

**Caiet de sarcini
sisteme portabile de termoviziune**

1 Item number	2 Quantity	3 Required specifications / Item description	4 Proposed specifications (including notes, comments, documentation ref.(s) if any)
Title Item: Portable observation systems			
1	2 sets	The Portable Surveillance System (hereinafter – System) has to provide remote monitoring of protected boundaries (sections, objects) and transmit signals about the fact and location of the boundary being crossed by an intruder in remote areas of the terrain.	MSS - Mobile Surveillance System The Portable Surveillance System (hereinafter – System) will provide remote monitoring of protected boundaries (sections, objects) and transmit signals about the fact and location of the boundary being crossed by an intruder in remote areas of the terrain.
		I. Positioner platform for camera	
		Parameter	Requirement
		Load capacity / Torque	Not less than > 6 kg
		System Weight (PT+Camera)	Less than < 11 kg
		Pan axis range / angle	n x 360°
		Pan axis speed	0. 1°/s - 120 °/s
		Tilt axis range / angle	-90° to +90°
		Tilt axis speed	0. 1°/s - 90 °/s
		Accuracy	Not less than > ±0.1°
		Backlash	None
		Operating voltage	24 VDC
		Maximum power	Not more than < 50 W
		Communication to the unit	RS-485
		Control protocol	PT protocol
		Protection / IP rating	IP 66
		Operating temperature	-32°C to +55°C
		II. Camera	
		Parameter	Requirement
		Thermal and VIS channel:	
		Thermal Detector	VOx LWIR FPA

	Thermal Resolution	640 x 512	640 x 512
	Thermal Detector pitch	17 μm	17 μm
	Thermal Spectral range	8 to 14 μm	7,5 to 14 μm
	Thermal NETD	$\leq 50\text{mK}$	$\leq 35\text{mK}$
	Thermal Focal length	Zoom: 26mm – 105mm	Zoom: 26mm – 105mm

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		Thermal Field of View	Zoom: 25.3°(H)X18°(V)- 5.9°(H)x4.5°(V)	Zoom: 25.3°(H)X18°(V)- 5.9°(H)x4.5°(V)
		VIS resolution	FHD	FHD
		VIS Focal length	4.3 – 129mm	4.3 – 129mm
		VIS Field of View	63.7° (H) – 2.3° (H)	63.7° (H) – 2.3° (H)
		Focus	Motorised	Motorised
		Video capabilities:		
		Frame rate	25 / 30Hz	25 / 30Hz
		Display	12.1" Class XGA Touchscreen Portable monitor	12.1" Class XGA Touchscreen Portable monitor
		Image processing	<u>Thermal camera:</u> Digital Detail Enhancement Digital zoom Non uniformity correction White Hot / Black Hot DRC Auto Focus Digital Noise Reduction <u>VIS camera:</u> Digital zoom Image stabilizer Defog IR cut Auto Focus Backlight on/off Wiper on/off	Thermal camera: Digital Detail Enhancement Digital zoom Non uniformity correction White Hot / Black Hot DRC Auto Focus Digital Noise Reduction VIS camera: Digital zoom Image stabilizer Defog IR cut Auto Focus Backlight on/off Wiper on/off

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		Digital Zoom	4x	4X
		Storage, Interfaces, power and other requirements:		
		Internal Recording Format	MP4	MP4
		Capacity	> 5 days continuous recording	7 days continuous recording
		Power input	1. 12V from car lighter 2. Battery pack	12V from car lighter Battery pack
		Video output	H264	H264
		Communication	USB (Video and Photo download)	USB (Video and Photo download)
		Battery	Rechargeable Li-ion battery pack suitable for 2 hours of operation *Autonomous operation from a vehicle	Rechargeable Li-ion battery pack suitable for 2 hours of operation *Autonomous operation from a vehicle
		Charging	Via supplied 12Vdc charger	Via supplied 12Vdc charger
		Battery autonomy	≥2h (room temperature)	2h (room temperature)
		Operating temperature range	-32°C to +55°C	-35°C to +55°C
		Storage temperature range	-50°C to +70°C	-40°C to +70°C
		Humidity	≤90%	≤90%
		IP rating	IP66, built according to MIL-810	IP66, built according to MIL-810
		Camera Dimensions	424mm (l), 264mm (h), 265mm (d)	393mm (l), 251mm (h), 245mm (d)
		Camera Weight	≤11 kg	9 kg
		Detection, recognition and identification (thermal channel):		
		DRI – NATO (VEHICLE) TARGET (2.3m x 2.3m):		
		Detection	Min. 7.16 km	7.16 km
		Recognition	Min. 2.36 km	2.36 km
		Identification	Min. 1.18 km	1.18 km
		DRI – HUMAN TARGET (1.8m x 0.5m):		
		Detection	Min. 3.20 km	3.2 km

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		Recognition	Min. 1.07 km	1.07 km
		Identification	Min. 0.54 km	0.54 km
		III. JUNCTION BOX		
		Parameter	Requirement	
		Weight	Not more than > 7 kg	7 kg
		Dimensions (H x W x L)	Not more than > 560x350x170mm (with connectors and cooling fins)	560x350x170mm (with connectors and cooling fins)
		Operating voltage	24 VDC	24 VDC
		Protection / IP rating	Not less than < IP 66	IP 66
		Operating temperature	-32°C to +55°C	-32°C to +55°C
		IV. CONTROL DEVICE:		
		Joystick functions	Pan, tilt, zoom, camera switch, recording, snapshot, PT speed	Pan, tilt, zoom, camera switch, recording, snapshot, PT speed
		V. SYSTEM COMPUTER & DISPLAY:		
		Parameter	Requirement	Compliance
		Operating system	At least Windows 11 Pro	Windows 11 Pro
		Processor	At least 12th Generation Intel® Core™ i3	12th Generation Intel® Core™ i3
		Display resolution	XGA (1024 x 768) Native Resolution	XGA (1024 x 768) Native Resolution
		Display	Capacitive multi-touch screen	Capacitive multi-touch screen
		Display	Portable, easy car front window installation	Portable, easy car front window installation
		Display weight	1.5 kg	1.5 kg
		Memory	At least 8 GB DDR4	8 GB DDR4
		Storage	At least 256 GB	256 GB
		VI. BATTERY		
		Parameter	Requirement	Compliance
		Weight	Not more than < 6 kg	6 kg

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		Dimensions	Not more than < 230x200x90 mm	230x200x90 mm
		Nominal voltage	48-50V	48V
		Capacity	Not less than > 23.1 Ah	23.1 Ah
		Protection / IP rating	Not less than < IP 66	IP 66
		Operating temperature	-32°C to +55°C	-32°C to +55°C
		VII. TRIPOD – Carbon fiber tripod with quick lock system		
		Compliance	Parameter	Requirement
		Weight	Not more than < 2,5 kg	2.01 kg
		Nested / Extended Height	0,71 m / 2,02 m	0,71 m / 2,02 m
		Quick lock system for positioner		
		Load capacity	25 kg	30 kg
		Leg sections	4 sections	4 sections
		Leg lock type	Twist Lock	Twist Lock
		Operating temperature	-32°C to +70°C	-32°C to +70°C
		Material	Carbon fiber/ Aluminum alloy	Aluminum alloy
		CABLES		
		Connectors	Military standard connectors on cables	Military standard connectors on cables
		VIII. Magnetic holder		
		Compliance	Parameter	Requirement
		Magnetic holder requirements	<ul style="list-style-type: none"> • Payload capacity at least 15 kg • Quick lock mounting system for positioners and handheld camera • Magnet holder for vehicle roof 	<ul style="list-style-type: none"> • Payload capacity 15 kg • Quick lock mounting system for positioners and handheld camera Magnet holder for vehicle roof
		IX. Other requirements		
		System components	Manufacturers will not use any Chinese components	Israel
		MAF authorization from the manufacturer for this tender;	MAF authorization from the manufacturer for this tender, including Maintenance and Support authorization for the warranty period requested;	Yes

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		ISO 9001 certificate of the manufacturer	ISO 9001 certificate of the manufacturer	ISO 9001 certificate of the manufacturer
		ISO 9001 certificate of the offeror	ISO 9001 certificate of the offeror	ISO 9001 certificate of the offeror
		Warranty period:	≥ 24 months	24 months
		Operator training:	min.16 persons	16 persons
		Maintenance and Support:	at least 24 months	24 months

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