# SPIKE A / Vehicle Observation EO System

SPIKE-A Photoelectric Reconnaissance and Loading System is stabilized and can be operated by day and night.

Operational functions include surveillance, target identification, and tracking. It can be widely used in vehicle reconnaissance, security protection, maritime enforcement, and other fields.

10μm @ 1260*1024 VoX uncooled
Thermal: 1024*768（1280/640 option) 22.9-100mm
Visible：1920*1080,10-150mm
LRF：6KM (1550nm)
Low light: Option
Ingress class: IP67
Operation temperature: -40℃ ~ +55℃


**Applications**

- Laser Ranger Finding
- Passenger & Vehicle recognition
- Picture in Picture
- Maritime Patrol

| Lens | DD (Vehicle) | DD (Human) | RD (Vehicle) | RD (Human) | ID (Vehicle) | ID (Human) |
|---|---|---|---|---|---|---|
| 100mm | 6km | 4km | 3.2km | 2.4km | 1.6km | 1.2km |

# Vehicle Observation EO System

**Features of SPIKE-A Best Inspection Camera for Automotive Use**

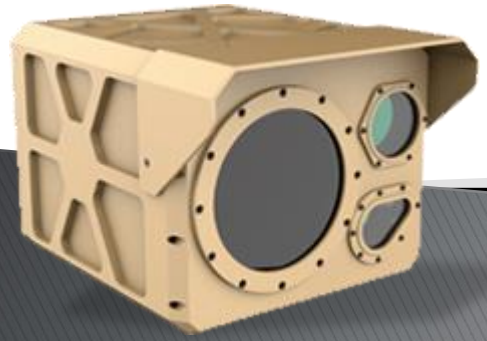
1. High resolution, large array
Infrared resolution 1024×768/1280×960 (optional)
Visible light resolution 1920×1080

2. Intelligent target identification and tracking
Optimized visual algorithm allows more accurate recognition and track of people and vehicles in FOV.

3. High stability
Visible light module optical axis stability≤3 pixels

4. Multi-sensor integration
The integration of infrared, visible light, and laser makes it capable of 24h long-distance identification and tracking as well as video and evidence collection. The low light module is optional.

5. High reliability
IP67 protect it from dust and water, vibration, and impact. The consistency between any two optical axes ≤0.3 mra



# Specifications

| | | | |
|---|---|---|---|
| Infrared Module | Detector type | | Uncooled infrared detector |
| | Resolution | | 1024×768 |
| | Spectral band | | 8~14μm |
| | Pixel size | | 12μm |
| | Frame rate | | 50Hz |
| | Focal length | | 22.9~100mm |
| | FOV | | 30.0°×22.8°~7.0°×5.3° |
| | NETD | | ≤50mK @25°C, F#1.0 |
| | MRTD (small FOV) | | ≤400mK @25°C, F#1.0 |
| | Focusing mode | | Auto or electric focusing |
| | Starting time | | ≤20s |
| | Continuous zoom time | | ≤4s |
| | Recognition distance | Human (1.7m×0.5m) | 2km |
| | | Vehicle (2.3m×2.3m) | 2.5km |
| Visible light module | Detector target area | | 1/1.8” |
| | Resolution | | 1920×1080 |
| | Pixel size | | 2.7μm |
| | Focal length | | 10~150mm |
| | FOV | | 29.1°×16.6°~2.0°×1.1° |
| | Focusing mode | | Auto or electric focusing |
| | Fog penetration | | Support |
| | Continuous zoom time | | ≤2s |
| | Recognition distance | Human (1.7m×0.5m) | 8km |
| | | Vehicle (2.3m×2.3m) | 9km |
| Laser Rangefinder | Laser wavelength | | 1535±5nm |
| | Measuring range | | 50m~6km (2.3m×4.6m) |
| | Measuring accuracy | | ≤2m |
| | Accuracy rate | | ≥98% |
| | Measuring frequency | | 1~10Hz |
| | Eye safety | | Class 1 |
| | Beam divergence angle | | ≤0.35mrad |
| | Number of detection targets | | ≥3 |
| Environment Adaptability | Operating temperature | | -40°C~+55°C |
| | Storage temperature | | -43°C~+70°C |
| | Ingress protection | | IP67 |
| Hardware Interfaces | Power supply range | | DC24V±6 |
| | Power consumption at room temperature | | ≤25W |
| | Communication protocol | | RS-422/CAN2.0B |
| | Video format | | SDI |
| Physical Parameters | Weight | | ≤9kg |
| | Dimensions | | 226×172×240mm |
| | Cover color | | Desert yellow |