Datasheet

X5

appear

X5: Compact. Powerful. Futureproof.

«A world-class streaming platform for live events»

The X5 is a compact version of Appear's multi-award-winning X Platform, purpose-built for high-quality, ultra-low latency live streaming and contribution.

Designed for operators handling high-value content at a lower scale per site, the X5 delivers best-in-class compression, IP connectivity, and future-ready workflows in a cost-efficient portable chassis.

Offering the same comprehensive X Platform feature set in a smaller form factor, this compact compression platform will futureproof your streaming requirements:

- Feature parity with the X10 and X20 in a smaller form factor
- Ultra-low latency (ULL) for live events & remote production
- AVC & HEVC encoding and decoding
- Fits into both SDI and IP uncompressed workflows

- Eases the transition to IP-based networks
- Secure and resilient transmission with ST2022-7, SRT, and IP-FEC
- Simplified operation with flow-based UI and scalable licensing

Features

TS over IP input and output

SRT for public and private network
- Enabled Ground To Cloud and Cloud to Ground workflows

Video alignment for slow-mo and VAR

ST2022-7 seamless protection

AVC & HEVC encoding and decoding
- 4:2:2/0, 8/10bit, interlace and progressive
- Encoding for transmission and decoding for monitoring via SDI or HDMI

25G data interfaces

IP-FEC output for reliable transportation

SDI and ST2110 capable unit
(seamless protection)

Independent management port
(out-of-band)

Advanced audio processing
(MP1L2, AAC, DD/DD+, DD+ w/ATMOS, AC-4)

NMOS, PTP support

Chassis overview

Built with portability in mind, the X5 is ideal for flight packs. The chassis is a compact, portable version of Appear's world-renowned X20 and X10.

Dimensions 1RU x 190mm x 395mm

Brackets for mounting one or two side-by-side are available to purchase.

The chassis has fans with LEDs in the front and connectors in the rear. It is possible to rack mount the chassis either way—with the connector-side facing the front or the rear of the rack.

The product features a redundant power supply, initially equipped with dual AC power in the first version of the chassis. A DC version is expected to be introduced in the future.

The X5 is not a modular unit as the connectors are fixed. The BNC connectors provide configurable inputs and output paths for SDI signals. A BNC connector is reserved for Genlock signals to synchronize the decoded outputs. An RJ45 connector provides dedicated Control port for management purposes. The bottom part hosts 4 x 25G ports that can be used in configurable manners depending on the use case. The first two are dedicated for bi-directional, redundant IP traffic while the two others can be used for either SDI, HDMI or ST2110. Appear provides SFPs for SDI inputs.

Dimensions

1RU x 190mm x 395mm
1RU x 7.48in x 15.55in

Highlights

- SRT and IP for site-to-site or ground-to-cloud transmissions
- Ultra-low latency (ULL) for live events
- World-class video quality
- Secure transmission with multiple built-in redundancy option
- Ad-insertion for monetization
- 12G and UHD capable

- Combined encoder and decoder in the same unit
- Scalable licensing model
- Futureproof service offering
- Manage the unit remotely
- Flow-based user interface for configuration and monitoring

The X5 is the ideal tool for operators that are sending and receiving high-value content.

World class compression quality combined with high-capacity internet connectivity makes the X5 the ideal tool for any live transmission. The small form-factor offers the same feature set as the flagship X20. Use cases span news gathering and live events to surveillance and monitoring. The unique video alignment feature, combined with low latency, enables slow-motion replays, multi camera production, seamless failovers and VAR applications.

IP connectivity enables transmission to a remote location or cloud for further processing and, at the same time, the ability to decode the return path.
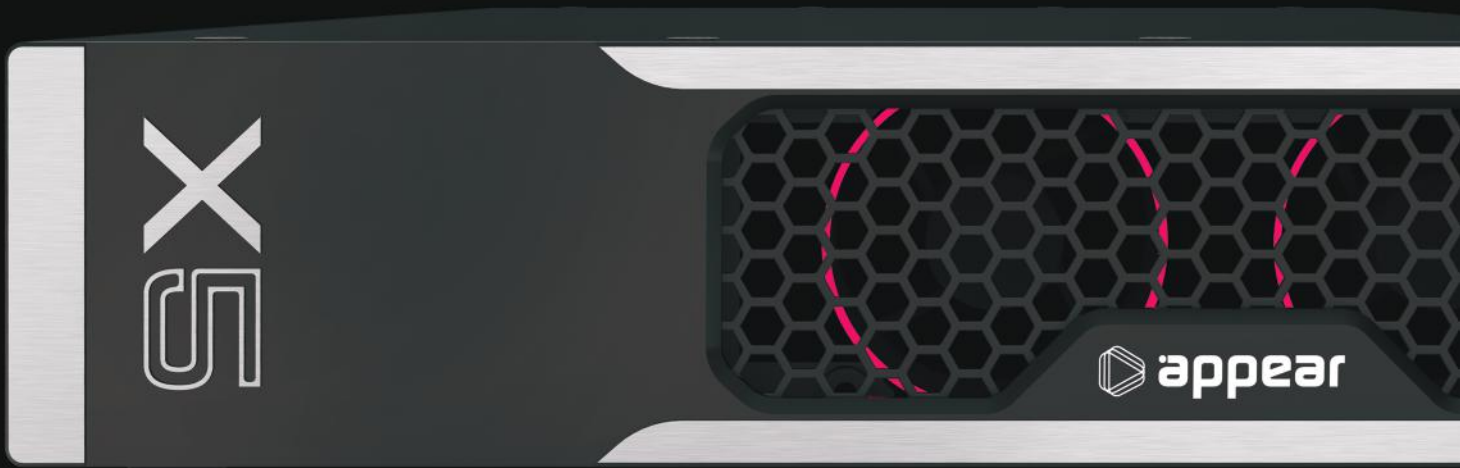
Enhanced security

There are typically multiple locations within a modern broadcasting environment necessitating secure video interfaces between sites, especially when implemented using public networks. The high level of security needed must protect the different sites from outside attacks as well as protect the integrity of video transmission itself. Being a fully operational video firewall, the X Platform maintains tight security on its control layer, supporting many advanced features encompassing authentication and authorisation. Security is assured by Appear's own FPGA-based IP packet forwarding mechanism and proprietary internal network structure.

Video-centric features provided in the X series include:

- Multicast forwarding (IGMP join and forward)
- Inspect and forward MPEG-2 TS packets (deep layer 5/6 packet inspection)
- De-multiplex MPEG-2 TS streams

- Encryption and decryption of video data
- Seamless network protection according to SMPTE 2022-7
- Encode and decode SMPTE 2022-1 supplementary FEC

Appear
Po Box 8 Lilleaker
No-0216 Oslo
Norway

Tel: +47 24 11 90 20
Email: info@appear.net
Web: www.appear.net