Kepler LRS

Stabilized True HD EO/IR Sighting ISR System

NVTS’s Kepler LRS combines our rugged weapon-grade optical package with our precision gyro stabilized pan tilt. Kepler LRS delivers high definition imaging, long range optics and precision targeting in a compact package.

Designed for extreme conditions, Kepler LRS delivers greater detection and stabilization performance than any camera system in its size range.

Kepler’s modular internal housing design allows for a wide range of visual and thermal sensor options to meet diverse field requirements.

Engineered for battlefield and maritime operations, the Kepler LRS is built to withstand weapon shock, vibration, sand, and severe weather. NVTS’s Kepler LRS delivers crisp imagery and targeting data, using our true HD Visible & Thermal Cameras.

Features:

- High performance integrated 3 axis MEMS Gyro provides superior stabilization in extreme conditions.
- Triaxial accelerometer, gyroscope, temperature sensors, and a pressure altimeter achieve the best combination of measurement qualities.
- Fast 1.8GHz ATOM Quad-Core edge processor, 200GB SSD hard drive delivers high performance computations and provides a wide variety of interface options.
- Long Range IR and Visible Continuous Optical Zoom Lens ensures smooth, accurate target assessment and engagement.
- Maintains stable line of sight in conditions of weapon shock, heavy vibration and temperature change.
- Precision targeting capability for weapons guidance and re-control applications.
- High Resolution 1.3MP Cooled Thermal Imager delivers over 4X the definition than the standard 640 x 480 format, providing improved detection and superior resolution.
- Thermal image enhancement that digitally sharpens, precision tunes the contrast for exceptional detail in poor visibility.
- Man size HD thermal detection ranges up to 15km
- Large Format 2/3" 2.2 Megapixel HD Visible Camera coupled with a 500mm CZ lens delivers up to 50% increased coverage and range compared to the competition.
- Sensor connections pass internally through the pan tilt yoke, eliminating exterior cables.
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Product Specifications

**HD Visible Camera:**
- HD Sensor Size/Type: 2/3 CMOS
- Resolution: 2.2 Megapixel 2048(H) x 1088(V)
- Lens: 15.6-500mm 32x optical zoom
- FOV: (H/V) WFOV: 30° 56' x 23° 36' NFOV: 1° 02' x 0° 46'

**Laser Range Finder:**
- Absolute Range: 4.5km, 10km, 20km Options
- Class: Class 1: Eye-safe
- Wave Length: 1535nm
- Range Accuracy: +/- 5meters

**Thermal Imager:**
- Sensor Type: MWIR HD 1280 x 1024 or 640 x 512 Bnn, or InSb FPA
- Wave Length: 3-5µm
- Pixel Pitch: 10µm HD, 15µm VGA
- Lens: F/3-4 15-330mm 22x Optical Zoom (standard) F/3-4 18-400mm 22x Optical Zoom (optional) F/3-4 60-660mm 22x Optical Zoom (optional)
- FOV: (15-330mm) Wide: 35.7°H x 29°V Narrow: 1.7°H x 1.4°V
- Cooler life: 20,000 hours std. (30,000 hours optional)

**Electrical:**
- Power: 18-32 VDC 280 Watts, Nominal, 350 Watts Max
- Connections: Power, Ethernet- (2)-CAT6, RS432, Service port, 10/100 Ethernet
- Control Interface Options: GigE, RS432, 422, 232, 10/100 Ethernet

**Laser Pointer: (optional)**
- Nominal wavelength: 830nm
- Power: 150mW

**Pan Tilt:**
- Pan Angle Range: 360°Continuous Azimuth Rotation
- Elevation Range: +/- 55° (payload dependent)
- Acceleration: up to 180°/sec azimuth / up to 180°/sec in elevation

**Sensor Options:**
- Laser Range Finder: 4.5km, 10km, 20km 4.5 to 30Km Class 1
- SWIR Sensor and Lens Options
- MWIR Sensor and Lens Options
- High Speed to Stationary Target Tracking
- Thermal/Visible Image Blending
- Laser Pointer (Class 3B)
- HD Visible Lens and Camera Options
- FOG (Fiber Optic Gyro Stabilization)
- Inertial Navigation
- Wind Measurement Receiver

**Optional Accessories:**
- Integrated Handheld Remote Display Controller
- Ruggedized Laptop
- Rugged Fixed Mount Display Controller
- Joystick Controller
- Armor Shielding Protection for Small Arms Fire

**Environmental:**
- Shock: Weapons Grade Vibration Articulated Mount Shock Isolation
- Operating Temperature: -40°C - +60°C
- Meets MIL-STD 810 & MIL-STD 461

**Dimensions:** (shown with standard 15-330mm IR & 15.6-500mm Visible)

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