81 Series

8116

DATASHEET



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8116

PASSIVE TERAHERTZ PEOPLE-SCREENING CAMERA

Thruvision 8116 is a very high-performance people-screening camera, designed and optimised to detect a range of items on both stationary and moving people in very high throughput environments.

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

ULTIMATE SENSOR TECHNOLOGY

Features Thruvision's patented very high-performance 16-channel sensor technology, combining speed and resolution to give the ultimate screening performance in all ConOps.

SmartSCREEN READY

8116 features built-in hardware support for Thruvision's intelligent SmartSCREEN software feature package.

DynamicDETECT READY

8116 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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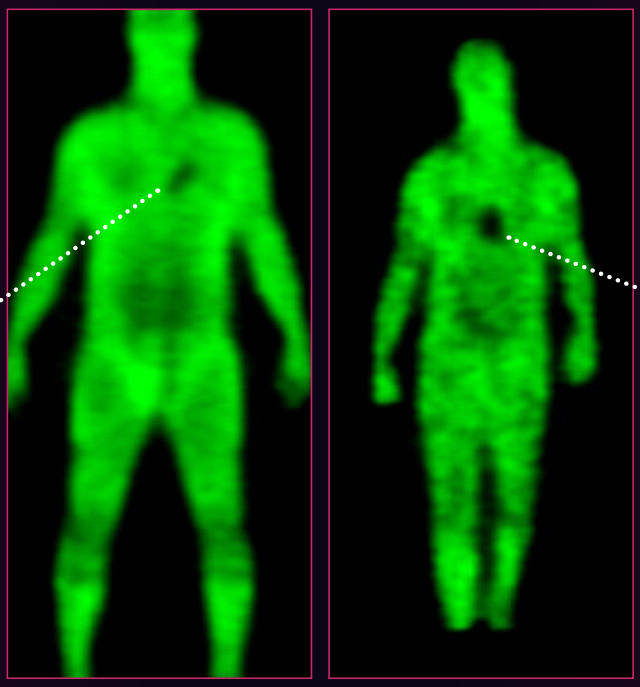
8116

DETECTION CAPABILITY

SpotCHECK

Penknife detected on stationary person, with SloScan, at 2.5 m distance.

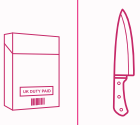
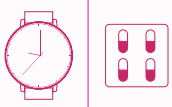
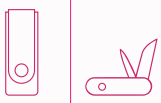




WalkTHRU PLUS

Packet of cigarettes detected on walking 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 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-8116
CAMERA	
Terahertz Sensor	Passive, very 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	**H 1.8 m** (70.9 in) **W 1.1 m** (43.3 in)
Angular Screening Field of View	**Horizontal FOV** 20° **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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B116

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., 50/60Hz	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) 670 W (Battery Charging)			90 W	90 W (Battery Not Charging) 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 539 mm (65.3 x 36.4 x 21.2 in) Battery types: 1,659 x 1,120 x 547mm (65.3 x 44.1 x 21.5in)				Mains type: 1,110 x 925 x 539 mm (43.7 x 36.4 x 21.2 in) Battery types: 1,110 x 1,120 x 547 mm (43.7 x 44.1 x 21.5in)			
Weight (with camera)	Mains type: 85 kg (187 lb) Battery types: 107 kg (236 lb)				Mains type: 71 kg (156 lb) 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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