



# BITSTREAMS EDGE

Simplified interface to manage  
NETINT VPUs for video encoding  
and transcoding workflows



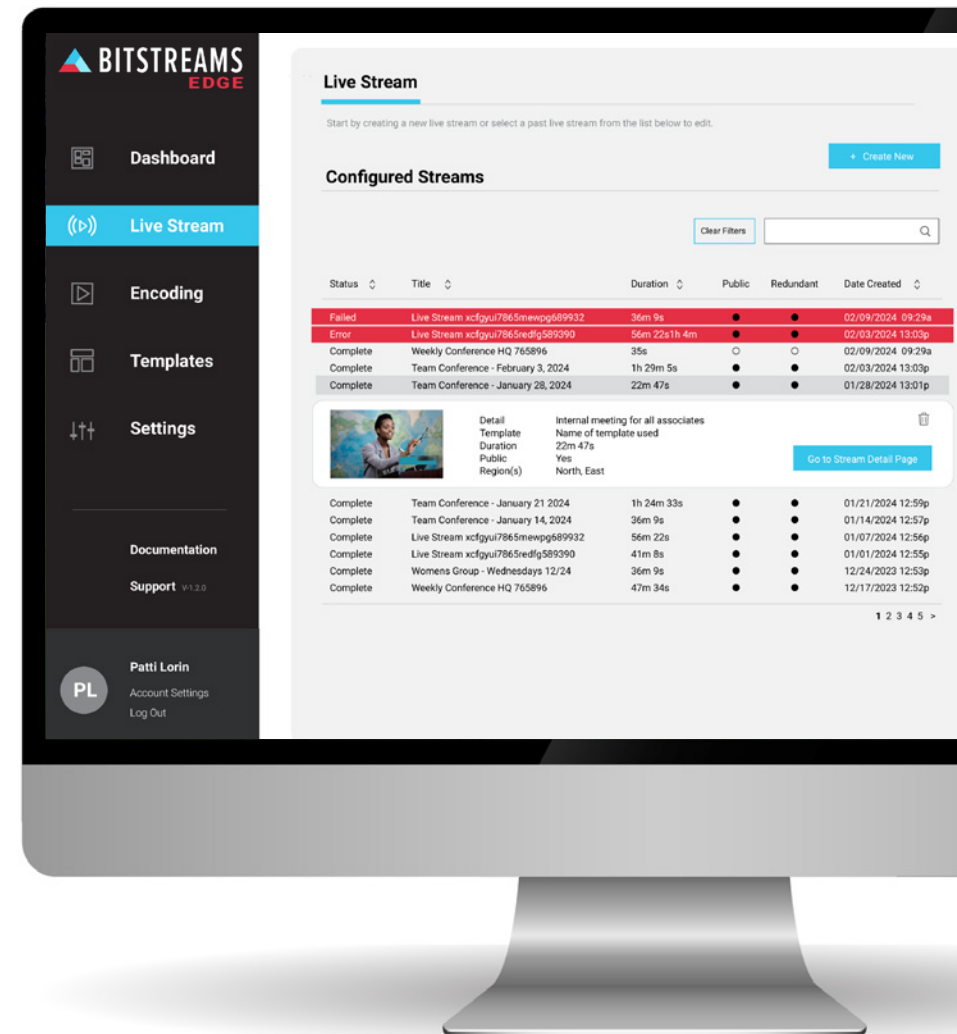
## NETINT

# No command lines, just a friendly face.

Bitstreams Edge was developed to reduce the complexity and simplify the process of prepping video content for streaming.

Similar to the evolution from complex DOS line-commands to user-friendly graphical interfaces, Bitstreams Edge presents a streamlined, visual approach to easily manage streaming content and maximize the performance of your Smart VPU hardware.

- **Simplified to configure and distribute live streams without touching complicated FFmpeg command lines**
- **Preconfigured templates help you manage and monitor your workflow through our web app or an integrated API**





### Templates

Select to preview, edit or delete.

Search:  [+ Create new](#)

Templates	Default	Date Created	Used
H264 multicast	<input checked="" type="checkbox"/>	02/03/2024 13:03p	521

#### Preview Configuration

Output Format: H264	Output stream:
SB Passthrough: BMP4	Output 1: H264, 4750/30, 1105x1185, AAC, 6, AAC-LC, 256, 48k
Duration: 30 sec	Output 2: H264, 2516/30, 1280x720, AAC, 6, AAC-LC, 256, 48k
	Output 3: H264, 990/30, 640x360, AAC, 6, AAC-LC, 32, 48k
	Output 4: H264, 990/30, 480x270, AAC, 6, AAC-LC, 32, 48k

HEVC multicast	<input type="checkbox"/>	01/28/2024 13:01p	96
Regional	<input type="checkbox"/>	01/21/2024 12:59p	107
National	<input type="checkbox"/>	01/14/2024 12:57p	125

### Edit Existing

Edit existing encoding template configuration.

Template Title:   Set as default

#### Configurations

**Encoding Parameters**

Normal Quality (default)  
Best suited for this reason

High Quality  
Best suited for this purpose

Custom

Look Ahead:

RDO Level:

RDO Quantity:

#### Outputs

Name	Codec	Bitrate (kbps)	FPS (frame rate)	Resolution
Output 1	H264	4.5	auto detect	1280 x 720
Output 2	H264	2	auto detect	960 x 540
Output 3	H264	1.1	auto detect	854 X 480
Output 4	H264	365	auto detect	640 x 360
Output 5	H264	145	auto detect	480 x 270

[+ Add new](#)

#### Optional

**Real-Time Captioning (AI)**  **Graphic Overlay**

Language:

### Create New Stream

Title: TSN Channel

Description: TSN Westcoast

Select input stream:

Template:

Output Format: DASH/HLS

BACK

**BITSTREAMS**  
EDGE

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- PL  
Patti Lorin  
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### Stream Detail Page Live

Title: **Weekly Conference HQ**

Description: Internal meeting for all associates

Upload cover graphic:

Connectivity: Excellent | Duration: 00h 00m 00s | Status: Live

Stop Stream

**Stream URLs** **Health Events** **Recordings**  DVR Enabled

Copy and paste these pertinent URLs for posting and sharing streams.

Stream Key:

Stream URL:

Backup Server URL:

**Playback URLs** edit, copy or delete these previous configurations.

Output Name	Templates	Visiblity	Key	Play Protocol	Playback URL
LinkedIn	current_default	Public	Public	DASH / HLS	/live/vb650af3949566888c95968jpm...
Website	default-h265	Signed	Key Name	DASH / HLS	/live/rodf6650af3949566888c95968jpm...

[+ Add Output](#)

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# About Bitstreams Edge

## Our Ideal Customers:

- Any company that needs a custom application architecture and is not developing their own custom software
- Streaming platform companies that have limited software experience and on-prem access to physical servers and racks
- Service providers, linear TV delivery, or live video streaming platforms
- Any company that requires video recording compliance with auto recording of all incoming streams

We built Bitstreams Edge in response to our customers asking for a simplified process. Our product is designed to run using Docker containers on edge deployment for fast and easy installation and requires a few command strings to get up and running.

## Bitstreams Edge Installation:

- NETINT will preload onto newly purchased hardware
- Customer can load onto their existing Quadra or Logan video servers
- Supports x86 and ARM CPU architectures with Linux OS
- Scheduled upgrades process to be managed by customer in their own maintenance window.

## System Features:

- Code-free configuration of FFmpeg for wide stream distributions
- Dashboard provides visual quick-check for:
  - Streaming Error Alerts
  - System Health Check
  - CPU/VPU hardware capacity loads
- Generates report logs for stream status
- Template based configurations for live stream sessions, set once-use many
- Managed through web app or custom API
- Annual subscription model includes:
  - New feature releases, bug fixes, tech support, and failover redundancy

## Live Streaming:

- Supports lone-time events with several hour duration
- Input: SRT, RTMP
- Output: Dash/HLS

## Live Video Encoding:

- System runs 24/7/365
- Input Support: SRT, RTMP, Dash/HLS, Multicast/UDP
- Output support: Dash/HLS, Multicast/UD
- Records to a file

# Quadra Video Server Ampere Edition

Finally, a server with monster throughput and a tiny appetite for power

Industry leaders united to consolidate your video transcoding process, accelerate core functionality and integrate multiple production workflows into this high-performance server.

- **HEVC, H.264 & AV1 encoding**
- **HEVC, H.264, & VP9 decoding**
- **Up to 8K resolution, 10-bit HDR**
- **AI enhanced productivity**
- **OpenAI Whisper auto-captioning**

The Quadra Video Server Ampere Edition empowers video engineers to run additional publishing-related application for enterprise integration such as dynamic ABR packaging, streaming orchestration, content management and of course, live captioning with Whisper AI.

**NETINT**  
**Smart VPU**  
Quadra  
T1Us

**AMPERE**  
**CPU**  
2.8 GHz 96-core  
Altra Max  
M96-28

**SUPERMICRO**  
**Server**  
MegaDC  
ARS-110M-NR  
1RU



# What makes our VPUs so smart?



**NETINT Quadra Smart VPU**  
ASIC chip, 2nd Gen G5

## **Built for Speed**

Tasking VPUs with only video transcoding enables them to process and scale streams faster than any other transcoder.

## **Built for Volume**

VPUs enable higher density for profitable video encoding and streaming operations. Get a 10X boost over software.

## **Eats Less Power**

VPUs have a tiny appetite for power, drawing <7W, and uses 80% less energy than CPU-processing.

## **Boosted with AI**

AI accelerates workflow productivity and delivers OpenAI's Whisper, real-time captioning feature.

**NETINT**  
**2024 Winner**

**TECH**  
**EMMYS**<sup>®</sup>

**Design & Deployment  
of Efficient Hardware Video  
Accelerators for Cloud**

We feel it's worth mentioning we're in the company of greatness; co-winners for this same category were Google and Meta.

[Read more](#)



**NETINT unveils  
AI-powered subtitling  
to increase content comprehension  
for live streaming platforms**

**OpenAI Whisper**

# Next level engagement for streaming audience

OpenAI's Whisper feature is the game changer in real-time, text subtitling.

Whisper eliminates the issue of noise interference, transforming garbled audio into crisp, clear text that streams in synch with the video, ensuring that every word is captured and every viewer is included. It's not just about enhancing comprehension; it's about democratizing access to information and entertainment, making live streams universally enjoyable and fully accessible.

- **AI generated captions enhances accessibility and comprehension for the hard-of-hearing communities**
- **Immediate translations remove language, accent barriers and frustration for non-native speakers**
- **Live events become more inclusive and interactive engaging wider audiences with dynamic translations**





# Next level experience for content creators



## **Improved Workflow for Journalists**

Journalists covering live events can use real-time transcription to accurately quote speeches, interviews, and commentary, streamlining their workflow and enhancing reporting accuracy.

## **Improved Marketing and Monetization Strategies**

Automatic transcription saves additional staff and hours from editing content and analyzing feedback. This enhances targeted SEO and personalization, significantly boosting campaign ROI and monetization strategies.

## **Automated Content Moderation**

Real-time transcription of live streams can be used to monitor and automatically flag inappropriate content, especially crucial for platforms hosting user-generated content and live broadcasts.

## **Content Archival and Searchability**

Whisper can transcribe vast amounts of live and archived video content, making it searchable, improving content discoverability and opens up new opportunities for monetizing archived content.

- **Media and Entertainment:** live subtitling
- **Education and Global E-Learning:** lecture transcriptions
- **Customer Service and Support:** live translations
- **Healthcare:** telemedicine consults and record-keeping
- **Legal:** accurate court proceedings and depositions
- **Law Enforcement:** real-time with 1st responders
- **Conferences and Events:** accessibility and translations

# Whisper AI feature is only available in our Bitstreams Edge bundle

Quadra Video Server Ampere Edition + 10 Smart VPUs + Bitstreams Edge software.  
That's the winning combination you'll need to unleash Whisper AI into your streaming content.

“

"The combination of NETINT's video processing technology and our high-performance Ampere Altra-Max CPU is a game-changer for the industry,"

**Sean Varley**

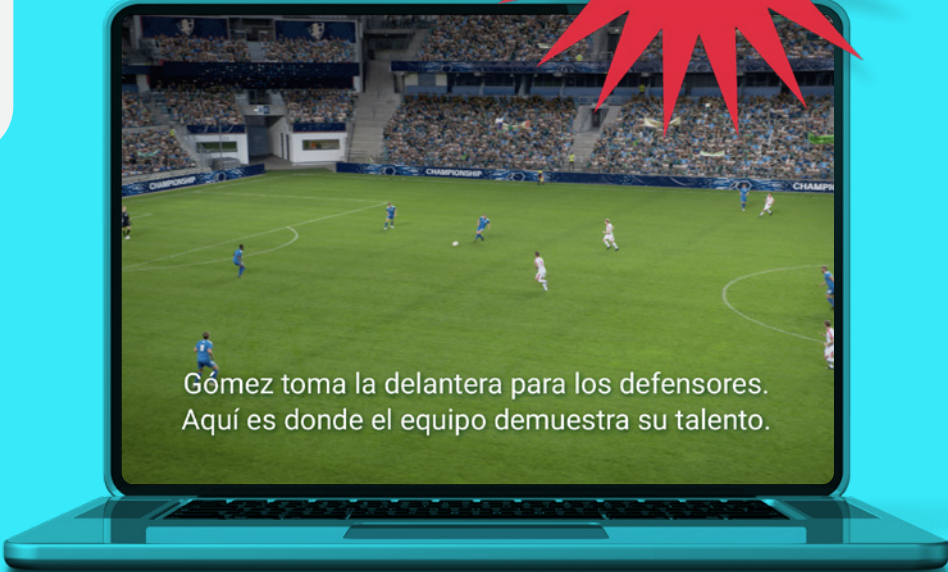
Chief Evangelist and VP of BizDev  
Ampere

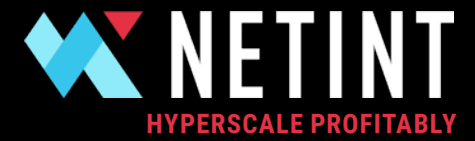
“

NETINT's Quadra Video Server with Whisper integration is years ahead in performance and efficiency, unlocking exciting opportunities for broadcasters and content platforms."

**Alex Liu**

Co-founder and COO  
NETINT





[sales@netint.com](mailto:sales@netint.com)

[netint.com](https://netint.com)