Havant IP Core Release Notes

Terms Used

- **GA** = General Availability
- **LA** = Limited Availability

Overview

The following release note covers all of the products manufactured for the Havant IP Core.

It also covers IP Gateways.

It does not cover product functionality that is not related to either of the above. For example, multiviewer functionality in the MV-820-IP or the UCP25-MV

Best Practice

With the introduction of V17.0 and multiple audio flows, it is recommended that the system is cleared down of all spigot addresses, flows remapped, and where necessary GV Orbit reconfigured to account for the additional flows. Not doing this potentially introduces the risk of unpredictable behaviour.

For releases prior V16.0 when changing the IO configuration of the product it is recommended to clear down the spigot IP addresses. Applying defaults is the quickest way of achieving this. Not doing this potentially introduces the risk of unpredictable behaviour. This was a subsequence of changing some of the flow capabilities

From V16.0 we have added, by default but user over-ridable, the setting of the card to defaults when the FPGA image changes. Eth1, Eth2 and the management port address, and FEC controls are unaffected by this meaning that the card shall remain connected and accessible.

Switching Software Defined Cores (SDCs)

When switching between SDCs on the IQUCP it is recommended to clear down of all spigot addresses, flows remapped, and where necessary GV Orbit reconfigured to account for the additional flows.

Important Notes

General

1. The IQUCP25-MV is a separate build to the rest of the IP core product range, albeit its version number is near that of the core
2. For releases earlier than V2.2 of the Tek Prism ST2110 compliant extended headers are not processed correctly by the Prism, and it will report sequence number errors for ST2110-20 if extended headers are enabled.

3. Auto detection with between integer and non-integer frame rates that are close to one another, for example 59 and 60, favours the non-integer frame rate. To overcome this the standard has to be selected manually

4. We only support 16 channels of audio. For 12G-SDI these are first 16 channels in Link 1

5. It is recommended that for 1080p59 the 8/8 builds are favoured from a deployment perspective, as whilst the IP core does not impose any limitations on the end user as to what signals are sent / received from what spigot, there are three important limitations that otherwise need to be taken into account when deploying a system.

    a. Firstly, it is left to the user to ensure that the bandwidth of the Media interface is not exceeded. For example, if you were to use the 0/16 configuration of the IQUCP25 with 16 unique 1080p50 ST2110-20 ST2022-7 streams, this clearly exceeds the 25GbE data rate of the media interface and would subsequently fail.

    b. AND, if the card is in Make-Before-Break, then for every simultaneous change the stream count is 2, not 1, for duration of the change.

    c. AND, there is an **IP Receiver** hardware limitation on the UCP25/UCP50 as to how many stream they can process concurrently

    This is captured in the table below.

Standard	ST2022-6	ST2110-20	ST2110-30	ST2110-40	Max. # Spigots
625i25	1				16
		1			16
		1	1		16
		1	1	1	16
		1	4	1	14
1080p50	1				13
		1			16
		1	1		16
		1	1	1	16
		1	4	1	14
1080p59	1				13
		1			14
		1	1		14
		1	1	1	13
		1	4	1	12
1080p60	1				13
		1			14
		1	1		14
		1	1	1	13
		1	4	1	12

6. The Multicast address **239.255.0.1** is reserved for Network management and must not be used for media streams

V17.0 (and V16.1 LA)

V17.0 introduces multiple audio flows

It is recommended that the system is cleared down of all spigot addresses, and flows remapped, and where necessary GV Orbit reconfigured to account for the additional flows; not doing this potentially introduces the risk of unpredictable behaviour.

When using manual Video selection over Auto, and the same flow is used across multiple spigots, the selected standard needs to be the same on all of the spigots.

The following products are now entering a maintenance phase and as such are not included in the V17.0 and subsequent releases. Only critical bug fixes will be provided for the V16.X moving

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	
IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP	
IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		KAHUNA IPI50	
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	
				S800 5970	X	KULA IP50	
				IQEDGE40_6	X	IQUCP50-MV	X

The UHD capable FPGAs now support non-UHD standards, we have also added support for a number of film modes. These, along with the product capabilities, are detailed in the tables below.

	SD/HD/3G Mode of Operation			
	SDI > IP	**IP > SDI**	**Format**	**Capabilities**
UCP25	8	0	625i25, 525i29 720p50/59/60 1080i25/29/30 1080p23/24/25/29/30/50/59/60	1xSDI, 1x2022-6, 1x2110-20/30/40 + FS
	16	0		1xSDI, 1x2022-6, 1x2110-20/30/40
	8	8		
	4	12		
	0	16		
	8	0		1xSDI, 1xVC2, 1x2110-30/40
	4	4		
	0	8		
	12	4		**RS-FEC** 1xSDI, 1x2022-6, 1x2110-20(RX)/30/40 1xSDI, 1x2022-6(RX), 1x2110-20/30/40 **FC-FEC** 1xSDI, 1x2022-6, 1x2110-20/30/40

	SD/HD/3G Mode of Operation			
UCP50	8	0	625i25, 525i29 720p50/59/60 1080i25/29/30 1080p23/24/25/29/30/50/59/60	1xSDI, 1x2110-20/30/40 + FS 1xSDI, 1x2022-6, 1x2110-30/40 + FS
	16	0		1xSDI, 1x2110-20/30/40 1xSDI, 1x2022-6, 1x2110-30/40
	12	4		1xSDI, 1x2022-6(RX), 1x2110-20/30/40 1xSDI, 1x2022-6, 1x2110-20(RX)/30/40(RX)
	8	8		1xSDI, 1x2022-6(RX), 1x2110-20/30/40
	4	12		1xSDI, 1x2022-6, 1x2110-20(RX)/30/40 1xSDI, 1x2022-6(RX), 1x2110-20/30/40
	0	16		1xSDI, 1x2022-6, 1x2110-20/30/40
	8	0		1xSDI, 1xVC2, 1x2110-30/40
	4	4		
	0	8		

	UHD/12G Mode of Operation			
	SDI > IP	**IP > SDI**	**Format**	**Capabilities**
UCP2500	2	2	720p50/59/60 1080i25/29/30 1080p23/24/25/29/30/50/59/60	1xSDI, 1x2110-20/30/40
	2	2	2160p50/59/60	4xSDI (QL-3G), 1x2110-20/30/40
	2	2	2160p23/24/25/29/30	4xSDI (QL-HD), 1x2110-20/30/40
UCP2504	2	2	720p50/59/60 1080i25/29/30 1080p23/24/25/29/30/50/59/60	1xSDI, 1x2110-20/30/40
	2	2	2160p50/59/60	4xSDI (QL-3G), 1x2110-20/30/40 1xSDI (12G), 1x2110-20/30/40
	2	2	2160p23/24/25/29/30	4xSDI (QL-HD), 1x2110-20/30/40
UCP50	4	0	720p50/59/60 1080i25/29/30 1080p23/24/25/29/30/50/59/60	1xSDI (SD/HD/3G), 1x2110-20/30/40
	2	2		
	0	4		
	4	0	2160p50/59/60	4xSDI (QL-3G), 1x2110-20/30/40 1xSDI (12G), 1x2110-20/30/40
	2	2		
	0	4		
	4	0	2160p23/24/25/29/30	4xSDI (QL-HD), 1x2110-20/30/40
	2	2		
	0	4		

V16.0 - GA

The ST2110-20 12G-SDI builds support all the advertised SD/HD/3G/12G-SDI formats. However, presently only the 12G-SDI and have been formally qualified. Validation for the non-UHD formats will be added in a future release.

With the introduction of single flow ST2110-20 support of UHD (12G-SDI and 4x3G-SDI), the FPGA images descriptions were changed to better reflect their functionality. The FPGA type ID remains unchanged.

For example:

Product	IQUCP5000
ID	0000
From	8xI/8xO: 25G 2022-6, RFC4175, AUD_L24, ANC
To	8/8 FC: HD/3G (1xSDI, 1x2022-6(RX), 1x2110-20/30/40)
Meaning	8 in / 8 out, FC-FEC, supports SD/HD/3G signals only, 1 SDI maps to 1 flow of ST2022-5, and 1 flow of ST2110-20, ST2110-30, and ST2110-40

And another example:

Product	IQUCP5000
ID	0071 (NEW)
From	-
To	2/2 RS: UHD (1xSDI, 1x2110-20/30/40)
Meaning	2 In / 2 Out, RS-FEC, support UHD support signals only, 4xSDI (UHD) in 2SI mode map to 1 flow of ST2110-20, ST2110-30, and ST2110-40

As part of regular housekeeping, the following duplicate images were removed. If the product was on an FPGA version that has been removed, the card will revert to the first FPGA image in its list, post upgrade. The user will need to select the new FPGA from the list and then reapply the card settings such as flow IP address.

Removed		Alternative(s)	
0046	0xI/4xO: 12G SDI: 50G 2022-6, AUD_L24, ANC	0081	0/4 FC: UHD (1xSDI, 1x2110-20/30/40)
0049	0xI/16xO: 50G 2022-6, AUD_L24, ANC	0022	0/16 FC: HD/3G (1xSDI, 1x2022-6, 1x2110-20/30/40)
0060	0xI/16xO: 50G FEC108 2022-6, AUD_L24, ANC	0055	0/16 RS: HD/3G (1xSDI, 1x2022-6, 1x2110-20/30/40)
0071	0xI/4xO: 12G FEC108 SDI: 50G 2022-6, AUD_L24, ANC	0068 0084	0/4 RS: UHD (1xSDI, 4x2022-6, 4x2110-20/30/40) 0/4 RS:UHD (1xSDI, 1x2110-20/30/40)

With the increased functionality it is no longer possible to support the 5/5 builds IQMIX10. These were replaced with 4/4 builds.

<V16.0		V16.0 and on	
0006	5xI/5xO: 2022-6, AUD_L24, ANC	0006	4/4: HD/3G (1xSDI, 1x2022-6, 1x2110-30/40)
0007	5xI/5xO: RFC4175, AUD_L24, ANC	0007	4/4: HD/3G (1xSDI, 1x2110-20/30/40)

We have also added, by default but user overridable, the setting of the card to defaults when the FPGA image changes. Eth1, Eth2 and the management port address, and FEC controls are unaffected by this meaning that the card shall remain connected and accessible.

V16.0 also sees the remapping of the IQUCPxx-MV BNCs as detailed below.
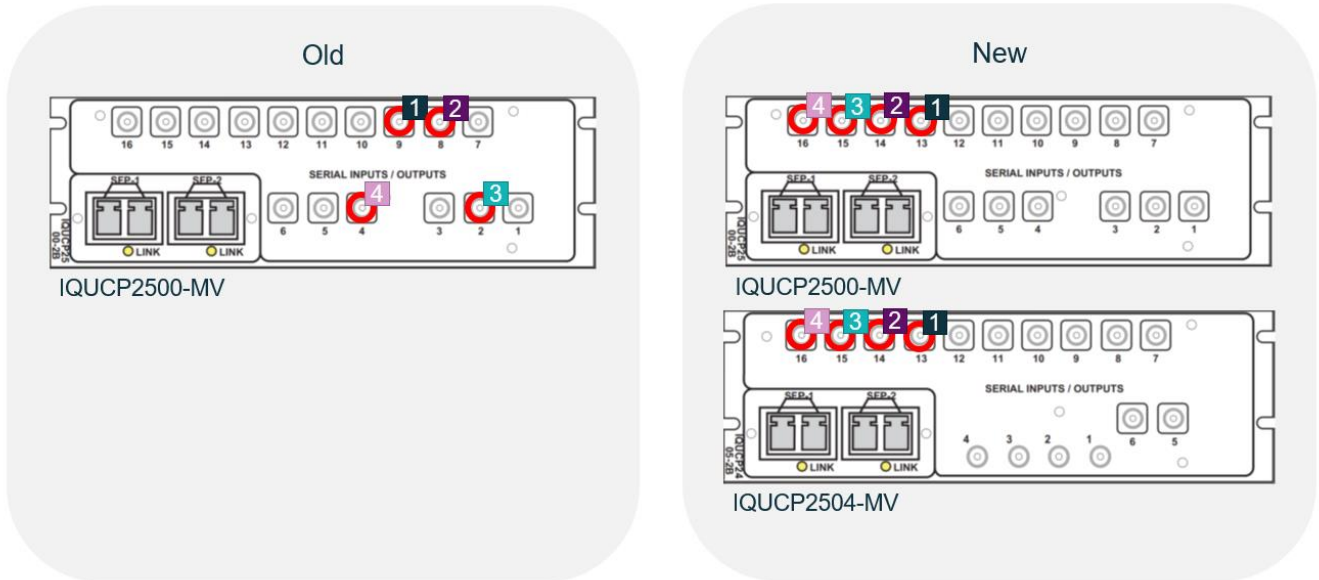
V15.6 - GA

From and including V15.6 the builds for the Kahuna 10GbE and Kahuna Tico have been deprecated

V15.5 - GA

Previously 50GbE senders supported both TR-03 and TR-04 within the same FPGA image / configuration. This has now been split. The receiver remains unaffected and supports both TR-03 and TR-04. When upgrading to V15.5 from any earlier release shall require the addresses for the sender flows to be remapped. The table below documents the differences.

UCP50	V15.0 and earlier		V15.5 and on		
Modified	0000 8xI/8xO	ST2022-6, ST2110-20/30/40	0000	8xI/8xO	ST2110-20/30/40
	0002 16xI/0xO	ST2022-6, ST2110-20/30/40	0002	16xI/0xO	ST2110-20/30/40
	0011 12xI/4xO	ST2022-6, ST2110-20/30/40	0011	12xI/4xO	ST2110-20/30/40
	0012 4xI/12xO	ST2022-6, ST2110-20/30/40	0012	4xI/12xO	ST2110-20/30/40
	0022 0xI/16xO	ST2022-6, ST2110-20/30/40	0022	0xI/16xO	ST2110-20/30/40
New			0047	8xI/8xO	ST2022-6, ST2110-30/40
			0048	16xI/0xO	ST2022-6, ST2110-30/40
			0049	0xI/16xO	ST2022-6, ST2110-30/40
			0050	12xI/4xO	ST2022-6, ST2110-30/40
			0051	4xI/12xO	ST2022-6, ST2110-30/40

Kahuna	V15.0 and earlier		V15.5 and on		
Modified	0001	2022-6, RFC4175, AUD_L24, ANC	0001	12xI	RFC4175, AUD_L24, ANC
	0002	2022-6	0002	12xI	2022-6, AUD_L24, ANC
	0006	2022-6, RFC4175, AUD_L24, ANC	0006	16xI	RFC4175, AUD_L24, ANC
New			0013	16xI	2022-6, AUD_L24, ANC

V15 - GA

From V15 (but not including) the UCP25-MV release notes are managed separately.

V14 - GA

The introduction of V14 was all about the need for licensing on the IQUCP to support the Software Defined Cores (SDC). Other products are unaffected.

For licensed products a single license file with multiple options must be installed using the existing license management tool found with RollCall Control Panel and RollMechanic.

If you upgrade to V14 (and on) on the IQUCP you will need to install a license file on the IQUCP. Transitioning from a non-licensed UCP (say V11.73D) to a licensed version will cause the upgrade to report that it has failed. This is because Control Panel / RollMechanic are expecting to see the same RollCall ID post upgrade. What has actually happened is that the card has reverted into an unlicensed state which has a different RollCall ID to that of the licensed state. This is because the UCP can take on different personalities, each having a different RollCall ID. The unlicensed state is treat no differently. Ethernet addresses are respected and you will still be able to connect to the UCP post upgrade in order to install a license.

UCP25 and UCP50 require different licenses to be installed. The card can only support one license file at time

V10.24 - GA

The SD card needs to be partitioned and formatted in a specific way. This cannot be done by the customer

V17.0c GA (20-Aug-21)

Summary

This release sees the critical fixes to the V17.0a release

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	
IQMIX10	X	IQMIX25	V17.0c.124_0.38.12	KAHUNA IPI40	X	IQUCP50-EP	V17.0c.124_0.38.12
IQMIX10_KP	X	IQUCP25-EP	V17.0c.124_0.38.12	KAHUNA IPO40	X	KAHUNA IPI50	
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	
		UCP-3901 25GbE	V17.0c.124_0.38.12	S800 5970	X	KULA IP50	
				IQEDGE40_6	X	IQUCP50-MV	X
						UCP-3901 50GbE	V17.0c.124_0.38.12

NMOS Client Version, V1.3.1

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-2586, Multiple ANC packets on a single line are not be handled correctly on the IP receiver

  Use alternative IO configuration or use FPGA 0047, 8/8 FC: SD-3G (1xSDI, 1x2022-6, 1x2110-20(RX)/30/40

- IQIPEP-2626, V17.0b for the UCP-3901 included the FPGA set for V17.0, it should have been the FPGA set for V17.0a

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-2509, Caption size is incorrect from some SD/HD standards on the IP receiver, when the TPG is enable

  Caption size is correct for live flow

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1761, VC2 Flow type not supported by NMOS
- IQIPEP-2474, VC2 IP receiver auto standards detection not working

  Use extended headers, or set the standard manually

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Workaround is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-2445, media flows with a subnet of /31 are not supported

- IQIPEP-2241, UHD receiver does not support packets containing an odd number of pgroups

- IQIPEP-1531, global clear counters does not clear FEC error counter

  Clear using the local control

V17.0b GA (30-Jul-21)

Summary

This release sees the inclusion of the UCP-3901 as part of the generic build process

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	X
IQMIX10	X	IQMIX25	X	KAHUNA IPI40	X	IQUCP50-EP	X
IQMIX10_KP	X	IQUCP25-EP	X	KAHUNA IPO40	X	KAHUNA IPI50	X
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	X
		UCP-3901 25GbE	V17.0b.123_0.37.47	S800 5970	X	KULA IP50	X
				IQEDGE40_6	X	IQUCP50-MV	X
						UCP-3901 50GbE	V17.0b.123_0.37.47

NMOS Client Version, V1.3.1

- IS04 v1.2
- IS05 v1.0

New

- Added the UCP-3901

Fixed

- None

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-2509, Caption size is incorrect from some SD/HD standards on the IP receiver, when the TPG is enable

  Caption size is correct for live flow

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2474, VC2 IP receiver auto standards detection not working

  Use extended headers, or set the standard manually

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Workaround is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-2445, media flows with a subnet of /31 are not supported

- IQIPEP-2241, UHD receiver does not support packets containing an odd number of pgroups

- IQIPEP-1531, global clear counters does not clear FEC error counter

  Clear using the local control

- IQIPEP-2586, Multiple ANC packets on a single line are not be handled correctly on the IP receiver

- IQIPEP-2605, UCP50 FPGA 0000, 8/8 FC: SD-3G (1xSDI, 1x2022-6(RX), 1x2110-20/30/40 ST2022 IP Receiver outputs broken

  Use alternative IO configuration or use FPGA 0047, 8/8 FC: SD-3G (1xSDI, 1x2022-6, 1x2110-20(RX)/30/40

- IQIPEP-2626, V17.0b for the UCP-3901 included the FPGA set for V17.0, it should have been the FPGA set for V17.0a

V17.0a GA (16-Jul-21)

Summary

This release sees critical bug fixes.

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	
IQMIX10	X	IQMIX25	V17.0a.122_0.36.14	KAHUNA IPI40	X	IQUCP50-EP	V17.0a.122_0.36.16
IQMIX10_KP	X	IQUCP25-EP	V17.0a.122_0.36.14	KAHUNA IPO40	X	KAHUNA IPI50	
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	
				S800 5970	X	KULA IP50	
				IQEDGE40_6	X	IQUCP50-MV	X

NMOS Client Version, V1.3.1

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-2472, Inputs 5-8 do not work when using the RS-FEC +FS FPGA
- IQIPEP-2514, 2505, Random interlace order swap
- IQIPEP-2493, 2498, 2493 ST2110-40 flow causing video corruption
- IQIPEP-2541, IQUCP sender RTP timestamps drift with respect to PTP when receiving 1080i SDI which does not have embedded ST352 packets
- IQIPEP-2547, Audio clipping on IQUCP IP sender output
- IQIPEP-2492, Incorrect behaviour on Destination Timing Page when enabling Linked mode
- IQIPEP-2502, XIP-3901 Timing issue when a IQUCP25 is rebooted
- IQIPEP-2527, Incorrect RollCall MAC video status displayed for 2160p stds when Auto Detecting input STD
- IQIPEP-1556, Number of Audio Channels is not reflecting new count
- IQIPEP-1803, RTP to PTP lip-sync alignment mode does not work for 2022 video flow and 2110-30 audio flow combination
- IQIPEP-2509, V17.0a RX Video Stds list is not correct, caption size incorrect
- IQIPEP-2520, Incorrect NMOS interface reported on RollCall template

- IQIPEP-2528, UHD low frame rate formats are not supported in 12G-SDI FPGAs – remove from TPG and receiver standards selection

- IQIPEP-2543, HDR control for Spigot 13 does not work

- IQIPEP-2025, Calculation of RTP TS offset from SDI alignment point to SMPTE Epoch for SDP file

- IQIPEP-1715, Change text for detected ST2110-40 flow

- IQIPEP-2018, IQUCP25_SDI fails to register to GVOC NMOS registry in static mode

- IQIPEP-2502, XIP-3901 Timing issue when a IQUCP25 is rebooted

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-2509, Caption size is incorrect from some SD/HD standards on the IP receiver, when the TPG is enable

  Caption size is correct for live flow

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2474, VC2 IP receiver auto standards detection not working

  Use extended headers, or set the standard manually

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Workaround is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-2445, media flows with a subnet of /31 are not supported

- IQIPEP-2241, UHD receiver does not support packets containing an odd number of pgroups

- IQIPEP-1531, global clear counters does not clear FEC error counter

  Clear using the local control

- IQIPEP-2586, Multiple ANC packets on a single line are not be handled correctly on the IP receiver

V17.0 GA (14-Apr-21)

Summary

This release sees the introduction of Multiple Audio Flows, PTP phase alignment to the Epoch allowing for PTP referenced only systems, and various PTP failover performance improvements.

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	
IQMIX10	X	IQMIX25	V17.0.119_b0.34.32	KAHUNA IPI40	X	IQUCP50-EP	V17.0.119_b0.34.30
IQMIX10_KP	X	IQUCP25-EP	V17.0.119_b0.34.30	KAHUNA IPO40	X	KAHUNA IPI50	V17.0.119_b0.34.30
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	V17.0.119_b0.34.30
				S800 5970	X	KULA IP50	V17.0.119_b0.34.30
				IQEDGE40_6	X	IQUCP50-MV	X

NMOS Client Version, V1.3.1

- IS04 v1.2
- IS05 v1.0

New

- Multiple audio flow support available as a general release
- PTP Epoch phase alignment, and various PTP robustness improvements, available as a general release
- NMOS redundancy added
- Film mode support for a number of standards added

Fixed

- IQIPEP-2159, 2166, 2330, 2417, 8/0 Frame sync configuration performance addressed
- IQIPEP-1911, 2091, 2040, IQIPEP-2150, 12G-SDI sporadically non-functional after a restart
- IQIPEP-2452, V16.1 LA release, all but first audio flow have a checksum IPv4 header error
- IQIPEP-2190, 2413, Unable to route a signal by NMOS due to an SDP Frame rate calculation error
- IQIPEP-2420, IPVU UHD shows "stitched" quadrants, output is not seamless
- IQIPEP-2430, MV821-IP NMOS connection issues
- IQIPEP-2441, Kahuna IPI / IPO fins not connecting at 1G
- IQIPEP-1913, Active CRC fails on some of the 12G spigots
- IQIPEP-2118, IQUCP2504 RollTracks for Input Ok / LOST with single stream firmware images show 8 Inputs

- IQIPEP-2119, RollTracks - MIX10/25/4010 & UCP2504/50 when Sender TPG is enabled the RollTrack Input_n_OK/Lost is broken
- IQIPEP-2200, Kahuna IPO Audio Stream Issue - ANC Disabled
- IQIPEP-1537, VRX exceeds specification for Narrow sender
- IQIPEP-2107, VPID value is wrong for 12G-SDI generated from 4 x ST2022-6
- IQIPEP-2134, Some non-UHD formats do not work correctly in UHD-capable FPGAs
- IQIPEP-2242, Sender TPG pull-down doesn't show non-UHD formats in unlinked mode when using 12G/UHD-SS FPGA
- IQIPEP-1897, IP receiver TPG is ordered haphazardly
- IQIPEP-2466, Media interface network driver is blocking the NMOS mDNS address preventing discovery

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Workaround is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1761, VC2 Flow type not supported by NMOS
- IQIPEP-2445, media flows with a subnet of /31 are not supported
- IQIPEP-2502, XIP-3901 Timing issue when a IQUCP25 is rebooted

V16.1b LA (18-Jun-21)

Summary

This release addresses a critical bug fix. It is a targeted release for one customer, as such it will be for the IQUCP25 only, but will be added to V17.0a.

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	X
IQMIX10	X	IQMIX25	X	KAHUNA IPI40	X	IQUCP50-EP	X
IQMIX10_KP	X	IQUCP25-EP	V16.1b.24_b0.39.1	KAHUNA IPO40	X	KAHUNA IPI50	X
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	X
				S800 5970	X	KULA IP50	X
				IQEDGE40_6	X	IQUCP50-MV	X

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-2547, Audio clipping on IQUCP IP output

Known Issues

- IQIPEP-2166, 2330, Frame sync build does not work reliably
- IQIPEP-1911, 2091, 2040, 2150, 12G-SDI sporadically non-functional after a restart

  This is typically a <1 in 300. Restarting the card clears the issue

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1761, VC2 Flow type not supported by NMOS
- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input
- IQIPEP-2445, media flows with a subnet of /31 are not support
- IQIPEP-2502, XIP-3901 Timing issue when a IQUCP25 is rebooted

V16.1a LA (12-Mar-21)

Summary

This release sees the resolution of the log server client on the MV-820 failing leading to the NMOS connection being dropped

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	V16.1a.118_b0.29.59
IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP	X
IQMIX10_KP	X	IQUCP25-EP	X	KAHUNA IPO40	X	KAHUNA IPI50	X
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	X
				S800 5970	X	KULA IP50	X
				IQEDGE40_6	X	IQUCP50-MV	X

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-2430, MV821-IP NMOS connection issues

Known Issues

- IQIPEP-2166, 2330, Frame sync build does not work reliably
- IQIPEP-1911, 2091, 2040, 2150, 12G-SDI sporadically non-functional after a restart

  This is typically a <1 in 300. Restarting the card clears the issue

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

- IQIPEP-2445, media flows with a subnet of /31 are not support

V16.1 LA (18-Feb-21)

Summary

This release sees the introduction of Multiple Audio Flows, PTP phase alignment to the Epoch allowing for PTP referenced only systems, and various PTP failover performance improvements.

Product(s) Built

IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR	V16.1.118_b0.29.55
IQMIX10	X	IQMIX25	X	KAHUNA IPI40	X	IQUCP50-EP	V16.1.118_b0.29.54
IQMIX10_KP	X	IQUCP25-EP	V16.1.118_b0.29.54	KAHUNA IPO40	X	KAHUNA IPI50	X
IQMIX4010	X	IQUCP25-MV	X	S800 5960	X	KAHUNA IPO50	X
				S800 5970	X	KULA IP50	X
				IQEDGE40_6	X	IQUCP50-MV	X

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- Add Multiple Audio Flows
- PTP phase alignment to the Epoch needed for IP only networks that have no analog reference plane
- PTP failover performance improvements
- IQIPEP-2228, NMOS needs to be able to handle a single network in an SDP - both networks are currently expected

Fixed

V16.0 and V16.1 are being managed as separately. This is to enable existing customers to upgrade their product without the need of having to reassign IP addresses as a subsequence of the introduction the additional audio flows. For this reason the following fixes have also been included as part of this release

- IQIPEP-2156, MV-820 fails to boot up due to SD card signal timing. SD card driver changed.
- IQIPEP-2193, SD card corruption during power cycle, due to SD card signal timing
- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

  In order to enable stream synchronisation without extended headers the user must enable RTP To PTP stream synchronisation on the Interop page.

- IQIPEP-2205, NMOS transactions may time out

- IQIPEP-2204, NMOS RECEIVER_STAGE_SET command is responding with the wrong resource id

- IQIPEP-2187, NMOS "Auto" Source RTP Port Assignment does not meet RFC3550 spec

- IQIPEP-2240, RollCall NVRAM module issues

- IQIPEP-2239, NMOS SDP "o" attribute parser expects dash

- IQIPEP-2222, SDP file captured on GVO has the wrong video height, frame rate and interlace information

- IQIPEP-2170, Product does not leave multicast address when it is used on multiple spigots

- IQIPEP-2068, master_enable behaviour changed as per IS04-140, NMOS client changed to make sure the staged data for senders is properly initialized to avoid these issues.

- IQIPEP-2191, IP Receiver device using 2022-7/Ref. locked to Black & Burst, removing 1 of the 2 SFP's causes output disruption for 3 seconds

- IQIPEP-1877, IQUCP send RTP payload ID with 0 to GVC via DDS

- IQIPEP-1295, Reference locked to PTP when PTP grandmaster fails over the card has unstable audio and video on all spigots

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

- IQIPEP-2171, IQUCP50 Reports FAIL:RX LOS for both SFPs despite the two lanes (SFP lane 1 and 2) being OK.

Known Issues

- IQIPEP-2166, 2330, Frame sync build does not work reliably

- IQIPEP-1911, 2091, 2040, 2150, 12G-SDI sporadically non-functional after a restart

  This is typically a <1 in 300. Restarting the card clears the issue

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

V16.1 beta (03-Nov-20)

Summary

This is a beta of V16.1. This release sees the introduction of Multiple Audio Flows, PTP phase alignment to the Epoch allowing for PTP referenced only systems, and various PTP failover performance improvements.

This beta release has had limited QA, and is not for general consumption.

Product(s) Built

IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR	
IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP	V16.1.111_b0.29.24
IQMIX10_KP		IQUCP25-EP	V16.1.111_b0.29.23	KAHUNA IPO40		KAHUNA IPI50	
IQMIX4010		IQUCP25-MV		S800 5960		KAHUNA IPO50	
				S800 5970		KULA IP50	
				IQEDGE40_6		IQUCP50-MV	

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- Multiple Audio Flow support

- PTP phase alignment to the Epoch to allow for PTP only referenced systems

- PTP failover performance improvements

- IQIPEP-2228, NMOS needs to be able to handle a single network in an SDP - both networks are currently expected

Fixed (Limited QA)

V16.0 and V16.1 are being managed as separately. This is to enable existing customers to upgrade their product without the need of having to reassign IP addresses as a subsequence of the introduction the additional audio flows. For this reason the following fixes have also been included as part of this release

- IQIPEP-2156, MV-820 fails to boot up due to SD card signal timing. SD card driver changed.

- IQIPEP-2193, SD card corruption during power cycle, due to SD card signal timing

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

    In order to enable stream synchronisation without extended headers the user must enable RTP To PTP stream synchronisation on the Interop page.

- IQIPEP-2205, NMOS transactions may time out

- IQIPEP-2204, NMOS RECEIVER_STAGE_SET command is responding with the wrong resource id

- IQIPEP-2187, NMOS "Auto" Source RTP Port Assignment does not meet RFC3550 spec

- IQIPEP-2240, RollCall NVRAM module issues

- IQIPEP-2239, NMOS SDP "o" attribute parser expects dash

- IQIPEP-2222, SDP file captured on GVO has the wrong video height, frame rate and interlace information

- IQIPEP-2170, Product does not leave multicast address when it is used on multiple spigots

- IQIPEP-2068, master_enable behaviour changed as per IS04-140, NMOS client changed to make sure the staged data for senders is properly initialized to avoid these issues.

- IQIPEP-2191, IP Receiver device using 2022-7/Ref. locked to Black & Burst, removing 1 of the 2 SFP's causes output disruption for 3 seconds

- IQIPEP-1877, IQUCP send RTP payload ID with 0 to GVC via DDS

- IQIPEP-1295, Reference locked to PTP when PTP grandmaster fails over the card has unstable audio and video on all spigots

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

Known Issues

- IQIPEP-1911, 2091, 2040, 2150, 12G-SDI sporadically non-functional after a restart

  This is typically a <1 in 300. Restarting the card clears the issue

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

- IQIPEP-2171, IQUCP50 Reports FAIL:RX LOS for both SFPs despite the two lanes (SFP lane 1 and 2) being OK.

V16.0c GA (27-Jan-21)

Summary

This release is the GA release for V16.0.

Product(s) Built

IQMIX00	V16.0c.116_b0.31.5	IQEDGE25_6	V16.0c.116_b0.31.5	IQMIX40	V16.0c.116_b0.31.5	MV-820-IP-REAR	
IQMIX10	V16.0c.116_b0.31.5	IQMIX25	V16.0c.116_b0.31.5	KAHUNA IPI40	V16-0c-116_b0.31.9	IQUCP50-EP	V16.0c.116_b0.31.5
IQMIX10_KP	V16.0c.116_b0.31.5	IQUCP2500-EP	V16.0c.116_b0.31.5	KAHUNA IPO40	V16-0c-116_b0.31.9	KAHUNA IPI50	V16-0c-116_b0.31.9
IQMIX4010	V16.0c.116_b0.31.5	IQUCP2500-MV		S800 5960		KAHUNA IPO50	V16-0c-116_b0.31.9
		IQUCP2504-EP	V16.0c.116_b0.31.5	S800 5970		KULA IP50	V16-0c-116_b0.31.9
		IQUCP2504-MV		IQEDGE40_6	V16.0c.116_b0.31.5	IQUCP50-MV	

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-2283, NMOS hostname appearing as 0.0.0.0 in the
- IQIPEP-2271, NMOS UUIDs can sometimes be duplicated
- IQIPEP-2068, NMOS client updated to prevent master_enable getting cleared
- NMOS client updated to set the staged data from the active data returned by the receiver / sender to the node

Known Issues

- IQIPEP-1911, 2091, 2040, 2150, 12G-SDI sporadically non-functional after a restart
  This is typically a <1 in 300. Restarting the card clears the issue

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p
  To overcome this the standard has to be selected manually

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

- IQIPEP-1877, IQUCP send RTP payload ID with 0 to GVC via DDS

V16.0b LA (IPVU only)

Summary

This release is a IQUCP2504 only LA release for V16.0, and includes PTP enhancements such as Epoch alignment

Product(s) Built

IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR	
IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP	
IQMIX10_KP		IQUCP2500-EP		KAHUNA IPO40		KAHUNA IPI50	
IQMIX4010		IQUCP2500-MV		S800 5960		KAHUNA IPO50	
		IQUCP2504-EP	V16.0b.115_b0.30.5	S800 5970		KULA IP50	
		IQUCP2504-MV		IQEDGE40_6		IQUCP50-MV	

NMOS Client Version, V1.2.16

- IS04 v1.2
- IS05 v1.0

New

- None

Fixed

- IQIPEP-1863, When SDI outputs are locked to PTP, SDI is not ST2059 Epoch aligned, for 23.97/29.97 standards, Video Delay for SDI outputs keep changing
- IQIPEP-1295, Reference locked to PTP when PTP grandmaster fails over the card has unstable audio and video on all spigots
- IQIPEP-2038, Video stream on multicast IP address 239.255.0.1 (DDS discovery address) kills card
- IQIPEP-2068, master_enable behaviour changed as per IS04-140, NMOS client changed to make sure the staged data for senders is properly initialized to avoid these issues.

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

V16.0a LA (24-Dec-20)

Summary

This release is a Limited Availability release for V16.0 that addresses various bug fixes and improvements on top of the V16.0 LA release.

Product(s) Built

IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR	V16.0a.113_b0.28.92
IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP	V16.0a.113_b0.28.92
IQMIX10_KP		IQUCP2500-EP	V16.0a.113_b0.28.92	KAHUNA IPO40		KAHUNA IPI50	
IQMIX4010		IQUCP2500-MV		S800 5960		KAHUNA IPO50	
		IQUCP2504-EP	V16.0a.113_b0.28.92	S800 5970		KULA IP50	
		IQUCP2504-MV		IQEDGE40_6		IQUCP50-MV	

NMOS Client Version, V1.2.15

- IS04 v1.2
- IS05 v1.0

New

- IQIPEP-2228, NMOS needs to be able to handle a single network in an SDP - both networks are currently expected

Fixed

- IQIPEP-2156, MV-820 fails to boot up due to SD card signal timing. SD card driver changed.

- IQIPEP-2193, SD card corruption during power cycle, due to SD card signal timing

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

  *In order to enable stream synchronisation without extended headers the user must enable **RTP To PTP** stream synchronisation on the Interop page.*

- IQIPEP-2205, NMOS transactions may time out

- IQIPEP-2204, NMOS RECEIVER_STAGE_SET command is responding with the wrong resource id

- IQIPEP-2187, NMOS "Auto" Source RTP Port Assignment does not meet RFC3550 spec

- IQIPEP-2240, RollCall NVRAM module issues

- IQIPEP-2239, NMOS SDP "o" attribute parser expects dash

- IQIPEP-2222, SDP file captured on GVO has the wrong video height, frame rate and interlace information

- IQIPEP-2170, Product does not leave multicast address when it is used on multiple spigots

Known Issues

- IQIPEP-1911, IQIPEP-2091, IQIPEP-2040, IQIPEP-2150, 12G-SDI sporadically non-functional after a restart

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2166, IQUCP25 IP stream show invalid on K-frame X input

- IQIPEP-1877, IQUCP send RTP payload ID with 0 to GVC via DDS

- IQIPEP-1295, Reference locked to PTP when PTP grandmaster fails over the card has unstable audio and video on all spigots

- IQIPEP-2038, Video stream on multicast IP address 239.255.0.1 (DDS discovery address) kills card

- IQIPEP-1863, When SDI outputs are locked to PTP, SDI is not ST2059 Epoch aligned, for 23.97/29.97 standards,Video Delay for SDI outputs keep changing

- IQIPEP-2068, master_enable behaviour changed as per IS04-140, NMOS client changed to make sure the staged data for senders is properly initialized to avoid these issues.

V16.0 LA (26-Aug-20)

Summary

This Limited Availability release sees the introduction of single stream UHD ST2110-20 and the release of the IQUCP2504.

A request to the Product Manager is required, on a case-by-case basis, to release externally.

There is an issue with 12G-SDI stability when power cycling the product and that there is a small possibility that the 12G-SDI interface will come up in a non-functional state. This only affects the 12G-SDI builds.

Product(s) Built

IQMIX00	V16-0-110_b0.28.79	IQEDGE25_6	V16-0-110_b0.28.79	IQMIX40	V16-0-110_b0.28.79	MV-820-IP-REAR	V16-0-110_b0.28.79
IQMIX10	V16-0-110_b0.28.79	IQMIX25	V16-0-110_b0.28.79	KAHUNA IPI40	V16-0-110_b0.28.79	IQUCP50-EP	V16-0-110_b0.28.79
IQMIX10_KP	V16-0-110_b0.28.79	IQUCP2500-EP	V16-0-110_b0.28.79	KAHUNA IPO40	V16-0-110_b0.28.79	KAHUNA IPI50	V16-0-110_b0.28.79
IQMIX4010	V16-0-110_b0.28.79	IQUCP2500-MV	V16.0.110_b0.28.79	S800 5960		KAHUNA IPO50	V16-0-110_b0.28.79
		IQUCP2504-EP	V16-0-110_b0.28.79	S800 5970		KULA IP50	V16-0-110_b0.28.79
		IQUCP2504-MV	V16.0.110_b1.0.45	IQEDGE40_6	V16-0-110_b0.28.79	IQUCP50-MV	V16.0.110_b1.0.45

NMOS Client Version, V1.2.14

- IS04 v1.2
- IS05 v1.0

New

- Add UHD support over ST2110-20 for the UCP25 and UCP50

- IQUCP2504 release, which introduces 12G-SDI support on the IQUCP25

- IQUCP25-MV spigot remapping

- IQIPEP-2070, Add user definable NMOS device naming

- IQIPEP-2104, Defaults are applied when product configuration is changed. Specifically this is to clear down the spigot addresses.

Fixed

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

  *In order to enable stream synchronisation without extended headers the user must enable **RTP To PTP** stream synchronisation on the **Interop** page. If this control is not selected then in the absence of extended headers the product will use **Nominal Delay** that then requires the user to adjust the audio delay on the **Destination Timing** page (as described below)*

  625i25   19ms
  1080i25   19ms
  720p50   9ms
  1080p50   9ms

525i29   15ms
1080i29   15ms
720p59   8ms
1080p59   8ms
In summary the stream synchronisation controls on the interop page are applied based on a top to bottom ordering.

- IQIPEP-1679, 1080i VPID is being set incorrectly

- IQIPEP-1767, When a TPG is selected its standard is not reflected in associated SDP file

- IQIPEP-2002, IQUCP50 the SFP configuration changes after each software reboot

- IQIPEP-1719, IP sender Video and Audio RTP timestamp alignment at startup with SDI present when RTP-PTP mode selected

- IQIPEP-2079, RS-FEC correction mode was being bypassed when mode enabled. It should have been enabled. This could result in poor connectivity

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  The mode should be set 'Auto' unless you know exactly what the audio channel count is

Known Issues

- IQIPEP-2091, 2040, 2150, 12G-SDI sporadically non-functional after a cold start

  This is the reason for LA nature of the release

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

  To overcome this the standard has to be selected manually

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-2205, NMOS transactions may time out

V15.6 GA (7-May-20)

Summary

Introduction of AMWA NMOS IS-04 and IS-05. This is a software only update. It should be noted that for this release NMOS support for VC2 and ST2022-6 is not offered. From V15.6, the builds for the Kahuna 10GbE and Tico have been deprecated and are no longer supported.

Product(s) Built

IQMIX00	V15.6.107_b0.24.73	IQEDGE25_6	V15.6.107_b0.24.73	IQMIX40	V15.6.107_b0.24.73	MV-820-IP-REAR	V15.6.107_b0.24.73
IQMIX10	V15.6.107_b0.24.73	IQMIX25	V15.6.107_b0.24.73	KAHUNA IPI40	V15.6.107_b0.24.73	IQUCP50-EP	V15.6.107_b0.24.73
IQMIX10_KP	V15.6.107_b0.24.73	IQUCP25-EP	V15.6.107_b0.24.73	KAHUNA IPO40	V15.6.107_b0.24.73	KAHUNA IPI50	V15.6.107_b0.24.73
IQMIX4010	V15.6.107_b0.24.73	IQUCP25-MV	V15.6.107_b0.1.23	S800 5960	V15.6.107_b0.24.73	KAHUNA IPO50	V15.6.107_b0.24.73
				S800 5970	V15.6.107_b0.24.73	KULA IP50	V15.6.107_b0.24.73
				IQEDGE40_6	V15.6.107_b0.24.73	IQUCP50-MV	V15.6.107_b0.1.23

NMOS Client Version, V1.2.15

- IS04 v1.2
- IS05 v1.0

New

- Add AMWA NMOS IS-04 and IS-05 support

Fixed

- None

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received
- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs
- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p
- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1679, 1080i VPID is being set incorrectly
- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

The following audio delay should be applied on the destination timing page.

625i25   19ms
1080i25   19ms
720p50   9ms
1080p50   9ms
525i29   15ms
1080i29   15ms
720p59   8ms
1080p59   8ms

- IQIPEP-1761, VC2 Flow type not supported by NMOS

- IQIPEP-1767, When a TPG is selected its standard is not reflected in associated SDP file

V15.5b GA (18-Mar-20)

Summary

This release addressed a specific issue affecting the Kula and Kahuna 50GbE interfaces where it was found the interface was occasionally not stable after power up.

Product(s) Built

IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR	
IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP	
IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		KAHUNA IPI50	V15.5b .98 b0.27.5
IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPO50	V15.5b .98 b0.27.5
KAHUNA IPI10				KAHUNA IPO40T		KULA IP50	V15.5b .98 b0.27.5
KAHUNA IPO10				S800 5960		IQUCP50-MV	
KAHUNA IPI10T				S800 5970			
KAHUNA IPO10T				IQEDGE40_6			

New

- None

Fixed

- IQIPEP-1739, RS-FEC occasionally non-functional from power up / restart

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1679, 1080i VPID is being set incorrectly

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

  The following audio delay should be applied on the destination timing page.

  625i25   19ms
  1080i25   19ms
  720p50   9ms

1080p50   9ms
525i29   15ms
1080i29   15ms
720p59   8ms
1080p59   8ms

V15.5a GA (24-Mar-20)

Summary

This release addressed a specific customer facing multiviewer related issues with the UCP-MV builds. There was no change to the IP core itself. Details of the MV changes are supplied separately to the IP core.

Product(s) Built

IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR	
IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP	
IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		KAHUNA IPI50	
IQMIX4010		IQUCP25-MV	V15.5A.97 b0.1.21	KAHUNA IPI40T		KAHUNA IPO50	
KAHUNA IPI10				KAHUNA IPO40T		KULA IP50	
KAHUNA IPO10				S800 5960		IQUCP50-MV	V15.5A.97 b0.1.21
KAHUNA IPI10T				S800 5970			
KAHUNA IPO10T				IQEDGE40_6			

New

- None

Fixed

- None (with respect to the IP core).

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1679, 1080i VPID is being set incorrectly

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

The following audio delay should be applied on the destination timing page.

625i25   19ms
1080i25   19ms
720p50   9ms
1080p50   9ms
525i29   15ms
1080i29   15ms
720p59   8ms
1080p59   8ms

V15.5 GA (4-Feb-20)

Summary

This release introduces RS-FEC across all 25GbE and 50GbE products, and it introduces the UCP50-MV. Please note at the time of writing 50GbE RS-FEC is not supported on GV Fabric.

Product(s) Built

IQMIX00	V15.5 .97 b0.23.136	IQEDGE25_6	V15.5 .97 b0.23.136	IQMIX40	V15.5 .97 b0.23.136	MV-820-IP-REAR	V15.5 .97 b0.23.136
IQMIX10	V15.5 .97 b0.23.136	IQMIX25	V15.5 .97 b0.23.136	KAHUNA IPI40	V15.5 .97 b0.23.136	IQUCP50-EP	V15.5 .97 b0.23.136
IQMIX10_KP	V15.5 .97 b0.23.136	IQUCP25-EP	V15.5 .97 b0.23.136	KAHUNA IPO40	V15.5 .97 b0.23.136	KAHUNA IPI50	V15.5 .97 b0.23.136
IQMIX4010	V15.5 .97 b0.23.136	IQUCP25-MV	V15.5.97 b0.1.9	KAHUNA IPI40T	V15.5 .97 b0.23.136	KAHUNA IPO50	V15.5 .97 b0.23.136
KAHUNA IPI10	V15.5 .97 b0.23.136			KAHUNA IPO40T	V15.5 .97 b0.23.136	KULA IP50	V15.5 .97 b0.23.136
KAHUNA IPO10	V15.5 .97 b0.23.136			S800 5960	V15.5 .97 b0.23.136	IQUCP50-MV	V15.5.97 b0.1.9
KAHUNA IPI10T	V15.5 .97 b0.23.136			S800 5970	V15.5 .97 b0.23.136		
KAHUNA IPO10T	V15.5 .97 b0.23.136			IQEDGE40_6	V15.5 .97 b0.23.136		

New

- Add RS-FEC support for 50GbE Interfaces, specifically this is required for supporting PSM4 QSFP modules that recommend the use of RS-FEC, required custom SFP settings {0x12, 0x0, 0x12, 0x1}

- Add VPID overloading for HDR/Colorimetry support

- Add DDS / IDL changes to support SDP object creation by GVC

- Add audio type override on the IP receiver

- Add UCP50-MV

- IQIPEP-362, Add support for AIMS RFC4175 profiles in sender

- IQIPEP-1480, Cisco PSM4 QSFPs qualified for IQUCP50

- IQIPEP-1481, Cisco AOC qualified for IQUCP25

Fixed

- IQIPEP-1347, Input loss to TPG does not work

- IQIPEP-1290, intermittent vertical jump with 2022-6

- IQIPEP-1452, Repeat frame issue

- IQIPEP-1529, Gigalight SR QSFP settings are incorrect

- IQIPEP-1518, Intermittent black SDI output

- IQIPEP-1574, Spigots show the incorrect format

- IQIPEP-551, PTP Status selection not working correctly

- IQIPEP-1533, Logging - INPUT_N_STANDARD not reporting correctly for TPG

- IQIPEP-1535, Logging - INPUT_N_SDI_ERRCNT flickering between values when TPG enabled

- IQIPEP-1602, PsF format not detected for HD 25/29/30 frame rates

- IQIPEP-1469, IGMP process failure if 42 or more unique flows are routed to an IP sender

- IQIPEP-1487, Switching between EP and MV on the IQUCP can lead to settings being corrupted

- IQIPEP-1400, Spurious clock removed from SD card interface

Known Issues

- IQIPEP-1446, 12G FGPA IP receiver TPG doesn't work until a flow has been received

- IQIPEP-1203, Audio tracking delay missing from frame synchronising inputs

- IQIPEP-1412, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images

- IQIPEP-1501, Auto detection does not work between integer and non-integer frame rates at 1080p

- IQIPEP-1585, Unpredictable audio channel behaviour when receiver does not match the number contained in the stream

  Work around is to set to 'Auto' unless you know exactly what the audio channel count is

- IQIPEP-1679, 1080i VPID is being set incorrectly

- IQIPEP-1642, ST2022+ST2110-30 or ST2110-2+ST2110-30 without extended headers leads to a fixed A/V delay

  The following audio delay should be applied on the destination timing page.

625i25	*19ms*
1080i25	*19ms*
720p50	*9ms*
1080p50	*9ms*
525i29	*15ms*
1080i29	*15ms*
720p59	*8ms*
1080p59	*8ms*

IQUCP50 Specification Change

This release sees a change to existing product functionality in the IQUCP50-EP. The IP sender has been split TR-03 and TR-04. Therefore when upgrading a product, if one of the configurations is selected its IP sender functionality will change and needs to be accounted for by the end user.

	V15.0 and earlier			V15.5 and on		
Modified	**0000**	8xI/8xO	ST2022-6, ST2110-20/30/40	**0000**	8xI/8xO	ST2110-20/30/40
	0002	16xI/0xO	ST2022-6, ST2110-20/30/40	**0002**	16xI/0xO	ST2110-20/30/40
	0011	12xI/4xO	ST2022-6, ST2110-20/30/40	**0011**	12xI/4xO	ST2110-20/30/40
	0012	4xI/12xO	ST2022-6, ST2110-20/30/40	**0012**	4xI/12xO	ST2110-20/30/40
	0022	0xI/16xO	ST2022-6, ST2110-20/30/40	**0022**	0xI/16xO	ST2110-20/30/40
New				**0047**	8xI/8xO	ST2022-6, ST2110-30/40
				0048	16xI/0xO	ST2022-6, ST2110-30/40
				0049	0xI/16xO	ST2022-6, ST2110-30/40
				0050	12xI/4xO	ST2022-6, ST2110-30/40
				0051	4xI/12xO	ST2022-6, ST2110-30/40

V15.0 GA (11-Oct-19)

Summary

This release brings the previously deprecated V11.73.x back on line, with the exception of the removal of audio rate adaption. It also introduces 12G-SDI support for:

- FGAN IQUCP5000-2B3

Product(s) Built

IQMIX00	V15.0 .95 b0.22.174	IQEDGE25_6	V15.0 .95 b0.22.174	IQMIX40	V15.0 .95 b0.22.174	MV-820-IP-REAR	V15.0 .95 b0.22.174
IQMIX10	V15.0 .95 b0.22.174	IQMIX25	V15.0 .95 b0.22.174	KAHUNA IPI40	V15.0 .95 b0.22.174	IQUCP50-EP	V15.0 .95 b0.22.174
IQMIX10_KP	V15.0 .95 b0.22.174	IQUCP25-EP	V15.0 .95 b0.22.174	KAHUNA IPO40	V15.0 .95 b0.22.174	KAHUNA IPI50	V15.0 .95 b0.22.174
IQMIX4010	V15.0 .95 b0.22.174	IQUCP25-MV	V15.0 .93 b0.23.007	KAHUNA IPI40T	V15.0 .95 b0.22.174	KAHUNA IPO50	V15.0 .95 b0.22.174
KAHUNA IPI10	V15.0 .95 b0.22.174			KAHUNA IPO40T	V15.0 .95 b0.22.174	KULA IP50	V15.0 .95 b0.22.174
KAHUNA IPO10	V15.0 .95 b0.22.174			S800 5960	N/A	IQUCP50-MV	N/A
KAHUNA IPI10T	V15.0 .95 b0.22.174			S800 5970	N/A		
KAHUNA IPO10T	V15.0 .95 b0.22.174			IQEDGE40_6	V15.0 .95 b0.22.174		

New

- Add auto detection when no extended headers are present
- Add 12G-SDI support to the IQUCP50-EP
- IQMIT-1546, Random delay override added for all products as factory control
- IQMIT-1454, Add a control to allow PTP to switch between active clocks based on priority
- IQMIT-1462, Show PTP clock status without having to show the detailed status
- IQMIT-1446, Counter added to time sync status page to indicate when we see an excessive correction value

Fixed

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1334, Auto-detect video standards with no extended headers added
- IQMIT-1287, Clean audio switching can be broken switching between audio flows with different packet time
- IQMIT-1038, Auto-detect the number of audio channels with no extended header
- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1567, Embedded Audio in SDI OP is 1ms early
- IQMIT-1505, MV-820-IP PTP port fail over not working
- IQMIT-1534, SDI outputs black
- IQMIT-1314, The ST2110-20 ext.seq. count increments in the wrong packet

The Tek Prism does not correctly process 2110 compliant extended headers, and will report sequence number errors for video if extended headers are enabled.

- IQMIT-1455, 2110-40 broken CC608

Known Issues

- IQMIT-1681, Packet drops when RS-FEC is enabled on IQUCP25 with Cisco C93180YC-FX
- IQMIT-1551, 12G FGPA receiver TPG doesn't work until a flow has been received
- IQMIT-1188, Audio rate adaption on the IP receiver not supported
- IQMIT-1283, Audio tracking delay missing from frame synchronising inputs
- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6
- IQMIT-1498, SD card corruption on power cycling
- IQMIT-1512, Intermittent picture stability issue with VC2 on IQUCP50 for fast panning images
- IQMIT-1615, Cannot auto detect between 59 and 60 frame rates
- IQMIT-1643, Gigalight SR settings are incorrect

  Work around is to set the SFP setting to the Custom {0x12, 0x0, 0x12, 0x1}.

V14.57 .85 b0.22.43 GA (17-May-19)

Summary

This release saw audio rate adaption deprecated from the IQUCP25-MV

Product(s) Built

	IQMIX00		IQEDGE25		IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010	X	IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

Deprecated Issues

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1287, Clean audio switching can be broken by small to large packet switches
- IQMIT-1038, Auto-detect the number of audio channels with no extended header
- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1283, Add audio tracking delay to frame synchronising inputs
- IQMIT-1188, Audio rate adaption on the IP receiver not supported
- IQMIT-1040, 1334, Auto-detect the video standard with no extended headers

Known Issues

- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6
- IQMIT-1498, SD card corruption on power cycling

V14.55 .86 b0.21.108 GA (11-Apr-19)

Summary

This release saw audio rate adaption deprecated for the MV-820-IP

Product(s) Built

	IQMIX00		IQEDGE25		IQMIX40	X	MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		KAHUNA IPI50
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPO50
	KAHUNA IPI10				KAHUNA IPO40T		KULA IP50
	KAHUNA IPO10				S800 5960		
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

Deprecated

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1287, Clean audio switching can be broken by small to large packet switches
- IQMIT-1038, Auto-detect the number of audio channels with no extended header
- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1283, Add audio tracking delay to frame synchronising inputs
- IQMIT-1188, Audio rate adaption on the IP receiver not supported
- IQMIT-1040, 1334, Auto-detect the video standard with no extended headers

Known Issues

- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6
- IQMIT-1498, SD card corruption on power cycling

V14.54 .86 b0.21.105 GA (08-Apr-19)

Summary

V14 introduces licensing to the UCP25/50, based upon V11.73D.76. Specifically this release saw the removal of audio rate adaption.

Product(s) Built

	IQMIX00		IQEDGE25		IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- V14 / Licensed version of the V11.73D.76 b0.20.88 release for the IQUCP

Known Issues

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1040, 1334, Auto-detect the video standard with no extended headers
- IQMIT-1287, Clean audio switching can be broken by small to large packet switches
- IQMIT-1038, Auto-detect the number of audio channels with no extended header
- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1283, Add audio tracking delay to frame synchronising inputs
- IQMIT-1188, Audio rate adaption on the IP receiver not supported
- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6
- IQMIT-1498, SD card corruption on power cycling

V14.47 .85 b0.22.35 GA (07-Feb-19)

Summary

This specific version introduces is the licensed IQUCP25-MV (Multiviewer) Software Defined Core to the IQUCP25.

Product(s) Affected

	IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010	X	IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- Initial release of the UCP25-MV core

Fixed

- IQMIT-1368, Removed high power FPGA build strategy
- IQMIT-1498, SD card corruption on power cycling

V14.34B .86 b0.21.105 GA (07-Feb-19)

Summary

V14 introduces licensing to the UCP25/50.

This specific version introduces the licensing to the IQUCP25-EP (Essence Processing / IP Gateway) Software Defined Core to the IQUCP25/50. Previously Essence Processing (V11 and earlier) did not require a license to work.

Product(s) Built

	IQMIX00		IQEDGE25		IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- V14 / Licensed version of the V11.73D.76 b0.20.88 release for the IQUCP

Known Issues

V11.73D.76 b0.20.21 GA (20-Mar-19)

Summary

This release was an immediate response to audio mute and distortion issues seen at a several customer sites post the introduction of V11.73 .76. The FPGAs were rolled back to a previous stable release (V11.58), however, the software was kept at the V11.73, specifically to keep improvements made to the non-volatile file system.

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40	X	MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE40_6		

New

- 2110 compliant extended header control was introduced. The card no has 3 modes: Off, Legacy and Compliant

Fixed

- IQMIT-1368, FPGAs may run hot depending on build strategy used
- IQMIT-1379, Intermittent vertical jump with 2022-6

Deprecated

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1334, Auto-detect video standards with no extended headers added
- IQMIT-1287, Clean audio switching can be broken by small to large packet switches
- IQMIT-1038, Auto-detect the number of audio channels with no extended header
- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1283, Add audio tracking delay to frame synchronising inputs
- IQMIT-1188, Add audio drop/repeat to IQMIX SDI outputs
- IQMIT-1040, Auto-detect the video standard with no extended headers

Known

- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6
- IQMIT-1498, SD card corruption on power cycling
- IQMIT-1560, Repeat frame issue

V11.73 .76 b0.20.88 GA (07-Sep-18)

Summary

Major update to include auto standards detection without the need for extended headers, as well as improvements made to the robustness of the non-volatile file system.

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10			X	S800 5960		KULA IP50
	KAHUNA IPI10T			X	S800 5970		
	KAHUNA IPO10T			X	IQEDGE40_6		

New

- IQMIT-1335, ST2110-40 clause 5.5 added
- IQMIT-1295, Add support ST2110-40 for SDI ANC payloads with non-specific H-offset values
- IQMIT-1337, Add Receiver TPG Control to the MIX
- IQMIT-1330, Add Audio rate adaption control to the template
- IQMIT-1329, Addition of receiver TPG Control on loss mode
- IQMIT-1283, Add audio tracking delay to frame synchronising inputs
- IQMIT-1188, Audio rate adaption added
- IQMIT-1040, Auto-detect the video standard with no extended headers
- IQMIT-1309, Add Kahuna 50 T variants to the code base
- Migrate Kahuna to unified code base

Fixed

- IQMIT-1332, Switching to a missing source causes audio distortion
- IQMIT-1334, Auto detection with no extended headers added
- IQMIT-1290, SD Card robustness improvements. FAT32 partition made read only
- IQMIT-1287, Clean audio switching can be broken by small to large packet switches
- IQMIT-1038, Auto-detect the number of audio channels with no extended header

Known Issues

- IQMIT-1368, FPGAs may run hot depending on build strategy used
- IQMIT-1498, SD card corruption on power cycling
- IQMIT-1379, intermittent vertical jump with 2022-6
- IQMIT-1560, Repeat frame issue with 2022-6

V11.58 .71 b0.20.74 GA (21 Jun 18)

Summary

The main focus of this release was an Engineering one so as to unify the Kahuna and MV-820-IP product software to use the same code as the MIX products.

Audio V-Fade was also added.

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE25_6		

New

- Kahuna added to unified code base
- MV-820-IP added to unified code base
- Audio V fade added
- Added Media port RollCall Logging for MIX10, MIX10_KP

Fixed

- IQMIT-1299, Video tear fixes
- IQMIT-1290, SD Card robustness improvements. Removed chkdosfs from QNX-IFS boot, changed PMIC to write to into /tmp/ folder rather than FAT32 partition.
- IQMIT-1273, Unclean MBB switching fixes
- Ethernet stack robustness improvements
- QNX robustness improvements

Known Issues

- IQMIT-1368, Post release it was found that for the MIX25/UCP25 they would run some 10C higher. Product performance and functionality is unaffected. This has no impact if the card is used within a 4U frame. For a 3U cards located towards the higher slot positions within a 3U is affected
- IQMIT-1498, SD card corruption on power cycling
- IQMIT-1560, Repeat frame issue

V11.43 .67 b0.20.55 GA (01-May-18)

Summary

This focus for this release was the introduction of the IQUCP50 Essence Processing product (not licensed).

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE40_6		

New

- UCP50 Released
- Added output spigot on input loss feature

Fixed

- Various minor fixes / enhancements

Known Issues

- IQMIT-1560, Repeat frame issue

V11.40 .64 b0.20.52 GA (25-Apr-18)

Summary

See details below

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE40_6		

New

- IQMIT-1247, Add frames dropped/repeated reports
- Bandwidth management added

Fixed

- IQMIT-1253, SD Card FAT32 robustness improvements
- IQMIT-430, Improve audio switching to avoid pops and bangs
- IQMIT-1240, VC2 problem fix (INC-52230)

Known Issues

- IQMIT-1560, Repeat frame issue

V11.34 .64 b0.20.45 GA (06-Apr-18)

Summary

The focus for this release was the introduction of the IQUCP25

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40	X	IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- IQUCP25 product introduction

Fixed

- IQMIT-1236, Add Gigalight LR option into the SFP configuration
- IQMIT-1228, Add Frame Sync controls

Known Issues

- IQMIT-1560, Repeat frame issue

V11.30 .62 b0.20.41 GA (13-Mar-18)

Summary

See details below

Product(s) Built

X	IQMIX00		IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR		
X	IQMIX10	X	IQMIX25		KAHUNA IPI40	X	IQUCP50-EP		
X	IQMIX10_KP	X	IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV		
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50		
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50		
	KAHUNA IPO10				S800 5960		KULA IP50		
	KAHUNA IPI10T				S800 5970				
	KAHUNA IPO10T				IQEDGE40_6				

New

- IQMIT-1196, Add Direct Copper entry in the SFP Database
- IQMIT-1108, Adding LLDP support
- Fast upgrade implemented

Fixed

- IQMIT-1209, 4K switching fixes
- Major Ethernet component update to latest QNX driver

Known Issues

- IQMIT-1560, Repeat frame issue

V10.67 .53 b0.12.92 GA (17-Nov-17)

Summary

See details below

Product(s) Built

X	IQMIX00		IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
X	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- Added support for configuration of RTP payload types

Fixed

- IQMIT-1128, Invalid RTP timestamp on audio flows with switched SDI
- IQMIT-1120, Upgrade process broken when CRC check detects file CRC error
- IQMIT-1072, Rapid series of crosspoints can result in incorrect final tally state
- Added support for configuration of RTP payload types
- Various logging enhancements
- Various minor fixes

Known Issues

- IQMIT-1560, Repeat frame issue

V10.53 .52 b0.12.69 GA (10-Oct-17)

Summary

This release saw the introduction of the IQEDGE25 and IQEDGE40 products

Product(s) Built

X	IQMIX00	X	IQEDGE25_6	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
X	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE40_6		

New

- IQEDGE-40 - 3U/4U Frame, 2x PSU + IQEDGE 40GE Rear Assembly

Fixed

- IQMIT-1075, SMPT2022-6 IP has incorrect SDI line numbers
- Various high availability manager improvements
- Various IGMP improvements
- Various FPGA programming improvement
- Various minor fixes / enhancements

V10.40 .52 b0.12.55 GA (09-Sep-17)

Summary

See detail below

Product(s) Built

X	IQMIX00	X	IQEDGE25	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
X	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T			X	IQEDGE40		

Fixed

- IQMIT-1066, Update QNX to incorporate latest ARM Errata fixes
- IQMIT-1054, Modified code to be able to support 12x3G-SDI on MIX40
- IQMIT-1050, Corrupted Ethernet packets causing network flooding
- IQMIT-1036, TPG caption improvements
- Various logging enhancements
- Various minor fixes

V10.24 .50 b0.12.36 GA (25-Jul-17)

Summary

See detail below

Product(s) Built

X	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- Added power safe file system
- Quad link support incorporated

Fixed

- IQMIT-976, Added destination timing page
- IQMIT-905, Enabled 25G FEC by default
- IQMIT-980, Upgraded improvements - to address no free space
- IQMIT-971, Fix for SDI flickering
- Various logging enhancements
- Add support for additional SFPs
- Various FPGA programming improvements
- Various minor fixes

V8.98 .39 b0.4.386 GA (16-May-17)

Summary

Various minor bug fixes for the MIX40

Product(s) Built

	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

Fixed

- Various minor fixes

V8.95 .39 b0.4.378/3780 GA (17-May-17)

Summary

See below

Product(s) Built

X	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
X	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- MIX10_KP released
- MIX10 released with b0.4.3780
- Added support for the IQH4B chassis

Fixed

- IQMIT-933, SMPTE2022+AES 67 with 125uS packet time causes SDI CRC errors
- IQMIT-913, IQMIT-917 added SMPTE 352 option
- Various quad link improvements
- Various logging fixes
- Various minor fixes

V8.84 .38 b0.4.367 GA (07-Apr-17)

Summary

See below

Product(s) Built

X	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
X	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

Fixed

- Various genlock enhancements
- IQMIX-850, added support for per flow RTP discontinuity measurement
- Various logging fixes
- Various minor fixes

V8.72 .34 b0.4.354 GA (15-Mar-17)

Summary

See below.

Product(s) Built

X	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
X	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- IQEDGE-25 - 3U/4U Frame, 2x PSU + IQEDGE 25GE Rear Assembly
- Add SFP configuration page and support for 25GbE

Fixed

- Add high availability manager
- Various SFP enhancements
- Various upgrader improvements / logging / instrumentation
- Various logging enhancements / fixes
- Various PTP enhancements
- Various minor fixes / enhancements

V8.12 .16 b0.4.204 GA (16-Nov-16)

Summary

The release introduced the IQMIX4010 and IQMIX4000 products.

Product(s) Built

					X				
	IQMIX00		IQEDGE25	X	IQMIX40		MV-820-IP-REAR
	IQMIX10		IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
X	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- IQMIX4000 4K/3G/HD/SD-SDI Multi Ch 40GE IP Transceiver
- IQMIX4010 4K/3G/HD/SD-SDI Multi Ch 10GE IP Transceiver
- MBB / BBM controls added

Fixed

- IQMIT-586, Broken RFC4175
- Various SFP fixes
- Various IGMPv3 fixes
- Various logging fixes

V7.0 .5 b0.40.41 GA (04-Oct-16)

Summary

This release introduces the IQMIX2500 product

Product(s) Built

	IQMIX00		IQEDGE25_6		IQMIX40		MV-820-IP-REAR
	IQMIX10	X	IQMIX25		KAHUNA IPI40		IQUCP50-EP
	IQMIX10_KP		IQUCP25-EP		KAHUNA IPO40		IQUCP50-MV
	IQMIX4010		IQUCP25-MV		KAHUNA IPI40T		KAHUNA IPI50
	KAHUNA IPI10				KAHUNA IPO40T		KAHUNA IPO50
	KAHUNA IPO10				S800 5960		KULA IP50
	KAHUNA IPI10T				S800 5970		
	KAHUNA IPO10T				IQEDGE40_6		

New

- MIX25 candidate release to the field