

KAZHAN-3K15 / 3K22 Optoelectronic Modules

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Devices of KAZHAN series are multispectral optoelectronic devices intended for use as a part of surveillance, reconnaissance and fire control systems.

Depending on the model type, KAZHAN devices are used in stationary look-out stations; as a part of autonomous combat modules; on armored vehicles; as a part of shipboard surveillance and fire control systems.

KAZHAN has several detection channels (1-3) in different spectral bands (visible, SWIR, MWIR, LWIR) and a rangefinder channel.

Digital processing unit as a part of OEM KAZHAN provides primary and secondary digital image processing; automatic target detection; target tracking; raw data recording; data transfer to a central observation post in digital and analog form.

KAZHAN devices are equipped with standard interfaces and can be easily integrated with other hardware.

[AT Commu](#)



TECHNICAL CHARACTERISTICS

THERMAL IMAGING CHANNEL	T1	T2
Type of camera	uncooled	
Detector	640 x 512 17 μ 8-14 μ	
Sensitivity	< 30 mK	
Focal length	150 mm	25 ÷ 225 m
Objective F number	F/1.0	F/1.5
Angular field of view (H x V)	6.2° x 5.0°	25° x 20° ÷ 2.7° x 2.2°
Recognition / Identification (human)	4.2 / 1.5 km	6.5 / 2.0 km
Recognition / Identification (vehicle)	10.0 / 3.6 km	16.0 / 5.0 km
DAYTIME CHANNEL	C1	
Type of camera	CMOS	
Detector	1/4" CMOS 1280 x 1024 60fps	
Lens focal length	3.5 ÷ 150.5 mm	
Angular field of view (wide)	H : 45.92° x V : 38.2°	
Angular field of view (narrow)	H : 2.7° x V : 1.8°	
Sensitivity	chromatic image: 0.5 Lux/F1.4, monochromatic image: 0.05 Lux/F1.4	
RANGE FINDER CHANNEL	R5	
Range	50-15000 m (on target with 85% coefficient of reflection) 50-7000 m (on NATO standard target with 30% coefficient of reflection)	
Wavelength	1550 nm, safe for vision, invisible for night vision	
Beam divergence angle	0.3 mrad	
Measuring frequency	10 Hz	
DIGITAL SIGNAL PROCESSING MODULE	E1	

Formation of the auxiliary video information	aiming marks: textual and graphical	
Movement detector	automatic detection of moving objects	
Automatic target tracking	acquisition and tracking of an indicated target	
Contrast / size / target speed	> 0.4 / 10x10 pixel / <150 pixel/sec	
Digital image processing	combination of 2 channels by different algorithms	
PERFORMANCE CHARACTERISTICS		
Protection class	IP67, ice protection	
Operating temperature range	-30°C ÷ +55°C	
Dimensions (L x W x H) *depending on component parts	287 x 254 x 330 mm	
Weight	18 kg	20 kg

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