

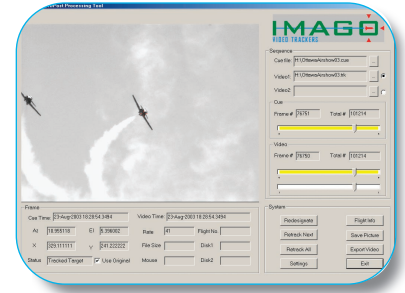
IMAGO-S Video Tracker Performance Specification



IMAGO-S Video Tracker

The IMAGO-S (standalone) is a software-based tracker that can be installed in most PCs and is designed to use commercial-off-the-shelf hardware. It comes on an installation CD and includes a video acquisition system.

If the customer requires additional functionality, they can upgrade the IMAGO-S from a list of desired options or contact IMAGO regarding one of our other higher performing tracking systems.



IMAGO-S PERFORMANCE

Video Tracking

- IMAGO's proprietary algorithm OR
- Edge/Centroid/Correlation algorithms

Accuracy

- The target off-boresight angle for a point target can be measured to 1/500 of the field of view.
- The minimum target size is 1% of FOV linear dimension.
- The minimum target contrast is 12 levels of grey

Target Acquisition

- Joystick controlled acquisition
- Designation in the centre 25% FOV
- Sit-and-wait mode for the centre 25% FOV

Automatic Coast Capability

- If the target is temporarily obscured our target state estimation system will coast and reacquire the target when it reappears.

Video Input – (2 Channel)

- Channel 1 - target acquisition, normally with a wider lens
- Channel 2 - target tracking with, normally with a narrower lens
- The IMAGO-S is compatible any standard video source and works with IR and daylight cameras. Supported Video standards: RS 170, CCIR, IEEE 1394.

Lens Selection

- Lens calibration algorithm is included, allowing the IMAGO-S to work with any lens

Pan/Tilt Unit Interface (RS232/RS422/TCP/IP)

The IMAGO-S generates a bore sight offset output that be integrated by the customer to use their own pan/tilt.

The IMAGO-S is also available with an interface to IMAGO's Standard (75 lb payload) and Compact (35 lb payload) pan/tilts. Using an IMAGO supplied pan tilt, the IMAGO-S controller can reliably track targets with rates up to 25 deg/sec. **Higher performance pan/tilt controllers are also available**

Output Log Files

The IMAGO-S outputs a time stamped log file of target azimuth/elevation. The log file is in ASCII format and can be easily loaded into Excel, MatLab, Simulink and any other data processing application.

Set Up and Calibration and Built in Tests

The IMAGO-S includes set up and calibration software to initialize the system.

Available functions include:

- Set pan/tilt motion limits
- Lens Calibration
- Log filenames (manual or automatic incrementing)
- Pan tilt selection
- Hardware Test Functions: video, joystick, pan tilt

User Interface

The IMAGO-S is a Windows XP application with a Graphical User Interface (GUI). The video image appears as a window on a high-resolution video monitor along with the other user displays and controls.

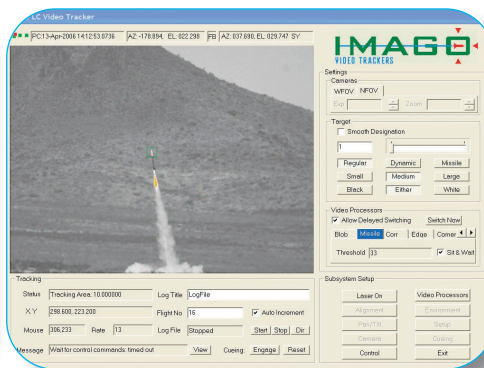
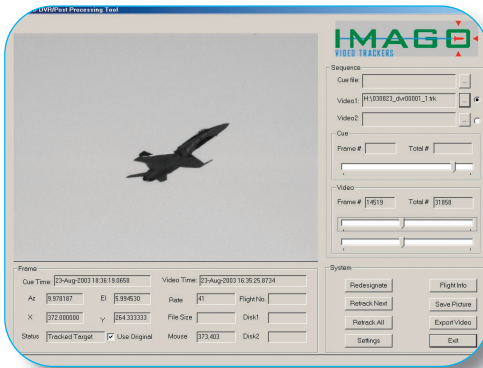
Computer Requirements

The IMAGO-S will run on most PCs with at least one serial port, one IEEE1394 (firewire) port and an Intel P4 - 2.8 GHz hyper-threaded CPU. A mobile version is also available.



Options

- Switch on the fly-tracking
- Track offsets
- Additional Video Tracking Algorithms that incorporate colour, motion analysis, and more complex pattern matching
- High performance controller to track more dynamic targets at higher rates
- Integration of 3rd party pan/tilts or gimbals
- Different coast models, based on target dynamics and pan/tilt motion
- Full field of view target acquisition
- Full field of view sit-and-wait motion analysis
- Cueing from/to radar, on-target sensors, etc.



Designed to run with commercial off-the-shelf-hardware, the Imago-S serves as a powerful, fully upgradeable base for your video tracking needs.

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ABOUT IMAGO

IMAGO has been building low-cost, high-performance video target tracking systems since 1987. IMAGO's video trackers are software based, can be easily updated, and are designed to use commercial-off-the-shelf hardware.

IMAGO's earlier sales were for standalone video trackers but as our technology advanced, IMAGO has been able to offer higher levels of sophistication. The addition of laser-rangefinders, multiple tracker triangulation systems and automatic cueing from other sensors has increased the level of accuracy and automation.

Our tracking systems are used both by private and defence groups around the world.

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