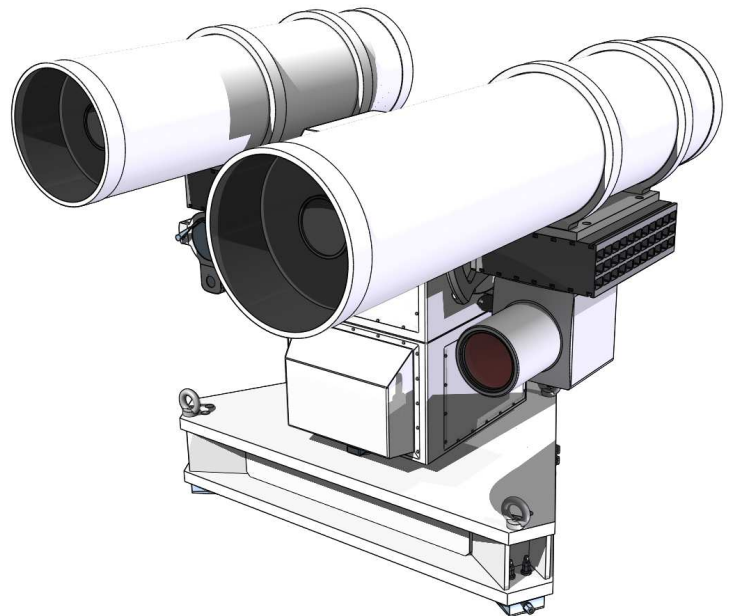
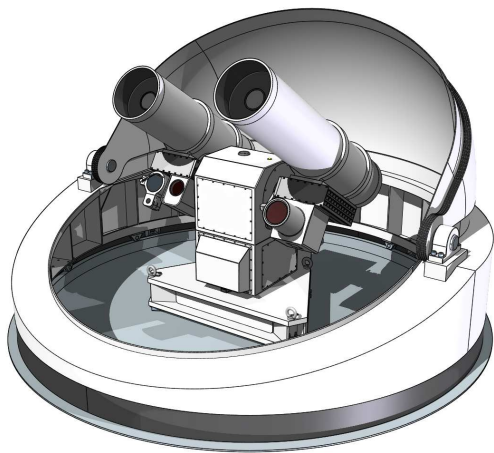


Electro-Optical Tracking System EOTS USP-T55 with outboard mounted payload

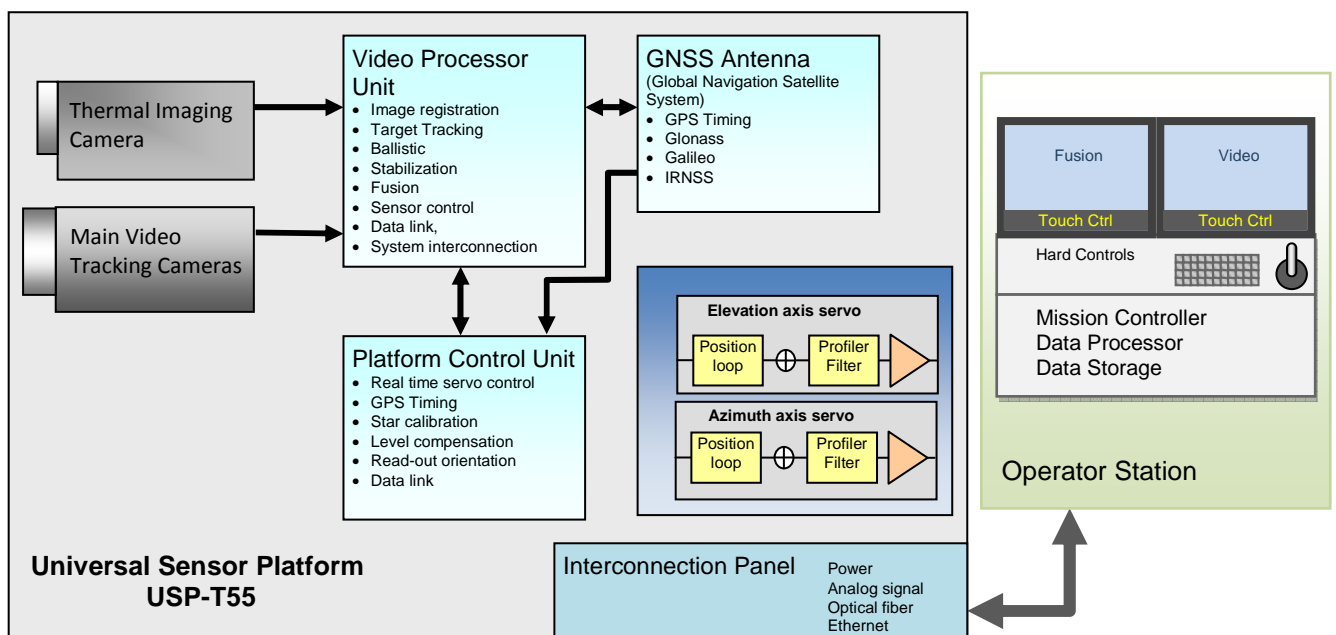


Description

The tracking mount USP-T55 is designed to carry multiple sensors, large and/or heavy payloads without jeopardizing neither dynamic performance nor accuracy.

The tracking mount has direct drive brushless servo motors. Position is measured by direct mounted high resolution absolute encoder. The vertical alignment of the azimuth axis is monitored. Measured leveling deviations from the azimuth axis vertical position are used to calibrate and correct the angular axes position readout.

The tracking mount servo control system is based on the amplifier/controller assembly, the real time platform control unit PCU and the image and data processing computer GRIP.



Electro Optical Tracking System USP-T55

Image processor GRIP, Video Target Tracker Processor



The GRIP Video Processor hosts the hardware based video tracker, which processes video image sequences from sensors keeping the camera pointing at the designated target. The two primary processing functions are:

1. Detecting and locating objects of interest
2. Controlling the platform in azimuth and elevation position, rate and acceleration.

The Video Processor/tracker has analog and digital video and other interfaces. Analog signals are digitized. The active tracking sensor can be selected by the operator. The monitor shows all relevant status information and has overlaid annotation.

Sensors, basic payload

Tracking mounts can be equipped for best coverage of the planned mission. Acuitas offers:

- Video Camera with fixed and variable focal length (zoom)
- Thermal Imager with stepped variable focal length or continuous zoom lenses
- High speed B/W Video Camera with zoom lens

Specification Summary

USP-T55; EL/AZ tracking mount supporting optical sensors with long focal, narrow field, high resolution optics.

Mount Performance,

| | <u>Azimuth</u> | <u>Elevation</u> |
|-----------------------|-----------------------|-----------------------|
| Angular freedom (deg) | ±185deg | -15deg to +190deg |
| Rate @ cont. torque | ±60 deg/s | ±60 deg/s |
| Acceleration, loaded | 60 deg/s ² | 60 deg/s ² |
| Nominal torque | 170Nm | 170Nm |
| Readout resolution | <1μrad | <1μrad |
| Readout accuracy | better 15μrad | better 25μrad |
| Power | 8000 Watt | |

Optional Equipment or Features

Dome with remote operated opening shutter. The vertical rotation axis is slaved to the azimuth axis of the tracking mounts.

Trailer mounted for placing the tracking mount at the optimal observation point. Operator station is contained in air-conditioned trailer with comprehensive data processing and data storage capability.

Inertial Stabilized Line of Sight for target tracking from mobile platform.

