

W9133L26QA030

Cable TV Subscription Installation and Services Solicitation Questions and Answers

1. Are there any available Building 3500 floor plans, roof plans/elevations, telecommunications pathway drawings, and as-built drawings applicable to the existing cable/satellite television and Haivision IPTV headend infrastructure? If Haivision-specific drawings are available, can you provide the current headend configuration, including existing equipment, available inputs/ports, and associated signal flow information?

ANSWER: Floor plan, as-built, etc. drawings are not available. Haivision configuration drawings attached.

2. The PWS requires integration of twelve (12) professional-grade cable boxes/CODECs or comparable signal delivery devices into the Government's existing Haivision streaming infrastructure and states that the existing Haivision system is the service endpoint. Can you clarify whether the Government will provide all Haivision equipment, licenses, cards/modules, encoders, Media Switch capacity, or other components required to expand the existing Haivision environment to accept the twelve (12) required inputs, or whether the Contractor must furnish any additional Haivision components or licensing required for this expansion?

ANSWER: Yes government will provide firmware version and description of all GFE Haivision equipment . Contractor is not responsible for Haivision licensing-Please see governments response to Question #4 as well as below.

As per PWS 4.1 General: Except for those items specifically stated to be Government-Furnished in Paragraph 3.0, the contractor shall provide all equipment and services necessary to deliver the required programming to the Haivision system, such that the programming is streamed via the enterprise IPTV distribution. Including but not limited to:

- professional-grade cable boxes/video CODECs or comparable to that are compatible with the Haivision IPTV system.
- All necessary cabling, connectors, amplifiers, and other signal distribution equipment.
- All necessary racks, mounts, and other support hardware.

3. Can you identify the model numbers, firmware/software versions, available input capacity, licensing configuration, and available physical interfaces of the Government-owned Haivision equipment with which the Contractor must integrate? Please also identify the required physical handoff/interface for each of the twelve (12) channels.

ANSWER: The contractor does not need to provide firmware/software, licensing for Haivision equipment. Just the configuration into the new cable system. Please reference current equipment photos.

Per PWS 5.2. Equipment and Installation: The contractor shall provide, install, and maintain all equipment necessary to receive and deliver the television programming and convert it to a HDMI that the Haivision encoder/headend can ingest.

4. Can you confirm the complete list of Government-Furnished Equipment (GFE) that will be available for Contractor use and identify the demarcation point between Government-Furnished Equipment and Contractor-Furnished Equipment for the proposed solution?

ANSWER: The demarcation point refers to the location on the roof where an existing satellite is attached.

As per PWS 3.3 Equipment: The Government will provide the contractor with access to the following existing, on-site equipment for the sole purpose of integration. The contractor is not responsible for the maintenance or warranty of the GFE but is responsible for ensuring the new cable TV system integrates with it successfully. Current equipment is as follows:

- MB6 - Makito/Makito/Barracuda/Torpedo2 6 Slot Chassis
- Makito X Dual SDI Encoder Appliance - H.264 IP Video Encoder
- Haivision Media Platform - Enterprise Appliance
- Makito X4 SDI Encoder Appliance

5. Can you confirm the required signal handoff from the Contractor-provided television reception/decryption equipment to the Government-owned Haivision system, including whether the Government requires twelve (12) HDMI baseband outputs, twelve (12) IP streams, or another interface? If IP delivery is required, please identify the required protocol, codec, resolution/frame rate, and network interface requirements.

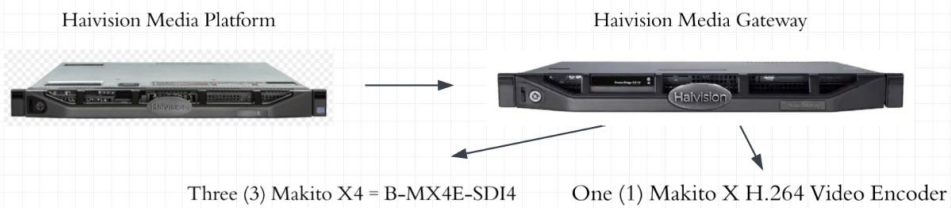
ANSWER: Per PWS 5.2. Equipment and Installation: The contractor shall provide, install, and maintain all equipment necessary to receive and deliver the television programming and convert it to a **HDMI** that the Haivision encoder/headend can ingest.

Per PWS 5.4.1. Install and configure 12 cable box/CODECs and connect to the Haivision streaming system.

Per PWS 5.4.2. Ensure that the video streams are at a minimum 720p resolution, low-latency, and stable, utilizing the Secure Reliable Transport (SRT) protocol where applicable.

6. The solicitation currently references the site visit as September 16, 2022. Can you confirm the intended date is September 16, 2026?

ANSWER: Yes, the site visit will be held on 16 September 2026 at 10am. The correction has been captured in Amendment 0001.



1. Haivision Media Platform
2. Haivision Media Gateway
3. Makito X4 Connected to Blackbox BNC to SDI to HDMI
4. HDMI to 3G-SDI Converter to Cable Box (Direct TV)
5. Cable Box (Direct TV) to Commscope CSMAPDU9VP



Cable Box F connector cable to
Commscope CSMAPDU9VP



MB6 - Makito X/Makito/Barracuda/Torpedo2 6 Slot Chassis		
Makito X Dual SDI Encoder Appliance - H.264 IP Video Encoder		
Haivision Media Platform - Enterprise Appliance		
Makito X4 SDI Encoder Appliance		
Haivision Play 2000-C Set Top Box		

Haivision Media Platform	Service Tag	B9V13Z3
	Express Service Code	24540921183
	Version	4.1.0
Haivision Media Gateway	Service Tag	4NQVDZ3
	Express Service Code	10142985855
	Version	4.1.0



Male to Mini BNC HD-SDI



HDMI out to Cable Box

Makito X H.264 Video Encoder



S-Play-2000-C





Virtual Events | Live All Hands | IPTV | Digital Signage Platform

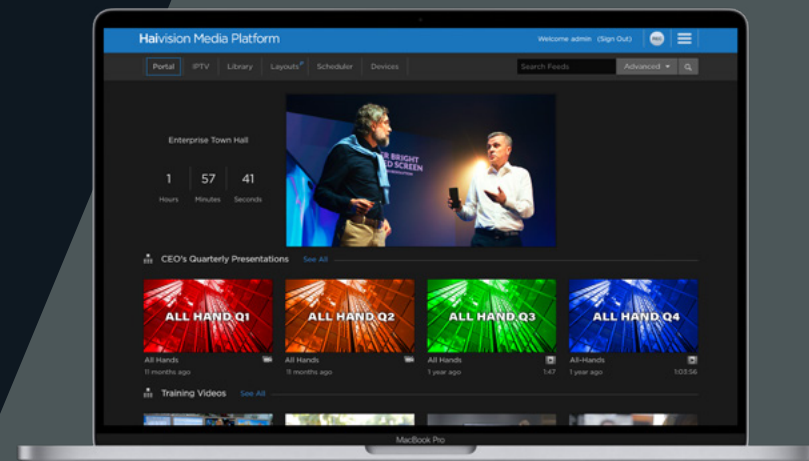
DATASHEET

Business-Critical Video for Any Organization

Haivision Media Platform lets you focus on communicating your message to the right people, no matter where they are or what type of screen they are using.

Modernize your video infrastructure with:

- Secure and scalable industry-leading eCDN solution for live video
- Multi-site low latency video delivery across corporate networks
- Meet viewer expectations with low bandwidth consumption
- Real-time analytics for reporting on video streaming and network performance



HAIVISION

Media Platform

ENTERPRISE
EDITION

SECURE AND SCALABLE ENTERPRISE CONTENT DELIVERY

Haivision Media Platform is a powerful multi-site video distribution platform for streaming live enterprise video content to employees watching anywhere inside and outside the corporate IP network and firewall. Haivision Media Platform also delivers regionally-filtered IPTV content to set-top boxes and video displays throughout your organization.

BROADCAST VIDEO TO ALL EMPLOYEES

Today's organizations rely on video to share important information to its employees. In order to communicate by video from anywhere, corporations need a reliable eCDN solution that can be easily scaled up. For the video to deliver a message with impact, employees need to have access to a common viewing experience, no matter where they are located, and it needs to look good.

The Haivision Media Platform securely delivers a pristine viewing experience to every employee on any type of screen – without overwhelming LAN and WAN networks. With a mix of on-premise, internet, and cloud options for building a video eCDN, the Haivision Media Platform enables all types of organizations to share live video to all locations. With an intuitive web-based user interface, Haivision Media Platform makes it easy to broadcast confidential, must-not fail live events, such as all hands meetings, town halls, and CEO addresses to employees based in offices around the world, at home, or on the road.

HAIVISION





“ A core tenet of Microsoft Stream is delivering live events, such as company meetings and CEO updates, to employees wherever they are – working remotely from home, in an office, or on the go. The ability to combine Stream playback with Haivision Media Platform provides added flexibility for enterprises that need to deliver live video to large numbers of remote employees while also distributing it efficiently behind the corporate firewall. ”

CHRIS KNOWLTON
PRINCIPAL PROGRAM MANAGER | MICROSOFT CORP



CONTENT AND NETWORK SECURITY

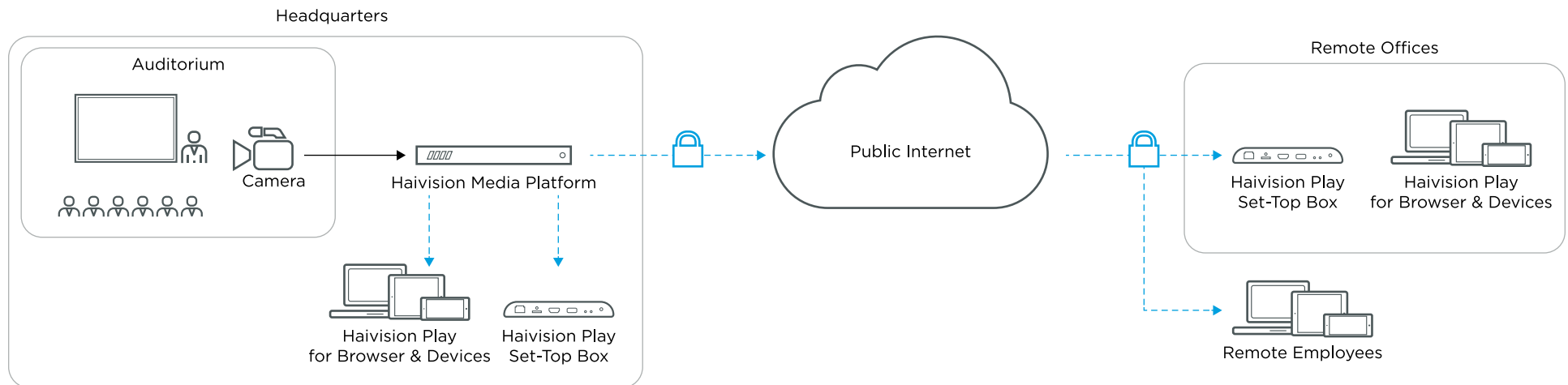
With Haivision Media Platform, users have a secure and authenticated single-point of access to watch live and on-demand video from their desktop, on set-top boxes, or on mobile devices – regardless of whether the content is delivered across the internal corporate network or over the public internet. The web portal player can display up to four synchronized HD sources at once (i.e., multiple different news channels, or a CEO presentation along with the full-motion presentation). Administrators can also embed a single or dual stream player directly within internal corporate portals like Microsoft SharePoint and intranet sites.

- ▶ **Permission-Based Authentication** - Support for Active Directory, LDAP, SSO, and Cloud Identity Providers ensures that administrators can provide employees and set-top boxes with authorized content.
- ▶ **Trusted Content Security** - Protect live and on-demand content from unauthorized viewing, copying, and redistribution with adherence to security frameworks and AES 128/256 encryption.
- ▶ **Enhanced Network Security** - Denial-of-Service Protection and Injection Attack Protection.
- ▶ **Customizable Simultaneous Login Limits** - Control how many failed log in attempts before a user is disabled and isolate from how many simultaneous log ins from multiple locations to restrict shared log ins.
- ▶ **Audit Logging** - View instant log ins, attempts, views, sessions watched live and on demand with location and user level detail.
- ▶ **Protect Valuable IP and Content** - Advanced customizable watermarking including custom text, username, IP address and timestamps.

BROADCAST FROM REMOTE LOCATIONS

Provide executives with the ability to present in high-quality from anywhere – headquarters, remote office, home office, or other off-site locations such as event venues. Haivision Media Platform provides the flexibility to broadcast live company updates and important presentations from anywhere over a standard internet connection. No matter where your all-hands meeting or keynote presentation is taking place, you can bring all your employees together and make them feel part of your important company events and milestones.

- ▶ Broadcast-quality and low latency HD & 4K video on browser, mobile, and set-top boxes.
- ▶ Support for closed captioning and user-selected languages on any HMP-supported device.
- ▶ Intuitive user portal for presenting and viewing from anywhere with an internet connection.
- ▶ Haivision H.264 and HEVC video encoding and the SRT protocol enables live content to be streamed to and from the Haivision Media Platform from anywhere – ensuring business continuity even when presenters are out of the office.
- ▶ Video-on demand library ensures that your message gets across to absent employees and those working in different timezones.
- ▶ Descriptive audio, text scaling and Closed Captions compliant with the Americans with Disabilities Act (ADA) Section 508.



UNIFIED CORPORATE VIDEO EXPERIENCE

Manage and distribute all of your valuable corporate video content through one platform including live events, IPTV, and video-on-demand. Enhance your corporate communications with branded messaging, custom templates, locally-relevant information, and dynamic content.

- ▶ **Live Video Streaming** - Deliver live video streams to employees everywhere, within corporate IP networks, behind firewalls, and across the internet to authenticated viewers.
- ▶ **Browser-based Administration** - Manage content, system settings, and generate user activity reports.
- ▶ **High Availability Option** - Minimize the risk of system failure and maintain uptime through an optional secure inter-server database replication and status tracking system.
- ▶ **Set-Top Box Management** - Centrally control and schedule when and where video is displayed on any STB-connected screen - in public areas, conference rooms, home offices, and auditoriums for group viewing.
- ▶ **Minimal IT Intervention** - Standards based support for any WAN/LAN infrastructure and video streaming in both unicast and multicast modes to any HTML5-based web browser.

DELIVER YOUR MESSAGE WITH IMPACT

Whether it's a CEO, marketing executive, chief of staff, head of sales, or HR leader, it's important that they are able to look good and get their message across to all employees in real-time, no matter where they are located. As a network administrator, corporate communications manager, AV professional or event manager, you need a solution that is not only easy to use, but can also ensure secure and reliable delivery of live video across your entire organization. With Haivision Media Platform you can enable your leaders to get their message across, with impact, while minimizing the impact on your IT infrastructure and without compromising internal corporate confidentiality.

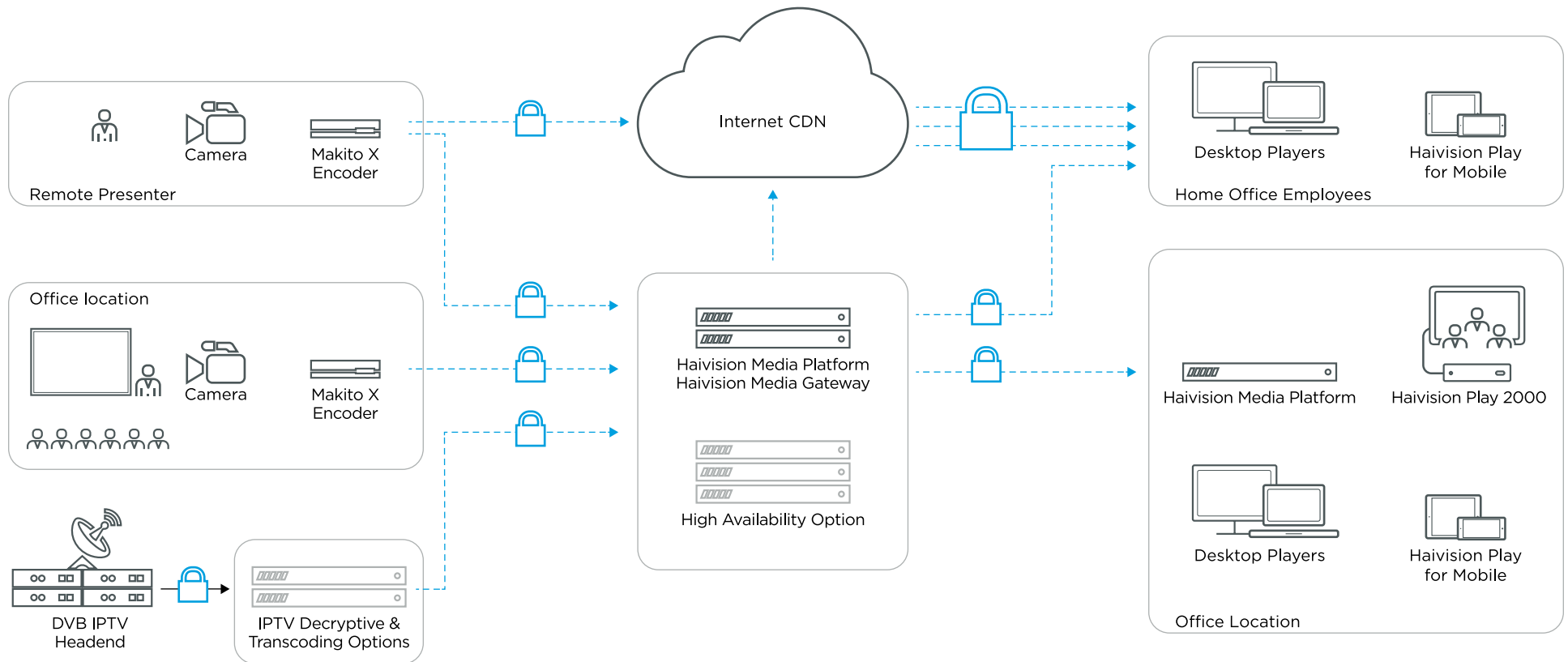
- ▶ Multi-site & multi-platform live video distribution to screens via secure browser, STBs and devices.
- ▶ Low latency encoding and streaming provides a consistent viewing experience wherever the content is consumed.
- ▶ Real-time analytics and metrics during and after the event for reporting.



ENTERPRISE IPTV

Carry HD broadcast channels throughout the organization and give employees the ability to watch live news, sports, and events as they happen. Stream breaking news or important sporting events to TVs in cafeterias, lobbies or break spaces, and even on desktop web browsers (when permitted, and based on specified location) so that employees can keep an eye on the world while they work. And with location-based permissions, you can ensure that content sharing is always in compliance with regional distribution agreements. Haivision Media Platform's centralized administration and scheduling tools control what channels employees can see – in which locations and on what screens – and when it's available.

- ▶ With a host of plug ins available passersby can see the latest health protocols to follow, which VIPS or C-Suite are in the office today, or evacuation procedures and down to what's on the menu in the cafeteria today.





“ With video, we have a powerful tool to help our team members better understand the direction of the company and how their own work connects to Follett’s success. The Haivision Media Platform allows us to stay-connected and communicate in real-time with more employees than ever and promote an inclusive corporate culture throughout the organization. ”

RICK ELLSPERMANN
EXECUTIVE VICE PRESIDENT OF HUMAN RESOURCES | FOLLETT



Haivision Play

Haivision Media Platform supports Haivision Play, a series of high performance video player applications for mobile devices, desktops, managed set-top boxes, streaming media players, and Smart TVs. Haivision Play provides:

High Quality, Low Latency Streaming

Users of Haivision Play can enjoy high quality, low latency video and audio payout.

Mobile Contribution

Turn your smart phone into a camera to stream live into Haivision Media Platform from anywhere directly with Haivision Play Mobile on iOS and Android.

Group Viewing

Stream live events to conference rooms and auditoriums with Haivision Play and Apple TV set-top boxes.

Set-Top Box Management

Haivision Play Set-Top Boxes can be easily controlled and managed with Haivision Media Platform.

End-to-End Security

Protect content from unauthorized viewing and sharing with multicast AES and encrypted HLS, delivered on platforms and appliances trusted by the world's largest financial institutions and certified on the US DOD Approved Product List.

IPTV Channels

Give your employees worldwide the ability to watch authorized IPTV channels (based on permissions and location).

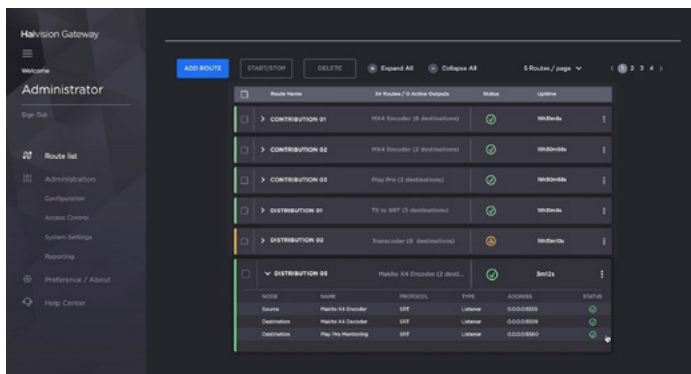
Authentication and Permissions

Provide access to the content employees need across devices with SSO, Active Directory, LDAP, and Cloud Identity Provider integration.

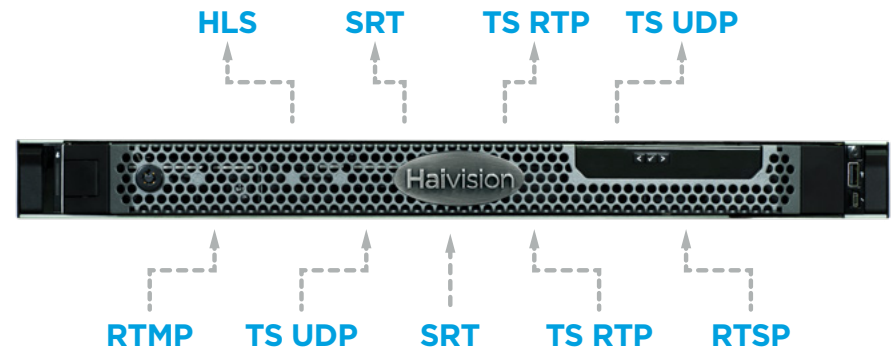
Optional Haivision Media Platform Add-ons



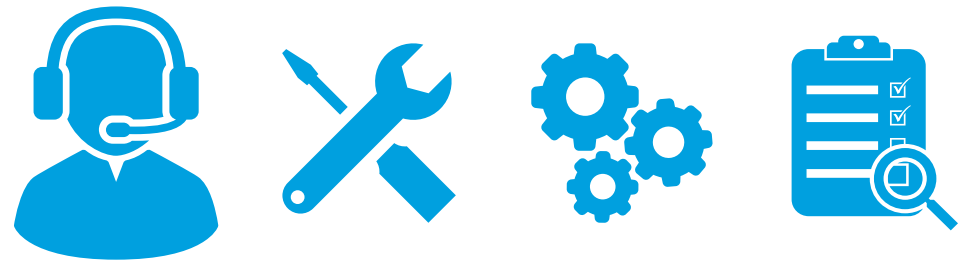
Makito X Encoder - Ideal for remote video contribution and backhauling low latency live video streams between locations over the internet, managed networks or by satellite.



Haivision Media Gateway (HMG) - Reach satellite office locations and even external users securely and reliably with integrated eCDN capabilities. The Haivision Media Gateway scales corporate video deployment to additional locations by bridging networks, formatting and replicating streams, and caching video content. HMG is available as an appliance, as a VM, or in the cloud.



Haivision IPTV Transcoder - Receives and transcodes streams from internal and commercial broadcast sources for secure & bandwidth efficient delivery within the Haivision Media Platform.



Professional Services - Haivision's experienced Professional Services team is prepared to assist customers with nearly any streaming related challenge, including pre/post sale network consulting and system design, turnkey implementation, customized cloud hosting, training, remote system/event monitoring, event staffing, event production, and on-site badged-staffing.

The Haivision Media Platform is available as a highly secure on-premise solution (server appliances and/or VM appliances), and as a hybrid solution (with components hosted in cloud or on-premise), with video distribution options tailored to each unique need and network infrastructure.

HAIVISION MEDIA PLATFORM STANDARD FEATURES:

- 500 concurrent users
- 5 recording ports
- Support for up to 200 live sources
- Location-based permissions for multi-site deployments
- Multi-stream viewing & recording
- User authentication with LDAP/AD/SSO/Cloud ID
- Advanced video player watermarking including; IP Address, Logged in Username and Date and Time as watermarks over live streams
- Web-based admin & management
- Video-on-demand library
- Americans with Disabilities Act (ADA) Section 508-compliant Closed Captions
- On-Screen Electronic Program Guide for IPTV
- AES-256 Encrypted Streaming
- Support for Network file storage (NFS)
- Automated watch-folder ingest of new content
- Role-based access control
- HTML5 Player
- Support for HD & 4K streams
- Support for HEVC streaming to Set-Top Boxes
- Central Set-top box management
- Content, system, and user activity reporting
- Embed external CDNs for remote viewers
- REST API with comprehensive documentation

AUDIO/VIDEO FORMATS:

- H.264 (STB, Web, and Mobile players) & H.265 (STB-Only)
- AAC-ADTS Audio Pass-Through

INPUTS:

- MPEG-2 Transport Stream over UDP
- SRT (Secure Reliable Transport)
- RTMP(S), RTSP (with Haivision Media Gateway)

OUTPUTS:

- MPEG-2 Transport Stream
- SRT (Secure Reliable Transport)
- HLS (with end-to-end encryption)

ADDITIONAL HAIVISION MEDIA PLATFORM ENTERPRISE FEATURES:

- Layouts*

ADDITIONAL HAIVISION MEDIA PLATFORM WORKGROUP FEATURES:

- Live Review - monitor content during recording*
- Low latency playback*
- KLV display per MISB ST 1909.1 Metadata Overlay for Visualization*

ADDITIONAL HAIVISION MEDIA PLATFORM BROADCAST FEATURES:

- Live Review - monitor content during recording
- Low latency playback*

*HAIVISION MEDIA PLATFORM CAPABILITIES ARE EXPANDABLE THROUGH LICENSING

- 2,500 user/device license packs
- 5 Recording channel packs
- High Availability configuration (requires use of NFS)
- eCDN and Haivision Media Gateway for multi-location delivery
- Enterprise, Workgroup, and Broadcast additional features

HAIVISION MEDIA PLATFORM SYSTEM COMPONENTS

HAIVISION MEDIA PLATFORM APPLIANCE

- 1RU: 42.8H x 482.0W x 822.88D (mm)
- Secure Linux-based OS
- Dual Intel® Xeon® processors
- Redundant hot-swappable power supplies 100-240V AC
- RAID configurations w/ hot-swappable drives (4x 480GB)
- Max Weight: 22.51kg
- 2x GigE Base-T NIC
- 2x SFP+ (up to 25Gbps) Expansion Slots (Copper or Fiber Modules not included)
- Rated up to 1,500Mbps (300 streams @5Mbps)
- Based on Dell PowerEdge R660 Rack Server
- Also available as a VM:
 - Requires VMware VSphere ESXi 5.5 and above

HAIVISION MEDIA GATEWAY APPLIANCE (INCLUDED WITH HMP ENTERPRISE AND HMP BROADCAST EDITIONS)

HAIVISION PLAY SET-TOP BOX (OPTIONAL) FOR USE WITH HAIVISION MEDIA PLATFORM:

HAIVISION PLAY 2000-B SET-TOP BOX

- 22H x 159.9W x 144.2D (mm)
- (0.87" x 6.3" x 5.7")
- Max Weight: 340g
- PoE (Type 1)
- Wall Power Optional 12V/1.5A
- Supports up to 4k Video
- Supports H.264 & H.265 codecs
- Supports SRT, HLS, and MPEG-2 Transport Stream
- ADA 508-compliant Closed Captions and Scalable User Interface

HAIVISION MEDIA GATEWAY SYSTEMS FOR REMOTE LOCATIONS (REQUIRES ECDN LICENSE)

HAIVISION MEDIA GATEWAY SYSTEM 100

- 100 Mbps aggregate output streaming capacity
- Small form factor appliance (optional rackmount).
- 42.4H x 146W x 158D (mm) without rackmount
- Secure Linux-based OS (NIST 800-53 r.4)
- Intel CPU
- 2x GigE Base-T NIC
- 256 GB Solid State Drive
- External Power Supply 90W

HAIVISION MEDIA GATEWAY SYSTEM 200

- 200 Mbps aggregate output streaming capacity
- 1RU: 42.8H x 482.0W x 609.24D (mm)
- (1.68"H x 18.97" W x 23.98"D)
- Max Weight: 12.2 kg
- Secure Linux-based OS (NIST 800-53 r.4)
- Intel Xeon CPU
- 2x GigE Base-T NIC
- 2 x HDD RAID-1
- Single Power 250W (fixed)

DODIN APL CERTIFIED:

Haivision Media Platform and Haivision Media Gateway are on the Department of Defense Information Network Approved Product List (DODIN APL) under tracking number **2118301**.

HAIVISION MEDIA GATEWAY SYSTEM 500

- 500 Mbps aggregate output streaming capacity
- 1RU: 42.8H x 482.38W x 595D (mm)
- Max Weight: 13.6 kg
- Secure Linux-based OS (NIST 800-53 r.4)
- Intel Xeon CPU
- 2x SFP+ (up to 10Gbps) Expansion Slots (Copper 1Gbps Module included)
- Rated up to 500 Mbps (100 streams @ 5Mbps)
- 4 x HDD RAID-5
- Dual 350W HS power supplies

HAIVISION MEDIA GATEWAY ALSO AVAILABLE AS VIRTUAL MACHINES AND COMPATIBLE WITH:

- VMware vSphere ESXi 5.5 and above
- Requires VMWare or NAS storage. We highly recommend using NFS for NAS storage (NAS should be on same LAN segment as HMP).

HAIVISION MEDIA GATEWAY SYSTEMS/VIRTUAL MACHINES STANDARD FEATURES:

STREAM INPUTS:

- Haivision SRT Streams, including 128/256-bit encryption for live video transport between facilities
- HLS unicast streams for VOD transport between facilities
- Transport Stream

STREAM OUTPUTS:

- Haivision SRT Streams, including 128/256-bit encryption for live video transport between facilities
- HLS unicast streams for VOD transport between facilities and live streaming to local users
- Transport Stream Multicast with optional Encryption and Forward Error Correction

READY TO GET STARTED WITH HAIVISION MEDIA PLATFORM?

We can't wait to help you! Speak to one of our experts.

CONSULT WITH AN EXPERT