

# Versatile Broadcast Contribution Receiver and Decoder Solution

Haivision StreamHub is a versatile solution for receiving IP video streams over mobile networks and the internet. StreamHub can decode live video from Haivision Pro and Air mobile transmitters, and Haivision Rack encoders using the two-time Emmy award winning SST technology for network aggregation. StreamHub can also receive live video from the Haivision MoJoPro mobile application, LiveGuest browser-based interviews, and SRT streams from Haivision Makito encoders as well as from third party sources. Its intuitive web user interface enables users to easily control and manage remote field units, optimize configurations, and monitor video transmissions with video thumbnails and advanced statistics.

StreamHub has been designed to meet the demanding requirements of broadcasters deploying video contribution systems over mobile and IP networks. Supporting both H.264 and HEVC with resolutions up to 4K UHD, StreamHub can be deployed on-premise or in the cloud for low latency transcoding and decoding to SDI, NDI, ST 2110, SRT and other IP outputs.

# **Key Features**

Mobile Video Receiver and Decoder StreamHub can receive up to 16 concurrent incoming SST streams from remote Haivision mobile encoders and transmitters or third-party sources and supports a rich set of IP protocols including RTMP, RTSP/RTP, SRT, NDI, HLS, and TS/IP. Up to 8 live video streams can be simultaneously decoded to 8 SDI outputs with genlock for multi-camera synchronization. StreamHub also features video transcoding capabilities for adapting incoming feeds to desired output formats.

**IP Distribution** StreamHub supports multiple streaming protocols including SST, RTMP, RTMPS, RTSP/RTP, HLS, TS/IP, SRT, NDI, and ST 2110 so that video content can be easily distributed over IP networks for all types of destinations. Up to 32 outputs are supported, included duplicate streams, for sharing live content over LANs, WANs, CDNs, cloud platforms, Social Networks, and to other StreamHub receivers.

Video Recording And File-based Transcoding StreamHub combines video recording functions with a file-based video transcoder that enables media professionals to adapt content formats and resolutions for each destination.

Story Centric Workflows & Metadata StreamHub can be used to manually or automatically manage projects & metadata for smooth integration with news production workflows. Using the highly intuitive user interface, broadcasters and media producers can quickly and easily identify recorded content and live sources.

IP Data Bridge The StreamHub Data Bridge feature provides direct access to the Internet from a field unit. Optimized for remote production workflows, it also allows for remote control of IP based devices such as PTZ cameras.

**IFB** and **Video Returns** StreamHub includes a two-way IFB or audio intercom that enables broadcasters to communicate in real-time with up to 16 remote field unit operators. StreamHub can also manage video returns for providing remote operators with studio feeds, confidence monitoring, and teleprompters.

Multiviewer Monitoring The grid view includes preview thumbnails of video sources that can be assigned to a multiviewer output displaying up to 16 video sources on a single monitor. Broadcast professionals can define audio sources, output standards, and add information overlays for each source.



#### **PLATFORM** ADVANCED FEATURES Metadata support for Live and Forward Physical Time Code and ST 2038 ancillary data passthrough 1 RU server platform AES-67 and legacy intercom Software Linux 64-bit server SST protocol IP Data Bridge Gateway Virtualized AES encryption of SST contribution streams, video-returns and intercom audio Available as a virtual machine deployable on AWS, Azure, Google MPEG2-TS and MP4 recording or other cloud platforms Transmuxing stream processing VIDEO Streaming to social media platforms including YouTube, Facebook, and Twitch Resolutions Multi-view output 4K/UHD: 23.98/24/25/29.97/30/50/59.94/60 Video return management HD: 1080p 23.98/24/25/29.97/30/50/59.94/60 **INTERFACES** 1080i 50/59.94/60 720p 23.98/24/25/29.97/30/50/59.94/60 StreamHub Lite SD: PAL, NTSC, 480p, 576p Dual GigE network interfaces 1x 3G-SDI or 1x HDMI output Decoding Codec: H.264/AVC (4:2:0 8-bit), H.265/HEVC (up to 4:2:2 10-bit) StreamHub Standard Bitrates: 100 Kbps up to 160 Mbps Dual GigE network interfaces 4 x 3G-SDI outputs (SD/HD) with genlock or 25GbE dual-port SFP28 Rate control: VBR and CBR StreamHub Ultra Up to 16x HD or 4x 4K decoding Dual 10GbE network interfaces Transcoding Codec: h.264/AVC 4:2:0 8bits Up to 8 x 3G-SDI outputs or 4 x 12G-SDI outputs with genlock or 25GbE dual-port SFP28 Bitrates: 100 kbps up to 20 Mbps Rate control: CBR MONITORING Up to 8 HD live encoding Web-based GUI Comprehensive REST API for third-party management system integration Integrated with Haivision Manager NMOS IS-04, IS-05 and IS-09 for ST 2110 Processing Video Down-scaling & Upscaling Interlacing and deinterlacing **POWER AUDIO** Dual Power 400W Decoding MPEG-2 AAC-LC ISO/IEC 13818-7 MPEG-4 AAC-LC ISO/IEC 14496-3 PHYSICAL Dimensions (W x H x D) AAC-HE v2 MPEG-1 L2 43.7 cm x 4.3 cm x 42.9 cm (17.2" x 1.7" x 16.9") OPUS Weight Encoding 11.43 Kg / 25.2 lbs Operating Temperature 5°C to 35°C (41°F to 95°F) MPEG-2 AAC-LC ISO/IEC 13818-7 MPEG1-L2 **OPUS** Software Version: 4.4 STREAMING PROTOCOLS Inputs TS/IP (SPTS, UDP and RTP), RTSP/RTP, RTMP push and pull, HLS, SRT, SST (IP and cellular bonding), NDI IGMPv3 & SSM for TS multicast input Outputs TS/IP (SPTS, UDP and RTP), RTSP/RTP, RTMP, RTMPS push and

HLS, SRT, SST (IP and cellular bonding), NDI, ST 2110



# Versatile Broadcast Contribution Receiver and Decoder Solution

Haivision StreamHub GO is a versatile small form factor solution for receiving IP video streams over mobile networks and the internet. StreamHub GO can decode live video from mobile transmitters using the two-time Emmy<sup>®</sup> Award-winning SST technology for network aggregation. StreamHub GO can also receive live video from the Haivision MoJoPro mobile application, LiveGuest browser-based interviews, and SRT streams from Haivision Makito encoders as well as from third party sources. Its intuitive web user interface enables users to easily control and manage remote field units, optimize configurations, and monitor video transmissions with video thumbnails and advanced statistics.

StreamHub GO has been designed to meet the demanding requirements of broadcasters deploying video contribution systems over mobile and IP networks. Supporting both H.264 and HEVC in HD resolutions, StreamHub GO can receive, transcode, and decode video streams to SDI, NDI, SRT and other IP outputs.

# **Key Features**

Mobile Video Receiver and Decoder StreamHub GO can receive up to 4 concurrent SST streams from Haivision mobile transmitters and supports a rich set of IP protocols including SRT, RTMP, NDI, and HLS. StreamHub GO also features video transcoding capabilities for adapting incoming feeds to required output formats.

**IP Distribution** Up to 4 outputs are supported, including duplicated streams, for sharing live content over LANs, WANs, CDNs, cloud platforms, social networks, and to other StreamHub receivers. StreamHub GO supports multiple streaming protocols including SST, SRT, RTMP, RTMPS, RTSP/RTP, HLS, TS/IP, and NDI so that video content can be easily distributed over IP networks for all types of destinations.

Video Recording and File-based Transcoding StreamHub GO combines video recording functions with a file-based video transcoder that enables media professionals to adapt content formats and resolutions for each destination.

Story Centric Workflows and Metadata StreamHub can be used to manually or automatically manage projects & metadata for smooth integration with news production workflows. Using the highly intuitive user interface, broadcasters and media producers can quickly and easily identify recorded content and live sources.

IP Data Bridge The Data Bridge feature provides direct access to the Internet from a field unit. Optimized for remote production workflows, it also allows for remote control of IP based devices such as PTZ cameras.

**IFB and Video Returns** StreamHub GO includes a two-way IFB or audio intercom that enables broadcasters to communicate in real-time with up to 4 remote field unit operators. StreamHub GO can also manage video returns for providing remote operators with studio feeds, confidence monitoring, and teleprompters.

# **HAIVISION** StreamHub GO

#### **VIDEO**

Resolutions:

HD: 1080p 23.98/24/25/29.97/30/50/59.94/60 1080i 50/59.94/60 720p 23.98/24/25/29.97/30/50/59.94/60

SD: PAL, NTSC, 480p, 576p

Decoding:

Codec: H.264/AVC, H.265/HEVC (up to 4:2:2 10-bit)

Bitrates: 100 Kbps up to 80 Mbps Rate control: VBR and CBR Up to 4x HD

Transcoding:

Codec: H.264/AVC 4:2:0 8bits Bitrates: 100 kbps up to 20 Mbps Rate control: CBR

Processing:

Video down-scaling & upscaling Interlacing and deinterlacing

# AUDIO

Decoding:

MPEG-2 AAC-LC ISO/IEC 13818-7, MPEG-4 AAC-LC ISO/IEC 14496-3, AAC-HE v2, MPEG-1 L2, OPUS

Encoding:

MPEG-2 AAC-LC ISO/IEC 13818-7, MPEG1-L2, OPUS

# STREAMING PROTOCOLS

Inputs:

SST (IP and cellular bonding), SRT, TS/IP (SPTS, UDP and RTP), RTSP/RTP, RTMP push and pull, HLS, NDI IGMPv3 & SSM for TS multicast input

SST (IP and cellular bonding), SRT, TS/IP (SPTS, UDP and RTP), RTSP/RTP, RTMP, RTMPS push and pull, HLS, NDI

#### ADVANCED FEATURES

Metadata for live streams and file forwarding Time Code and ST 2038 ancillary data passthrough AES-67 and legacy intercom

SST protocol

IP Data Bridge gateway
AES encryption of SST contribution streams, video-returns and intercom audio
MPEG2-TS and MP4 recording
Transmuxing stream processing

Streaming to social media platforms including YouTube, Facebook, and Twitch Video return management

INTERFACES

Dual 2.5 GbE network interfaces 1x 3G-SDI output 1x SDI sync

# MONITORING

Web-based GUI

Comprehensive REST API for third-party management system integration Integrated with Haivision Manager and Haivision Hub 360

# **POWER**

12-19V, 90W

#### **PHYSICAL**

Dimensions (W x H x D): H: 1.67" (42.4 mm) W: 5.75" (146 mm) D: 6.22" (158 mm)

Weight:

Temperature:

Operating: 10°C to 35°C (50°F to 95°F) Non-Operating: -40C to 65°C (-40°F to 149°F)

Software Version: 4.4



Haivision StreamHub GO rear