![Sonel® logo]

# KCH-320
## Gas Thermal Imaging Camera



## OVERVIEW

KCH-320: is with cooled detector (QWIP, NETD<25mK) to detect gas leaks and pinpoint the gas leaks location accurately, also offers temperature measurement. It is a multifunctional device for gas leakage detection and thermograph applications.

KCH-320: provide safe & efficient inspection at long distance without shutting systems down, scans large areas & numerous objects rapidly, sees into areas that are difficult to reach with contact measurement tools and enhances predictive maintenance at the same time. It is an ideal device for chemical/petrochemical application such as offshore platforms, oil refineries and natural gas processing plants.
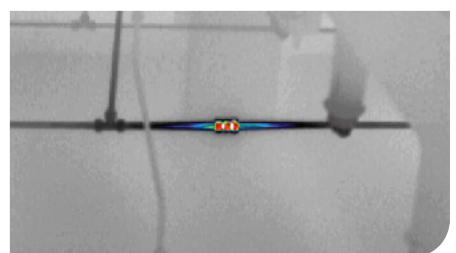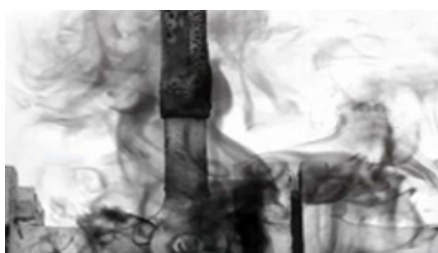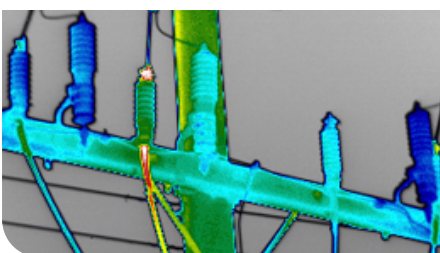
## TYPICAL APPLICATIONS:

- » refinery
- » natural gas processing facility
- » offshore iol/gas exploration platform
- » chemical industry
- » research Institute, etc..

## FEATURES:

- » Cooled QWIP detector, sensitivity <0.025°C,pinpoint gas leaks location quickly,
- » Gas detection accuracy ≤ 0.001ml/s
- » Dual-application: Gas leakage detection and thermograph application,
- » Temperature range: -20~500°C,
- » Inspection without interrupted process,
- » Interchangeable lenses available,
- » Built-in 5.0 MP digital camera,
- » Folding and 270° rotatable display

## GAS LEAKAGE DETECTION:

CH4, benzene

# SPECIFICATIONS

### Detector Data

| | |
|---|---|
| **Type** | Cooled QWIP |
| **IR resolution** | 320×256 |
| **Pixel pitch** | 30μm |
| **Spectral range** | 3.1~3.5μm |
| **NETD/Sensitivity** | 25mK |
| **SF6 gas sensitivity** | ≤0.001ml/s |

### Lens

| | |
|---|---|
| **FOV/Focal distance** | 10°×7.5°/55mm |
| **Minimum imaging distance** | 2m |
| **IFOV** | 0.55mrad |
| **Minimum imaging distance** | Auto/Motor/Manual |

### Image Performance

| | |
|---|---|
| **Display** | 5",color LCD, 800×480 pixels |
| **Frequency** | 50Hz/60Hz |
| **Digital zoom** | 1X~8X continuous |
| **Color palettes** | 12 palettes(including iron, rainbow, white hot and black hot etc.) |
| **Contrast/brightness** | Auto/Manual |

### Measurement

| | |
|---|---|
| **Temperature range** | -20°C~+350°C |
| **Temperature accuracy** | ±2°C/±2°C%(reading) |
| **Spotmeter** | 10 adjustable spots |
| **Line profile** | Vertical/Horizontal |
| **Area** | 5 adjustable boxes with max./min./ avg temperature value |
| **Isotherms analysis** | Capture high/low temperature/ interval |
| **Alarm** | Voice, color |
| **Measurement correction** | Auto/Manual |
| **Emissivity correction** | Adjustable from 0.01 to 1.0 or selected from list of materials |
| **Background temperature correction** | Auto |
| **Atmospheric transmissivity correction** | Auto |
| **Setting function** | Date/time, temperature unit °C/°F/°K, language |
| **Languages** | 10 languages (English, French, Italian, German, Spanish, Portuguese, Russian, Korean, Japanese, Simplified Chinese & Traditional Chinese) |

### Image storage

| | |
|---|---|
| **Storage card** | 8G SD card(can be extended to 32G) |
| **Video output** | Card reader, USB, WiFi |
| **Storage mode** | Store signal frame image or dynamic video auto/manual |
| **IR image format** | JPEG, 14-bit measurement data image included |
| **Visual light image format** | Single frame, JPEG |

| | |
|---|---|
| **Video storage** | High definition video stored in SD card(MPEG4/H.264 format),recording time up to 1 hour for per video |
| **Voice annotation** | 40s voice record, stored with per image |
| **Periodic image storage** | 10s to 24h |

### Laser point

| | |
|---|---|
| **Grade/Type** | Class 2,1mW/635nmRed |

### Interfaces

| | |
|---|---|
| **Power** | Yes |
| **SD card slot** | Yes |
| **Video output** | CVBS |
| **Audio output** | Yes |
| **Tripod** | 1/4" -20 |

### Power system

| | |
|---|---|
| **Battery type** | Rechargeable li-ion battery |
| **Battery operation time** | 2h |
| **DC supply** | DC: 12V |
| **Charging system** | In camera, AC adapter, car charger |
| **Power saving** | Yes |

### Environment Parameters

| | |
|---|---|
| **Operation temperature range** | -15°C~+40°C |
| **Storage temperature range** | -20°C~+50°C |
| **Humidity** | ≤95% (Non-condense) |
| **EMC** | EN61000-6-4 & EN61000-6-2 FCC47CFR Part15 class A EN-61000-4-8, L5 |
| **Vibration** | 2G (IEC60068-2-6) |
| **Shock** | 25G (IEC60068-2-29) |
| **Encapsulation** | IP54 (IEC60529) |

### Physical Data

| | |
|---|---|
| **Size(L×W×H)** | 308mm×142mm×166mm |
| **Weight** | ≤2.5kg (with standard lens) |
| **Main Gas Detection** | $CH_4$, benzene |

### Packing

| | |
|---|---|
| **Standard** | Thermal imaging camera with standard 10°standard len, USB WiFi module, 2 Li-ion batteries, battery charger, adapter, car, charger, SD card, SD card, reader, software CD, warranty card, certificate, calibration book |
| **Optional accessories** | Laptop, SLR camera |