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## CASPER Analog Periscope Camera

Our CASPER Analog Periscope Camera provides the investigator with a high-quality overt or covert surveillance system. The CASPER small periscope gives you a compact solution that is weather resistant, and designed for 360-degree coverage of the monitored area. This model CASPER operates through analog RF links. A separate IP CASPER model is available.

With a built-in, state-of-the-art sealing system and removal of the limit switch components, the unit is engineered to provide trouble free operation in all weather conditions. The integrated controller, which operates with RS-232 or DTMF, allows the unit to be connected to any number of video servers or legacy DTMF surveillance systems.

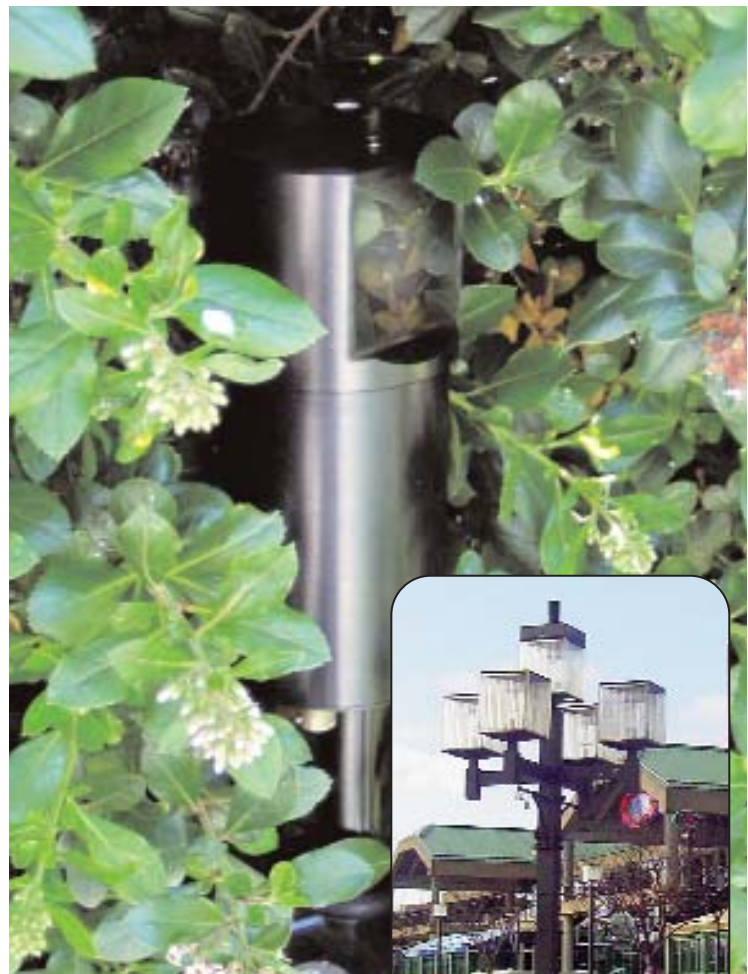
The unit's low-power operation is perfect for tactical "drop-and-run" surveillance requirements.

Offered with either a visible 18x day/night or 36x day color camera system or uncooled 320x240 thermal imager with a 50 mm fixed lens, the CASPER offers a perfect solution for both daytime and nighttime surveillance applications.

Drop it in plain view for area/agent protection, build it into your own concealment, or select from a line of NSMS' concealments to hide the CASPER's surveillance functions. Choose from our accessory kits, remote power options and wireless options to design your own highly dependable, quickly deployable video response system.

The CASPER is designed to work with all NSM Surveillance solutions including Micro Recorder Kit, NS9200 and legacy Pro-kits.

Contact your sales representative to see how CASPER and NSMS can fulfill your surveillance needs.



### Applications

#### Overt tactical surveillance

- SWAT, Special Forces, Sniper spotter

#### Overt long term surveillance

- Harbors, airports, bridges, power plants

#### Covert surveillance

- Urban and rural concealments available

#### Low power operation for solar battery deployments

### Standard Features

- Pan — Continuous rotation
- Tilt — +/- 30 degrees - typical (camera lens dependent)
- MPEG4, MJPEG & H.264
- Zoom — 18x or 36x day color camera (Thermal - consult sales department)
- Field Proven — ultimate reliability
- Available in day or low-light color or with thermal imager for no light applications
- RF Modules, IP & Analog available for all models and RF bands

## CASPER-480 DAY/NIGHT MODEL

### Image Sensor

1/4 type EXview HAD CCD

### Lens

18x zoom  
f = 4.1 mm (wide) to 73.8 mm (tele)  
F1.4 to F3.0

### Digital Zoom

12x (216x with optical zoom)

### Angle of View

48° (wide end) to 2.8° (tele end)

### Minimum Illumination

0.7 lux (typical) (50 IRE)

### S/N Ratio

More than 50 dB

### Electronic Shutter

1/1 to 1/10,000s, 22 steps

### Gain

Auto/Manual (-3 to 28 dB, 2 dB steps)

### Video Output

VBS: 1.0 Vp-p (syn negative), Y/C output

## CASPER-1000 DAY MODEL

### Image Sensor

1/4 type EXview HAD CCD

### Lens

36x zoom  
f = 3.4 mm (wide) to 122.4 mm (tele)  
F1.6 to F4.5

### Digital Zoom

12x (432x with optical zoom)

### Angle of View

57.8° (wide end) to 1.7° (tele end)

### Minimum Illumination

1.4 lux typical (50 IRE)

### S/N Ratio

More than 50 dB

### Electronic Shutter

1/1 to 1/10,000s, 22 steps

### Gain

Auto/Manual (-3 to 28 dB, 2 dB steps)

### Video Output

VBS: 1.0 Vp-p (syn negative), Y/C output

## CASPER-50T THERMAL MODEL

### Detector

Uncooled Microbolometer  
Vanadium Oxide

### Array format

320 x 240

### Pixel Size

38um

### Spectral Response

7.5-13.5 um

### Video output

NTSC

### NEdT

< 85 mK @ f/1.6

### Normalize source

Internal shutter

### Time to image

~ 2 seconds

### Image control

Revert, Invert, 2x digital zoom

### Lens

50.0mm f 2.0 14 degree HFOV

## CASPER Physical Specifications

### MECHANICAL

#### Weight

3 lbs

#### Rotation

360° continuous

#### Tilt

+/- 30°

#### Speed

Rotation: 0.87 - 6 degrees/second

Tilt: 0.65 - 17.5 degrees/second

#### Precision

0.1° resolution, ± 0.1° repeatability

### ELECTRICAL

#### Power Consumption

CASPER 480: 5.7 watt

CASPER 1000: 7.0 watt

CASPER 50T: 4.5 watt

#### Control

RS-232, DTMF

### ENVIRONMENTAL

#### Temperature Range

-30°F to +125°F

#### Humidity

100%

Product specifications are subject to change

