



 trillium

**HD45**

**HIGH-PERFORMANCE 4.5-INCH CLASS STABILIZED EO/IR  
CAMERA SYSTEM FOR SMALL UNMANNED VEHICLES**



**DIRECT DRIVE ARCHITECTURE**

Best-in-class robustness and stability



**EMBEDDED VIDEO PROCESSING**

Electronic stabilization and scene tracking



**ONBOARD GPS/INS**

Accurate real-time vehicle and target location



**VISIBLE AND THERMAL CAMERAS**

Day and day/night operations with a single payload



**ITAR FREE**

Non-controlled configurations available



**720P HD DIGITAL VIDEO**

Fully digital, h.264-compliant video pipeline



**ENVIRONMENTALLY SEALED**

Highly resistant to dust and water



**NVG-COMPATIBLE LASER POINTER**

850nm laser for precise discreet pointing available



**ETHERNET INTERFACE**

Video and gimbal control over ethernet or RS-232



**METADATA**

Target location, gimbal health, and more

## SOFTWARE

### FEATURES

- Onboard h.264 compression with adjustable bitrate
- Dynamic or static IP addressing
- Field upgradable software
- Onboard electronic stabilization
- Onboard scene tracking
- MISB-compliant output including embedded KLV metadata
- Optional target tracking, may require external module

### GPS/INS

- IMU co-located with cameras
- 1.5° (typical) total system accuracy
- IMU upgrade available to 1° system accuracy
- Real time geointing and geolocation
- Attitude, velocity and position computed at 200Hz
- Onboard GPS receiver
- GPS and heading accepted over serial or Ethernet
- Dual GPS heading support

## MECHANICAL

### SPECS

- Machined magnesium housing
- Glass and Germanium windows
- Direct drive brushless motors
- 0.02° encoder resolution
- 60Hz closed loop stabilization bandwidth
- 50μRAD - 150μRAD RMS jitter

## ELECTRICAL

- Control over Ethernet or serial
- Ethernet and analog video
- 15W average, 75W peak power consumption
- 24VDC regulated input, external regulation accepting 10V to 30V available
- Interface connector: 37 pin Nano Bi-Lobe connector conforming to MIL-DTL-32139
- GPS connector: MMCX
- Analog video connector: MMCX
- GPS antenna: 3.3V active, L1 band



**HD45-LV-CZ**

## CAMERA CONFIGURATIONS

CONFIGURATION	WEIGHT	CAMERAS	FOV
HD45-LV-CZ	1280g	Visible Rolling Shutter 3X LWIR 640 with 5X continuous zoom lens	13.7°–4.6° 29°–5.9°
HD45-LV-CZ-GS	1330g	Visible Global Shutter 10X LWIR 640 with 5X continuous zoom lens	54°–4.9° 29°–5.9°