Gloobox

CAPTURE &
LOOP RECORD

GLOOBOX CAPTURER SD/HD/UHD/IP_

GENERAL INFORMATION

PRODUCT OVERVIEW

Glookast Gloobox Capturer is a digital base-band ingest server designed to capture material into a shared storage environment, produce multiple resolutions of the same material, and manage metadata in conjunction with an asset management system. Gloobox's template-based operation allows for a centralized controlled ingest scheme that both frees editing systems for editing and minimizes human error during this process.

System Components and Models

Main highlights & features of Gloobox Capturer Generation II:

Gloobox Capturer GEN II is a family of baseband ingest /player turnkey solutions with support to a wide range of codecs, providing affordable and seamless integration of baseband signals into file-based workflows. It is available in four versions: HD-SDI & 4K/UHD for SFR, HD-SDI & 4K/UHD for HDR and HFR (50p/60p), HD-SDI & 12G, and SMPTE 2110 IP.

HIGHLIGHTS (features depend on configuration):

• **Capture and check into** Avid PAM or MAM, Adobe, Edit-Share/Flow, ARVATO VPMS, with Edit-While-Ingest.

• **Create up to 3 three individual resolutions (per input channel)** simultaneously to multiple destinations with or without a backup copy to an alternate destination. Typically, the three resolutions consist of a master resolution – for finishing conform and product finalization; working resolution – a standard mid-level compressed format for offline editing; and proxy resolution – a very compressed format for browsing, cataloguing, and post-archive browsing.

• **Capture into two storage/metadata systems simultaneously**: two PAM, one MAM/one PAM, one PAM/one NearLine – Archive Parking

• **Multiple models/configurations available**:

> **GLOOBOX CAPTURER GEN II 4+4 SFR (4 ch SD/HD SDI or 1 ch UHD/4K – 4x3G)** system with Clip Player & Monitoring with pre-read (play while ingest). Encodes most of the production SD/HD/UHD codecs (XDCAM HD, AVC, DNxHD, ProRes, XAVC, DNxHR). Includes GLOOKAST server with redundant power supply and 6TB (RAW) SSD internal buffer/storage (expandable to 24 TB).

GLOOBOX CAPTURER GEN II 4+4 HFR (4 ch SD/HD SDI or 2 ch UHD/4K – 4x3G) system with Clip Player & Monitoring with pre-read (play while ingest). Encodes most of the production SD/HD/UHD codecs (XDCAM HD, AVC, DNxHD, ProRes, XAVC, DNxHR). Supports High Frame Rates (50p & 60p). Includes GLOOKAST server with redundant power supply and 6TB (RAW) SSD internal buffer/storage (expandable to 24 TB).

GLOOBOX CAPTURER GEN II – 4+4 IP/HFR (4 ch SD/HD SDI or 2ch UHD/4K – IP2110) system with Clip Player & Monitoring with pre-read (play while ingest). Encodes most of the production SD/HD/UHD codecs (XDCAM HD, AVC, DNxHD, ProRes, XAVC, DNxHR). Supports High Frame Rates (50p & 60p). Includes GLOOKAST server with redundant power supply and 6TB (RAW) SSD internal buffer/storage (expandable to 24 TB).

NEW>> **GLOOBOX CAPTURER GEN II 8-SFR (8ch SD/HD SDI or 2 ch UHD/4K – 4x3G. Alternatively it can provide 4 ch UHD/4K-12G)** system. Encodes most of the production SD/HD/UHD codecs (XDCAM HD, AVC, DNxHD, ProRes, XAVC, DNxHR). Includes GLOOKAST server with redundant OS (NVMe), redundant PS and 12TB (RAW) SSD internal buffer/storage (expandable to 48 TB)

- **Background transfer functionality**.
    Allows for local record/capture into the SSD server buffer for future transfer into a PAM and/or MAM (sports, events, field production, mobile trucks). Also provides additional reliability by preserving content in case of a network failure during feed ingest,

- **SDI Player and monitoring with pre-read**.
    Can monitor the signal being recorded into the local buffer or playback a clip, while recording in the same channel

- **Loop Recorder**
    Allows for recording and pre-selection of content in local buffer, before ingest, reducing online storage consumption. Loop size is user definable per channel. Features sub-clipping with locators and clip stitching.

- **Controllable via**
    GLOOBOX WebClient, Glookast Scheduler, Glookast LiveOps , Avid Interplay Capture, Automation Systems.

- Optional **RS232/RS422** Serial VTR control port (assignable per channeland across servers), **GPI input and GPI output** (**channel programmable).**

- **CWC – Capturer Web Client** (optional)
    Optional multi-user full remote control (per server)

GLOOKAST CONTROL Options:

• **Gloobox LiveOps** (optional control system)
Multi-channel, multi-user, web based ingest control and resources management application, designed for live events, sports, multi-camera / studio productions, for Gloobox Capturer GEN II servers. Full integration and control from Avid Cloud|UX via plugin
Live video and audio display of up to 32 incoming feeds per LVOPS server with administrator definable number of channels per user. Separate manager and user views and controls and emergency back-up channel selection. Optional fail-over system

• **Gloobox Scheduler** (optional control system)
Web-based, multi-user, ingest scheduling application that controls feed recording in Gloobox Capturer GEN II servers . Main license allows control of up to 8 Capturer GEN II channels, expandable to 48 channels per server. Full integration with Avid Cloud|UX via plugin. Designed for optional redundancy with fail-over

• **Gloobox IPC Bridge** (optional control system)
API based connector for third party control.
Currently following systems can control Capturer GEN II: Avid Interplay Capturer, Cyradis Broadcast and VDCP based automation

CORE FUNCTIONALITY – PARTIAL LIST

How can recording be scheduled and controlled?

GLKST> Multiple ways: Local GUI, WebClient, optional Scheduler, optional LiveOps, Avid Interplay Capture, VDCP based automation or via API

How can the solution be integrated to workflows?

GLKST> Gloobox Capturer has API or WS integration with the following systems? Avid PAM, Avid MAM, EditShare FLOW, Arvato VPMS, Arvato EditMate, Adobe Premiere

How does the solution save the files? What are the options?

GLKST> Files can be saved in any selectable storage sub-system and/or in the internal buffer. Current options: Avid shared storage (ISIS, NEXIS), Matrix Store, EditShare, BlackPearl, Harmonic, S3 and Generic storage (free form path may be entered)

What kind of storage solution is included in the suggested solution?

GLKST> SSD based 6TB (RAW) internal buffer, currently expandable to 24TB with RAID 5, 10, 50

How does the solution handle recording of back-ups?

GLKST> 1. Internal buffer retains the files ingested into shared storage (user definable)

2. Each of the three outputs per channel can simultaneously send a backup (OP-1a or OP-atom) to another destination (Multi-Res / Multi-Destination option).

3. Field Acquisition using removable storage cartridges

How does the solution handle usage of growing files?

GLKST> Full support to growing files with Edit-While-Ingest (around 20-30 max sec delay)

How can timecodes be configured in the proposed solution?

GLKST> Gloobox supports embedded time code signal in the following formats:
- **LTC** - linear time code
- **TOD** - Time of Day generated from the local server clock
- **VITC** - Vertical Interval Time Code

Breaks and Discontinuities

Capturer may also be configured to take action when a time code break is detected. The following actions are available:
- Ignore - GLOOBOX ignores the break and continues ingesting as if nothing had happened, linearly and atomically incrementing time code despite the break and thus

maintaining time **code continuity at the target system. In the event of a time code break, the ingested time** code will not match the source media time code from the break point onwards.

      • New Clip - GLOOBOX creates a new clip at the break point, thus splitting the original stream into two separate clips containing two distinct continuous time codes.

      • Stop - GLOOBOX simply stops ingesting at the time code break and closes the currently ingesting clip such that it ends just before the break.

Does the solution support monitoring and playing recorded signal in six different locations? If yes, how this is done?
GLKST> Yes, via SDI player/pre-read monitor. Each channel has a full SDI player, individually controllable (local GUI, CWC or LiveOps)

How can the system be configured between HD and UHD recording and how does this affect the recording capacity of the system? Optimally system should be configurable from SDI to video over IP with interchangeable interfaces.
GLKST> Basic 2 ch or 4 ch HD system can be configured (reboot required) to work as a single channel in UHD or 4K. For multiple channels of 4x3G, 12G or IP 2110 hardware is required.

Can the solution record ultra HD (4K) video?
Which codec is used for this?
What is the maximum bitrate?
What is the solutions HDR and/or HFR capability?
GLKST>   Yes.
           DNxHR HQx, XAVC up to class 480, ProRes 4:22 and 4:4:4:4
           HDR: pass-through or color space conversion in the case of Up/Down conversion
           HFR: 50p / 60p

What is the solution's capability to directly record web streams?
GLKST>   SRT support and TS with direct URL copy & paste

Are all recordings recorded with 16:9 aspect ratio or can the solution also use other aspect ratios?
GLKST>   System supports 4:3 and 16:9 with up/down conversion in each channel input

What are the solution's player capabilities? For example, is it possible to create physical mark in and out points while recording?
GLKST>   Yes system has full support of colored locators, compatible with Interplay and allows for sub-clipping. Oalkyer also allows to be ingesting one clip while playing or reviewing other

How quick is the solution (e.g. transfer speed, how quick copies are created, network bandwidth, transcoding speed)?
GLKST>   Very fast depending on the network and writing bandwidth of the storage system. Supports Gig-e, 10Gig-e, 40 Gig-e

How soon after recording a file it is usable in the target system?
GLKST>   20 to 30 sec max delay

What are the features of the solution regarding audio, e.g. number of tracks, bitrate, etc?
GLKST>   16 channels, 24 bit, up to 192 Khz

Which functions that can be done via RestAPI?
GLKST>
Capturer API - Pull Template list, Send record job, Record start / stop, Metadata
LoopFeatures: Select channel, Mark In / Out, Ingest from loop, Metadata, Template.
Scheduler API **requirements** Schedule events new, Schedule event update, Metadata, Template
LiveOps API requirements Select channel, Mark In / Out, Ingest from loop, Metadata, Template.