Observation &
Sighting Equipment

Handheld Thermal Viewer
Type IR510

Handheld
Thermal Viewer
Type IR510

General Description

The Handheld Thermal Viewer Type IR510 is a high-resolution thermal viewer featured with clear images, ×2 zoom, long detection range and automatic contrast and brightness adjustment.

Principal Data

Detector Type	Uncooled FPA Micro bolometer (320x240 pixels)
Spectral Response	8 to 14 microns
Frame Rate	50 Hz
Spatial Resolution	0.5 mrad
NETD	≤0.1 ℃
Detection Range	1,200 m (3,960 ft)
Electronic Zoom	×2, ×4
Camera Configuration	Save, recall or default reset
Ergonomic Design	One hand operation
Mounting Provision	Tripod
Ambient Temperature	-10~+50 ℃ (-40 ℃ optional)
Storage Temperature	-40~+60 ℃
Protection Level	IP54
Power Supply	7.2 V DC (rechargeable Li battery)
Power Consumption	6 W
Battery Working Life	>2 h
Dimension (without lens)	143×82×83 mm
Viewfinder	CRT
Weight	2 kg (4.4 lbs)
Interface	
-Video output	PAL/NTSC
-External control	RS-232
Standard Lens	100 mm=F1.0
Field of View	8°×6°
Optional Lens	20 mm/F0.7
	40 mm/F0.8
	80 mm/F1.0
	120 mm/F1.1
	150 mm/F1.2

Thermal Sight
Type IR160

Thermal Sight
Type IR160

General Description

The Thermal Sight Type IR160 adopts the latest uncooled Focal Plane Array (FPA) detector and real-time digital image device, thus optimized for day & night searching and aiming in severe weather conditions even through thick smoke or in blind darkness.

Principal Data

Detector	
-Type	Amorphous silicon uncooled FPA
-Spectral range	8~14 μm
-Pixel	160×120
-Pitch	25 μm×25 μm
-Bad pixel	≤1%
Image Presentation	
-Display	OLED viewfinder, 256-level gray
-Lens	50 mm/F1.0 manual lens
-FOV	4.58°×3.44°
-IFOV	0.5 mrad
-Focusing range	3 m~∞
-Electronic zoom	×2
Image Display	
-Video output	PAL
-Frame frequency	50 Hz
-Auto mode	Manual/Auto brightness and contrast
-Polarity	Black heat & white heat
-Ballistic reticle	Available, movable per 1/4 pixel
Work Range to People	
-Detection range	1,200 m
-Recognition range	500 m
-Identification range	400 m
Power Supply	
-AC/DC adapter	4.2 V DC
-Rechargeable battery	4.2 V DC
-Battery working life	>8 h
Ambient Temperature	-40~+55 °C
Storage Temperature	-40~+55 °C
Humidity	95% (+40 °C)
Shock	MIL-STD F
Vibration	MIL-STD F
Weight (with battery)	800 g
Dimension	236×71×69 mm

Observation &
Sighting Equipment

Ultra Long-range
Thermal Camera
Type **IR136**

Ultra Long-range Thermal Camera Type IR136

General Description

The Ultra Long-range Thermal Camera Type IR136 features unique and professional technologies. Integrating high sensitivity mid-wave detector and 240/60 mm lens, it can track aircraft more than 200 km away. Dual field of view and electronic zoom enables early situation awareness and fast target recognition. With solid metallic housing and optional silicon protecting window, IR136 is an all-weather equipment.

The camera is equipped with an all-function remote controller. The remote control functions include the adjustments of lens cap (open/close), focus, FOV, brightness and contrast of image, image intensification, image electronic zoom in/out, image polarity, calibration, and etc..

Principal Data

Detector Material	HgCdTe
Spectrum Range	3~5 μm
Pixel	320×256
Pitch	30 μm
Cooling Method	Stirling cooler
NETD	<15 mK (+20 °C)
Lens	240/60 mm/ F#=2
FOV	
-NFOV	2.3°×1.7°
-WFOV	9.1°×6.9°
Image Presentation	
-Video output	CCIR 625 lines/50 Hz, Analog PAL 1.0 VPP 75 Ω
-Image color	256 level gray, B & W, B & W inverse
-Image processing	Auto/Manual brightness and contrast Auto-adjusted sky & ground detection mode Intensify information of long range tiny object Nonlinear correction, no “ghost” Auto/manual NUC (non-uniformity calibration) Bad pixel correction Image polarity, image enhancement, ×2 electronic zoom
Remote Control	RS422 & RS232
Power for Cooling	26W
Ambient Temperature	-20~+60 °C (-40 °C optional)
Storage Temperature	-55~+60 °C
Shock	GJB150-86
Vibration	GJB150-86
EMC	GJB151A-97
Weight	17 kg
Dimension	439.5×144.6×172 mm

Observation &
Sighting Equipment

Multifunctional Locating Handheld Infrared Thermal Viewer

Type **IR513**

Multifunctional Locating Handheld Infrared Thermal Viewer
Type IR513

General Description

Combining infrared camera, GPS, laser range finder, electronic compass and visual telescope, Multifunctional Locating Handheld Infrared Thermal Viewer Type IR513 enables target observation in the sky, on land or sea in both day and night, measurement of target distance, indication of target direction and location. The measuring result will be sent to command system through communication device by connecting it with preformed interface. With all these features, IR513 is ideal for police, suppressing smuggling, firefighting, law enforcement and coastal surveillance.

Main Functions

Both visual image and infrared image available	Enabled by built-in visual telescope and infrared camera.
GPS and electronic compass	To get target position and direction by connecting communication device to preformed interface on IR513 camera.
Laser range finder	To get target distance at any moment and anywhere.
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 human eye.
Electronic zoom	2×～4× electronic zoom in (by interpolating) to improve image recognition capability
Black and white display	black hot/ white hot
Multiple color display	Multiple color for easier observation and analysis

Principal Data

Type	Micro bolometer
Detector Material	Amorphous silicon
Response Time	4 ms
Pixels	384×288
Pitch	35 μm
Spectrum Range	8~14 μm
Fill Factor	＞80%
Pixel Sampling Rate	3.689 MHZ
Bad Pixels	＜1%
Response Rate	＞4 mV/K at 30°C
NETD	＜85 mK at 25°C
Non-uniformity	＜±1°C
Lens	f=80mm F # =1.0 aspheric transmission-type IR lens
FOV	9.6°×6.9°
Operating Temperature	-40~+60°C
Storage Temperature	-40~+70°C

Thermal Sight
Type **IR527/IR627**
(for Anti-tank Missile)

Thermal Sight
Type IR527/IR627
(for Anti-tank Missile)

General Description

The Thermal Sight Type IR527/IR627 (for Anti-tank Missile) adopts the latest uncooled/cooled Focal Plane Array (FPA) detector and real-time digital image electronics, thus optimized for day & night searching and aiming in severe weather conditions even through thick smoke or in blind darkness.

Various versions are available to work with different anti-tank missiles, such as Chinese HJ-73 series, HJ-8 and HJ-9A missiles, some of Russian and French ones.

Principal Data

Detector Type	Uncooled FPA (384×288, 35 μm)	Stirling cooled FPA (320×256, 30 μm)
Wave Band	8~14 μm	3~5 μm
Field of View	5.1°×3.9°	2.3°×1.8° (NFOV) 9.2°×7.2° (WFOV)
NETD	<80 mK (+25 ℃)	—
Power Supply	9V DC	9 V DC
Power Comsumption	—	≤20 W
Battery Working Life	≥3 h	—
Cooling Time	—	<7 min.
Video Output	PAL	PAL
Ambient Temperature	-40~+60 ℃	-40~+60 ℃
Storage Temperature	-40~+70 ℃	-40~+70 ℃
Shock	GJB150-86	GJB150-86
Vibration	GJB150-86	GJB150-86

SAM Missile Thermal Sight

Type IR535

SAM Missile Thermal Sight
Type IR535

General Description

The SAM Missile Thermal Sight Type IR535 is designated to provide night vision for individual air defence missiles.

Principal Data

Detector Type	384×288 uncooled FPA microbolometer
Spectrum Range and Pitch	8~14 μm
	35 μm
Lens	f=140 mm/F#=1.1
Field of View	2.3° (H)×1.7° (V)
Ambient Temperature	-40~+60 °C
Storage Temperature	-40~+70 °C
Shock	GJB150-86
Vibration	GJB150-86

White-light Sight

for 5.56mm Rifle Family

White-light Sight

for 5.56mm Rifle Family

General Description

The sight for 5.56mm Rifle Family is a special sight for 5.56mm automatic rifle and 5.56mm assault rifle. The reticule is designed according to the firing table of 5.56x45mm SS109 ammunition.

Principal Data

Magnification	x3
Field of View	8°
Exit Pupil Diameter	5 mm
Exit Pupil Distance	45 mm
Eyepiece Diopter	-0.5 to -1D
Reticule Adjusting	≤0.25 kg

Dim Light Sights

Dim Light Sights

Dim Light Sight for Heavy MGs & Rocket Launchers

General Description

The Dim Light Sight for Heavy MGs & Rocket Launchers, with a second/second plus/third generation image intensifier, can be mounted on various heavy machine guns and rocket launchers to search and aim at night. Fitted with an additional handle, it can be used as a hand-held observation device, featuring better concealment, reliability and easy operation.

Principal Data

Magnification	×4.5
Field of View	10°
Focus Range	20 m~∞
Night Vision Range	250 m (starlight)
Weight	2.1 kg

Dim Light Sight for Light MGs & Rifles

General Description

The Dim Light Sight for Light MGs & Rifles, with a second/second plus/third generation image intensifier, can be mounted on various light machine guns and rifles to search and aim at night, featuring better concealment, reliability and easy operation.

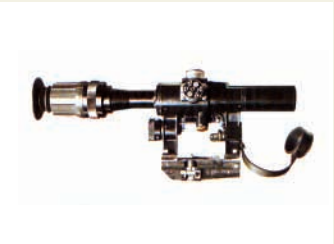
Principal Data

Magnification	×3
Field of View	10°
Night Vision Range	150 m (starlight)
Weight	0.9 kg

Sight

for 7.62mm Sniper Rifle

Sight
for 7.62mm Sniper Rifle



General Description

The Sight for 7.62mm Sniper Rifle is specially designed for the 7.62mm Sniper Rifle Type 85 within the range of 1,300 m. By use of infrared sensitive screen, the sniper can search, aim and shoot the target of active infrared illuminator, as well as detect the distance to the target roughly by reticule scales.

Principal Data

Magnification	×4
Field of View	6°
Exit-pupil Diameter	6 mm
Eye Relief	70 mm
Reticule Adjusting	±10 mil
Weight	0.6 kg

Field Artillery Fire Control System
Type **FACS**

Field Artillery
Fire Control System
Type FACS

General Description

The FACS Field Artillery Fire Control System is mainly used to improve the reaction ability and enhance the fire accuracy of field artillery. It consists of laser range/direction finder, terminals for Battalion, Battery and Artillery.

Principal Data

Armament Applicable	artilleries, MLRSs
Operating Conditions	
-Elevation	0~750 mil
-Altitude of gun position	0~5,000 m
-Site slope	-200~+ 200 mil
Laser Detecting Range	150~5,000 m
Firing Data Accuracy	
-Range	<7/10,000
-Traverse	<0.5 mil
Data Processing Time	≤3 s
Battalion System Reaction Time	<10 s
Transmission Rate	300, 600, 1,200 bps
Max. Transmission Distance	
-Wire	20 km
-Wireless	radio set coverage
Fire Control Capability	
-Battalion computer	3 batteries
-Battery computer	6 guns
Computer Weight	3.5 kg
Ambient Temperature	-20~+ 55 ℃