

**CUBIC™**

Digital Intelligence

MotionDSP

Features

- Multi-channel FMV encoding/transcoding with KLV
- MotionDSP video enhancement: dehazing, stabilization, super-resolution, dynamic lighting correction
- FMV Detection and Tracking
- Hardware accelerated AI/ML processing
- Full API and web administrative portal
- Low-SWaP airborne/ground hardware and enterprise VM options

**MotionDSP**
.JET™

Low-latency video transcoding, Enhancement, and AI Platform.

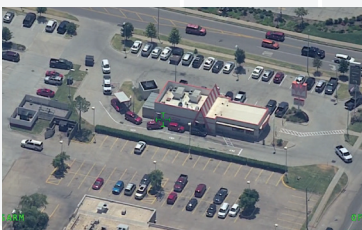
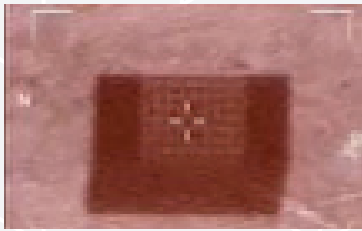
Cubic offers MotionDSP JET, a unique solution that integrates MotionDSP's patented real-time video enhancement algorithms with multi-channel transcoding and geospatial metadata correction and smoothing. Jet is an open solution that scales from low-SWaP computers to the enterprise and cloud. With its RESTful API, JET integrates into existing airborne, ground, and enterprise ISR systems to improve visual quality, geospatial accuracy and overall system performance.

Jet's Pixel Intelligence

Jet brings unique Pixel Intelligence to Full Motion Video (FMV) processing. JET demuxes, decodes, processes and resynchronizes FMV and geospatial metadata, integrating with multiple third-party AI/ML classification and orthorectification systems. During processing, JET's image-processing algorithms correlate, and temporally correct and smooth geospatial metadata in real time, providing accurate and smooth KLV data for every frame of video, reducing the "shake" in Augmented Reality (AR) geospatial overlays, and vastly improving the AR user experience.



Examples below captured from real-world video of Cubic's video conditioning provide a view into how we leverage this technology to increase lethality and survivability, and improve mission success today.

Pre-Conditioning**Image Processing Algorithm****Super Resolution**

Patented algorithm automatically analyzes and reconstructs each video frame with the best information from 51 adjacent frames of video.

Contrast

Contrast-limited adaptive histogram equalization adjusts for non-uniform illumination and reveals new detail within shadows and low-contrast areas.

Dehaze

Estimates the amount of haze in the image in a non-uniform manner, and adaptively increases contrast, regardless of depth discontinuities.

Stabilization

Corrects camera shake, drift and change in perspective by using up to 51 frames of motion information to plot an optical-like stabilized camera path.

AI/ML Orchestration

Jet orchestrates AI detection and classification algorithms, and translates pixel data to accurate geolocations.

Post-Conditioning