

# 81 Series

## 8112 DATASHEET



# 8112

## PASSIVE TERAHERTZ PEOPLE-SCREENING CAMERA

Thruvision 8112 is a high-performance camera, optimised for WalkTHRU Plus screening, and designed to detect larger items on 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

### SENSOR TECHNOLOGY OPTIMISED FOR WALKTHRU PLUS

Features Thruvision's patented high-performance sensor technology, optimised for the screening of walking people.

### SmartSCREEN READY

8112 features built-in hardware support for Thruvision's intelligent SmartSCREEN software feature package.

### DynamicDETECT READY

8112 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.

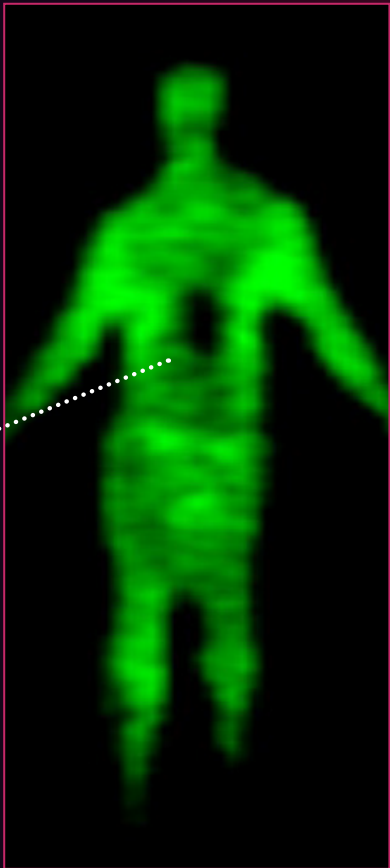
Rugged wheels for rapid deployment.









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

# 8112

## DETECTION CAPABILITY

Image shows a 35 cl (12 fl oz) bottle of alcohol detected on a walking person at 3.5 m distance.



| CONCEPT OF OPERATIONS                      | PEAK FLOW RATE (PEOPLE/HR) | 35CL SPIRITS                                                                        |                                                                                     | PACKET CIGARETTES                                                                   |                                                                                      | METAL WATCH                                                                           |                                                                                       | USB PENDRIVE                                                                          |                                                                                       |
|--------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                            |                            | 9MM HANDGUN                                                                         |                                                                                     | KITCHEN KNIFE                                                                       |                                                                                      | 50x50 MM DRUGS                                                                        |                                                                                       | SMALL PENKNIFE                                                                        |                                                                                       |
| REPRESENTATIVE MINIMUM CONCEALED ITEM SIZE |                            |  |  |  |  |  |  |  |  |
| SpotCHECK                                  | UP TO 300                  | 8104                                                                                |                                                                                     | 8104                                                                                |                                                                                      | 8108                                                                                  |                                                                                       | 8116                                                                                  |                                                                                       |
| WalkTHRU                                   | UP TO 600 (WITH PAUSE)     | 8104                                                                                |                                                                                     | 8108                                                                                |                                                                                      | 8116                                                                                  |                                                                                       |                                                                                       |                                                                                       |
| WalkTHRU PLUS                              | 600 - 1,200 (NO PAUSE)     | 8112                                                                                |                                                                                     | 8116                                                                                |                                                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                            | 1,200 - 1,800 (NO PAUSE)   | 8116                                                                                |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

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

### CAMERA

|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| Terahertz Sensor                       | Passive, high-performance sensor, operating at 250 GHz frequency |
| Terahertz Image Refresh Rate           | Up to 28 lines/sec, depending on scan mode                       |
| Screening Field Of View At 3m / 9.8 ft | <b>H 1.8 m</b> (70.9 in) <b>W 1.1 m</b> (43.3 in)                |
| Video Camera                           | Colour HD stereo vision depth camera                             |
| Video Camera Frame-Rate                | 15 fps                                                           |
| Optimum Screening Distance             | <b>2.5 - 3.5 m</b> (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                                  |
| Connectivity      | Mains a.c. (power), Ethernet (data)        |

### PHYSICAL

|            |                                                                               |
|------------|-------------------------------------------------------------------------------|
| Dimensions | <b>H 610 mm</b> (24.0 in) <b>L 625 mm</b> (24.6 in) <b>W 253 mm</b> (10.0 in) |
| Weight     | <b>34 kg</b> (75 lb)                                                          |

### ENVIRONMENTAL

|                                           |                                                      |
|-------------------------------------------|------------------------------------------------------|
| Ambient Air Operating Temperature         | <b>5 - 28 °C</b> (41 - 82 °F)                        |
| Optimum Ambient Air Operating Temperature | <b>18 - 22 °C</b> (64 - 72 °F)                       |
| Storage Temperature                       | <b>0 - 40 °C</b> (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           | <b>2,000 m</b> (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 <a href="http://www.thruvision.com/patents">www.thruvision.com/patents</a> for details                                                       |

| OPERATOR STATIONS |                                |                                      |                                      |                                      | CAMERA STANDS              |                                  |                                  |                                  |
|-------------------|--------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------------|
| Type              | Mains                          | Battery                              |                                      |                                      | Mains                      | Battery                          |                                  |                                  |
| Part 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., 50-60 Hz                             | 220 to 240 V a.c., 50/60 Hz | 230 V a.c., 50 Hz | 100 to 120 V a.c., 50/60 Hz | 100-240 V a.c., 50-60 Hz                 | 220 - 240 V a.c., 50/60 Hz | 230 V a.c., 50/60 Hz | 100 to 120 V a.c., 50/60 Hz |
| Power Consumption (Max With Camera) | 700 W                                                | 1,700 W                     |                   |                             | 160 W                                    | 1,160 W                    |                      |                             |
| 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 SSD (Boot/OS), 2 TB HDD (Storage) | N/A |
| GPU              | NVIDIA RTX 3060TI                        | N/A |
| Operating System | Microsoft Windows 10 Enterprise 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: 1,645 x 925 x 525 mm (64.8 x 36.4 x 20.7 in)<br>Battery types: 1,645 x 1,062 x 535 mm (64.8 x 41.8 x 21.1 in) | Mains type: 1,060 x 925 x 525 mm (41.7x 36.4 x 20.7 in)<br>Battery types: 1,060 x 1,062 x 535 mm (41.7 x 41.8 x 21.1 in) |
| 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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