

armstrong optical

IR513 Multifunctional Handheld Infrared Thermal Camera



By combining an infrared camera, GPS, laser range finder (with integrated visible telescope), electronic compass, the IR513 multifunctional handheld infrared thermal viewer provides target observation in the air, on land or at sea in both day and night. Additionally, target range, direction and location are obtained in real-time. Measurement results can be sent to a command system through the built-in interfaces. The IR513 is ideal for both mobile and/or static operation. With all these features, the IR513 is ideal for military, police, firefighting, law enforcement and costal surveillance.

Both visible image and infrared image available

Dual waveband operation for passive day & night surveillance.

GPS and electronic compass

Provides system position and target direction to the built-in interface on IR513 camera.

Laser range finder

Provides target distance in real-time.

Manual adjustment of brightness/contrast

Adjust brightness and contrast manually to get best image quality according to specific environment condition.

Automatic adjustment of brightness/ contrast

Adjust brightness and contrast automatically to get image with best viewing effect for personal preference.

Electronic zoom

2× electronic zoom (by interpolation) to improve image recognition capability.

Black and white display or Multiple color display

Multiple colours for easier observation and analysis, plus black hot & white hot.

RS232/RS485/RS422

Allows camera control and image transfer to PC.

RS232 (RS485/422 option) interface

Provides remote camera control

Range information	Detection	Recognition	Identification
Man	2.5km	1.8km	1.5km
Vehicle	4km	2.5km	2km
Aircraft	>20km	-	-

Specification

Thermal Imager Performance

Type	Micro bolometer
Detector Material	Amorphous silicon
Response Time	4ms
Pixels	384×288 array
Pitch	35µm
Spectrum Range	8~14µm
Pixel Sampling Rate	3.689MHZ
Fill Factor	>80%
Bad Pixels	<1%
Response Rate	>4mV/K@30°C
NETD	<85mK@25°C
Non-uniformity	<±1°C

Optics

Lens	f=80mm F=1.0
FOV	5.5°×4.12°

Environmental Specification

Operating Temperature	-20°C ~ +55°C (-40°C ~ +60°C optional)
Storage Temperature	-40°C ~ +60°C
Shock	Compliant with GJB150-86
Vibration	Compliant with GJB150-86

GPS

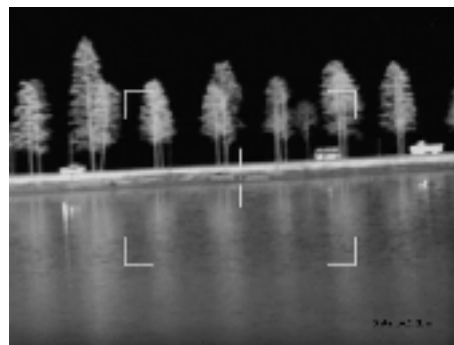
Accuracy	Single unit <3m (2DRMS)
Cold start	<60sec
Hot start	<20sec
Re-acquisition time	<1sec

Laser rangefinder

Ranging performance	50 ~ 5000m
Ranging accuracy	±3m
Wavelength	1.064µm
Beam divergence	≤1.0mrad
Repetition rate	10/min
Working voltage	7~12V

Digital compass

Accuracy	0.3°
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