# 81 Series

# 8104

DATASHEET




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# 8104

## PASSIVE TERAHERTZ PEOPLE-SCREENING CAMERA

**Thruvision 8104 is a cost-effective people-screening camera, designed and optimised to detect large items on both stationary and moving people.**

## BENEFITS

### COMPREHENSIVE SECURITY

Detects all types of metallic and non-metallic materials, including clothing, liquids, electronics, tobacco, foodstuffs and paper.

Shows concealment size, shape and location, in real-time, to allow rapid decision making without the need for physical pat-down.

### RESPECTFUL

Cannot distinguish age, ethnicity or gender, and complies with GDPR.

### SAFE

Safe for everyone, including pregnant women, children and people with implanted medical devices.

### RELIABLE

Built-in redundancy and resilience supports mission critical operations.

## FEATURES

### PATENTED SENSOR TECHNOLOGY

Features Thruvision's patented sensor technology, optimised to detect large items on both stationary and moving people.

### SmartSCREEN READY

8104 features built-in hardware support for Thruvision's intelligent SmartSCREEN software feature package.

### DynamicDETECT READY

8104 features built-in support for Thruvision's unique AI-based automatic concealed item detection software.

## DESIGN

### NEW FULLY INTEGRATED PLATFORM DESIGN

Mobile, modular design provides a convenient operating platform for screening operations.

Integrated high-performance PC with touchscreen display.

Rugged wheels for rapid deployment.

Battery powered option for up to 4 hours operation away from mains power.

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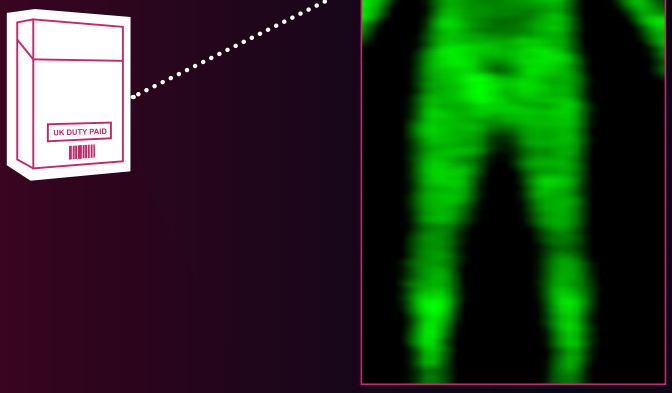
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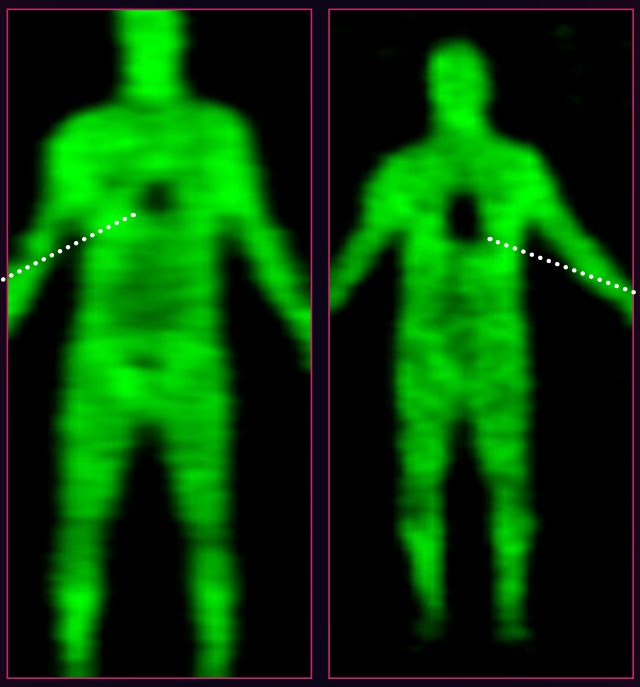
# 8104

## DETECTION CAPABILITY

**SpotCHECK**

Packet of cigarettes detected on stationary person at 2.5 m distance.

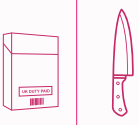
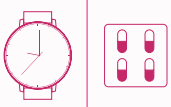
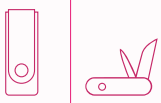


**WalkTHRU**

35 cl bottle of alcohol detected on pausing person at 3.5 m distance.



| CONCEPT OF OPERATIONS | PEAK FLOW RATE (PEOPLE/HR) | 35CL SPIRITS / 9MM HANDGUN | PACKET CIGARETTES / KITCHEN KNIFE | METAL WATCH / 50x50 MM DRUGS | USB PENDRIVE / SMALL PENKNIFE |
|---|---|---|---|---|---|
| **REPRESENTATIVE MINIMUM CONCEALED ITEM SIZE**<br>When used within optimum ambient temperature range (18-22°C / 64-72°F) | |  |  |  |  |
| SpotCHECK | UP TO 300 | 8104 | 8104 | 8108 | 8116 |
| WalkTHRU | UP TO 600 (WITH PAUSE) | 8104 | 8108 | 8116 | |
| WalkTHRU PLUS | 600 - 1,200 (NO PAUSE) | 8108 | 8116 | | |
| | 1,200 - 1,800 (NO PAUSE) | 8116 | | | |

Compatible with DynamicDETECT | Requires SloScan (NOT compatible with DynamicDETECT) | Compatible with SmartSCREEN

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## CAMERA SPECIFICATIONS

| MODEL NUMBER | TV-CAM-8104 |
|---|---|
| **CAMERA** | |
| **Terahertz Sensor** | Passive, high-performance sensor, operating at 250 GHz frequency |
| **Terahertz Image Refresh Rate** | Up to 14 lines per second, depending on scan mode |
| **Screening Field Of View At 3m / 9.8 ft** | **H 1.8 m** (70.9 in) **W 0.8 m** (31.5 in) |
| **Angular Screening Field of View** | **Horizontal FOV** 16° **Vertical FOV** 33° |
| **Video Camera** | Colour HD stereo vision depth camera |
| **Video Camera Frame-Rate** | 15 fps |
| **Optimum Screening Distance** | **2.5 - 3.5 m** (8.2 - 11.2 ft) |
| **ELECTRICAL** | |
| **Operating Voltage** | Rated range 100 to 240 V a.c., 50 to 60 Hz |
| **Power Consumption** | 140 W Max |
| **Typical Operating Power Consumption** | 90 W |
| **Connectivity** | Mains a.c. (power), Ethernet (data) |
| **PHYSICAL** | |
| **Dimensions** | **H 633 mm** (24.9 in) **L 635 mm** (25.0 in) **W 285 mm** (11.2 in) |
| **Weight** | **34 kg** (75 lb) |
| **ENVIRONMENTAL** | |
| **Ambient Air Operating Temperature** | **5 - 28 °C** (41 - 82 °F) |
| **Optimum Ambient Air Operating Temperature** | **18 - 22 °C** (64 - 72 °F) |
| **Storage Temperature** | **0 - 40 °C** (32 - 104 °F) |
| **Ambient Operating Environment** | Indoors, dry and preferably air-conditioned location |
| **Operating Humidity** | 20 to 90 % RH, non-condensing |
| **Maximum Operating Altitude** AMSL | **2,000 m** (6,560 ft) |
| **APPROVALS & PATENTS** | |
| **Conformity** | CE, UKCA |
| **EMC** | EN 55032:2015 + A11:2020 (emissions), EN 55035:2017 + A11:2020 (immunity), EN 61000-3-2:2019, EN 61000-3-3:2013 + A1:2019, 47 CFR Part 15B (FCC) |
| **Safety** | CB, IEC 62368-1:2018, EN IEC 62368-1:2020 + A11:2020, AS/NZS 62368:1:2022, CSA C22.2 No. 62368-1:19, JIS C 62368-1 (2021), UL 62368-1:2019 |
| **Vibration** | ETSI EN 300-019-2-2 (T2.2 vibration) when transported in original Thruvision packaging |
| **Patents** | See www.thruvision.com/patents for details |

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## STAND SPECIFICATIONS

| | OPERATOR STATIONS | | | | CAMERA STANDS | | | |
|---|---|---|---|---|---|---|---|---|
| **Type** | Mains | Battery | | | Mains | Battery | | |
| **Model No: TV-MNT-** | OSM | OSB-UK | OSB-EU | OSB-US | CSM | CSB-UK | CSB-EU | CSB-US |
| **Description** | Mains powered Operator Station | Operator Station for UK spec battery | Operator Station for EU spec battery | Operator Station for US spec battery | Mains powered Camera Stand | Camera Stand for UK spec battery | Camera Stand for EU spec battery | Camera Stand for US spec battery |
| **COMPATIBILITY** | | | | | | | | |
| Recommended Usage | SpotCHECK, WalkTHRU, WalkTHRU Plus | | | | WalkTHRU, WalkTHRU Plus | | | |
| **ELECTRICAL** | | | | | | | | |
| Rated Voltage Range & Frequency | 100-240 V a.c.,50-60Hz | 220 to 240 V a.c., 50/60Hz | 230 V a.c., 50 Hz | 100 to 120 V a.c., 50/60 Hz | 100-240 V a.c.,50-60Hz | 220 - 240 V a.c.,50/60Hz | 230 V a.c., 50/60 Hz | 100 to 120 V a.c., 50/60 Hz |
| Rated Power Consumption (with camera) | 700 W | 1,700 W | | | 140 W | 1,160 W | | |
| Typical Operating Power Consumption (with camera) | 230 W | 230 W (Battery Not Charging)<br>670 W (Battery Charging) | | | 90 W | 90 W (Battery Not Charging)<br>530 W (Battery Charging) | | |
| External Connections | Mains a.c. (power), RJ45 Ethernet (data), HDMI, USB3 | | | | Mains a.c. (power), RJ45 Ethernet (data) | | | |
| **COMPUTE** | | | | | | | | |
| Processor | 8th Gen Intel Core i7 | | | | N/A | | | |
| RAM | 16 GB DDR4 dual-channel RAM | | | | N/A | | | |
| Storage | 500 GB NVMe SSD (Boot/OS), 2TB HDD (Storage) | | | | N/A | | | |
| GPU | NVIDIA GeForce RTX 5070 Twin Edge OC 12 GB GDDR7 | | | | N/A | | | |
| Operating System | Microsoft Windows 10 IoT Enterprise LTSC 2021 64-bit | | | | N/A | | | |
| **DISPLAY** | | | | | | | | |
| Screen Diagonal | 60.5 cm (23.8 in) | | | | N/A | | | |
| Screen Type | IPS touchscreen | | | | N/A | | | |
| Native Resolution | 1,920 x 1,080 px | | | | N/A | | | |
| Aspect Ratio | 16:9 | | | | N/A | | | |
| Brightness (Typical) | 300 cd/m² | | | | N/A | | | |
| Static Contrast Ratio (Typical) | 1,000:1 | | | | N/A | | | |
| **PHYSICAL** | | | | | | | | |
| Dimensions H x L x W | Mains type: 1,659 x 925 x 539mm (65.3 x 36.4 x 21.2in)<br>Battery types: 1,659 x 1,120 x 547mm (65.3 x 44.1 x 21.5in) | | | | Mains type: 1,110 x 925 x 539mm (43.7 x 36.4 x 21.2in)<br>Battery types: 1,110 x 1,120 x 547mm (43.7 x 44.1 x 21.5in) | | | |
| Weight (with camera) | Mains type: 85 kg (187 lb)<br>Battery types: 107 kg (236 lb) | | | | Mains type: 71 kg (156 lb)<br>Battery types: 93 kg (205 lb) | | | |
| **ENVIRONMENTAL** | | | | | | | | |
| Ambient Environment | Indoors, dry and preferably air-conditioned location | | | | | | | |
| Operating Temp | 5 to 28 °C (41 to 82 °F) | | | | | | | |
| Relative Humidity | 20 to 80% RH, non-condensing | | | | | | | |
| Storage Temp | 0 to 55 °C (32 to 131 °F) | | | | | | | |
| Operating Altitude (Max) | 2,000 m (6,560 ft) AMSL | | | | | | | |
| **APPROVALS** | | | | | | | | |
| Conformity | CE, UKCA | | | | | | | |
| EMC | EN 55032:2015 + A11:2020 (emissions), EN 55035:2017 + A11:2020 (immunity), EN 61000-3-2:2019, EN 61000-3-3:2013 + A1:2019, 47 CFR Part 15B (FCC) | | | | | | | |
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| Vibration | ETSI EN 300-019-2-2 (T2.2 vibration) when transported in original Thruvision packaging | | | | | | | |
| Patents | See www.thruvision.com/patents for details | | | | | | | |

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