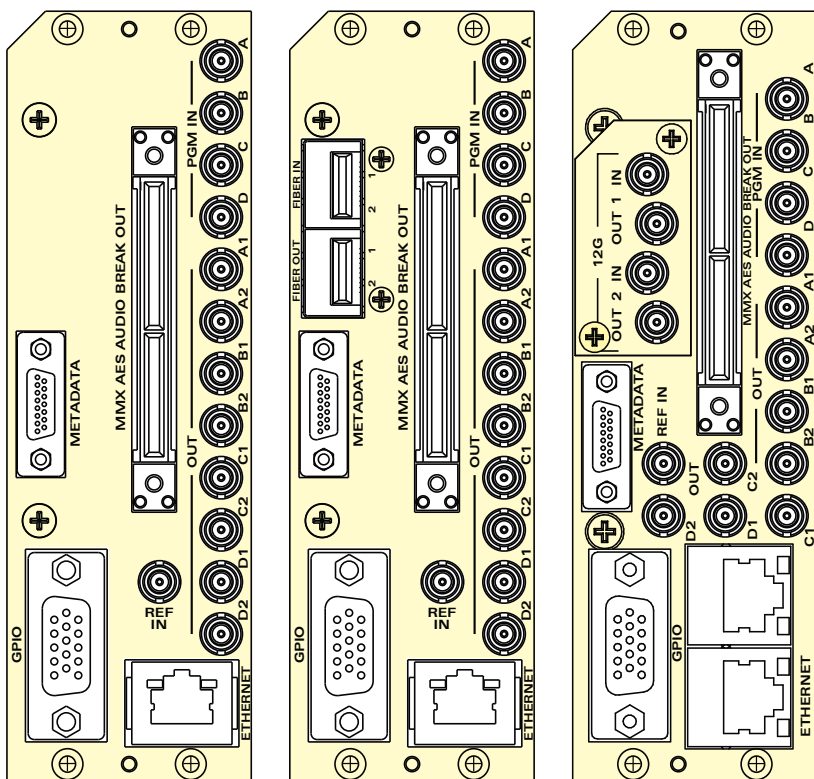# 7814UDX–4K Series

UHD/12G/3G/HD Up/Down/Cross Converter with Frame Sync

Addressing the needs of content producers and distributors to supply UHD, 3G and HD content in parallel, the **7814UDX–4K**, **7814UC–4K**, **7814HDC–4K** and **7814XC–4K** are a series of broadcast quality up/down/cross converters that convert between common HD/SMPTE ST 292M, 3G/SMPTE ST 424M and UHD signal formats including SMPTE ST 2082. Variants are also available to support up conversion, down conversion and cross conversion between square division and 2SI UHD signal formats.

L to R: **7814UDX–4K***,* **7814UDX–4K–12G** *and* **7814UDX–4K–12G–HDBNC–R**

The 7814UDX/UC/XC/HDC–4K series supports broadcast quality video conversion. Advanced motion adaptive spatial–temporal (3D) noise reduction and next generation de–interlacing techniques ensure superior resolution and artifact reduction, generating the highest quality video suitable for broadcast and other professional media applications. Optionally available video processing features (+VPROC option) include full broadcast quality color correction for SDR video signals and detail enhancement processors along with RGB–based color legalization.

The 7814UDX–4K series products are also HDR capable (with +VPROC and +HDR options), have HDR color correction and can up/down/cross convert SDR and a range of HDR formats, including SMPTE ST 2084 (PQ), HLG and S–Log3. It
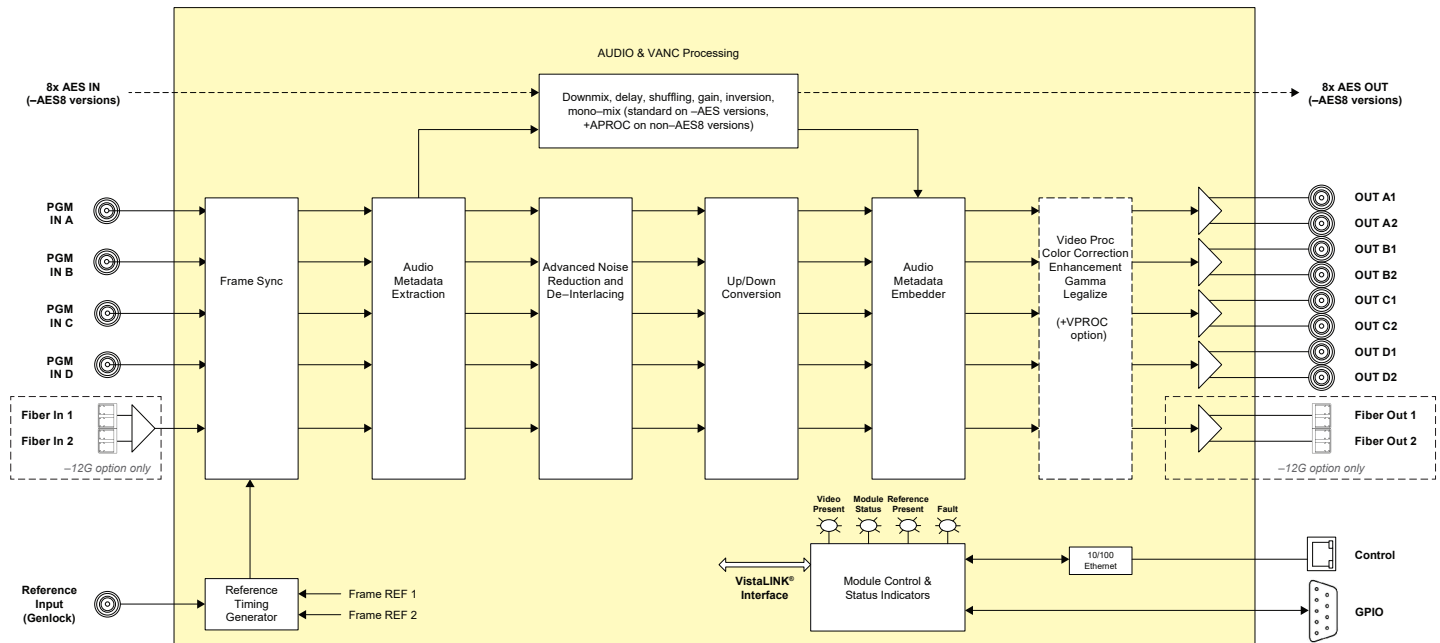
Features & Benefits

- Broadcast quality up/down/cross conversion between common HD/SMPTE ST 292M and 3G/SMPTE ST 424M video signals to/from UHD
- Integrated frame synchronizers (quad input synchronizers on 7814UDX–4K series to time quad–lane SDI inputs)
- Supports card reference connection and two sources of 7800FR frame reference (software selectable)
- Advanced 3D noise reduction and next–gen de–interlacing technologies
- Color corrector and detail enhancement engines optional (+VPROC option)
- 16–channel embedded audio support
- Audio delay automatically tracks video delay
- Full audio processing and channel swapping (+APROC option)
- Supports 8x external AES inputs and outputs (–AES8 versions)
- Supports low latency, high quality SDR to/from HDR and HDR cross conversion of HLG, HDR10 (PQ) and S.Log3 and color space conversion (BT.709/BT.2020/S.Gamut3)
- Remote monitoring and control available via SNMP using VistaLINK® PRO, CP–2116E or CP–2232E

AV SOLUTIONS

CONTRIBUTION & DISTRIBUTION

CONTROL/ MONITORING

ENCODING, TRANSCODING & MULTIPLEXING

FACILITY LINK/ FIBER TRANSPORT

INFRASTRUCTURE & CONVERSION

IP SOLUTIONS

LIVE MEDIA PRODUCTION

MEDIA ASSET MANAGEMENT & PLAYOUT

MULTIVIEWERS

RF SOLUTIONS

ROUTERS

WAN TRANSPORT

also performs all colour space conversion including BT.709, BT.2020 and S.Gamut3. The Evertz HDR conversion uses high–precision mathematical modelling to allow for very low–latency, high accuracy transforms while allowing on–the–fly changes to colour correction or HDR transfer function parameters using LUT based processing.

The 7814UDX/UC/XC/HDC–4K series transparently supports 16x channels of embedded audio with audio delay automatically matching video delay. Optional audio processing features (+APROC option) include audio channel shuffling, gain, inversion and mono–mixing. With "–AES8" variants, 8x discrete AES inputs and 8x discrete AES outputs are provided, allowing for discrete AES input and output. Full audio routing capability allows outgoing embedded and discrete AES audio (–AES8 versions) to be sourced from any combination of embedded audio, discrete AES inputs (–AES8 versions) or processed audio.

These modules are SNMP–capable for remote monitoring, control and configuration capabilities using VistaLINK® PRO, CP–2116E or CP–2232E control panels. VistaLINK® is available when modules are used with the 3RU 7800FR series or 1RU 7801 frames and 7800/7801FC VistaLINK® frame controller module is installed. Each card occupies two slots in the frame.

The –12G option adds support for SMPTE ST 2082 and enables up to 2x 12G SFPs (ordered separately) to be added to allow transport over a single coax or fiber. The –12G–HDBNC–R option includes an HDBNC module that supports 12G–SDI signals.

Ordering Information

7814XXX–4K	3G/HD to UHD upconverter and frame synchronizer, quad–SDI interface (DIN rear plate only)
7814XXX–AES8–4K	3G/HD to UHD upconverter and frame synchronizer, quad–SDI with discrete AES I/O (DIN rear plate only)
7814XXX–4K–12G	3G/HD to UHD upconverter and frame synchronizer, quad–SDI and 2x 12G fiber SFP slots (SFPs sold separately, DIN rear plate only)
7814XXX–AES8–4K–12G	3G/HD to UHD upconverter and frame synchronizer, quad–SDI with discrete AES I/O and 2x 12G fiber SFP slots (SFPs sold separately, DIN rear plate only)
7814XXX–4K–12G–HDBNC–R	3G/HD to UHD upconverter and frame synchronizer, quad–SDI and replaceable 12G–SDI HDBNC module (included)
7814XXX–AES8–4K–12G–HDBNC–R	3G/HD to UHD upconverter and frame synchronizer, quad–SDI with discrete AES I/O and replaceable 12G–SDI HDBNC module (included)

All options above can be ordered with the following options:

UDX:	*Up/down/cross conversion*
HDC:	*High quality downconverter*
XC:	*Cross converter*
UC:	*Upconverter*

Ordering Options:

+VPROC	Optional video proc/color correction support including RGB, YCbCr and Gamma proc plus RGB based color legalization
+APROC	Optional audio processing support including global audio delay, audio channel shuffling, gain, inversion and mono-mix capabilities on 16 channels of embedded audio.
+HDR	Colour space conversion between 709, 2020 and S.Gamut3. Dynamic range conversion between HLG, 2084/PQ, S.Log3 and SDR. REQUIRES +VPROC OPTION.

SFP Module Options: *(note: sold separately)*

SFP3TR–13–12G	SD/HD/3G/12G Reclocking SFP Transceiver using a wavelength 1310nm, Optical power: -5~0.5dBm, Sensitivity: -10dBm, handles pathological pattern, 2LC connectors. For use in Evertz 12G Router and Processing Products.
SFP3TR–HDBNC–12G	12G/3G/HD/SD Reclocking, MSA SFP Transceiver, HD–BNC Connectors.

Rear Plate Suffix:

+3RU	3RU rear plate

Enclosures:

7800FR	3RU Multiframe Which Holds up to 15 Single Slot Modules with AC Power Supply
7800FR–QT	Quiet Multiframe with Intelligent Front Fan Cooling
7801FR	1RU Multiframe Which Holds up to 4 Single Slot or 2 Dual Slot Modules, Requires Rear Plate Option for Modules