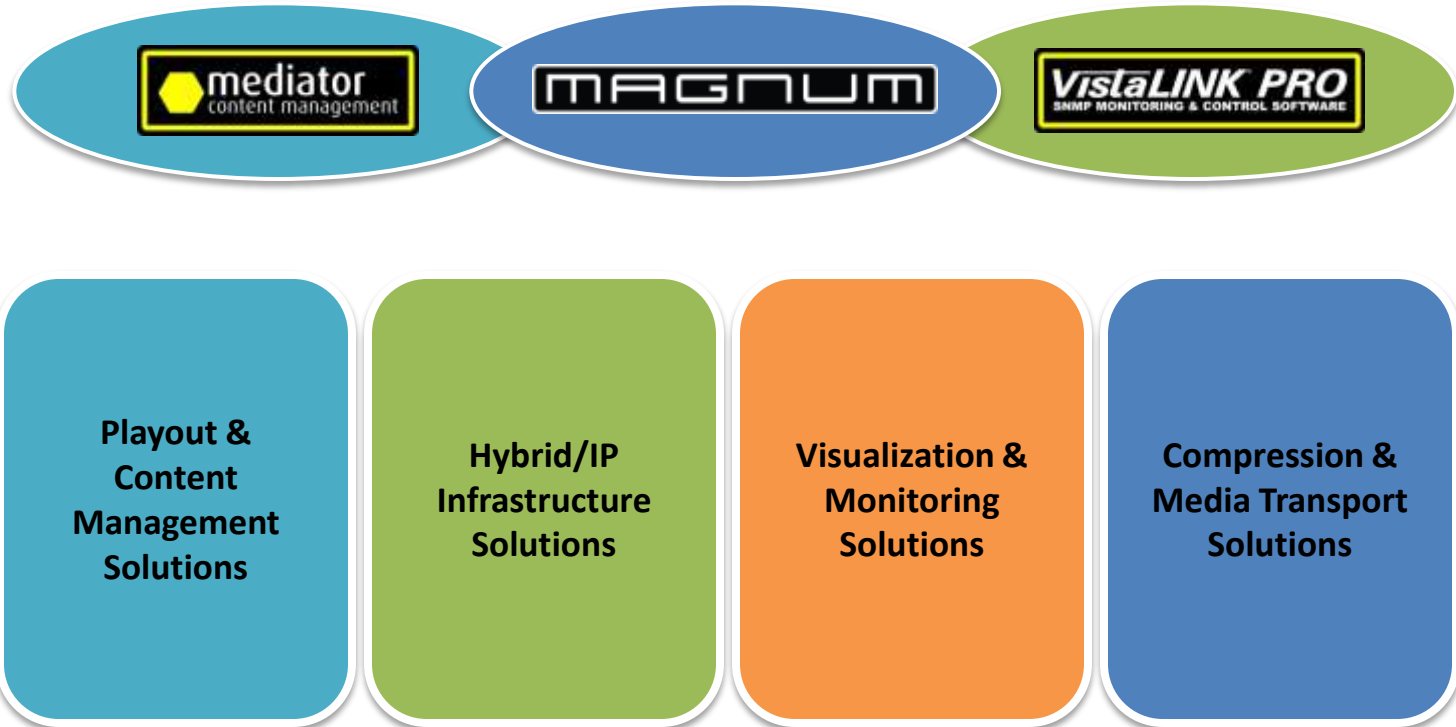


Introduction to the EQXM and EQX10



The Complete Solution Provider



EQXM and EQX10... Part of the EQX FAMILY



EQX10
180x180 + 15 XLINK



EQX16
288x288 + 27 XLINK



EQX26
576x576 + 18 XLINK



EQXM
1152x1152
+ AVIP/AVOP

EQXM



- 1152 x1152 Simplified
- Low Power Consumption
- N+N Redundant Power, Cooling & Control
- Same Path by Path redundancy used in the 2 Frame EQX26 solution

EQXM



- Input / Outputs
 - 3G/HD/SD-SDI
 - Fiber
 - MTP In/Out
 - SFP
- Hybrid 10GbE interfacing
 - Via Top of rack
 - 3000REM-TX9 / 3000REM-RX9

EQXM

FRONT INSIDE VIEW & REAR PLATE OPTIONS



COAX



**FIBER MTP
IN**



**FIBER MTP
OUT**



FIBER SFP

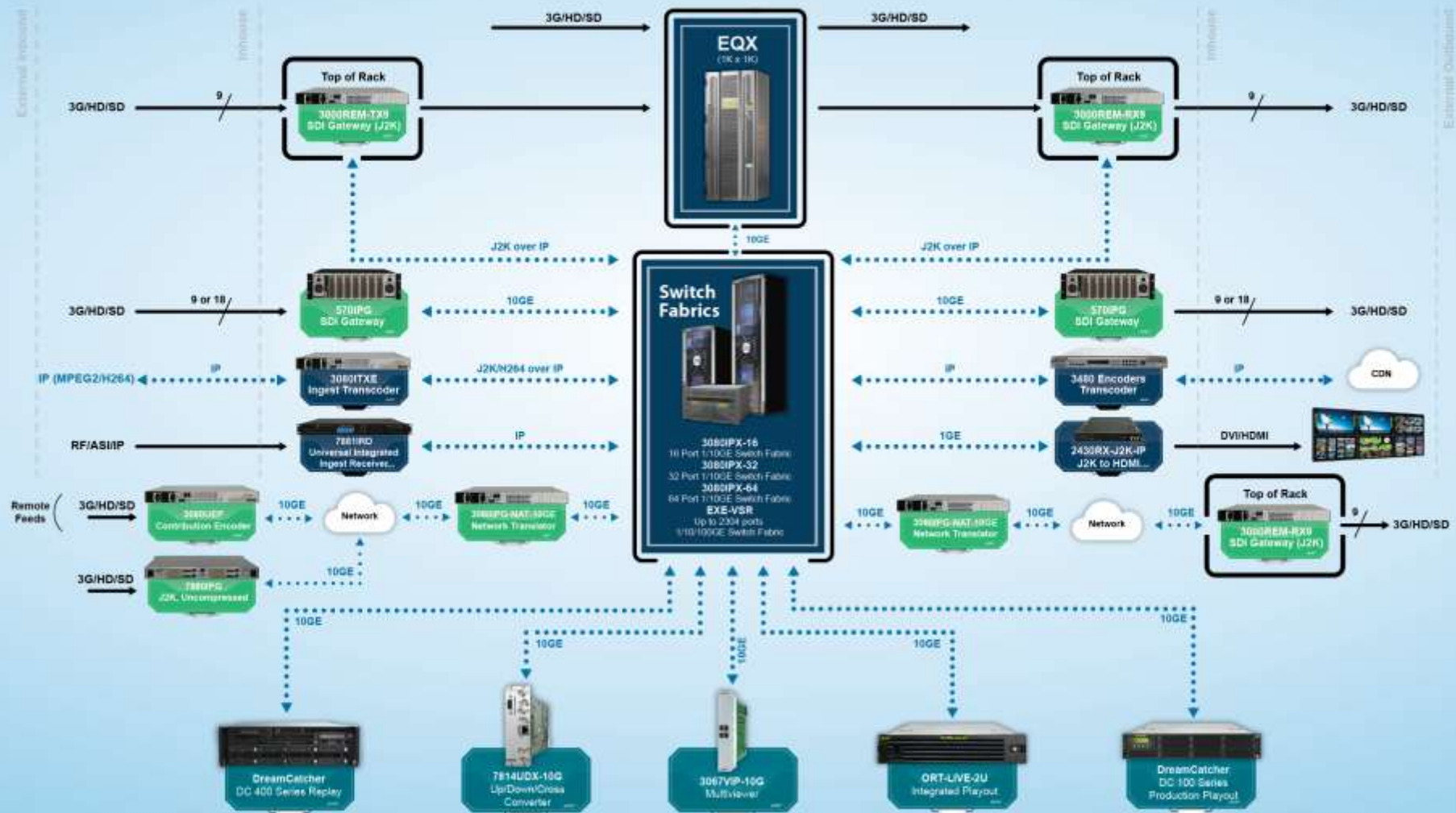
SDVN Hybrid



Content Management & Automation

SDVN Orchestration & Control

Network Management



Hybrid System



EQXM vs. EQX 2 Frame 1152x1152



- Less total RU space than the 2 x 26RU
- No interconnecting cables
 - 76 XLINK for the 2 Frame
 - All in one vs. 2 Independent Frames
- EQXM supports AVIP/AVOP
 - Embedding and de-embedding functionality



POWERED BY





NEW

EQX10



- Same characteristics/ architecture as EQX16 and EQX26
- Redundancy, etc.
- Suitable for small to midsized applications like stadiums, small network, local broadcaster, corporate applications, smaller trucks and mobile flight pack applications.

EQX10



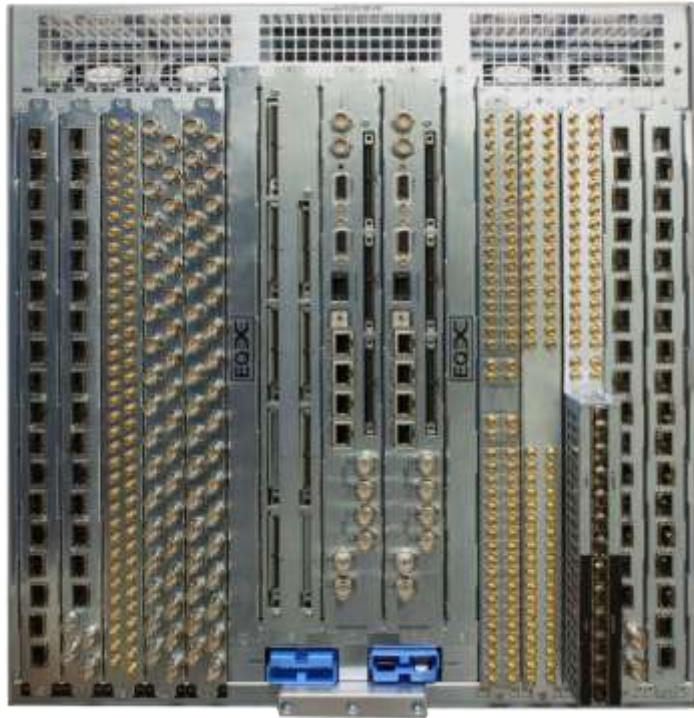
- Features a new compact dense crosspoint utilizing the same Green technology found the other EQX crosspoints
- Uses Evertz time proven robust EQX Frame controller module

EQX10



- The EQX10 offers X-LINK connections from both of the EQX10 frame options
- **EQX10-FR**
 - 6 X-LINK connections
- **EQX10-FR-XLINK**
 - 15 X-LINK connections
 - That's **480** outputs!!!

EQX10



- All Input modules, Output modules and rear plate options are **common** across the EQX 10RU, 16RU and 26U frames
 - 3G/HD/SD-SDI
 - Fiber I/O
 - 10GbE
 - AVIP/AVOP

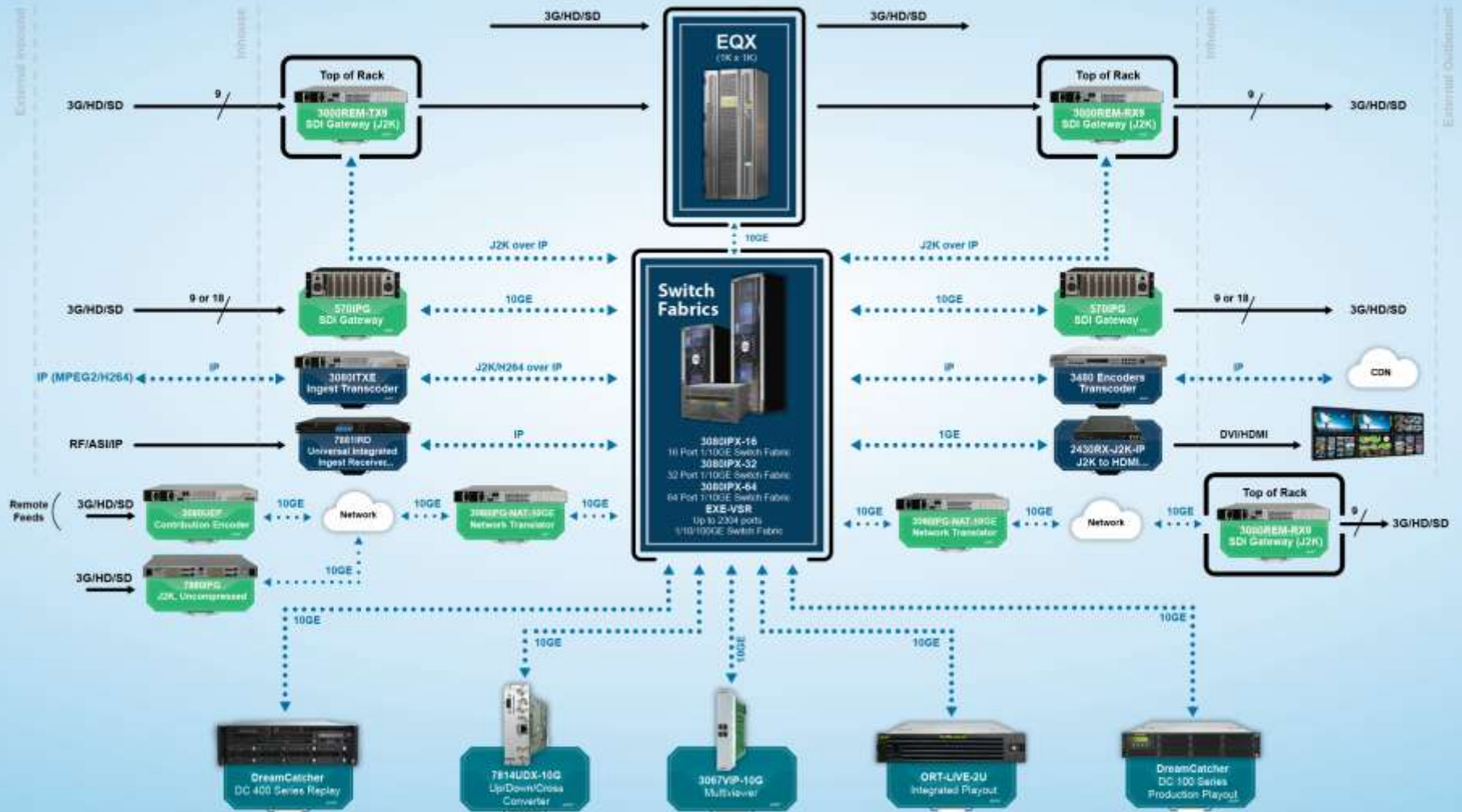
SDVN Hybrid



Content Management & Automation

SDVN Orchestration & Control

Network Management

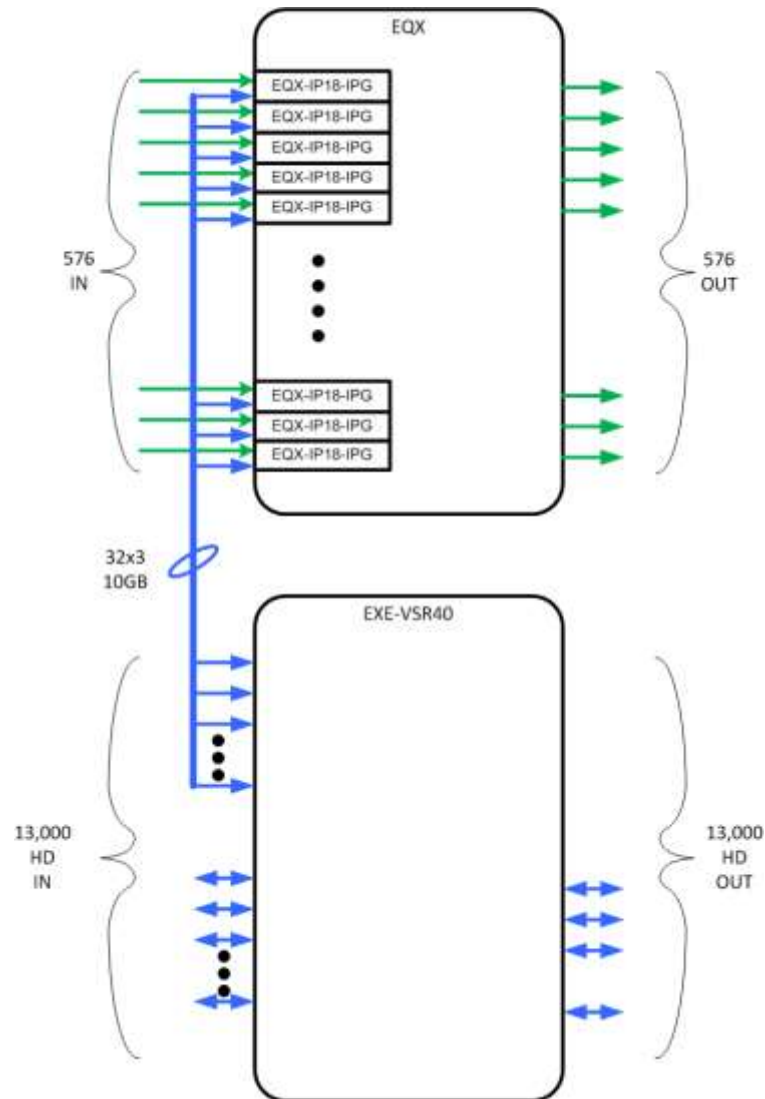


EQX-IP18-IPG

- Migrate to 10GbE/IP seamlessly
- 18 3G/HD/SD-SDI inputs
- 6 x 10GbE
 - 3 x 3G per 10GbE
 - 6 x HD per 10GbE
- Primary and Redundant 10GbE



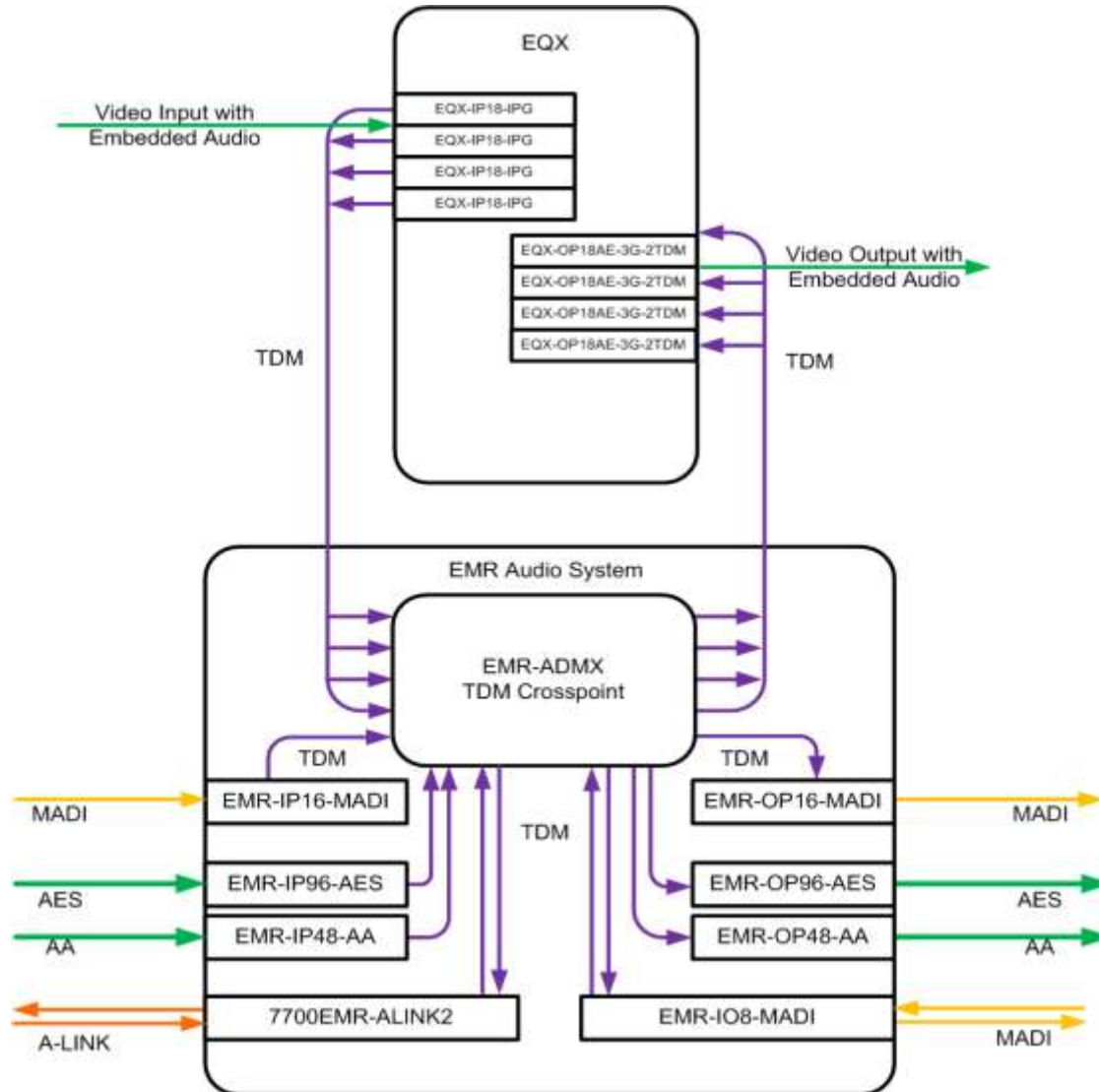
Hybrid SDVN Solution



Hybrid Audio Solution



Hybrid Audio Solution





EQX FAMILY



EQX10
180x180 + 15 XLINK



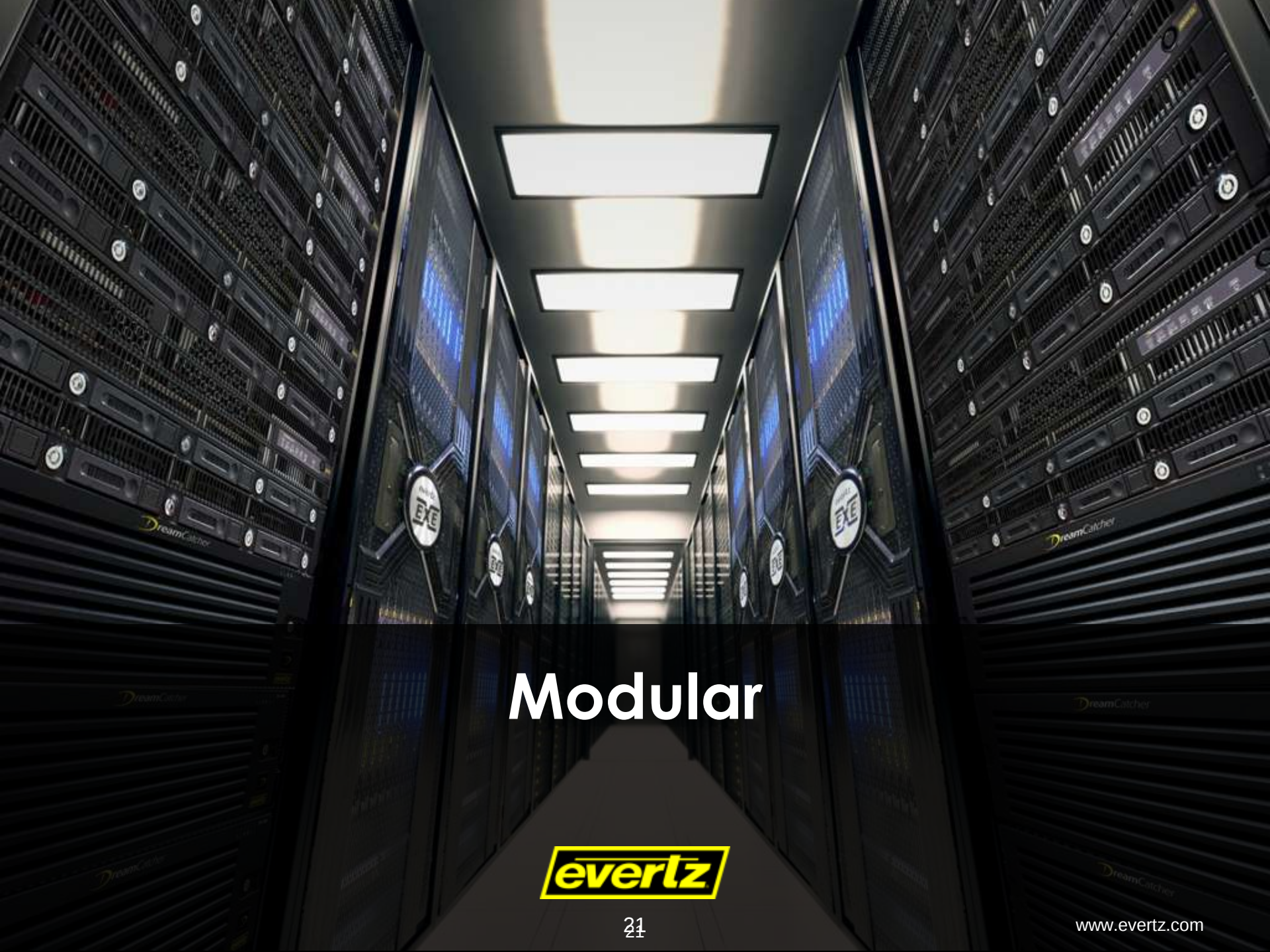
EQX16
288x288 + 27 XLINK



EQX26
576x576 + 18 XLINK



EQXM
1152x1152
+ AVIP/AVOP



Modular





**7815VPDA
AKA
THE “SUPER DA”**

7815VPDA-3G/HD-F-2

- Ideal for applications requiring **inbound feed distribution/processing and in-house/cross facility IPTV monitoring**
- High density dual path processing (14 paths in 3RU) **WITH dual streaming encoding**
- Integrated fiber/coax inputs
- 2x DA COAX, 6x PGM COAX outputs, 4x fiber out per path



7815VPDA-3G/HD-F-2

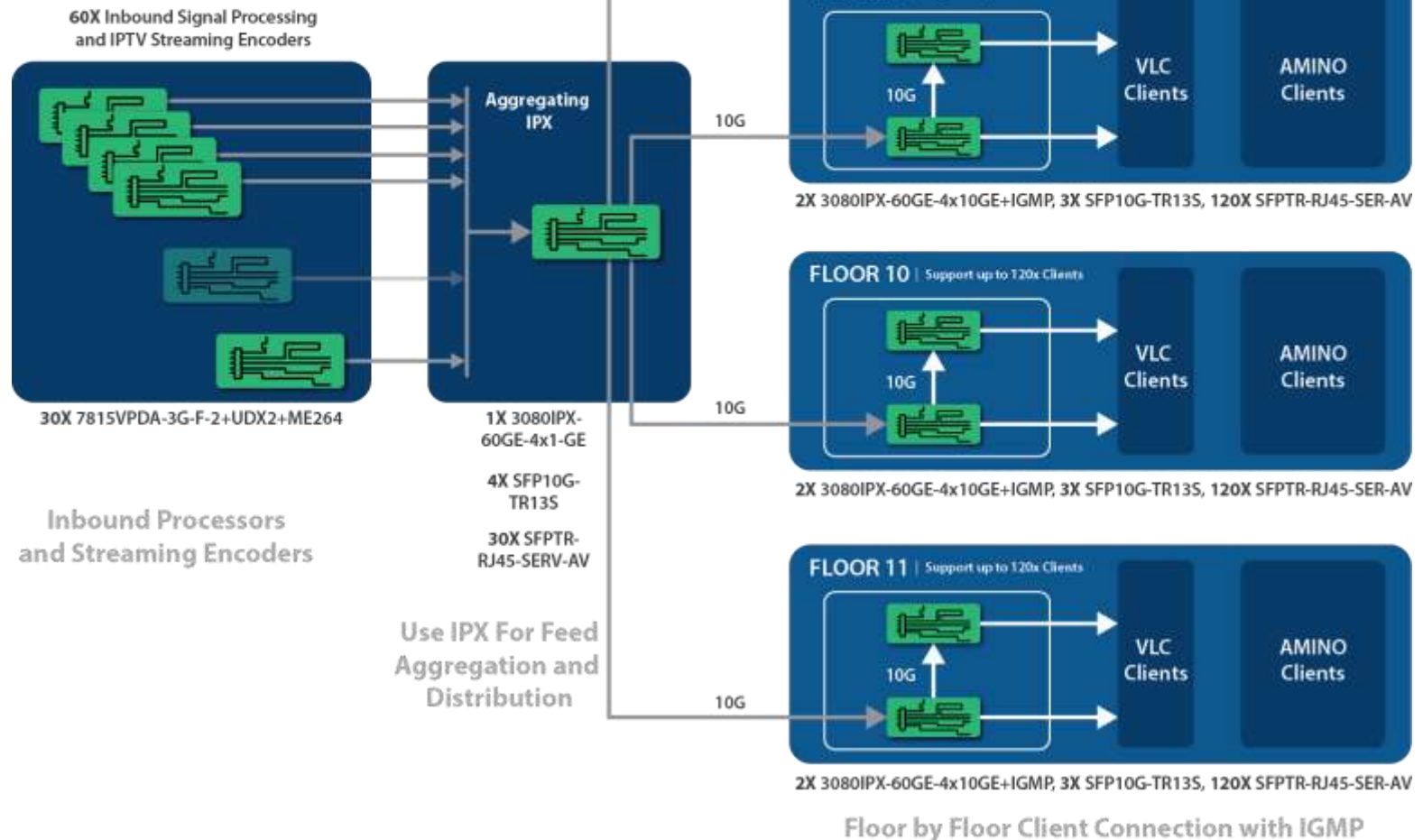
- Optional dual path frame synchronization
- Optional dual path up/down/cross conversion
- Comprehensive video proc controls
- Common rear plate between
 - simple Intelligent DA (IDA) and,
 - advanced Video Processing DA (VPDA)
- Source Identification (SID) stamping
- ...and more....and moreand more...



7815VPDA-3G/HD-F-2

- Optional embedded StreamLINK Encoding (1x per path)
 - Additional up/down/cross conversion core dedicated for each streaming encoder
 - Support for MP2/H264 encoding and AAC audio encoding
 - Awesome video encoding quality

The Evertz System Solution...



7815VP-STB

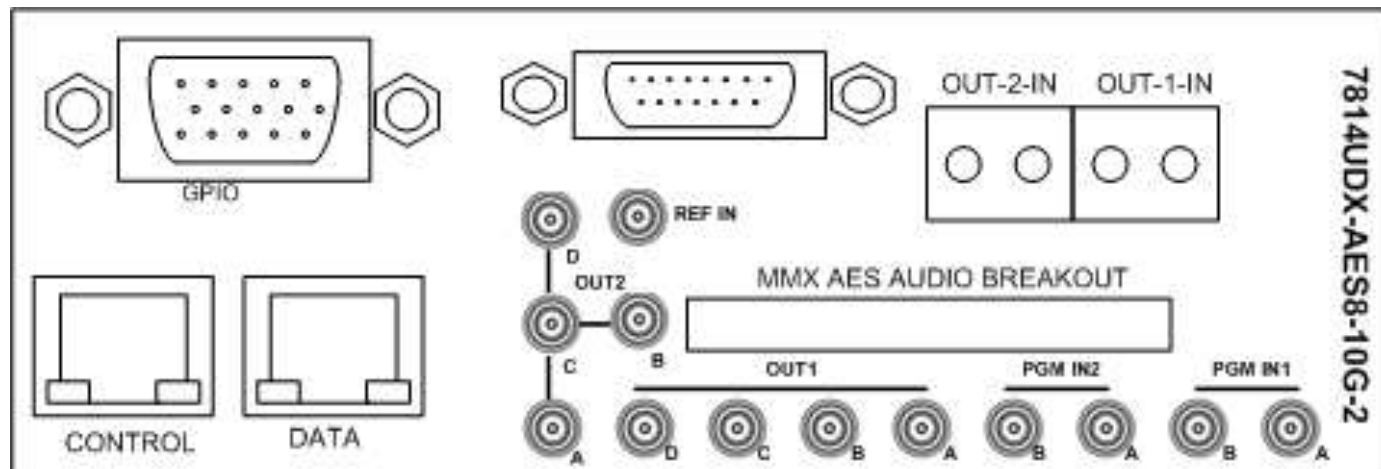
- VPDA + “typical” set top box interfaces
- HDMI, component analog HD/SD, AA, TOSSLINK
- Dual channel remote monitoring solution for STB with integrated IR control

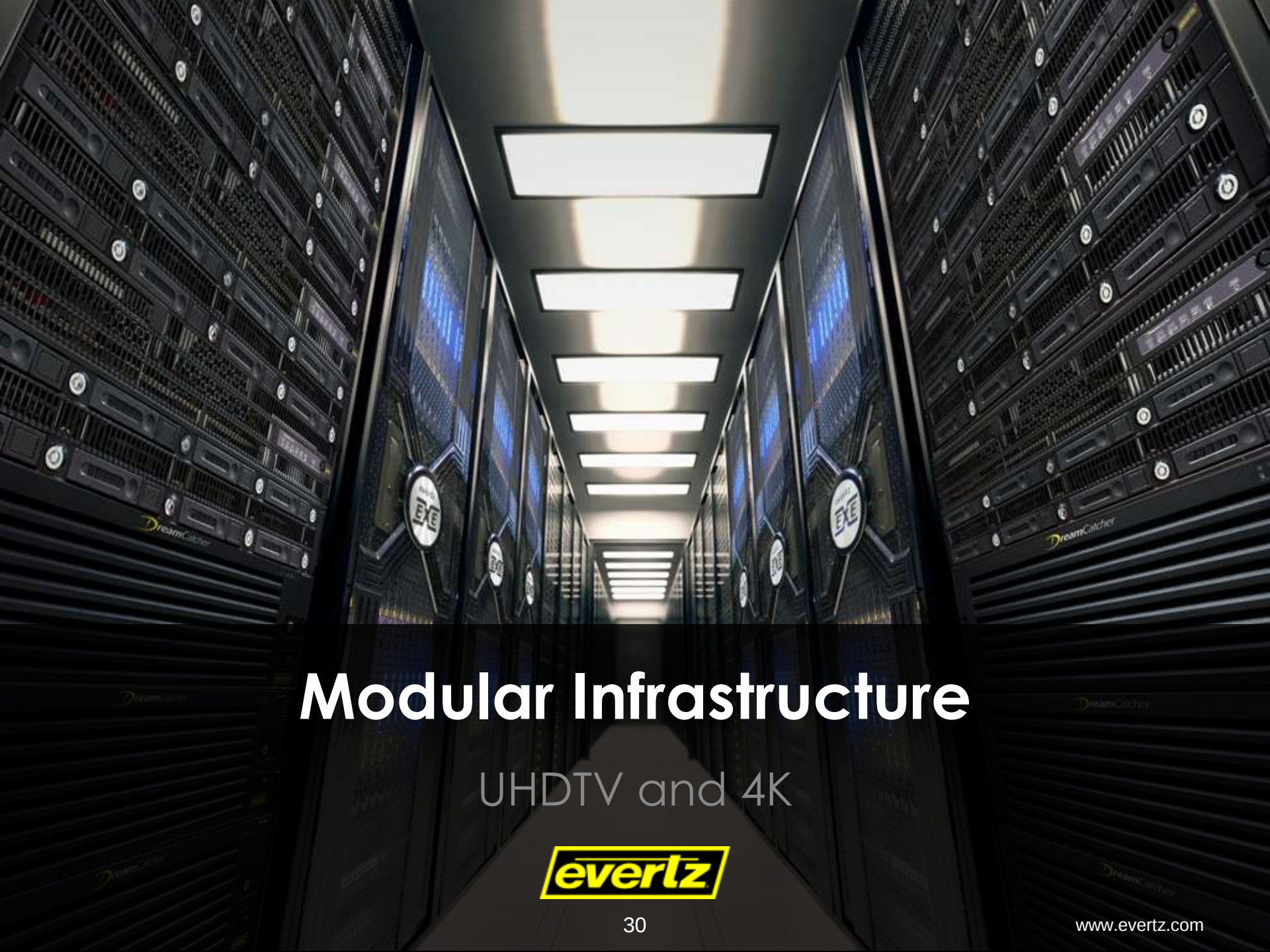
10G Modular Processing

- Its simple and easy with the 7814UDX-AES8-10G-2
- All the features we are familiar with in the UDX series
- Dual path UDX processing
- Simultaneous support for 10G and SDI based I/O

10G Modular Processing

Its simple and easy with the 7814UDX-AES8-10G-2





Modular Infrastructure

UHDTV and 4K

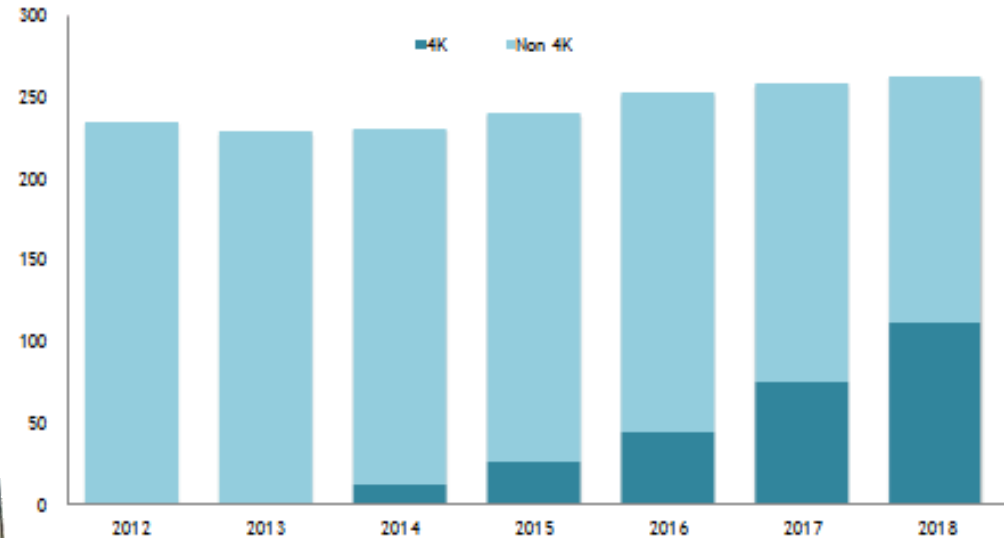


What is Driving Ultra HD

4K TV MARKET OUTLOOK

4K to account for 42% of Global TV Sales in 2018

Shipments (M units)



futuresource
CONSULTING



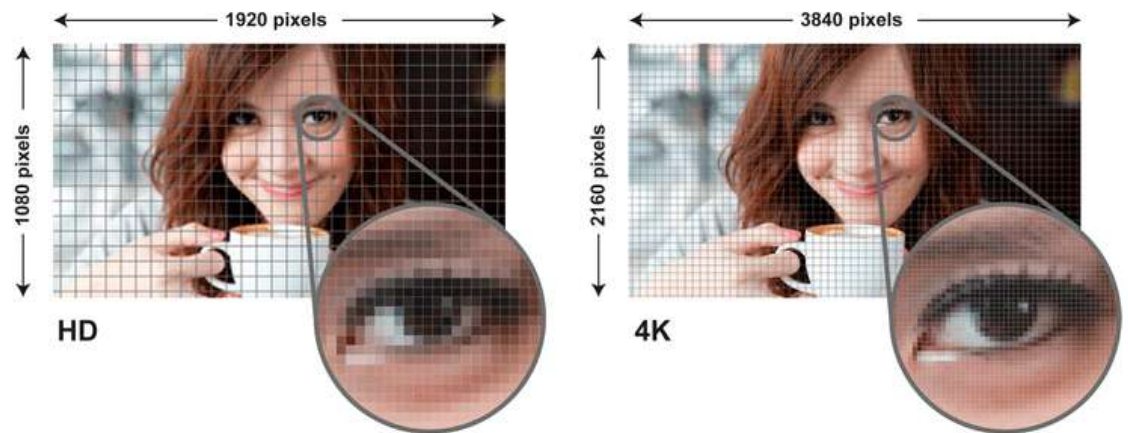
Content Rules

- OTT providers first to market
- Not enough bandwidth - need HEVC
- Broadcasters waiting for content
- Unsure of revenue potential
- Sports a driver



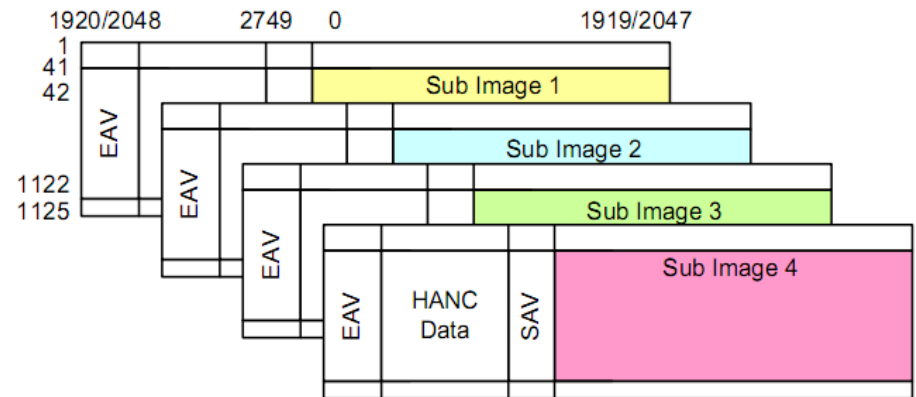
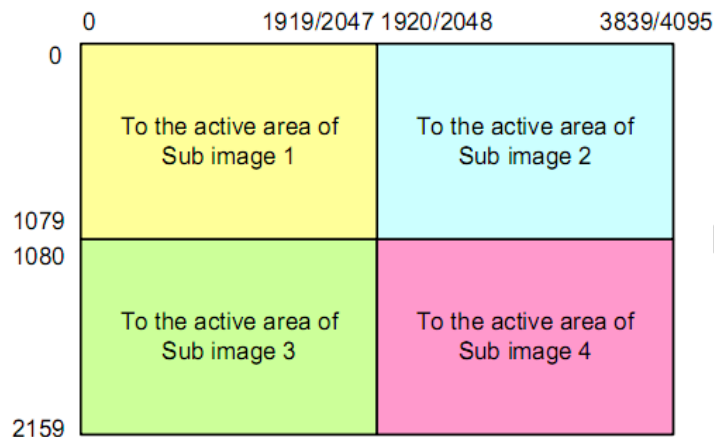
Revolution not Just Resolution

- Better pixels and not just more pixels
- Higher Dynamic Range (HDR)
- Higher Frame Rate (HFR)
- Higher Bit Depth
- Better Sound
- Better UX



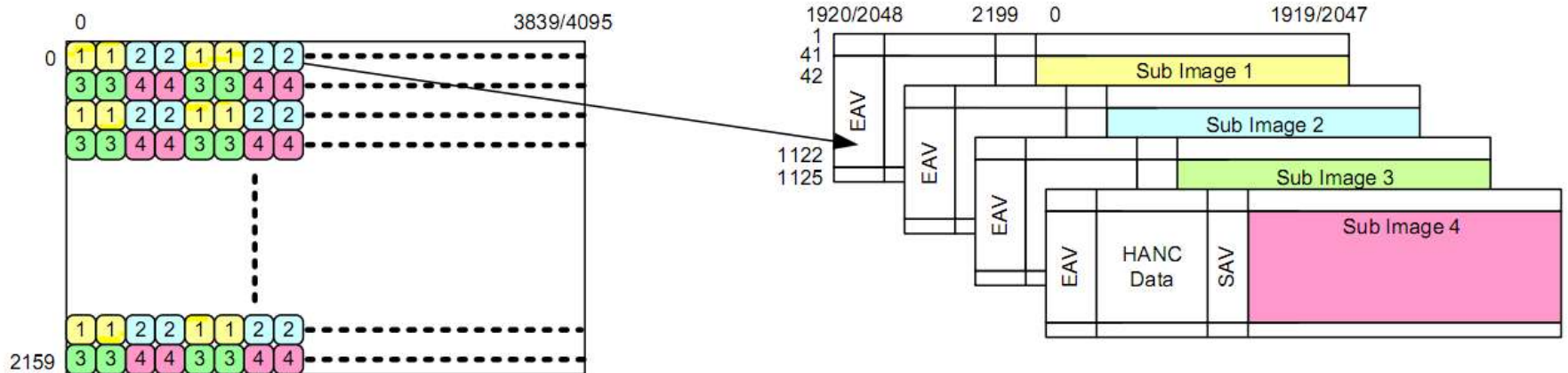
Square Division

- Current method used by majority of equipment
- Designed before UHDTV monitors available
- Processing delay of 1 frame
- Not standardized



2-Sample Interleave Division

- SMPTE ST 425-5 released in April of 2014
- Only 2 samples of latency for processing
- Each sub image contains entire picture
- Supports payload ID

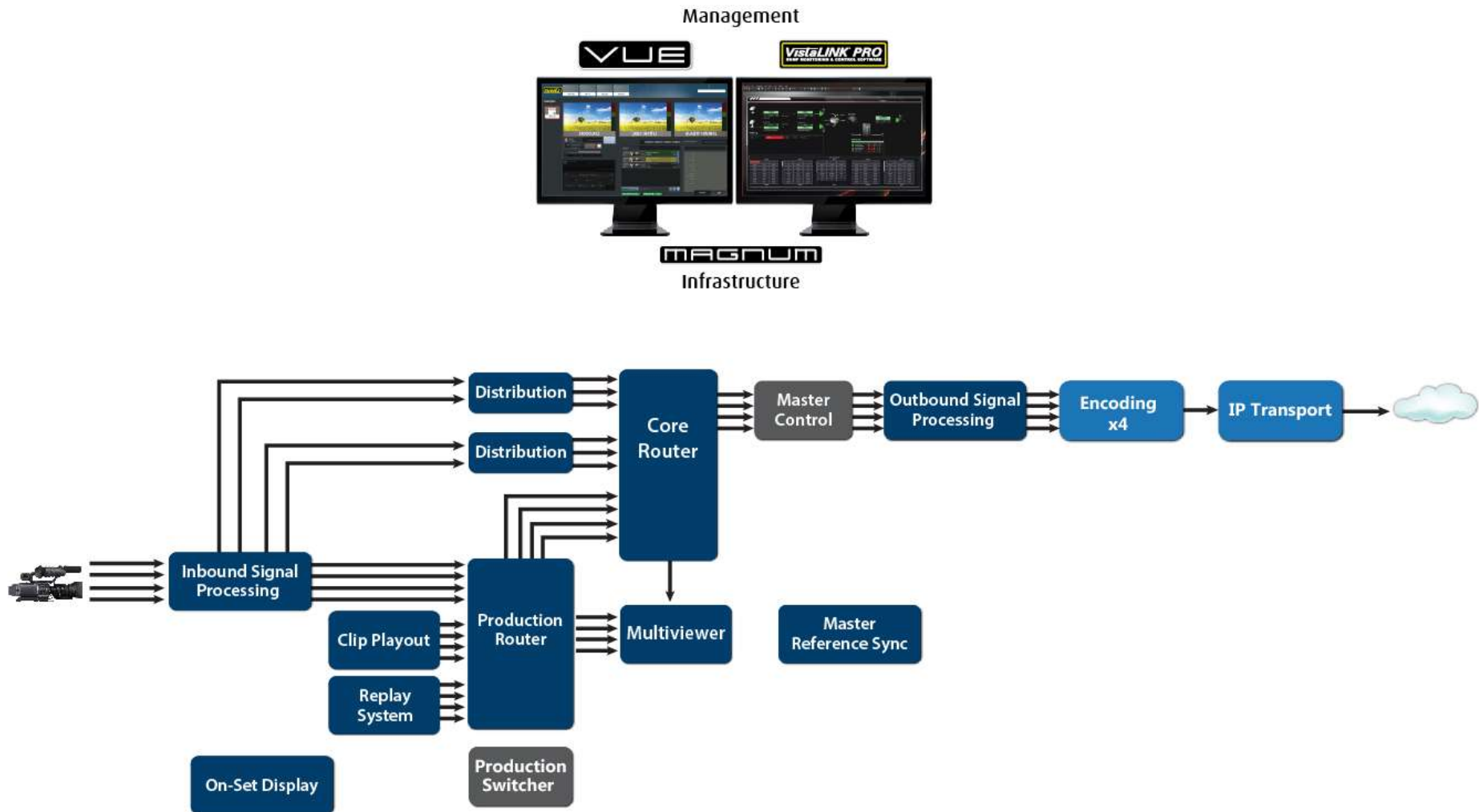


What we Have Today

- 5601MSC+4K
- 3G routers (EQT, EMR, EQX)
- Magnum and VUE
- 3G Multi-viewers (MVP, VIP)
- 7814UDX-AES8-4K
- DreamCatcher
- 3080UEP Encoder



Ultra HD Live Production

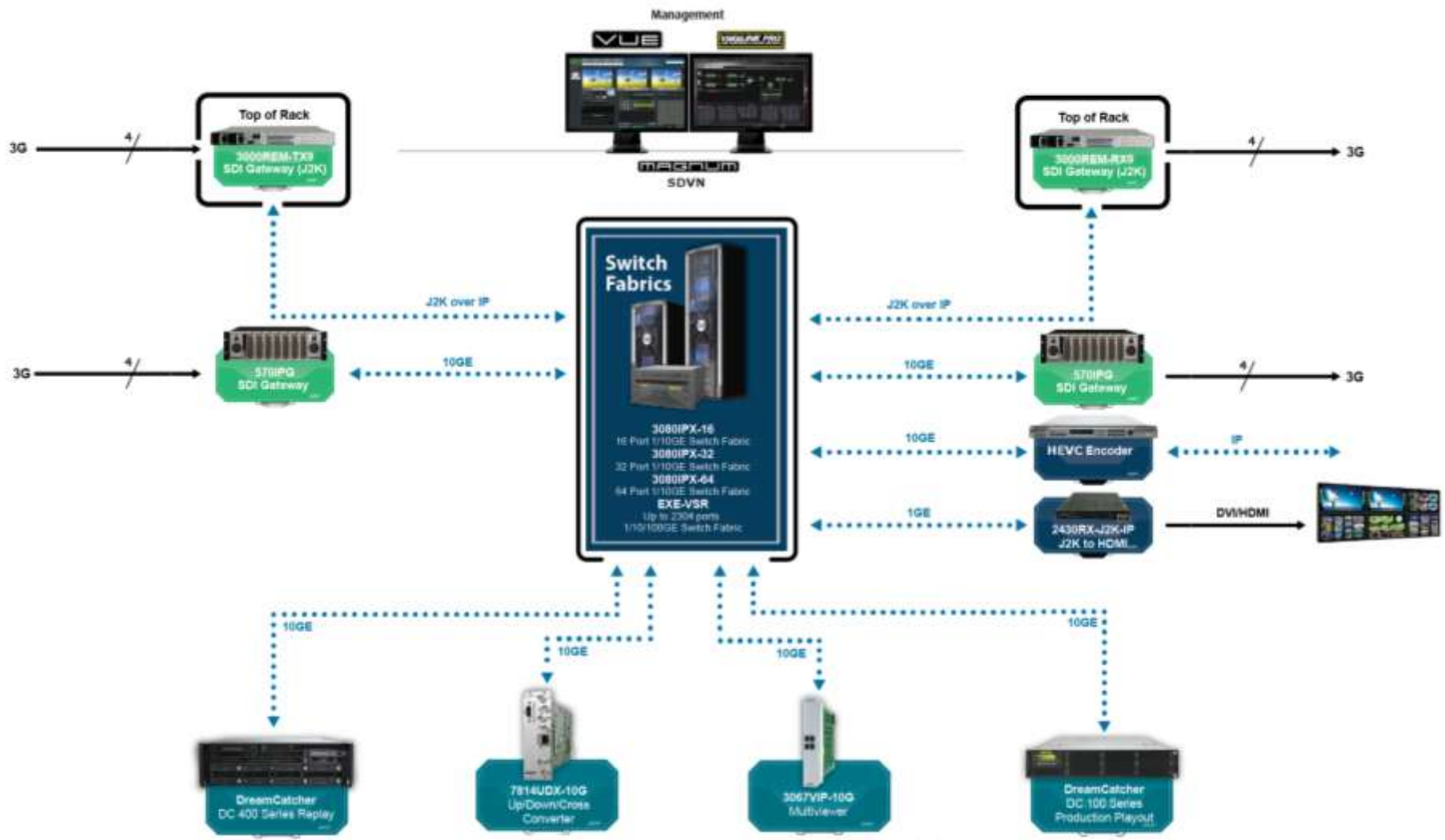


Opens Door for IP

- 4X SDI cables not practical
 - 4X resources == 4X cost
 - Sync problems
 - Weight of cables
 - More points of failure
- 6GB and 12 GB extended SDI
 - Cable length limitations
 - Not future proof (8K?)
 - Baseband only



Ultra HD Production Using IP





Multiviewer Systems



MVP facts

- Build on 6RU platform
- Redundant power supply
- Hot swappable
- Build for 24/7 operation
- Fast boot time(45 sec)

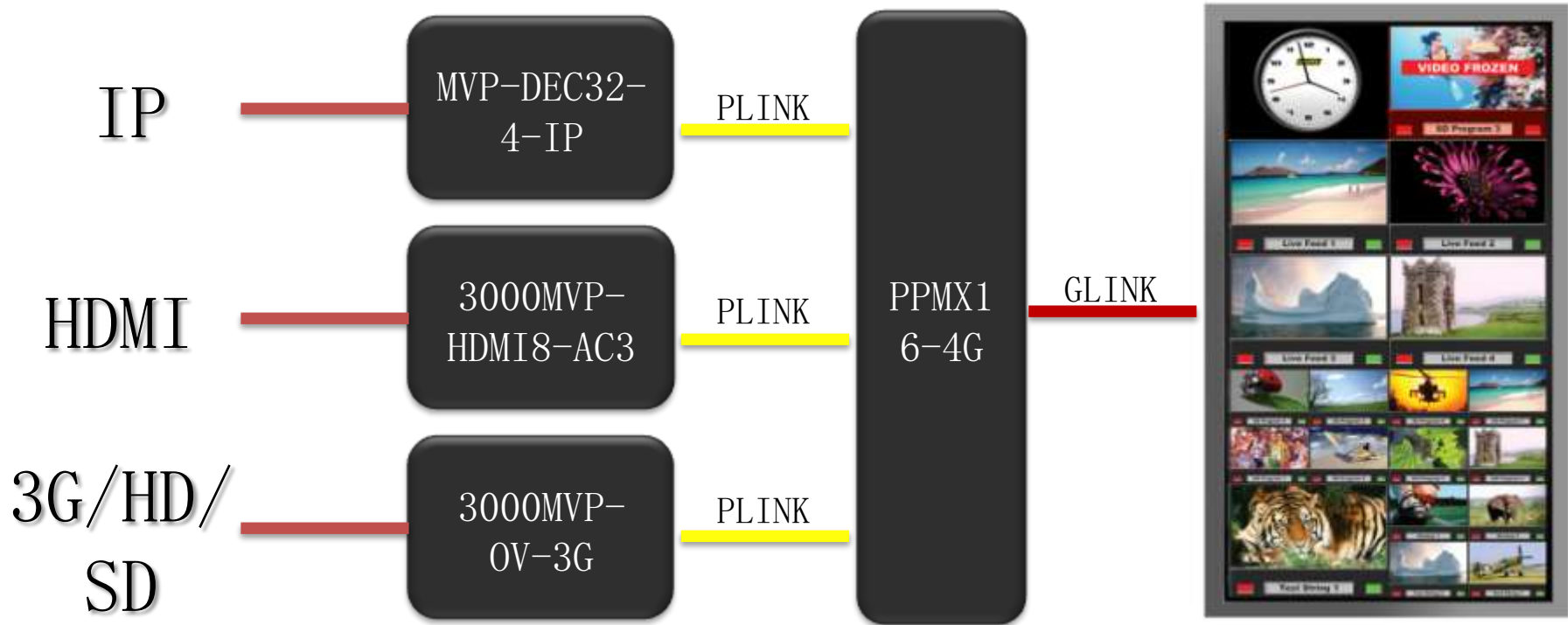


MVP facts

- Industry's Most Reliable monitoring platform
- Expandable from 8 input to display system up to 1024 input to 64 displays. No need for upstream router
- Proven track record: **5000+ installs**



Mixed Signal Processing



IP and HDMI can be added to an existing MVP install

MVP and VIP's

Workhorse for last 10 Years

Installs in Last 2 years:

MVP systems : 200+

VIPA's & VIPX : 3000+

MVIP & DEC32: 250+

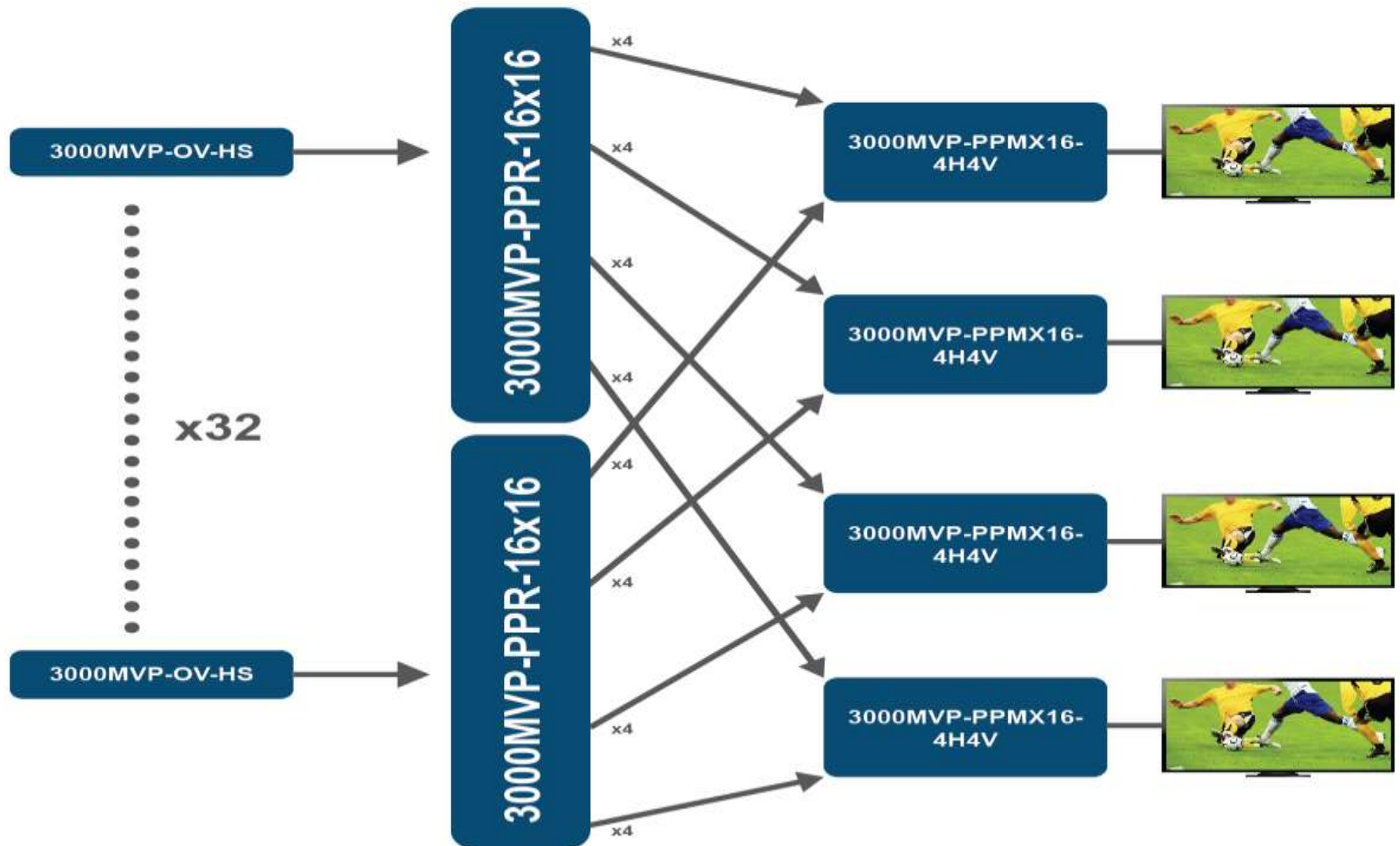
IP Multiviewers

New Products:

- 3067VIP10G-J2K-HW
- 3067VIP10G-3G-HW
- 2430RX-J2K-IP
- 2430RX-J2K-IP-EFX
- 2430RX2-10G
- MVP-DEC-32-4-IP
- MVIP-II

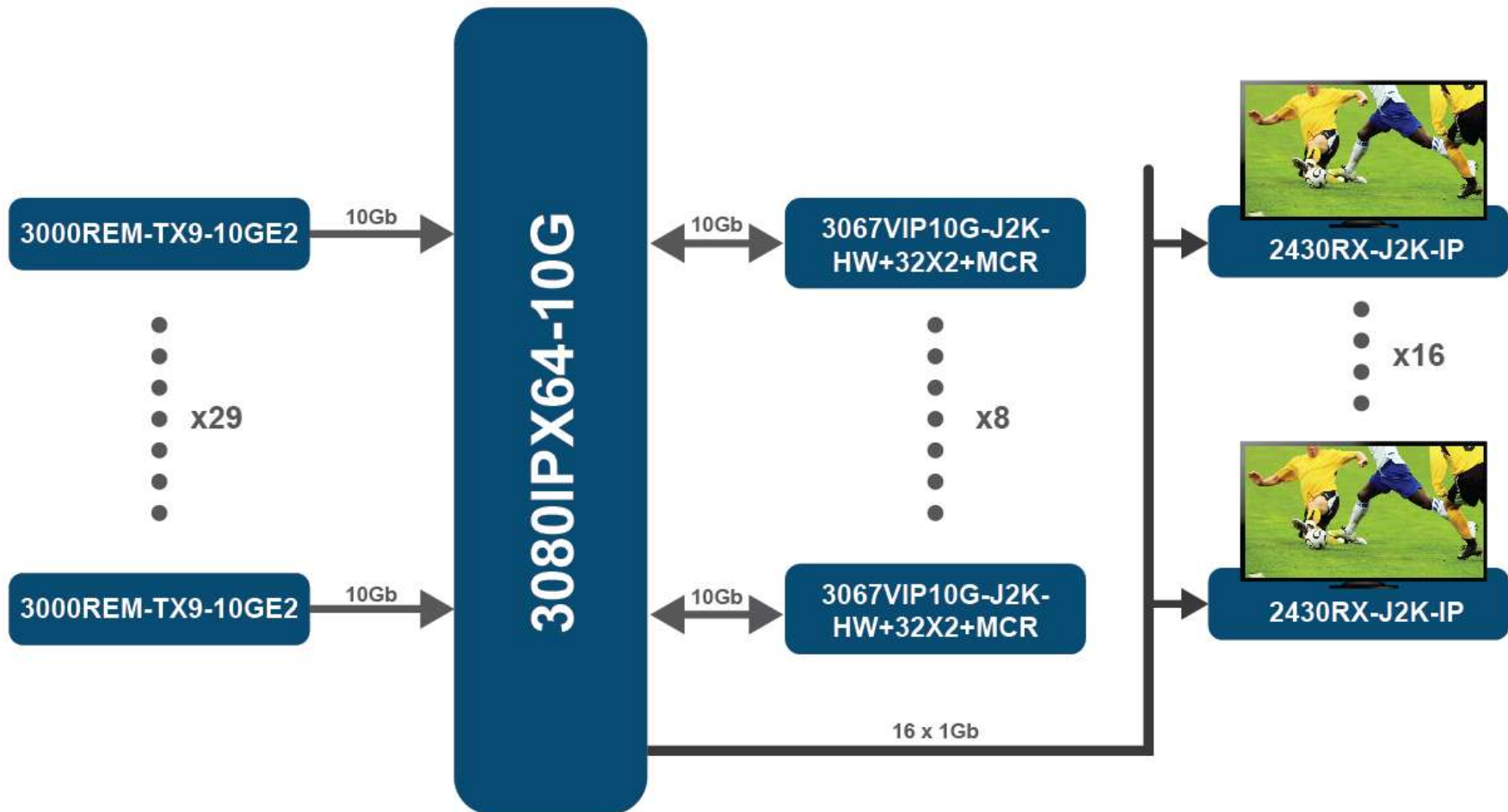
MVP System 256 Input to 16 Output

MAGNUM



Next Generation Monitoring System 256 Input to 16 Output

MAGNUM



Advantage

- MAGNUM manages as a pooled resource
- No restrictions
- Display output not required for fullscreen
- Scale engine based on conversion product for best picture quality
- VistaLINK-enabled for AVM monitoring and control
- Web based design
- Unlimited presets
- Recall through VUE-Web , Smart Panel or VUE

Design Tool



Design Tool



3067VIP10G-J2K-HW



Head Ends: MSO, IPTV,DTH
PCR,OB

3067VIP10G-J2K-HW

Hardware:

- Modular
- 2 Slot
- Fits into EMX6-FR, EMX3-FR or EMX1-FR
- Hot swappable
- 4 x SFP Cage
- Up to 2 x10G port active
- Up to 2 x SDI outputs
- Dual control network support via EMX-FC



3067VIP10G-J2K-HW

Mandatory Option:

I/O Option	# Decodes	# Outputs	Max Image Per Display
+32x2	32	2	16
+24x2	24	2	12
+16x2	16	2	8
+32x1	32	1	32
+24x1	24	1	24
+16x1	16	1	16
+12x1	12	1	12

- J2K encoded mosaic outputs
- SDI output (optional)

3067VIP10G-J2K-HW

Monitoring Options:

+SM (Standard Monitoring)	+MCR (Advance Monitoring)
Video Loss	XDS decode & monitoring
Video Frozen	CC\subtitle burn-in & monitoring
Video Black	SID decode & monitoring
Audio Loss	AFD\WSS support
Audio Low	Dolby E monitoring
Audio High	Loudness monitoring
Support 4 audio groups	Includes +SM

3067VIP10G-3G-HW



Master Control, Playout
PCR, OB

3067VIP10G-3G-HW

- Modular
- 2 Slot
- Fits into EMX6-FR or EMX3-FR
- Hot swappable
- 32 SFP Cage
- Up to 24 10G ports
- Up to 4 SDI output
- Dual control network support via EMX-FC



3067VIP10G-3G-HW

Mandatory Option:

I/O Options	# Inputs	# Outputs	Max Image Per Display
+36x4	36	4	9
+16x4	16	4	4
+32x2	32	2	16
+24x2	24	2	12
+16x2	16	2	8
+32x1	32	1	32
+24x1	24	1	24
+16x1	16	1	1
+12x1	12	1	1

- Uncompressed output
- SDI output (optional)
- Up to 2 J2K output (optional)

3067VIP10G-3G-HW

Monitoring Options:

+SM (Standard Monitoring)	+MCR (Advance Monitoring)
Video Loss	XDS decode & monitoring
Video Frozen	cc \subtitle burn-in & mon
Video Black	SID decode & monitoring
Audio Loss	AFD\WSS support
Audio Low	Dolby E monitoring
Audio High	Loudness monitoring
Support 4 audio groups	Includes +SM

2430RX-J2K-IP

Hardware:

- Stand alone unit
- 2 x 1GE Data port
- 1 x 1GE Control port
- Output: 1 x HDMI & HD-SDI
- 3 x 3.5mm Jack
- DB9 connector

Features:

- 1 x JPEG 2000 decode
- HDMI and HD-SDI output (mirrored)
- Audio monitoring on HDMI or 3.5mm jack.
- Color correction (+VPGC)
- In band control



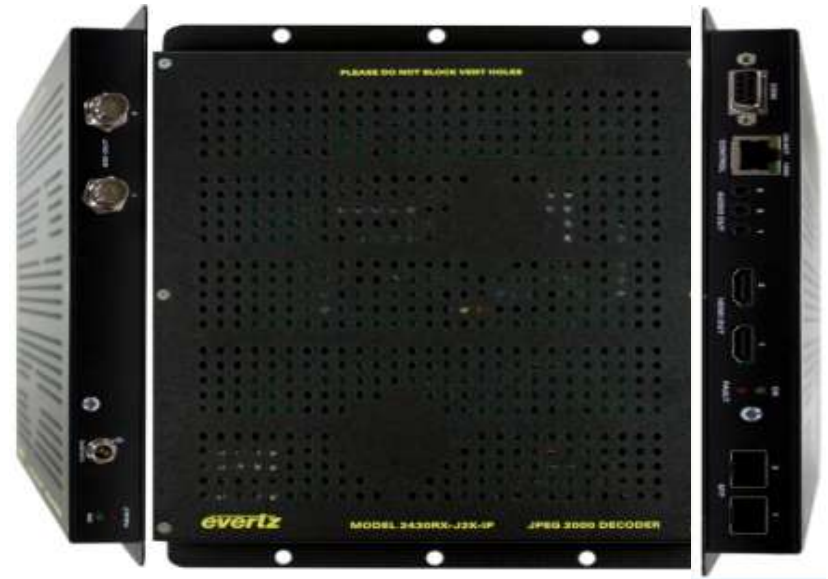
2430RX-J2K-IP-EFX

Hardware:

- Stand alone unit
- 2 x 1GE Data port
- 1 x 1GE Control port
- Output: 1 x HDMI & HD-SDI
- 3 x 3.5mm Jack
- DB9 connector

Features:

- JPEG 2000 decode
- HDMI and HD-SDI output (mirrored)
- Audio monitoring on HDMI or 3.5mm jack.
- Crop, Zoom & Rotate
- Color correction (+VPGC)
- In band control



2430RX2-10G

Hardware:

- Stand alone unit
- Input : 2x 10GE
- Uncompressed 3G/HD/SD
- Output: 2 x HDMI and HD-SDI
- 3 x 3.5 mm Jack
- DB9 connector



Features:

- 2 x Uncompressed 3G/HD/SD input over 10G
- HDMI and HD-SDI output (mirrored)
- Audio monitoring on HDMI or 3.5mm jack.
- Color correction (+VPGC)
- In band control

MVIP-II

MPEG2/H.264 Monitoring

Hardware:

- 2RU
- 2 x DVI output
- 2 x USB port
- 4 x 1Ge RJ45
- Audio output Via 35mm jack



Decoding Capability

- **64 SD MPEG2/H.264 or 32 HD MPEG2 or 16 HD H.264 decode**

MPEG-2 SD (MP@ML)	H.264/MPEG-4 AVC SD (MP@L3)
MPEG-2 HD (MP@HL)	H.264/MPEG-4 AVC HD (MP@L4)
MPEG-4 Part 2	H,264/MPEG-4 AVC HD (High 4:2:2@L4.1)
VC-1 (SMPTE ST 412)	

- **Supports all Major Audio Formats**

MPEG-1 L2 Audio	E-AC3 Audio
AC3 Audio	AAC Audio
Dolby E® Audio monitoring	

- **Supports all major OTT formats HLS, LSS, HDS and MPEG-DASH**

Monitoring Feature

Standard Monitoring Features:

Video Loss	Audio Loss	Bit Rate Graph
Video Frozen	Audio Low	Statmux View
Video black	Audio Loss	Subtitle, DVB subtitle and cc decoding/monitoring
Metadata decoding		

Optional Features:

+REC Fault based ts recording	+ LGM Loudness Monitoring
+MBD Macroblock detection	

Thank you