

AR-014-03

Multifunctional Networked Observation System

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- Vanadium oxide uncooled microbolometer array
- 4-megapixel CMOS progressive scan
- 44x zoom
- Object recognition and tracking
- IP67 protection
- Pan: +/-175°; tilt: +/-30°
- Positioning error < 0.06°

The device is a multifunctional observation system comprising daylight and thermal cameras integrated with a pan-tilt system, a rangefinder, a Global Positioning System (GPS), and automatic calculation of object geographic coordinates. The system also supports network-based control, providing real-time data transmission and remote operation.

Technical Data			Visible imaging		
Thermal imaging			Detector type		
Microbolometer array type (detector)	Vanadium oxide, uncooled (VOx)		1/1.8" Sony Starvis progressive CMOS		
Array resolution	640(H) x 512 (V)		Maximum resolution		
Pixel size	12 µm		1920(H) x 1080 (V)		
Spectral range	8 µm - 14 µm		Pixel count		
Sensitivity	≤ 35 mK		4.17 megapixels		
Focal length	50 mm		Minimum illumination		
Field of view	H: 8.7 ° V: 7 °		Color: 0.005 lm/F1.5 Black and white: 0.0005 lm/ F1.5		
Digital zoom	2x, 4x, 8x		Detection range		
Detection range	Human	2350 m	Human		
	Vehicle (tank)	4600 m	Vehicle (tank)		
Recognition range	Human	670 m	Human		
	Vehicle (tank)	1400 m	Vehicle (tank)		
Identification range	Human	350 m	Human		
	Vehicle (tank)	700 m	Vehicle (tank)		
			Focal length		
			6.8 mm - 300 mm		
			Field of view		
			H: 59.6° - 1.5° V: 35.7° - 0.8° D: 66.7° - 1.7°		
			Optical zoom		
			44x		

Rangefinder	
Laser safety class	Class 1 (eye-safe)
Maximum measurement range	12000 m
Accuracy	< 0.5 m
Vehicle (2.3 m x 2.3 m) ranging capability	4000 m
Medium-size structures ranging capability	8000 m
Pan-tilt system	
Pan and tilt angular range	Pan: +/-175° Tilt: +/-30°
Minimum speed	0.1°/s
Maximum speed	15°/s
Positioning accuracy	0.06 °
Power and operating conditions	
Power source	DC 12/24 V AC 220 V / 50 Hz
Power consumption	< 36 W
Operating temperature	-30°C to +60°C
Operating humidity	≤95%
Continuous operation	24/7
Storage temperature	-40°C to +70°C
Ingress protection rating	IP67
Video	
Video compression	H.265 / H264H / H264B
Frame rate	50 Hz

Image resolution	Thermal imaging: Main stream: 1280x1024 Substream: 640x512
	Visible imaging: Main stream: 1920x1080 Substream: 1280x720
Specifications	
Coordinate calculation	WGS84 or SK42
Global Navigation System (GPS)	Integrated
Picture-in-picture (PIP)	Supported
Interoperability	Onvif; Aragats SDK
Network protocol	HTTP; HTTPS; TCP; RTSP; UDP; SMTP
Storage	SSD: 1TB
Fault detection	Network fault detection and storage-capacity monitoring
Solar panel integration	Supported