

SLA-1000

On-board UAV Stabilization and Tracking

The SLA-1000 from SightLine Applications is an embedded video stabilization and tracking system well-suited for airborne video applications. SLA stabilization technology dramatically improves video quality, and hands-free low-latency tracking feedback accurately drives cameras to follow fast-moving vehicles even at high zoom. Command, control, and data readout functions are performed via RS232 or Ethernet. Compatible with NAVAIR on-board stabilization and tracking requirements specified in STUAS/Tier II UAS Program requirements (<http://www.navair.navy.mil/pma263/stuav/stuas.html>)



Stabilization

- Measures frame-to-frame shift in video
- Identifies and removes high frequency "jitter" components
- Automatically passes true camera pan and tilt motion
- Smooth high-quality output from a vibrating video source

Tracking

- Hands-off tracking of designated targets
- Image understanding and motion estimation isolate target from background
- Persistent tracking when view of target is temporarily blocked
- Tracking solution output continuously to provide low-latency turret control

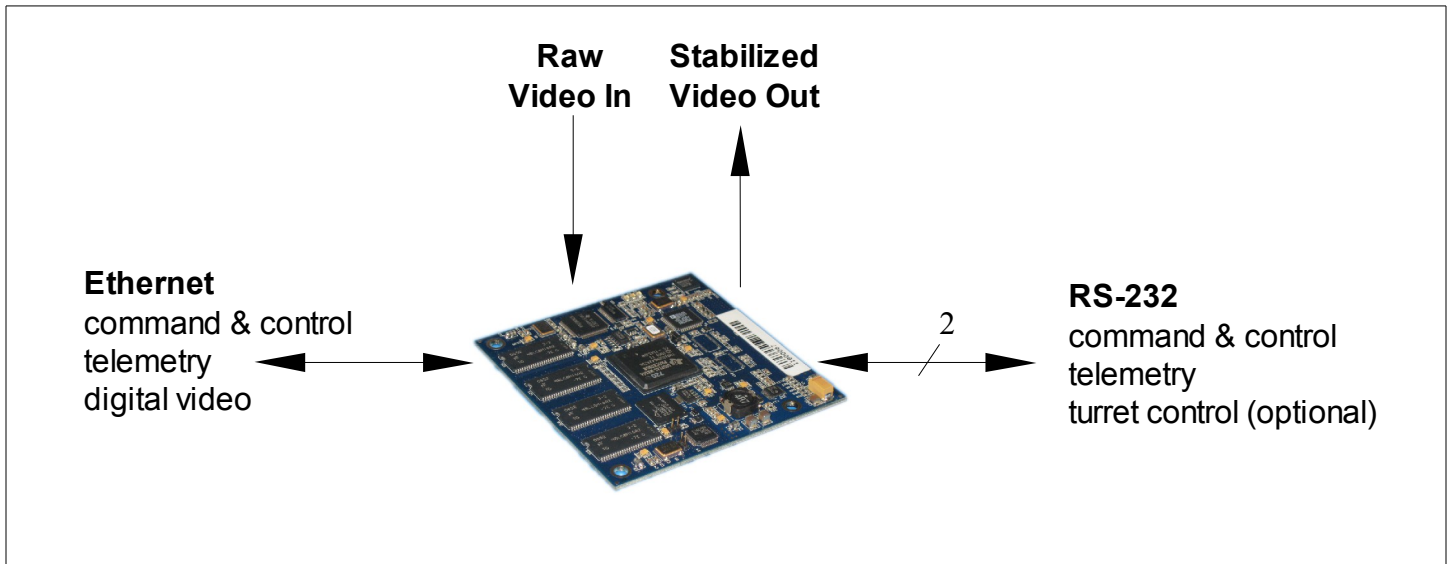
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Interfaces with

- Infrared cameras
- Visible/EO cameras
- Fixed or zoom optics
- Fixed or gimbaled cameras
- Interlaced or progressive scan cameras

Applications

- Vehicle tracking
- Roadside inspection
- Perimeter security



Specifications

Video Stabilization	Robust frame-to-frame registration
	Optional video deinterlacing
	Reject vibrations with magnitude < 1/2 FOV
Target Tracking	Hands free target tracking
	Algorithm resists tracking drift
	Continue tracking following target occlusions
	Tracking and stabilization at full video frame rate
Video Input and Output	RS-170, Composite NTSC and PAL support
Control Interfaces	10/100 Base-T Ethernet, RS-232 (2 channels)
Physical	3.432" x 3.432" x 0.167", < 100 grams
Electrical	11-14 V DC, 500mA @ 12V



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