

# VisiX LR-1000-PTZi





## LRS long-range surveillance with laser illumination Built for Border Control and Homeland Security

### Features

- Camera zoom range 30mm to 1000mm (33×)
- Digital video output (Streaming IP)
- Laser illuminator bore-sighted to camera
- Fast Pan, Tilt, Zoom (PTZ) operation
- 808nm semi-conductor laser
- True day/night operation
- Wide temperature range, -40°C to +70°C
- Active back focus temperature compensation

The VISIX LR-1000- PTZi is an integrated, ruggedized, military grade, high-precision PTZi camera, with built-in laser illuminator.

The laser illuminator uses the same type of optics as the zoom lens for optimal field of view at all zoom settings.

The camera and laser unit are bore-sighted, ensuring optimal scene illumination regardless of distance to the object, making it ideal for day or night surveillance for border protection, costal protection, camp perimeter protection, homeland security, and critical infra-structure protection (CIP) applications.

### Graphic Overlays

The VISIX LR-1000- PTZi system has a built-in graphic overlay generator that allows arbitrary graphic overlays to be inserted into the image output.

Typical overlays are text strings, showing azimuth, elevation, GPS data or hair crosses or other reticles.

Graphic overlays can be customized to suit specific user requirements.



# VisiX LR-1000-PTZi

## Optical system

The VISIX LR-1000-PTZi optical system has been developed specifically for use in long-range surveillance. It features continuous zoom, with a powerful zoom ratio of 30 to 1000 mm, plus auto-iris and focus adjustment from 3 m to infinity.

The “Auto-Focus on Demand” focuses the camera system automatically at the push of a button.

The lens design incorporates oil-free, low-friction surfaces with special coatings, high-speed motors with zero backlash and high-precision feedback potentiometers.

## Fog penetration

The fog penetration function is designed to automatically increase visibility under conditions including fog, haze and fire smoke.

The camera continuously analyses the picture and once it detects a low-contrast condition, it will automatically enhance the contrast.

The Digital Noise Reduction (DNR) in the camera system is a function that analyses the video image and reduces noise, particularly in low-light conditions.

The analysis is based on a 2- and 3-dimensional algorithm

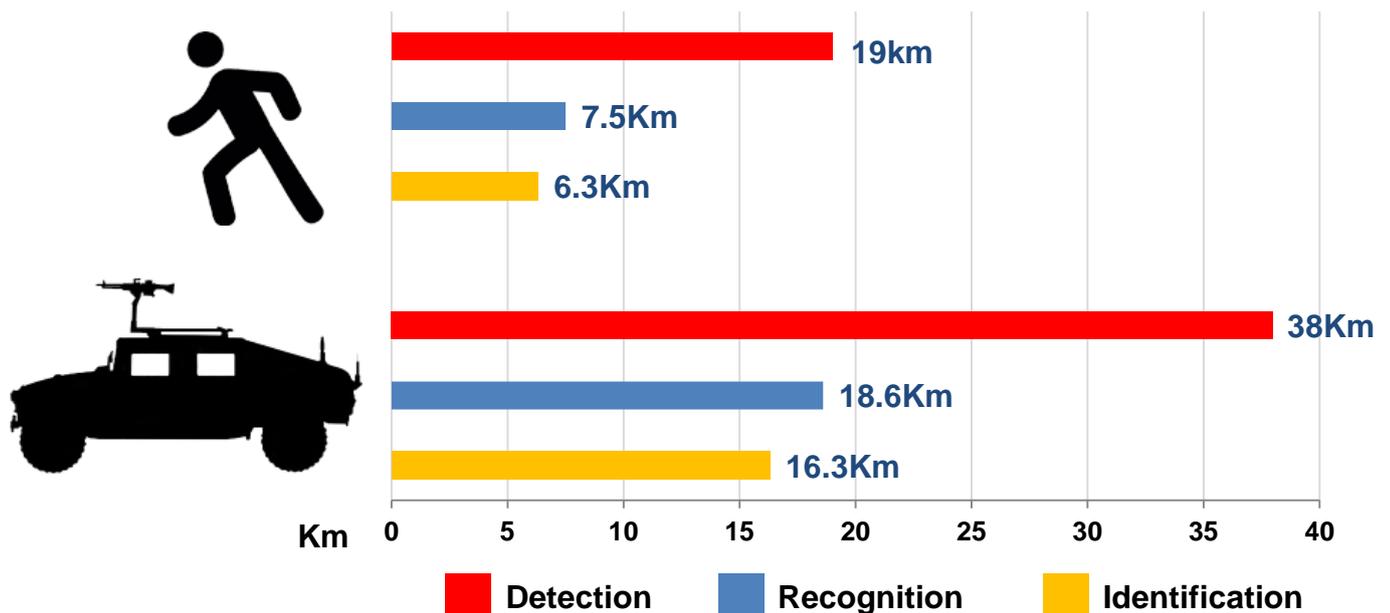
## Easy installation and operation

The VISIX LR-1000-PTZi camera and laser unit has been developed for easy installation and operation in complex surveillance applications.

Video output is via IP and the unit is controlled via RS-485 with Pelco-D protocol.

The unit can also be controlled locally with keyboard and has an analogue video output.

## Visual Range Performance



**Conditions for SSIP CAM program:** Contrast 30%, Over cast daylight, Sky ratio 3, Visibility 80km, 50% probability, NFOV 0,3° (H),

**Dimensions Man:** 0.45m × 1.7m. Vehicle dimensions NATO target 2.3m × 2.3m

## TECHNICAL SPECIFICATIONS

### Image system

Sensor High sensitivity 1/3" CCD sensor with complementary mosaic  
Effective pixels (H × V) 976 × 582  
Aspect ratio 4:3  
Video output Video CVBS  
Focal length / Horizontal field of view 30 to 1000mm zoom (33×) / 9° to 0.3°  
System video resolution 540 TVL (15% video modulation, with lens)  
Sensitivity 0,030 Lux, 25% video, F4.5  
Spectral response Visible + Near-IR (Switchable IR-cut filter)  
Signal to noise ratio > 52 dB, AGC off  
Gamma correction 0.45 / 1.0  
Focus range 3m to ∞ (Active back focus temperature compensation)  
Image stabilization Optional

### Laser illuminator

Laser type / optical power Laser diode / 8 W  
Wavelength 808nm  
Range > 6km  
Divergence 9.3° to 0.37° (synchronous to the camera zoom)  
NOHD 29m for wide beam, 239m for narrow beam  
MTBF 10,000 hours @ 100% ≈ 3 years @ normal operation

### Pan / Tilt

Speed, Pan (Azimuth) Maximum 60° per second, Minimum 0.03° per second - continuous speed at 25°  
Speed, Tilt (Elevation) Maximum 60° per second, Minimum 0.03° per second - continuous speed at 25°  
Position resolution 0.01°  
Range of motion, Pan 365°  
Range of motion, Tilt +40° to -45°  
Gear head backlash None

### Electrical specifications and functions

Video output Streaming IP (H.264 or MJPEG), Composite CVBS, 1 Vpp, 75 ohm  
Commands/status IP Pelco-D Protocol

### Mechanical

Overall dimensions - mm (W × H × L) 414 × 568 × 531  
Mounting holes 8 × Ø13mm  
Net weight 52kg

### Environmental

Operating voltage 24 VDC ±10% MIL-1275  
Maximum current consumption Day: 1.5A + 2A for heater, Night: 6.5A + 2A for heater  
Maximum current consumption, moving Day: 5.5A + 2A for heater, Night: 10.5A + 2A for heater  
Connectors (power, control) In accordance with MIL 38999  
Shock/vibrations Vibration 3.05 Grms and chock 11ms 30g  
Operating temperature -40°C to +70°C  
Storage temperature -46°C to +75°C  
Surface treatment Chromit AL TCP / Painting  
Protection IP 65  
Bore-sighting retention ±0.2 mRad ≈ ± 2m @ 10km  
Bore sight relation Camera/Laser ±0.5 mRad