

## Software

## Video Processing Software

SightLine provides a powerful suite of software functions that are key in a wide variety of real-time applications. By providing both software and hardware option flexibility, SightLine offers tailorable, powerful solutions. <u>Contact</u> <u>SightLine</u> to discuss configurations to meet your system's unique requirements.

Analyze Functions (OEMs and Library)	Render Functions (OEMs only)
<b>Telemetry Data</b>	<b>Stabilization and Roll Correction</b>
Scene, tracker, and detection functions provide low-latency	SightLine's frame to frame registration enables electronic
pixel position telemetry data needed for gimbal pointing.	stabilization of video that improves the user experience. Corrects
To 60 Hz.	both frame-to-frame jitter and roll/nod movement.
<b>Object Tracking</b>	High Bit Depth Processing
Low-latency telemetry essential for agile gimbal-pointing.	Enables full pixel depth functionality (beyond 8 bit) which is
Advanced image analysis isolates tracked objects from	critical for functions such as DPR/NUC and improves performance
background for robust tracks. Track multiple objects or the	of detection and most enhancement functions. Enables recording
scene (visual geo-pointing).	of absolute amplitude snapshots.
<b>Dual Processing (3000-OEM/4000-OEM)</b>	DPR and NUC
Simultaneous multi-channel processing provides powerful	Dead Pixel Removal and Non-Uniformity Correction add capability
options for EO/IR systems by running both analyze (detection,	to calibrate IR cameras/lenses, removing the need for a separate
etc.) and render (PiP displays, blending, recording) functions	dedicated DPR/NUC board.
<b>Detection Algorithms</b> Detection algorithms provide important situational awareness and aid in tracker initialization. Detection modes: vehicle, staring, radiometric, anomaly, blob, aerial, drone, and maritime.	<b>Enhancement</b> A range of functions are provided to optimize video presentation. Enhancement modes include CLAHE, LAP, false color, AGC, histogram equalization, scintillation mitigation, etc.
<b>Custom Classifier</b> (3000-OEM/4000-OEM/Library)	Video Display Options
Customer-defined classifier runs in real-time to assess any	A range of multi-channel display options for situational
detection or track against training classes. Customer maintains	awareness: Picture in Picture (PiP), two-up, Detect and Track to
proprietary training sets. SightLine provides training tools and	multi-PiP, and multi-spectral blending. OSD options allow text,
support.	metadata, watermarks, and symbology additions to video.
<b>Focus Telemetry</b>	<b>Recording / Snapshot</b>
Focus metric telemetry provided at frame rate for customer	H.264 video recorded to local SD card or remote FTP. H.265
implementation of autofocus algorithms that enable zoom	recording available on 4000-OEM. Snapshots with metadata and
optics.	full pixel depth.
<b>Precision Landing</b>	IP Encoding (H.264 and H.265)
Video-based precision landing enables accurate landing in	Ethernet video encoding and streaming to H.264 (all), H.265 (on
GPS-denied environments. Low latency telemetry to the flight	4000-OEM), and MPEG4 / MJPEG (on 1500-OEM). MPEG2 TS/RTP
controller. Successful integration requires control	encapsulation. Connectivity via UDP, TCP, and RTSP, unicast,
system/autopilot expertise.	multicast, broadcast.
HD Video	KLV / Metadata
Meets demand for HD video capabilities. Up to 4K video on	System metadata (system position/pointing angles, NMEA, time,
4000-OEM; 1080P/59.94 on 3000-OEM; 720p with reduced	etc.) can be inserted into KLV video stream, used in OSD, with
rates or SD on 1500-OEM. OEM camera interface adaptors	JPEG EXIF headers, full pixel snapshots, and KML or NITF files. KLV
enable use of a wide range of HD cameras.	metadata is generated in accordance with MISB standards.