to Surround Back channels.

Decoding and audio input issues

- When playing DTS:X then switching to DTS 44.1kHz 5.1, stream information will show 7.1.4.
- When playing Auro-3D® content on Theater not having height or top speakers, it's recommended to select Auro-Matic® has "Preferred Upmix".
- Sometimes, HDMI card crash when switching from Full HD to 4K. Unit must be restarted to recover.
- Mute can be heard on play/pause with "Dolby Digital 48 kHz 5.1" (DTS:X decoder only).
- Glitch can be heard when resuming with Zappiti player.
- In some rare cases, when using Netflix over ARC, we can hear a glitch at Netflix launching or selecting movie.
- In some rare cases, eARC content is not decoded. Workaround: select an input where BDP is playing content, then switch back to ARC/eARC.

Audio output issues

- If DTS Neural:X is selected as "Preferred Upmix" and your Theater Speaker layout is 6.1.0.0 or 6.0.0.0 you will not be able to play Auro-3D® content.
- Small plop can be heard at sleep on/off transition.
- Auro-3D 9.1 or 11.1 content cannot be upmixed to 13.1 (no LB/RB channel).
- Not the same output level for DTS Neural:X vs other surround modes when playing PCM 2.0, 5.1 and 7.1.
- Limitation for the sub-theater: cannot allow speaker to have different signal in different sub-theaters of the same Theater.
- Small mute heard when changing Lipsync, Loudness, CinemaEq parameters.
- Child zone definition is now possible as sub-zone of a Theater (with Mono, Stereo Left, Stereo Right and SUB signals selection). Limitation: not possible to use different signal in different child zone.

User interface issues

- In the Copy to EQ dropdown list, wrong channel number displayed if remap has been used. This does not impact "copy to" feature.
- In the Web Remote Control, for a preset including several zones, the Zone area displayed in the right panel is always set to show the first zone available in the preset when doing a refresh or switching Tab.
- Meter to ms conversion doesn't work well. Delay vs distance being relative, we are using an internal distance as reference. Changing the delay (ms) may lead to out of range distance after conversion back to meter.
- Never use more than one browser WebUI instance on the same product in installer or expert mode at the same time. (limitation)
- Never use more than one browser WebUI instance on the same product in user mode at the same time, as it can display discrepancies with the real parameters applied.
- Triggers delay scheduling at wakeup does not correspond to Inputs configuration settings.
- Preferred Upmix stays on "Input" preference even when "Preset" is changed.
- Loudness and CinemaEQ are still available and settable in remotes but have no audio effect (Control4, Creston, Savant, RTI, iRule).
- When user calls Deep Standby feature via Front Panel, led stay Green.
- Wrong Video Input informations can be displayed in monitoring page.
- In Dirac Live® tools, symbol characters are not allowed.

Supported speaker configurations list

Below you can find the table listing all the possible pre-defined speakers' layouts that the ISP / I.ISP range supports with the FW3.5r2. We can support layouts with Wide speakers for Dolby Atmos and DTS:X modes up to 9.1.6 and 9.1.2 respectively. There is no synthetized Wide channels with 9e.x.y.z layouts anymore. Theaters defined with synthetized Wide will be converted to regular ones.

Speaker Layer: a 4 digits' label will represent the speakers' layout such as 7.1.4.4:
7 speakers in the base layer, 1 LFE channel decoded, 4 height speakers and 4 ceiling speakers.

Note: This speaker layout is link to the Decoded signal structure, each of these speakers can be duplicated in the next step of the configuration process.

As an example: If 4 subwoofers are used in a 7.1.4 decoded speaker lay-out, the output speaker configuration will become a 7.4.4 output speaker lay-out.

- Signal routing for each layout is optimized for each of the Audio Format.
- See how each Immersive Audio Format is properly supported by each layout
    - Green: Fully optimized
    - Yellow: Supported
    - Orange: Not optimized
    - Red: Not supported, no use of height/top layer
- With Layouts that are making use of Ceiling speakers, it is recommended to consider the use of speakers that can get angle/orientation adjustments. This allows for a better sound coverage and compatibility with Auro-3D and DTS:X requirements.
- Surround Height and Surround Back Height are now combined: position of this speaker is a stretch of both Auro-3D and DTS:X angles requirements.
- Some layouts show additional codification:
    - "s" = for 2 surround height speakers position,
    - "f" = for 2 ceilings, means the speakers should be placed in Front position,
    - "m" = for 2 ceilings, means the speakers should be placed in Middle position,
    - "mb" = for 4 ceilings, means the speakers should be placed in Middle and Back position. Without "mb", the Speakers should be placed Front and Back position.
    - This is necessary to differentiate a speaker layout that is compatible with Dolby Atmos 7.1.6 vs 7.1.4: Front Height speakers might be used to play "Front Top" Dolby Atmos with "mb" and allowing a 7.1.6 rendering.

Recommended	Speaker Layout (Base, Sub, Height, Ceiling)	Dolby Enabled compatible	Atmos	DTS:X	Auro3D	Base									Sub	Height					Ceiling							Nb Ch
						LF	CF	RF	LW	RW	LS	RS	LB	RB	Sub	LFH	CH	RFH	LBH/LSH	RBH/RSH	LFT	RFT	LMT	RMT	LBT	RBT	VOG	0
	2.0.0.0	No	1	1	1	x		x																				2
	2.1.0.0	No	1	1	1	x		x							x													3
	2.1.0.2m	Yes	1	1	1	x		x							x								x	x				5
	3.1.0.0	No	1	1	1	x	x	x							x													4
	3.1.0.2m	Yes	1	1	1	x	x	x							x								x	x				6
	4.1.0.0	No	1	1	1	x		x			x	x			x													5
	4.1.0.2m	Yes	1	1	1	x		x			x	x			x								x	x				7
x	5.1.0.0	No	2	2	2	x	x	x			x	x			x													6
	5.1.0.2f	Yes	3	2	2	x	x	x			x	x			x						x	x						8
x	5.1.0.2m	Yes	3	2	0	x	x	x			x	x			x								x	x				8
x	5.1.0.4	Yes	3	3	2	x	x	x			x	x			x						x	x			x	x		10
x	5.1.0.5	No	3	3	2	x	x	x			x	x			x						x	x			x	x	x	11
x	5.1.0.6	No	3	3	2	x	x	x			x	x			x						x	x	x	x	x	x		12
x	5.1.1.5	No	3	3	2	x	x	x			x	x			x		x				x	x			x	x	x	12
	5.1.1.6	No	3	3	2	x	x	x			x	x			x		x				x	x	x	x	x	x		13
	5.1.2.0	No	2	3	3	x	x	x			x	x			x	x		x										8
	5.1.2.2b	No	2	3	2	x	x	x			x	x			x	x		x							x	x		10
	5.1.2.3b	No	2	3	2	x	x	x			x	x			x	x		x							x	x	x	11
	5.1.2.4mb	No	2	3	2	x	x	x			x	x			x	x		x					x	x	x	x		12
	5.1.3.2b	No	3	3	2	x	x	x			x	x			x	x	x	x							x	x		11
	5.1.3.3b	No	3	3	2	x	x	x			x	x			x	x	x	x							x	x	x	12
	5.1.3.4mb	No	3	3	2	x	x	x			x	x			x	x	x	x					x	x	x	x		13
x	5.1.4.0	No	2	3	3	x	x	x			x	x			x	x		x	x	x								10
	5.1.4.1	No	2	3	3	x	x	x			x	x			x	x		x	x	x							x	11
	5.1.4.2m	No	3	3	3	x	x	x			x	x			x	x		x	x	x			x	x				12
	5.1.4.4	No	3	3	3	x	x	x			x	x			x	x		x	x	x	x	x			x	x		14
	5.1.4.4mb	No	3	3	3	x	x	x			x	x			x	x		x	x	x			x	x	x	x		14
	5.1.5.0	No	2	3	3	x	x	x			x	x			x	x	x	x	x	x								11
x	5.1.5.1	No	2	3	3	x	x	x			x	x			x	x	x	x	x	x							x	12
	5.1.5.2m	No	2	3	3	x	x	x			x	x			x	x	x	x	x	x			x	x				13
	5.1.5.4mb	No	3	3	3	x	x	x			x	x			x	x	x	x	x	x			x	x	x	x		15
	6.1.0.0	No	2	2	1	x		x			x	x	x	x	x													7
x	7.1.0.0	No	3	2	1	x	x	x			x	x	x	x	x													8
	7.1.0.2f	Yes	3	3	0	x	x	x			x	x	x	x	x						x	x						10
x	7.1.0.2m	Yes	3	3	0	x	x	x			x	x	x	x	x								x	x				10
x	7.1.0.4	Yes	3	3	2	x	x	x			x	x	x	x	x						x	x			x	x		12
	7.1.0.5	Yes	3	3	2	x	x	x			x	x	x	x	x						x	x			x	x	x	13
x	7.1.0.6	Yes	3	3	2	x	x	x			x	x	x	x	x						x	x	x	x	x	x		14
	7.1.1.5	No	3	3	2	x	x	x			x	x	x	x	x		x				x	x			x	x	x	14
	7.1.1.6	No	3	3	2	x	x	x			x	x	x	x	x		x				x	x	x	x	x	x		15
	7.1.2.0	No	3	3	3	x	x	x			x	x	x	x	x	x		x										10
	7.1.2.2b	No	2	3	2	x	x	x			x	x	x	x	x	x		x							x	x		12
x	7.1.2.4mb	No	2	3	2	x	x	x			x	x	x	x	x	x		x					x	x	x	x		14
x	7.1.2s.6	No	3	3	3	x	x	x			x	x	x	x	x				x	x		x	x	x	x	x	x	16
	7.1.3.2b	No	3	3	2	x	x	x			x	x	x	x	x	x	x	x							x	x		13
	7.1.3.3b	No	3	3	2	x	x	x			x	x	x	x	x	x	x	x							x	x	x	14
	7.1.3.4mb	No	3	3	2	x	x	x			x	x	x	x	x	x	x	x					x	x	x	x		15
x	7.1.3s.6	No	3	3	3	x	x	x			x	x	x	x	x		x		x	x		x	x	x	x	x	x	17
	7.1.4.0	No	2	3	3	x	x	x			x	x	x	x	x	x		x	x	x							12
	7.1.4.1	No	2	3	3	x	x	x			x	x	x	x	x	x		x	x	x						x	13
	7.1.4.2m	No	2	3	3	x	x	x			x	x	x	x	x	x		x	x	x			x	x				14
	7.1.4.4	No	3	3	3	x	x	x			x	x	x	x	x	x		x	x	x	x	x			x	x		16
	7.1.4.4mb	No	3	3	3	x	x	x			x	x	x	x	x	x		x	x	x			x	x	x	x		16
	7.1.4.5	No	3	3	3	x	x	x			x	x	x	x	x	x		x	x	x	x	x			x	x	x	17
	7.1.4.6	No	3	3	3	x	x	x			x	x	x	x	x	x		x	x	x	x	x	x	x	x	x		18
	7.1.5.0	No	2	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x							13
x	7.1.5.1	No	2	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x						x	14
	7.1.5.2m	No	2	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x			x	x				15
	7.1.5.4	No	3	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x			x	x		17
	7.1.5.4mb	No	3	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x			x	x	x	x		17
	7.1.5.5	No	3	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	18
x	7.1.5.6	No	3	3	3	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		19
	9.1.0.0	No	3	3	1	x	x	x	x	x	x	x	x	x	x													10
x	9.1.0.2m	Yes	3	3	0	x	x	x	x	x	x	x	x	x	x								x	x				12
x	9.1.0.4	Yes	3	3	2	x	x	x	x	x	x	x	x	x	x						x	x			x	x		14
	9.1.0.5	Yes	3	3	2	x	x	x	x	x	x	x	x	x	x						x	x			x	x	x	15
x	9.1.0.6	Yes	3	3	2	x	x	x	x	x	x	x	x	x	x						x	x	x	x	x	x		16
	9.1.1.4	Yes	3	3	2	x	x	x	x	x	x	x	x	x	x		x				x	x			x	x		15
	9.1.1.5	Yes	3	3	2	x	x	x	x	x	x	x	x	x	x		x				x	x			x	x	x	16
x	9.1.1.6	No	3	3	2	x	x	x	x	x	x	x	x	x	x		x				x	x	x	x	x	x		17
x	9.1.2.4mb	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x		x				x	x	x	x		16
x	9.1.2s.6	No	3	3	3	x	x	x	x	x	x	x	x	x	x				x	x		x	x	x	x	x	x	18
x	9.1.3.4mb	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x		17
x	9.1.3s.6	No	3	3	3	x	x	x	x	x	x	x	x	x	x		x		x	x		x	x	x	x	x	x	19
	9.1.4.1	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x		x	x	x						x	15
	9.1.4.2m	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x		x	x	x			x	x				16
	9.1.4.4mb	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x		x	x	x			x	x	x	x		18
x	9.1.4.5	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x	x	x	19
	9.1.5.1	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						x	16
	9.1.5.2m	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x				17
x	9.1.5.4mb	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x		19
	9.1.5.5	No	2	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	20
x	9.1.5.6	No	3	3	3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		21

Firmware release historic

You will find below former firmware revision Release Notes summary.

FW3.5r3 (20190726)

New features and enhancements

SYSTEM & CONTROL
- WebUI
  - Copy to EQ : fix crossover copy issue with EDGE browser
- TCP/IP API
  - Zone volume up and down commands added

HDMI
- HSR82P
  - Fix audio stream detection issue

FW 3.5r2 (20190620)

New features and enhancements

SYSTEM & CONTROL

- TCP/IP API
  - "Proc state" improvement.
- General bug fixes

FW 3.5r1 (20190415)

New features and enhancements

SYSTEM & CONTROL

- WebUI
  - EQ creation and visualisation
    - Filter frequency response view.
    - Combined filters frequency response view.
    - EQ bank per channel has been increased from 10 to 20.
  - Zone2
    - OPTICAL (PCM only) / COAX (PCM only) / Stereo Analog input can be used has Zone2 audio in.
    - Zone2 audio is displayed in VuMeter.
  - External generator is available for HDMI / OPTICAL / COAX / Stereo Analog.
  - Deep/Standby Network is configurable.
  - Download logs include SQL configuration (only for support).
  - Monitoring unit "sleep" status event added.

- o   Input, audio in "eARC" has been replace by "ARC/eARC".
- Dirac Live DLCT 2.x:
  - o   Management of Dolby Enabled Speakers.
- Room EQ Wizard
  - o   EQ Filters can be exported from REW, then imported to ISP.
- TCP/IP API
  - o   Zone2 control command added.

HDMI

- HSR72-Q new software
  - o   Hot Plug Event and authentication improvement.
  - o   AppleTV improvement.
  - o   AppleTV switching to Oppo UDP203 improvement.
- New HMC82 board control
  - o   ARC and eARC compatible.
  - o   Dolby Vision, Standard and Low Latency pass through.

Removed features

SYSTEM & CONTROL

- WebUI
  - o   Loudness and CinemaEQ

FW 3.4r4 (20190326)

New features and enhancements

SYSTEM & CONTROL

- Dirac Live DLCT 2.x
  - o   communication stability improvement,
  - o   Real-time noise generator impossible level adjustment issue addressed,
- Correction of Volume Zone command, in link to TCP/IP and Control Systems (RTI, Crestron).

FW 3.4r2 (20181219)

New features and enhancements

SYSTEM & CONTROL

- Dirac Live DLCT 2.0 is now available and compatible with ISP/I.ISP. Firmware is still compliant and compatible with Dirac Live for StormAudio 1.0.
- Dirac Live tools can be used with Safari browser (macOS X) running the WebUI.

AUDIO FORMATS & SPEAKERS CONFIGURATION

- Improvement of Dolby Atmos detection when played on AppleTV and Xbox.

HDMI

- HDMI output drive strength value can be changed (only for support).
- Zappiti media box interoperability improvement.

FW 3.4r1 (20181009)

New features and enhancements

SYSTEM & CONTROL

- Front panel:
  - New GUI with better readability.
  - Allows for restoring "installer" and "expert" user/password.
- WebUI:
  - Monitor HDMI output 1 and 2 states.
  - Monitor back fan fault.
  - VuMeter and Console are now working over Domotz and remote tunnel.
  - Hardware System info page has been reworked.
  - Only ASCII characters are handled in the editable area.
- New PSU is now detected and managed.
- At wake-up, we force back fan speed at 50% during 1min in order to detect fan failure.

HDMI

- Improved EDID handshaking robustness (AppleTV, SONY projector, INNEOS Optical Fiber...) for faster source and resolution change.

FW 3.4r0 (20180817)

New features and enhancements

SYSTEM & CONTROL

- IR remote control handling through back panel connection. WARNING: "IR IN" is always bottom connector and "IR OUT" is always top connector, whichever silkscreen used.
- 16ch RCA board option can be used as alternate or XLR16 replicate (StormAudio ISP range).
- 16ch AES/EBU Input can now be processed by the decoder for upmixing when in 7.1 or 5.1 mode.
- 16ch AES/EBU Input with Auro-3D encoded 5.1 or 7.1 PCM streams is now detected and decoded.
- XLR 4 board option is now supported.
- Preferred Upmix is now assignable per Input.
- Limiters are now adjustable (level and enable/disable) on a per speaker basis in Speakers page.
- WebUI Improvement (pop-up, screen resolution) to better match with various display resolution.
- Home/rack mode for I.ISP (change fan regulation law) for quieter operation in home mode.
- Volume Level reference (set and recall) for the noise generator in Speakers page.

AUDIO FORMATS & SPEAKERS CONFIGURATION

- Speakers Layout expansion to support 9.1.5.6 layout.
- Phantom Center feature is now available for any Speakers layout.
- Sub Theater definition is now possible as sub-zone / child zone of a Theater (with Mono, Stereo Left, Stereo Right and SUB signals selection). Limitation: not possible to use different signal in different child zone.

FW 3.3r2 (20180606)

New features and enhancements

SYSTEM & CONTROL

- Custom Bass Management has been renamed to "Expert" Bass Management.
- Parameters changed in Edit Speakers page are now automatically saved when going on EQ page.

AUDIO FORMATS & SPEAKERS CONFIGURATION

- PCM upmixed with DTS Neural:X reaches saturation on center and wide channels correction.
- Improvement of PCM 44.1 and 48 kHz transition with play/pause/skip from source.
- Improved phase response of the 2nd order filters used for Multi-Way speakers and Bass Management and of the 4th order filters used in the LARGE AND SUB case for the Bass Management is available.

FW 3.3r0 (20180410)

New features and enhancements

SYSTEM & CONTROL

- Software upgrade will only update parts of the firmware that are different from the upgrade package used. It is nevertheless possible to force update of all modules (HDMI and audio decoder).
- Export extension of a configuration backup and log files are now *.7z file and suffixed with date of day (compatibility with *.dat file is maintained).
- EDID information settings:
  - Manufacturer Plug N Play ID is "IMF"
  - Product Code
  - Serial Number (not being handled properly by HDMI board)
  - Manufacture Week and Year
  - Product Name
  - Manufacturer's Name
- New monitoring panel for Signal informations.
- New monitoring panel for Video In informations.
- New HDMI settings:
  - Possibility to extend HDMI2.0 capability to all inputs.
  - Possibility to change HDMI2.0 speed limit to 450 MHz instead of 600 MHz.

- Dirac possible Timeout issue ("Deadline exceeded") is corrected.

AUDIO FORMATS & SPEAKERS CONFIGURATION

- Up to 9.1.6 speakers layout native decoding for Dolby Atmos (16ch discretely-rendered channels).
- Up to 9.1.2 speakers layout native decoding for DTS:X.
- Speakers Layout possibilities have been expanded to support the 16 ch decoding expansion (9.1.0.5, 9.1.1.5, 9.1.4.1, 9.1.4.5, 9.1.5.1, 9.1.5.5).
- Possibility to adjust the delay in the Speakers Configurator with 0.02ms pitch.

FW 3.2r6 (20180410)

New features and enhancements

SYSTEM & CONTROL

- DRC for Dolby Digital Plus: Is now following DRC requirements.
- Upgrade Support of new decoder Flash memory.

FW 3.2r5 (20180202)

New features and enhancements

SYSTEM & CONTROL

- SD card Read Only issue has been addressed with a Rescue process using an external USB Flash dongle.

FW 3.2r4 (20180116)

New features and enhancements

EXTENSION BOARD AND TOOLS

- Use of the microphone connected to the USB port for remote monitoring (StormMonitoring), is now extended with the use of CAT5 UTP extender.

AUDIO FORMATS & SPEAKER CONFIGURATIONS

- Auro Immersive VOG signal is played on all available tops speakers if Theater configuration does not contain VOG discrete speakers.
- Improvement of the PCM 48 kHz frequency response from 20 Hz to 22 kHz.
- Digital Input map configuration speakers is not lost anymore.

- I.ISP product, SUB limitation on XLR output has been removed allowing for full 16ch speakers layout selection.
- During configuration, Preview configuration layout has been added in configurator pop-up.
- Generator bug correction when using SphereAudio not bypassed.

SYSTEM & CONTROL

- In Edit mode, Improvement of Speaker Configurator "Viewer".
- During configuration, Viewer has been removed from configurator pop-up.
- Invert column has been moved to the right.
- Improvement of Monitoring feedback messages.

FW 3.2r0 (20171123)

New features and enhancements

AUDIO FORMATS & SPEAKER CONFIGURATIONS

- SphereAudio Cinema Effect has been added.
- Speakers Layout possibilities have been expanded to support Wide speakers for Dolby Atmos and Dolby Surround (true wide only in 9.x.y.2 layout and synthetized wide for other layout 9e.x.y.z).
- Preferred Upmix is now Preset based.
- Output remapping capability has been added.
- Bass Management is now available in two modes: Standard and Custom, offering full flexibility in bass redirection in Custom mode.
- In the Speaker Layout configurator, Surround Height (Auro-3D) and Surround Back Height (DTS:X) are now combined for more clarity.

SYSTEM & CONTROL

- Control4 system control driver has been updated with more functions accessible, especially the support of audio zones and audio adjustments.
- A delay function has been added to the Triggers settings (immediate, 1sec, 2sec, 3sec, 4sec, 5sec, 6sec, 7sec and 8sec).
- The general gain per Theater has been increased to 12dB.
- Monitoring page has been added (with VuMeter graphics, power, temperature, fan speed supervision and event log, for ISP, I.ISP and PA).
- Real Time Analyser graphic visualization has been added to the Speakers edition page.
- PA upgrade is now available from ISP or IISP web page.
- PA upgrade web page is now available (in its beta version).
- Preferred upmix is now selectable on front panel.
- Active upmix information is displayed on front panel and on WebUI Remote page.
- New TCP/API command has been added to allow sending text message to client APP.
- The USB upgrade process will not restart in loop.

FW 3.1r4 (20171005)

New features and enhancements

EXTENSION BOARDS AND TOOLS

- AVB optional board is now fully supported.

AUDIO FORMATS & SPEAKER CONFIGURATIONS

- The down firing speaker of a Dolby Enabled Speaker can now be selected as FRONT, SIDE or BACK.

SYSTEM & CONTROL

- A Fast Boot Setting is now available. When activated, ISP comes out of standby in a few seconds. Standby Power Consumption is higher when Fast Boot is enabled.

FW 3.1r0 (20170703)

New features and enhancements

EXTENSION BOARDS AND TOOLS

1. The ISP / I.ISP will now support the Dirac Live™ Room Calibration process for up to 32ch Theaters.

   o A StormAudio specific license of the Dirac Live Room Calibration Tool™ (DLCT) is required to be installed in the laptop to capture via a USB microphone the acoustic response of the room. The DLCT will then create a correction filter design exported via the network to the ISP / I.ISP for Realtime playback.
   o Any ISP / I.ISP will support the Dirac Live™ runtime after this firmware upgrade.
   o Dirac Live calibration can be applied to all Theater or Audio Zones, except headphones zones.
   o The DLCT license is part of an Integrator Calibration Kit available for sale, check your distributor for availability and order.

2. A new hardware optional module is now available for the ISP:
   o Dual Theater with 16 RCA unbalanced connectivity.

AUDIO FORMATS & SPEAKER CONFIGURATIONS

3. The SphereAudio engine powered by Auro®-Headphones™ has been added to the Headphones audio zones via a specific Listening Presets to be defined at the Preset level. There will be 4 binaural SphereAudio Effects available on the Remote Controls: Bypass, Lounge, Home Cinema and Concert.

4. Speakers Layout possibilities have been expanded to support above new features (2.1.0.2m, 3.1.0.2m, 4.1.0.2m, 2.0.0.2m, 3.0.0.2m, 4.0.0.2m).

5. LFE and low frequencies of "Small speakers" signals can now be routed to any "Large" declared speaker of the Base layer, in addition to the Subwoofers.

SYSTEM & CONTROL

1. Unit will restart automatically after an unexpected power cut and in the same state it was before the power cut.
2. StormRemote App is available for test for your iPad. Please contact info@stormaudio.com to request an access with your iPad account email address. TestFlight will need to be installed in the iPad to download and access it.
3. Crestron system control is available (basic and advanced commands).
4. Control4 system control is available (basic commands).

PRODUCT CONFIGURATION

6. With the integration of Dirac Live™, we have changed the way to manage the various audio configurations possible within a Theater and an Audio Zone with the creation of Audio Profiles, combining Speakers configuration, Manual Equalization and Dirac Live Filter Design. Audio Profile will replace the "Theater EQ" concept of former firmware revision.
   o With this major update, your Theater EQs will be migrated into as many Audio Profiles as you created Theater EQs.
   o You will be able to use this migrated Audio Profiles as basis to run Dirac.
7. To compensate for the headroom required by Manual Equalization and Dirac Live filter design, it is now possible to increase the Digital Gain of all the outputs on a per-theater basis from 0 to 9dB, per 3dB steps.
   o It has to be noted that improper use of this adjustment can lead to clipping of the outputs.

FW 3.0r0 (20170411)

New features and enhancements

AUDIO FORMATS & SPEAKER CONFIGURATIONS

1. The Auro-3D® engine is integrated, supporting decoding and upmixing up to 13.1, in addition to the Atmos and DTS:X engines.
2. Dolby® Atmos decoding and upmixing is expanded to support 7.1.6 speaker configuration.
3. Few configurations without Center channel has been added.
4. Speakers Layout possibilities have been greatly expanded to support above new features.
   o (see below the list of supported configurations).

SAMPLING RATES

5. Audio formats with sampling rate up to 192kz are now supported.
6. DTS 96/24 is now supported.

PRODUCT CONFIGURATION

7. Improvement of Web-UI Inputs page is making configuration easier.

8. Narrow Band Pink Noise option has been added to the test signal generator for a more accurate speaker level adjustment..
9. Sine frequency test signal is extended down to 10 Hz.
10. The test signal routed to a speaker will be simultaneously routed to the subwoofer channel (according to the Speakers settings) to allow for proper Channel & Subwoofer matching adjustment.
11. The 16ch AES/EBU Digital Input has a modifiable channel mapping and audio sync selection to accommodate specific audio servers output routing.
12. Maximum gain for Tone adjustments available on the Remote Control can be set to 0, 3db or 6dB in the Settings page.

PRODUCT MONITORING

13. Temperature and fan speed are displayed on Front Panel system info page.

FIRMWARE INSTALLATION

14. The Firmware Package is now common to ISP and I.ISP.