



≡ SeaChange® MediaClient™ 4012

Standard Definition
Single Input, Dual Output CODEC

The SeaChange® MediaClient™ 4012 is an innovative Broadcast quality Single Channel Encoder and Dual Channel Decoder with back to back capabilities of the following formats: MPEG-2, IMX, and DV25/50 compression coding. Multiplex stream formats include MXF, Quicktime, MPEG-2 Program/Transport and DV standards. Serial Digital I/O signals are SMPTE-259M compliant with up to eight embedded AES channels (16 audio tracks) and compressed or uncompressed VBI lines support.

The MediaClient 4012 includes native MXF file streaming capabilities and enables users to accelerate workflows by replacing tape-based workflows, baseband playout/ingest transfers and sneaker nets with file-based asset sharing schemes. The MediaClient properly wraps MPEG2 encoded files in accordance with the MXF Operational Pattern-1A standard. The MediaClient can properly interpret compliant third-party files and can play back-to-back natively MPEG2, DV and IMX on the same timeline.

The MediaClient 4012 supports a variety of uncompressed and compressed embedded audio payloads. Dolby-E/AC-3 embedded signals will be passed through in native format. Up to 32 lines of compressed VBI can be captured and preserved per video frame. Closed-caption capabilities comply with EIA-608 and VITC capture/playback complies with SMPTE standards.

Each MediaClient 4012 input and output is a fully independent encoder or decoder that is equipped with an RS-422 automation control port to permit control via standard broadcast automation systems or popular Jog/Shuttle controllers. Each MediaClient 4012 is also equipped with two Gigabit Ethernet ports, permitting synchronous video packet traffic to be isolated from the asynchronous control and configuration traffic.



The SeaChange MediaClient 4012 is housed in a 1RU rack-mount enclosure with a standard redundant hot-swappable power supply. The high channel density, low per-channel cost and integrated ingest/playout capability make the MediaClient 4012 the ideal solution for TV broadcasters and multi channel providers.

The MediaClient 4012 is one model of the SeaChange MediaClient HD/SD product range. It connects ideally with the rock solid SeaChange MediaLibrary to form the most scalable and innovative Playout server available today. The resulting solutions provide IT-like simplicity, and offer unmatched fault tolerance.

KEY FEATURES

- Supports MPEG-2, IMX and DV encoding and decoding
- Native MXF and Quicktime capabilities
- Compatible with SeaChange Broadcast MediaCluster media files
- Space-saving 1RU rackmount chassis
- Standard, hot-swappable redundant power supply

BENEFITS

- Plays back-to-back MPEG-2, IMX and DV on the same timeline content without transcoding, multiple decoders and complex automation control
- Encode or decode content for popular NLEs
- Supports file-based asset sharing with best-of-breed acquisition and production systems
- Efficient use of rack and floor spaces
- Reliable and high throughput over IP connectivity to SeaChange MediaLibrary storage

FUNCTIONAL SPECIFICATIONS

Video Standards	525/59.94Hz and 625/50Hz
Video Quantization	10-bit for MPEG-2 and IMX; 8-bit for DV
Video Codecs	MPEG-2 4:2:0 Profile, up to 15Mb/s, per ISO/IEC 13818-2 (CBR) MPEG-2 4:2:2 Profile, up to 50Mb/s, per ISO/IEC 13818-2 (CBR) IMX30, IMX40, IMX50, per SMPTE 356M and 328M DV25, DV50, per SMPTE 314M DV, per IEC-61834-2
Audio Sampling Frequency	48 KHz
Audio Quantization	16bit, 20bit or 24bit, per applicable Audio Codec specification
Audio Codecs (MPEG Only)	Up to Eight AES Channels (16 tracks) Uncompressed, per SMPTE 302M and 331M (MXF only) Up to Four AES channels (8 tracks) MPEG-1, Layer II Compressed, per ISO/IEC 13818-3 Up to Eight Mixed Compressed and Uncompressed AES channels
Audio Codecs (IMX Only)	Four AES channels (8 tracks) Uncompressed, per SMPTE 302M and SMPTE 331M (MXF only)
Audio Codecs (DV Only)	One AES channel (2 tracks) Uncompressed for DV, per IEC-61834-2 One AES channel (2 tracks) Uncompressed for DV25, per SMPTE 314M Two AES channels (4 tracks) Uncompressed for DV50, per SMPTE 314M
Vertical Blanking Interval	16 or 32 lines Compressed per Video Frame for MPEG 32 Lines Compressed per Video Frame for IMX Up to 6 lines uncompressed per Video Frame VITC per SMPTE-12M Close Caption per EIA 608
Stream Multiplexes	MPEG-2 Program Stream and Transport Stream MXF Operational Pattern 1A, per SMPTE 378M Quicktime 7 Self contained (for DV) DV, per SMPTE 314M and per IEC-61834-2

Control Protocols	VDCP , Sony BVW-75
Network Protocols	CIFS (Common Internet File System)

OPERATIONAL CAPABILITIES

Record	Completely independent from decoder channels, frame-accurate triggering from Control Port
Play	Completely independent from encode and alternate decoder, frame-accurate triggering from Control Port, Back-to-Back playout of all specified video/ audio codecs and stream types, 5 second clip length for continuous back-to-back playout
Jog/Shuttle	-128x to +128x, supports scrub audio

I/O SPECIFICATIONS

Video Input	One SDI per SMPTE 259M, 75 Ohm BNC Connector
Video Output	Two SDI per SMPTE 259M, 75 Ohm BNC Connector
Audio Input	Up to Eight Embedded AES Channels (16 tracks) per SDI Input, per SMPTE 272M
Audio Output	Up to Eight Embedded AES Pairs (16 tracks) per SDI Output, per SMPTE 272M
VITC Input	via SDI inputs, via VANC per SMPTE-RP188
VITC Output	via SDI outputs, via VANC per SMPTE-RP188
LTC Input	Optional - Unbalanced 75ohm BNC
Control	RS-422 Serial Port per Video I/O, 9-pin Female "D" Connectors
Reference	Analog Black Burst, 75 ohm BNC Loop-thru Connectors
Network	Dual 1000baseT Ethernet, RJ45 Connectors

HARDWARE SPECIFICATIONS

CPU	Dual Intel 3.2 GHZ, Xeon w/ 1MB cache
Memory	1GB, Registered, ECC
Service Disk	One 250GB SATA Drive
Removable Media	CD-ROM



CHASSIS SPECIFICATIONS

Size	1RU rackmount, 1.7"H x 9"W x 27.5"D (43mm x 430mm x 698mm)
Weight	Approximately 35 lbs (15.9kg)
Environmental Conditions	Operating temperature: +10 C to +35 C (50 to 95 F) Non-operating temperature: -40 C to +70 C (-40 to 150 F) Relative non-operating humidity: 95% at +30 C, non-condensing
Power Requirements	100-240 VAC, 50/60Hz Option for single power supply

ORDERING INFORMATION

Sales Order Number	Description
mcl-4012-aR	Standard Definition, Single Channel Encoder, Dual Channel Decoder for use with SeaChange MediaLibrary 24000e with redundant power supply
PWR-0078-00	Spare Power Supply Set for SeaChange MediaClient 4012
PWR-0078-NR	Credit option to remove the second power supply
FGA-5001-00	Optional LTC input adapter and cable

Other SeaChange Broadcast Products

SeaChange® MediaLibrary™ 24000e

Scalable, Fault-tolerant, Network Media Library

- Scales from 2.9TB to 43TB usable storage
- Gigabit Ethernet I/O nodes provide up to 9 Gb/s total bandwidth
- Patented SeaChange® RAID2® fault-tolerant architecture
- Central media library for tapeless workflows

SeaChange® MediaLibrary™ X12100e

Low-cost, Highly-scalable Fault Tolerant Digital Media Storage

- Scales from 3.9TB to 344TB
- Native Windows® Media browsing and streaming

SeaChange Broadcast MediaCluster-BMC 15000, 30000 and 60000

RAID²- based Broadcast Transmission Servers

- Scalable storage, I/O and bandwidth
- Supports MPEG-2, IMX and ASI I/O formats
- Better fault tolerance & storage efficiency than mirrored servers

SeaChange® QuickSilver™ VOD Workstation

Powerful end-to-end VOD Content Production

- Capture, prepare & splice features, promotions and ads
- Metadata input & validation
- Package, review and deliver

About SeaChange

SeaChange International™ provides digital video systems that are changing television. Its powerful server and software systems enable television operators to provide new on-demand services and to gain greater efficiencies in advertising and content delivery.

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