



Video Processing

SightLine provides a suite of software functions that are key in a wide variety of real-time applications. With software and hardware flexibility, SightLine provides tailorable, powerful solutions.

Full Tracking

Onboard tracker provides low-latency telemetry, essential for agile gimbal-pointing. Advanced image analysis and motion estimation isolate tracked objects from background for robust tracks. Tracks objects or scene (visual geo-pointing).

Telemetry Data

Tracker and detection functions provide low-latency pixel position telemetry data needed for gimbal pointing. Telemetry rates up to 30 Hz.

IP Encoding (H.264 and H.265)

Ethernet video encoding and streaming. H.264 / MPEG4 / MJPEG / H.265 (on 4000-OEM) encoding, MPEG2 TS/RTP encapsulation. Connectivity via UDP, TCP, and RTSP, unicast, multicast, broadcast.

Enhancement and High Bit Depth

A range of functions are provided to optimize video presentation. Enhancement modes include: CLAHE, LAP, false color, AGC, etc. Improved functionality with High Bit Depth.

HD Video

Meets demand for HD video capabilities. Up to 4K video on 4000-OEM; 1080P/59.94 on 3000-OEM; 720p/25 on 1500-OEM. Digital interface adaptors enable use of HD cameras.

Precision Landing

Video based precision landing enables accurate landing in GPS-denied environments. Telemetry to the flight controller includes pattern position, range, and angles. Sample code available; natively supported by MicroPilot.

Blending

Multi-spectral blending, 3000-OEM only, provides for best situational awareness.

Detection Algorithms

Real-time detection algorithms provide important situational awareness information and aid in tracker initialization. Detection modes: vehicle, staring, radiometric, anomaly, blob, gas, aerial, drone (with AI classification), and maritime.

Stabilization and Roll Correction

Key to video ISR functions, frame to frame registration provides stabilized video that improves the user experience. Corrects both frame-to-frame jitter and roll/nod movement.

KLV Metadata

KLV metadata is generated in accordance with MISB standards (0102.10, 0601.7, 0603.2, 0604.3, and 0903.3). User can insert pre-formatted (or custom) KLV data into video stream or on-screen display. NMEA stream compatibility.

DPR and NUC

Dead Pixel Removal and Non-Uniformity Correction add capabilities to IR cameras, removing the need for a dedicated DPR/NUC board.

Focus Telemetry

Focus metric telemetry provided at frame rate for customer implementation of autofocus algorithms. Sample code available.

Recording / Snapshot

H.264 video recorded to local SD card or remote FTP. H.265 recording available on 4000-OEM. Onboard recording satisfies recording requirement without an additional piece of hardware. Snapshots with metadata and full pixel depth.

On Screen Display

OSD options allow text, metadata, watermarks, and symbology additions to video.