

The VILGA video processor offers video tracking from multiple video sources installed in the optical payload. Targets are highlighted and overlaid on screen during tracking.

The user can select a given target amongst several proposed by the tracker. Selecting and engaging a target in tracking mode is made by the user from the hand grip controller. Once engaged the video tracker will drive the turret to the target.

#### The VILGA image processor

The VILGA processor card combines multi-task image processing with overlaid graphics.

It also offers a Picture-in-Picture mode (PIP) where two sensors can be displayed on a single display. The user can select which sensor to display as full screen in the overlaid PIP mode. The PIP mode feature is particularly useful when using the Spotter Scope (SSC) in combination with the TV zoom camera.

#### **Electronic stabilization**

Vilga also offers electronic stabilization of images from external sensors. This can be useful when cameras are installed on high poles or in other environments susceptible to movement caused by wind or other factors.



#### Vilga tracker key features:

- VideoTracker embedding the latest image processing algorithms
- High quality overlay features for MMI
- Picture-in-Picture mode for displaying several video sources on a single screen
- Electronic stabilisation of images from external sensors
- VILGA is a ruggedised card designed to offer embedded image processing features in the smallest possible footprint.
- VILGA operates under a robust real time operating system (RTOS) with minimum latency time for critical tasks.



2006-08-28 10h40 MISSION : 200 HOURS GPS : 10° / 180° AZ/EL : 28° / -15





The Vilga video tracking boara will allow the camera to follow an object as long as it can be seen.



# Vilga:

## Technical specifications

#### MAIN SPECIFICATIONS

#### CORRELATION MODE Video-tracker mode

Min. target Signal/Noise ratio Min. target contrast Min. target size Max. target size

Tracking window Target aspect ratio Max. target velocity Tracking accuracy Tracker sampling rate Latency

#### SCENE MODE

Minimum Feature Contrast Minimum number of feature points Maximum number of feature points Maximum Feature Horizontal Displacement between two frames Maximum Feature Vertical Displacement between two frames Maximum Target to Boresight Error update rate System delay

#### **INTERFACES**

Size Weight Analogue video inputs Analogue video outputs Voltaae Power UART's

Overlay graphics

#### **ENVIRONMENTAL**

Operational temperature Storage temperature Humidity Randam vibration Sine vibration Shock

SOFTWARE

Correlation, Centroïd, scene base

4% 3% 8x8 pixels 160x160 pixels

Dynamically sized *Up to 1:6 in any direction* 32 pixels/frame at 50 Hz 1/10<sup>th</sup> pixel 50 Hz PAL or 60 Hz NTSC 40 ms (2 frames) at 50 Hz

12.5 grey levels : 4.9%

12

24 pixels : 3.4% FOV

28 pixels : 4.9% FOV

### 60 Hz

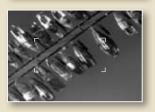
40 ms

115 mm x 60 mm x 18 mm 130ax3 PAL or NTSC x2 PAL or NTSC (x1 with overlay, x1 raw) 5-32 V DC 5 W x4 RS-422/RS-422 configurable Multiple integrated input/output command protocol 32 bits color

-40℃ to +70℃ -45℃ to +85℃ 95% relative 0.04g<sup>2</sup>/Hz from 15Hz to 2000Hz 10g peak from 15 Hz to 2000 Hz >30g sawtooth 11 ms

Vilga Demo frontal software (Windows®) Communication Protocol description















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