

InSync FrameFormer with TVU MediaMesh®

Premium Motion-Compensated Frame Rate Conversion for Broadcasters and Content Distributors — best-in-class quality, cloud-native efficiency, flexible access.

WHAT PROBLEM DOES THIS SOLVE?

Broadcasting premium live events globally means distributing content across regions with different video standards — frame rates, formats, and scan modes. Existing conversion tools introduce high latency, compromise image quality during fast motion, and are expensive to scale in cloud environments.

InSync FrameFormer with TVU MediaMesh solves this by delivering best-in-class, motion-compensated frame rate conversion natively within the cloud routing workflow — with just one second of latency and no GPU dependency, at a fraction of the cost of legacy hardware solutions.

SOLUTION OVERVIEW

InSync FrameFormer

Best-in-class software standards conversion preserving image integrity across formats, frame rates, and scan modes. CPU-only, low-latency, with 20+ years of proprietary algorithm refinement.

TVU MediaMesh®

Scalable, universal IP video routing with drag-and-drop simplicity and broad codec support. FrameFormer is available as an optional integrated feature within MediaMesh workflows.

AT A GLANCE

- Cost-efficient CPU-only design
- Motion-compensated conversion
- Premium live image quality
- Easy cloud deployment
- De-interlacing support
- Up/Down/Cross conversion
- SDR/HDR & WCG support
- Seamless workflow integration
- On-premises or cloud optimized
- Pay-as-you-go or subscription

JOINT HIGHLIGHTS

Premium Conversion Quality

Best-in-class frame rate conversion with unmatched image preservation for fast-motion live events.

Cloud-Native Efficiency

CPU-only, cost-effective, and seamlessly integrated into TVU MediaMesh for global scale.

Flexible Access

Pay-as-you-go or subscription — use only when needed for major live events worldwide.

Advanced features including de-interlacing and SDR/HDR tools simplify integration of traditional SDR interlaced formats into modern HDR progressive workflows — just set your output format and go.

SDR/HDR (HLG, PQ, S-Log3)

WCG (BT.601/709/2020)

1080i ↔ 1080p

Up/Down/Cross Conversion

De-interlacing

HOW IT WORKS

1 Receive & Demux

MediaMesh receives the incoming stream (SRT, SDI, etc.) and demultiplexes audio and video into separate processing paths via shared memory.

2 Motion-Compensated Frame Rate Conversion

FrameFormer applies proprietary motion-compensated conversion via the shared memory exchange — time-aligned with the audio path for perfect sync.

3 Re-encode & Mux

Converted video and audio are re-encoded and multiplexed back into the output stream — all within MediaMesh's automated, real-time pipeline.

4 Deliver to Any Destination

The finished stream is sent to any destination (SRT, SDI, etc.) via TVU MediaMesh's global IP transport — bi-directionally, at scale.

CONTACT

TVU Networks

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InSync Technology

www.insync.tv

SOLUTION USE CASES

Major Global Sports Events

High-quality international content transfer for FIFA World Cup, Olympics, Super Bowl, NBA, Wimbledon, and Tour de France — where fast motion and flawless quality are non-negotiable.

Interlaced to Progressive Integration

Seamless integration of 1080i interlaced legacy sources into modern 1080p progressive live production and distribution workflows — without quality compromise.

Bi-Directional International Exchange

Route local sources to international destinations bi-directionally when operating across different video formats and frame rates — with consistent sub-second latency.

Cloud-Native Standards Conversion

Replace expensive legacy hardware converters with a software-defined, cloud-scalable alternative — accessible on demand within MediaMesh at pay-as-you-go pricing.

WHY IT MATTERS

Unmatched Latency

One second of conversion latency versus four to six seconds from competitors. For live sports and breaking news, this difference is critical — enabling natural director-to-talent interaction.

Cost Efficiency at Scale

CPU-only architecture eliminates GPU hardware costs. Pay-as-you-go pricing means you only pay during active events — eliminating idle hardware expense between broadcasts.

Proven at the Highest Level

Powered by InSync's proprietary algorithms refined over two decades, FrameFormer has delivered flawless conversion for the world's most demanding live events and productions.

Simple, Integrated Workflow

TVU's drag-and-drop routing and broad codec support make FrameFormer instantly accessible inside MediaMesh — just set your output format and go. No separate system to manage.

ARCHITECTURE OVERVIEW

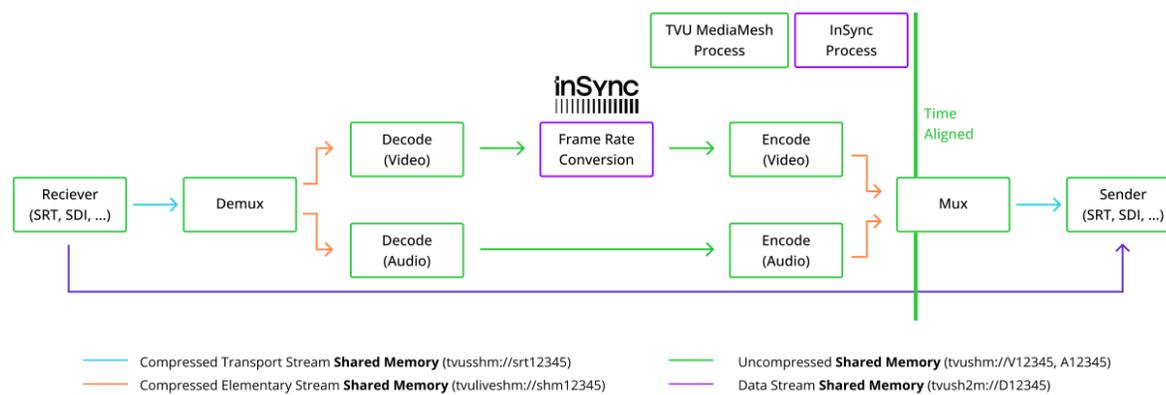


Fig. 1 — TVU MediaMesh® + InSync FrameFormer high-level integration. Video and audio are demuxed from the incoming stream, processed independently through shared memory, then re-muxed for delivery. FrameFormer operates as an integrated microservice within MediaMesh — no external hardware required.