

Xstream One

Professional Integrated Receiver Decoder

PRODUCT SHEET

ALL-PURPOSE INTEGRATED RECEIVER/DECODER

A next-generation solution for contribution and primary distribution applications, SatExpander Xstream One offers industry leading capability, flexibility and affordability, empowering content providers, broadcasters, operators, and media service providers. A single channel multi-CODEC IRD, SatExpander Xstream One can decode HEVC, H.264 or MPEG-2 compressed video in HD or SD formats and deliver highest video quality at resolutions up to 1080p60.

HIGH FLEXIBILITY FOR ANY WORKFLOW

SatExpander Xstream One features compact design, allowing for multiple configurations and service options. Built on off-the-shelf servers with software-defined architecture and state-of-the-art management capabilities, SatExpander Xstream One delivers high availability operation and service continuity. Designed to deliver highest levels of availability and flexibility, SatExpander Xstream One presents comprehensive set of video processing capabilities and features. Supporting multiple inputs and outputs of various types - IP, SDI, ASI/Satellite, SRT - with seamless switching, SatExpander Xstream One maximizes network flexibility and scalability, adapting to any workflow and network architecture.

POWERFUL SWITCHING, RE/MULTIPLEXING AND STREAM PROCESSING

SatExpander Xstream One presents a powerful multiplexing system, supporting program level bit rate measurements on both incoming and outgoing streams. Offering multiple modes of operation and comprehensive configuration, SatExpander Xstream One supports any-to-any automatic failover matrix, ensuring very high system and service availability.

COMPREHENSIVE CONTENT SECURITY

Assuring content security, SatExpander Xstream One integrates two Conditional Access Module (CAM) slots for customer supplied DVB-CI compliant card. In addition, Xstream One supports any BISS decryption, including BISS-CA - the latest content protection standard.

HIGHLIGHTS

- Single channel multi-CODEC IRD
- IP, SDI, ASI/Satellite, and SRT interfaces
- DVB-S/S2/S2X demodulation
- BISS 1/2/E/CA descrambling
- DVB-CI Multicrypt and Simulcrypt support
- Embedded transport stream multiplexer capabilities (MPTS and SPTS)
- IP/TS/service/PID level filtering and monitoring
- Seamless stream/port/packet level switching
- Cutting-edge user interface and REST API



INTERFACES

IP INTERFACES

- 2xGbE (input / output)
- UDP / RTP, Unicast / Multicast support
- MPTS / SPTS
- VLAN support
- Service filtering
- MPEG-2 TS support

ASI INTERFACES*

- EN50083-9
- 4 independent I/O ports
- SPTS / MPTS
- BNC (F) 75 Ohm
- 4 different Transport Streams
- 213.7Mbit/s per port

*Optional instead of L-Band interface

SATELLITE DEMODULATORS

- SMA (F) 50 Ohm
- Frequency range: 950-2450Mhz (20KHz steps)
- Up to 45Msps
- DVB-S / DVB-S2 / DVB-S2X
- QPSK, 8PSK, 16APSK, 32APSK
- All FEC supported

COMMON INTERFACE

- Dual DVB CI slots

SYSTEM

REDUNDANCY

- Stream and Source redundancy on TS over IP inputs

MANAGEMENT

- SSH CLI
- Web Based
- User and Privilege support
- REST API
- Stream analysis and event logs

PHYSICAL AND ENVIRONMENTAL

- COTS-based server
- 19" x 1RU
- Management Interface
- Temperature
 - o Operational: 10° to 35°C (50° to 95°F)
 - o Storage: -30° to 60°C (-22° to 140°F)
- Humidity
 - o Up to 90% non-condensing

CERTIFICATES

- CE, FCC, BIS, CCC
- Electrical safety EN60950-1, EN 62479
- Electromagnetic EN 55032, EN 55024

DECODING

VIDEO DECODING

- MPEG-2: Simple, Main, and 422P profile, up to high level
- MPEG-4/H.264: Baseline, Main, and High Profile, High 10, and High 422
- HEVC/H.265: Main, Main 10, Main 420 10, Main 422 10
- 10 and 8 bits

AUDIO DECODING

- Uncompresses PCM - Multichannel (SMPTE 302M-2007)
- MPEG-1 layer 2
- MPEG-2 layer 3 (mp3)
- MPEG2/MPEG-4, AAC-LC, AAC-HE
- Dolby Digital E, AC-3 and passthrough
- Sampling Frequency: 32, 44.1, 48 KHz

RESOLUTIONS AND FRAME RATES

- Flexible - QCIF to HD 1080p60
- Common Resolutions:
 - o 240p, 288p, 480p, 576p @ 10, 12.5, 15, 20, 23.976, 29.97, 30, 50 and 59.94 and 60 Hz
 - o 576i and 480i x 720, 544 and 352 pixels @ 23.976, 24, 25, 29.97 and 30 Hz
 - o 1080i x 1920, 1440, 1280 and 960 pixels @ 23.976, 24, 25, 29.97 and 30 Hz
 - o 720p x 1280, 960 and 640 pixels @ 23.976, 24,29.97,30, 50, 59.94, and 60 Hz
 - o 1080p x 1920, 1440, 1280, and 960 pixels @ 23.976, 24,29.97,30, 50, 59.94, and 60 Hz

PROCESSING

RE/MUX AND STREAM PROCESSING

- PID filtering / Remapping / Pass through on each input
- Modify, remove, rename, extract services
- Content routing from any input to any output
- Re-route complete transport streams or individual PID/services
- Create new TS Bouquets, MPTS and SPTS
- On-the-fly transformation or injection of content and signaling

CONTENT PROTECTION DESCRAMBLING

- BISS 1/2 based on EBU TECH
- DVB CAS simulcrypt compliant

ANCILLARY DATA

- EIA608 & EIA708 closed captioning
- SCTE35 passthrough (with IP input)

BITSTREAM FORMATS

- MPEG-TS over UDP/IP or ASI
- RTP/UDP/IP
- MPEG2-TS/RTP/UDP/IP

CONTAINERS

- UDP, RTP
- MPEG-2 TS, MPTS/SPTS
- SRT