2015 IR DEFENSE CATALOG

IRD

THERMAL MONOCULARS - THERMAL WEAPON SIGHTS
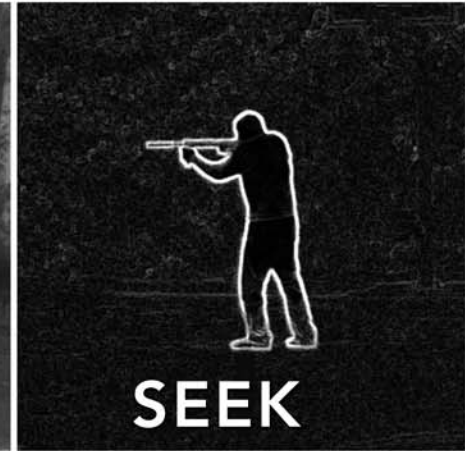
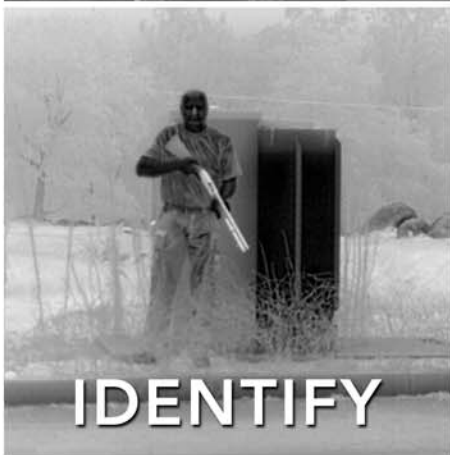WATCH

LOCATE

REVEAL

SEEK

IDENTIFY

APPROACH

RECON

SURVEIL

OBSERVE

IR PATROL™

640x480 THERMAL MONOCULAR

IR PATROL...   Changing the Rules...

"Excellence in innovation" would be the best term to describe the new IR patrol thermal monocular. The IR PATROL monocular features an advanced user interface with a military grade, five position thumb stick that is the perfect size. The monocular's ergonomic design provides users optimum functionality. The menu system is engineered to be intuitive and efficient to use.

IR PATROL M250

Actual Image Taken with PVS-14 3rd Gen

Actual Image Taken with IR PATROL M250

IR PATROL™ IN USE.....

As seen in the images above the IR Defense thermal systems are outperformaning Night Vision on even a full moon night. Because of this high resolution thermal imagery is an absolute necessity for law enforcement. At the heart of the IR PATROL monocular is a twelve micron, 640x480 resolution BAE thermal core. Images taken by the core are displayed on an integrated super contrast OLED display. This advanced technology provides military and law enforcement officers one of the best images vailable in a hand held thermal device.

IR PATROL™

IR PATROL M300W

Image From a IR PATROL
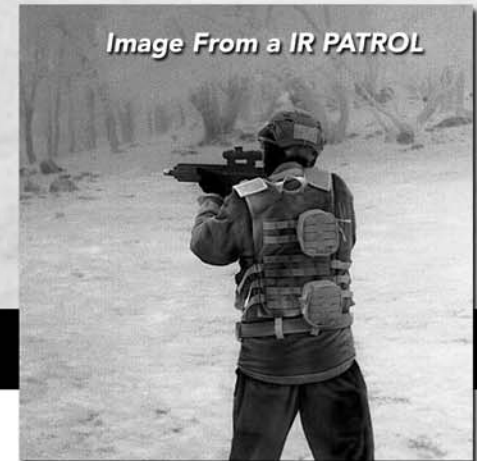
IR PATROL™ M300W

The M300W takes the IR PATROL platform to a new level with the implementation of the weapon sighting mode. This allows the system to turn into a dedicated thermal weapon sight that is ideal for mounting on M4 style rifle. If you already have a day optic sighted in the M300W should be able to be placed in front and used as a Clip-0n device.

IR PATROL™

640x480 THERMAL MONOCULAR

ADVANCED THERMAL MONOCULAR

FULLY DIGITAL ARCHITECTURE

We went the extra mile to make the IR PATROL the highest quality system at an affordable price. Our goals were to make the perfect mix of technology, ergonomics, tactical design and high performance of which we believe we have surpassed. The system with all its advanced capabilities and accessories will fit your budget and your requirments.

IR PATROL SYSTEM SPECIFICATIONS	
Sensor Type	BAE Uncooled VOx LWIR
Thermal Sensitivity	<50mk
Sensor Resolution	640 x 480
Sensor Pitch	12um (micron)
Frame Rate	60hz M250 M300W / 30hz LE100 LE100C
Spectral Responce	8 - 12um
Display	Monochrome Emagin OLED 640x480
Basic Features	E-Zoom, Polarity, DFC
Advanced Features	DCE - Edge Detection Mode
Start Up Time	>4 Seconds
Battery Type	1 each CR123 / 2 each with Adapter
Battery Life	1 each - 2.5 Hours @ 30hz / 2 each - 4 Hours @ 30hz
Weight	454g
Dimensions	5.95" L x 2.0" H x 2.95" W LE100/LE100C
Diopter	-6 / +4
Eye Relief	27mm
Environmental	-40c to +55c Operating / -45c to +75c Storage
Video Output	Analog RS-170 (with Optional Cable)

HAND HELD SYSTEM
LE100

PERFORMANCE - RESOLUTION - DETECTION

The IR PATROL has the highest performance thermal core, along with the leading 640x480 VGA OLED Micro Display, together these two features provide the user optimal detection capabilities. All IR PATROL systems are made to superior quality and stringent US standards and are 100% made in the USA. Bottom line creating American jobs.

TACTICAL SYSTEM
M250

WILCOX
MODULAR BY DESIGN™

Modular by Design.....

The M250 and M300W systems come with an integrated Wilcox shoe interface, permitting use with numerous Wilcox mounting solutions. Helmet mounted with a Wilcox G24 mount the IR patrol provides a tactical advantage for both law enforcement and military users.

WEAPON SYSTEM
M300W

The IR PATROL™ M300W is a mini weapon mountable system that works as a dedicated or Clip-On thermal weapon sight. When the monocular is not in use, the Wilcox Side-Flip Mount conveniently flips the monocular out of the way to not obstruct your day sight.

- Tactical Reticle
- Clip-On Mode
- Side-Flip Mount

System	Model No.	Resolution	Frame Rate	Magnification	Image Capture	Shoe Interface	Reticle System
IR PATROL™ LE100	IRP-LE100	640x480	30HZ	1x - 22° Field of View	No	No	No
IR PATROL™ LE100C	IRP-LE100C	640x480	30HZ	1x - 22° Field of View	80 Images	No	No
IR PATROL™ M250	IRP-M250	640x480	60HZ	1x - 22° Field of View	80 Images	Yes	No
IR PATROL™ M300W	IRP-M300W	640x480	60HZ	1x - 22° Field of View	80 Images	Yes	Yes
IR PATROL™ M350B	IRP-M350B	640x480	60HZ	1x - 22° Field of View	80 Images	Yes	No

	L1	L2	L3	L4
IR PATROL™ **LE100**	YES	NO	NO	NO
IR PATROL™ **LE100C**	YES	YES	NO	NO
IR PATROL™ **M250**	YES	YES	YES	NO
IR PATROL™ **M300W**	YES	YES	YES	YES
IR PATROL™ **M350B**	YES	YES	YES	NO

L1 OPERATING SYSTEM Level 1
Basic Functions and Controls
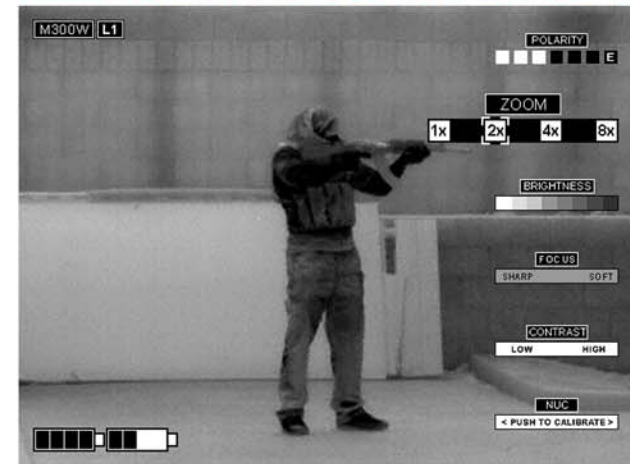
POLARITY - Controls the MaxPol feature for 3 white hot and 3 black hot polarity modes. In the M250 and M300W it also has the Edge Detect.

E-ZOOM - Turns on the digital zoom function enabling digital magnification of 2x, 4x and 8x. Each increase in Electronic Zoom reduces the system resolution.

BRIGHTNESS - Controls the brightness level of the display.

DFC - Sets the Digital Focus Control which will soften or sharpen the image. This feature pulls details out in the image but too much DFC can also increase the noise levels of the image.

DCE - Controls the Digital Contrast Enhancment feature which is used with the DFC to help improve the image quality. This feature when used will make the black and white stand out more.

NUC - When selected it will apply a "NUC" or Non-Uniformity Calibration to improve the image quality.

L2 OPERATING SYSTEM Level 2
Image Capture Controls

CAPTURE IMAGE - When selected it will allow an image to be captured with the thumb stick controller. Up to 99 images can be captured and saved before the memory is used.

REVIEW IMAGES - When this mode is active the user can scroll through the saved images to view them. The user also can apply the Maxpol, DFC and DCE features to any saved image.

DELETE IMAGES - Activating the Delete images will only erase all stored images. The only way to erase individual images is with the PC Software and the download cable.

DOWNLOAD MODE - The IR PATROL images are set to the systems current settings when they are downloaded. This feature sets the system to a factory optimized setting for image download.

L3 OPERATING SYSTEM Level 3
Configuration Settings

FRAME RATE - Controls the Frame Rate setting to select 60hz or 30hz power save mode. This is only available in the M250 and M300W, the LE100 and LE100C only are available in 30hz.

VIDEO OUTPUT- Turns on the video output signal so that a video output cable can be connected.

START-UP SETTINGS - Lets the user decide if the system is to recall the last settings or if it comes on as factory default on power up.

SLEEP MODE - This setting lets the user select how many seconds until the icons disappear on the display. 8, 15 and "OFF" are the selections.

AUTO DIMMER - Sets the auto dimming feature on the display to slowly decrease the brightness level over 30 minutes to limit eye fatigue.

ICON FLIP - When selected it will invert all of the icons on the display so that the unit can be used upside down.

L4 OPERATING SYSTEM Level 4
Weapon Sight Controls

SIGHTING MODE - This setting changes the system from a Monocular/Viewer to a weapon sight. This setting has four positions that are for Viewer, Reticle (dedicated mode) or Clip-On and Zoom Center for Clip-on alignment.

RETICLE LOCK - Needs to be selected in order to unlock the reticle to adjust zero. This is used as a safety device so that the zero position is not adjusted accidentally.

ELEVATION ZERO - When active it will allow the user to zero the scope with the thumb controller moving the reticle up and down.

WINDAGE ZERO - When active it will allow the user to zero the scope with the thumb controller moving the reticle left and right.

IR PATROL™ **LE100** HAND-HELD MODEL

640x480 High Performance

Advanced Thumb Stick Controller

Ruggedized System Design

Full Digital Display

Optional 2X and 3X Magnifiers

Laser/Illuminator Weapon Light (not included)

IR PATROL™ **LE100C** IMAGE CAPTURE MODEL

Image Capture Feature

80 Full 640x480 Images

Includeds Download Cable

Includes Download PC Software

*IR PATROL **LE100C** with Download Cable*

Integrated Accessory Rail
Built-In Mini Picatinny Rail

Thumb Stick Controller
Intuitive User Interface

Solid Construction
6061-T6 Aluminum Housing

Mil.Spec Eyepiece
Diopter Adjustments

Manual Focus Lens
Objective Lens with Manual focus

IR PATROL™
640x480 THERMAL MONOCULAR

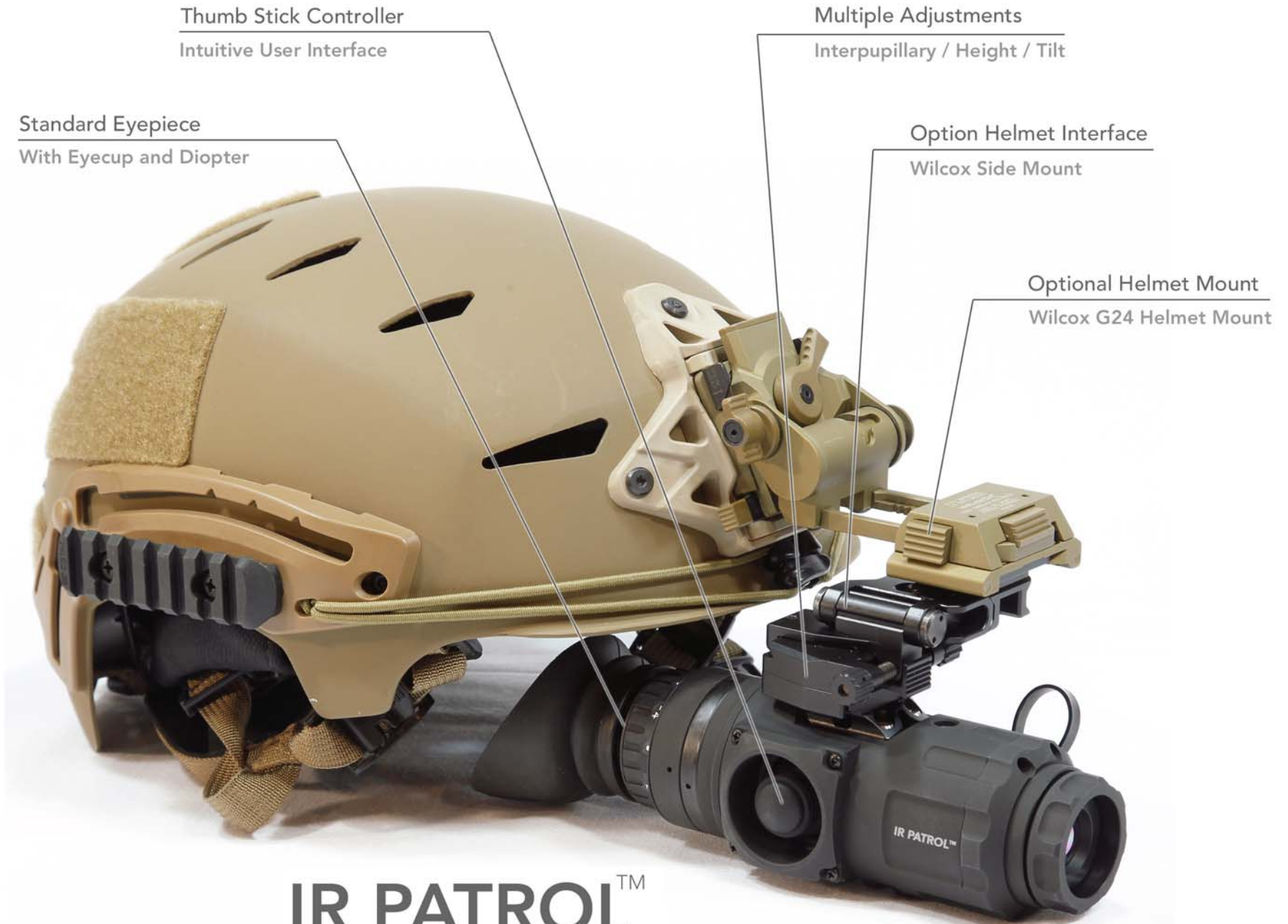## IR PATROL™ M250 HELMET MOUNTED MODEL

Wilcox Interface Shoe

60hz High Speed Frame Rate

Edge Detect Mode

Light Weight Design

Wilcox Bridge Mount included in M250-K kit

Thumb Stick Controller
Intuitive User Interface

Multiple Adjustments
Interpupillary / Height / Tilt

Standard Eyepiece
With Eyecup and Diopter

Option Helmet Interface
Wilcox Side Mount

Optional Helmet Mount
Wilcox G24 Helmet Mount

IR PATROL™
640x480 THERMAL MONOCULAR

IR PATROL™ M300W WEAPON MOUNTED MODEL

Fully Adjustable Reticle System

CLIP-ON Mode Included

*Optional Wilcox Side Flip Mount

Mini Thermal Weapon Sight

Side-Flip Mount Pictured

Wilcox Flip Mount only Included in M300W-K kit.

Integrated Accessory Rail

Built-In Mini Picatinny Rail

Optional Weapon Mount

Wilcox Side Flip Mount

Manual Focus Lens

Objective Lens with Manual focus

Mil.Spec Eyepiece

Diopter Adjustments

Eye Guard

Recoil Protection / Light Discipline

IR PATROL™

640x480 THERMAL MONOCULAR

IR PATROL™ **M350B** BINOCULAR MODEL

- True Dual Thermal System (Stereoscopic Vision)
- Wilcox Dual Bridge Mount
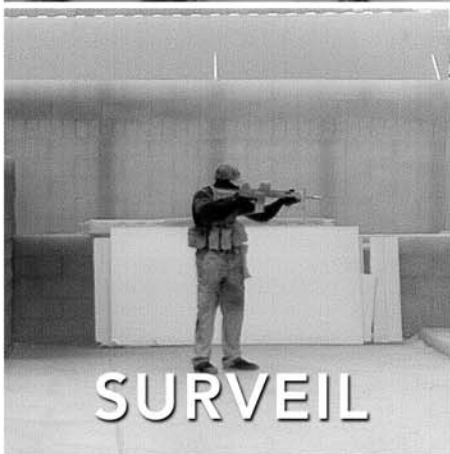- External Battery Pack
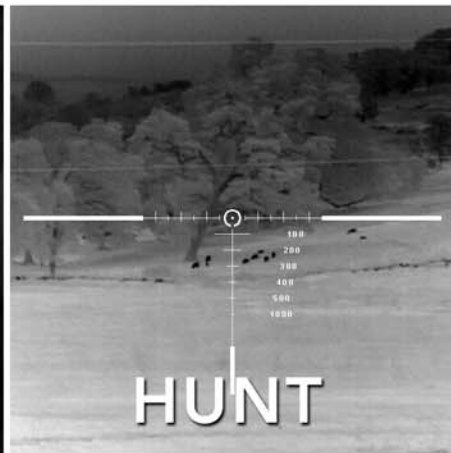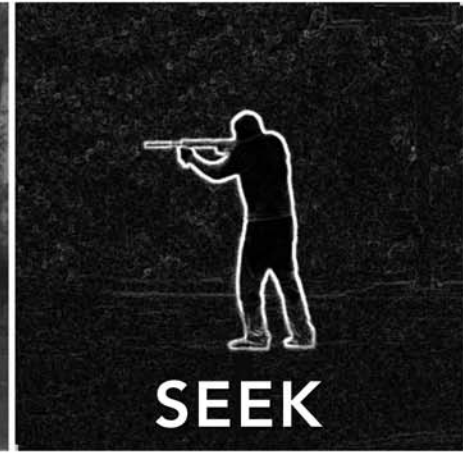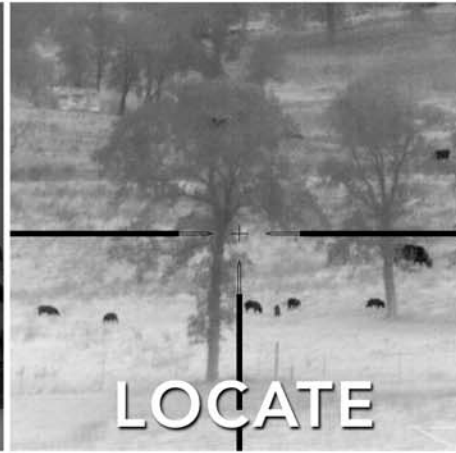- Slaved Unit (Single Controller)

SPECIAL ORDER ONLY

Optional Dual Bridge
Wilcox Dual Bridge Mount

Optional Helmet Mount
Wilcox G24 Helmet Mount

Multiple Adjustments
Interpupillary / Height / Tilt

Master Unit
This System Controls Both

Slaved Unit
Controlled by Master Unit

IR PATROL™
640x480 THERMAL MONOCULAR

IDENTIFY LOCATE REVEAL SEEK

STALK APPROACH HUNT

SURVEIL OBSERVE
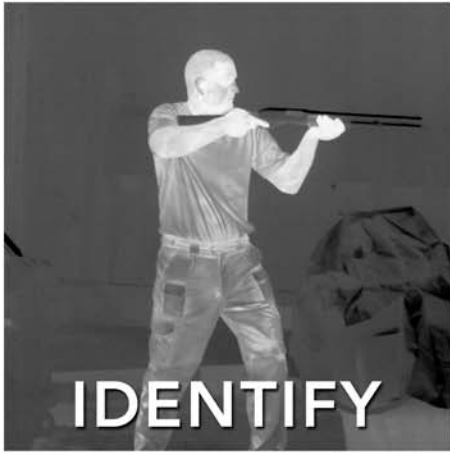
IR|HUNTER™ SERIES
THERMAL WEAPON SIGHT

IR HUNTER...   MULTI USE SIGHT...

The IR HUNTER MK2 and new IR HUNTER MK3 are both designed and built to be the perfect dedicated thermal weapon sights. They can also be used in various other applications such as a clip-on sight, hand-held system or even a forward observation device. Now that's a flexible system...

IR HUNTER MK2

Image Taken with IR HUNTER Mark II
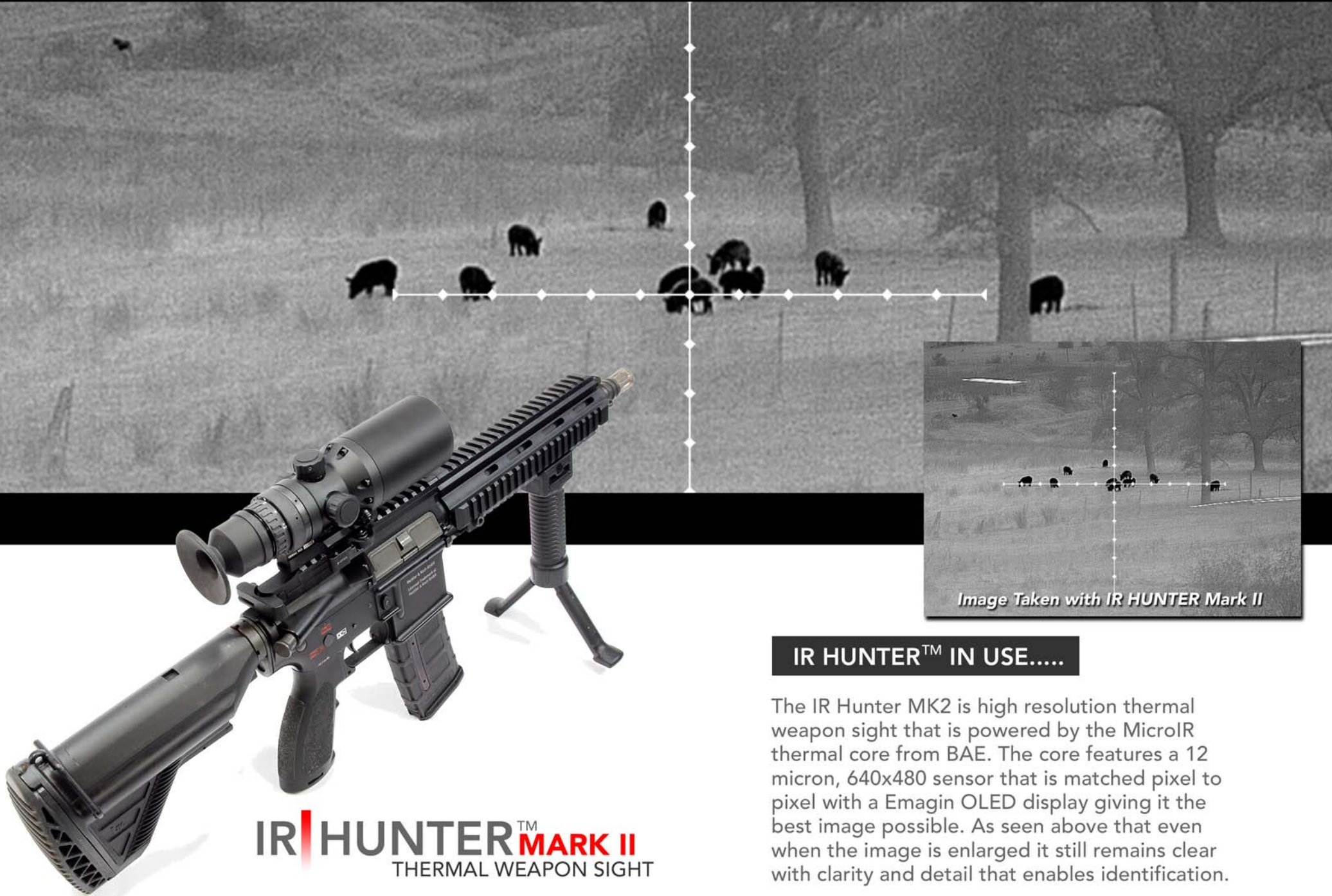
IR HUNTER™ IN USE.....

The IR Hunter MK2 is high resolution thermal weapon sight that is powered by the MicroIR thermal core from BAE. The core features a 12 micron, 640x480 sensor that is matched pixel to pixel with a Emagin OLED display giving it the best image possible. As seen above that even when the image is enlarged it still remains clear with clarity and detail that enables identification.

IR HUNTER™ MARK II
THERMAL WEAPON SIGHT

IR HUNTER MK3

2 METER SCALE

100 METERS

RANGE - TURN TO SET DISTANCE

RETICLE
ZC
CO
R1
R2
R3
R4
R5
RF

2 METER SCALE

100 METERS

Image Taken with IR HUNTER Mark III

IR HUNTER™ MARK III

IR HUNTER™ MARK III

The new IR HUNTER MK3 combines the high performance and features of the IR HUNTER MK2 with the addition of an advanced ballistic feature set which intergrates a stadiametric Range Finder, advanced reticle features, and a Dual LaRue Throw Lever Mount. All theses new features make MK3 the most lethal thermal weapon sight on the market.

IR HUNTER™ SERIES
THERMAL WEAPON SIGHTS

ADVANCED THERMAL WEAPON SIGHT

FULLY DIGITAL ARCHITECTURE

We went the extra mile to make the IR HUNTER the highest quality system at an affordable price. Our goals were to make the perfect mix of technology, ergonomics, tactical design and high performance of which we believe we have surpassed. The system with all its advanced capabilities and accessories will fit your budget and your requirments.

IR HUNTER SYSTEM SPECIFICATIONS

Sensor Type	BAE Uncooled VOx LWIR
Thermal Sensitivity	<50mk
Sensor Resolution	640 x 480
Sensor Pitch	12um (micron)
Frame Rate	60hz / 30hz Selectable
Spectral Responce	8 - 12um
Display	Monochrome Emagin OLED 640x480
Basic Features	E-Zoom, Polarity, DFC
Advanced Features	DCE - Edge Detection Mode
Start Up Time	>4 Seconds
Battery Type	2 each CR123 / 3 each with Adapter
Battery Life	2 each - 4.5 Hours @ 30hz / 3 each - 7 Hours @ 30hz
Weight	825g 20mm / 990g 35mm
Dimensions	6.5" L x 2.9" H x 3.1" W 20mm 7.5" L x 2.9" H x 3.1" W 35mm
Diopter	-6 / +4
Eye Relief	27mm
Environmental	-40c to +55c Operating / -45c to +75c Storage
Video Output	Analog RS-170 (with Optional Cable)

STANDARD SYSTEMS

PERFORMANCE - PRECISION - PERFECTION

The IR HUNTER combines the performance of a military thermal sight with the precision of a high end rifle scope. Never before has there been a thermal sight that is so easy and intuitive to use with so many options and features. The best way for us to show you how good the IR HUNTER works is to put it next to the competition.

TACTICAL SYSTEMS

IRD

Tactical by Design.....

Engineered to be balanced on your weapon system this state of the art Thermal Sighting platform is ready to rock. From its unmatched image to the tactical turret knobs this is the one. A truly affordable, precision optical device that operates 24-7 all year round.

CLIP-ON SYSTEMS

The IR HUNTER™ is not just your everyday thermal sight, it can easily convert into a Clip-On thermal sight.

- Built-In Alignment Software
- Operation is Simple
- Easy to Switch Modes
- Best of Both Worlds
- Ask about recommended optics

THERMAL WEAPON SIGHT
CLIP-ON MODE
Included Feature

THERMAL WEAPON SIGHT
ONE-SHOT ZERO
Included Feature

System	Model No.	Resolution	Objective Lens	Display	Base Magnification	Digital Magnification
IR HUNTER™ MARK II	IRHM2-640-20	640x480	19mm f/1.1	640x480	1.5x - 22.4° Field of View	12x - 2.8° Field of View
IR HUNTER™ MARK II	IRHM2-640-35	640x480	35mm f/1.2	640x480	2.5x - 12.4° Field of View	20x - 1.5° Field of View
IR HUNTER™ MARK III	IRHM3-640-35	640x480	35mm f/1.2	640x480	2.5x - 12.4° Field of View	20x - 1.5° Field of View

IR|HUNTER™ MARK II 20MM
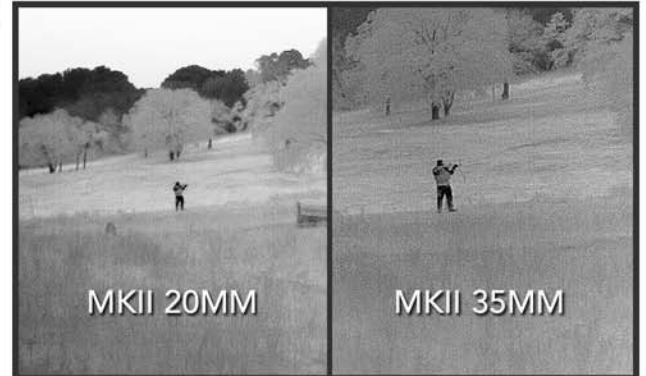
- High Performance Optics
- 1.5x Optical / 12x Digital
- 22° Field of View
- Turret Adjustment Knobs
- Advanced Thermal Core
- Full Digital Display

MKII 20MM

MKII 35MM

System Comparison at 100 Yards

Turret Adjustment Knobs
Intuitive User Interface

LaRue™ Throw lever Mount
Tactical Quick Disconnect

Mil.Spec Eyepiece
Diopter Adjustments

Video Output
Superior Fischer Connector

Eye Guard
Recoil Protection / Light Discipline

Athermalized Lenses
DLC Hard Coated / Sealed Optics

IR HUNTER™ MARK II
THERMAL WEAPON SIGHT

IR|HUNTER™ MARK II 35MM
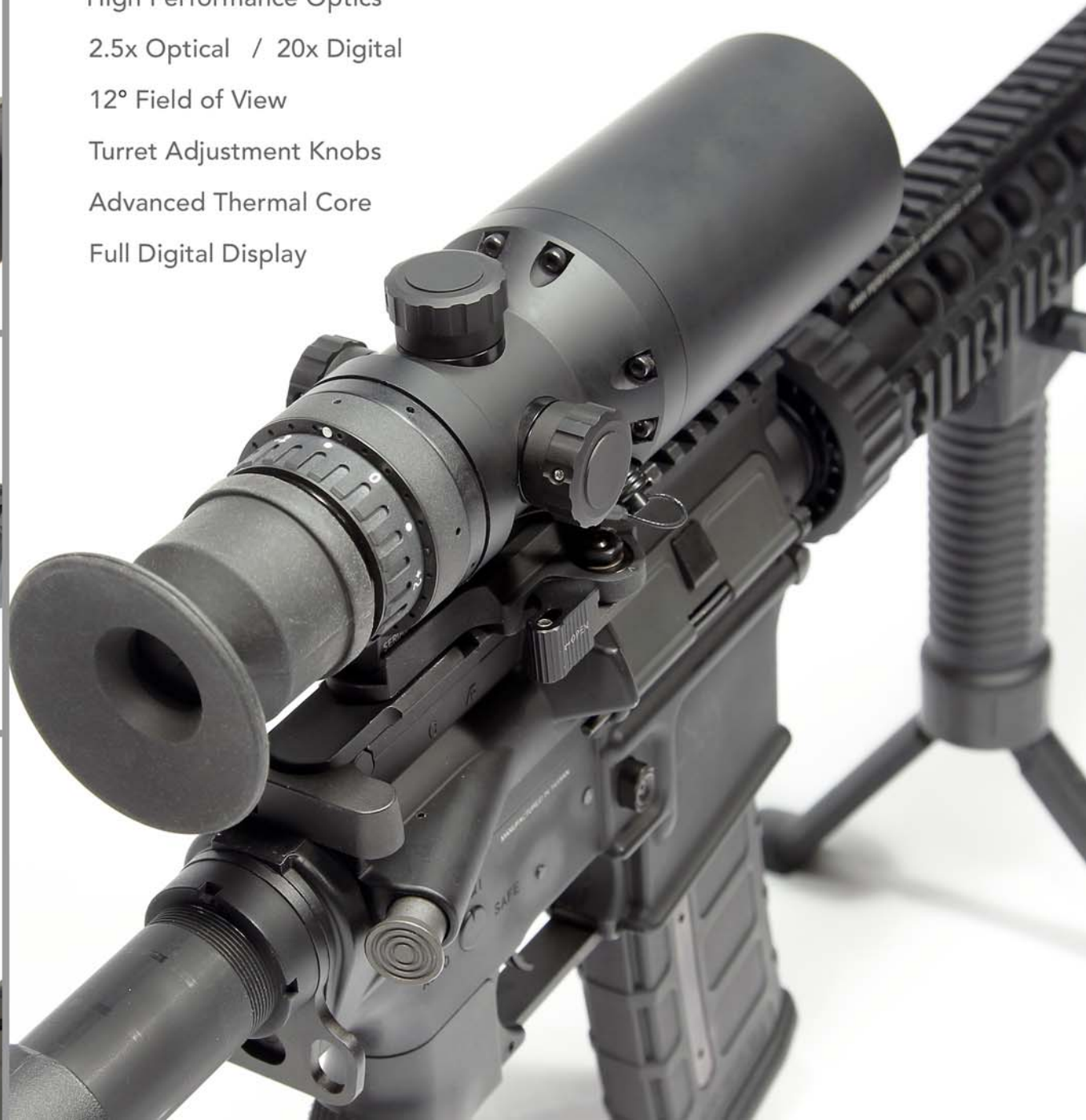
High Performance Optics

2.5x Optical   /   20x Digital

12° Field of View

Turret Adjustment Knobs

Advanced Thermal Core

Full Digital Display

Turret Adjustment Knobs
Intuitive User Interface

LaRue™ Throw lever Mount
Tactical Quick Disconnect

Mil.Spec Eyepiece
Diopter Adjustments

Video Output
Superior Fischer Connector

Eye Guard
Recoil Protection / Light Discipline

Athermalized Lenses
DLC Hard Coated / Sealed Optics

IR HUNTER™ MARK II
THERMAL WEAPON SIGHT

IR HUNTER™ MARK III 35MM

Same System as MARK II Plus:

- Azimuth/Elevation Position Read-Outs
- 2 New Reticle Patterns
- Multiple Reticle Save Locations
- Stadiametric Range Finder
- Front Lens Flip-Cap
- Download / Video Cable
- Dual Lever Mount
- Battery Extender

Turret Adjustment Knobs
Intuitive User Interface

LaRue™ Dual lever Mount
For Added Repeatability

Mil.Spec Eyepiece
Diopter Adjustments

FLIP-CAP
Molded Flip-Cap for Easy Calibration

Eye Guard
Recoil Protection / Light Discipline

35mm Athermalized Lenses
DLC Hard Coated / Sealed Optics

IR|HUNTER™ MARK III
THERMAL WEAPON SIGHT

CLIP-ON FEATURE

Include on all MKII and MKIII systems

Advanced Software Allows Dual Mode Use

Works as Both a Clip-ON and Dedicated Sight

Clip-On Mode works only with Approved Day Optics

E-Z User Calibration Interface

Accuracy Enhanced Design means **No Special Optics Required**

THERMAL WEAPON SIGHT
CLIP-ON MODE
Included Feature

Throw Lever Mount
For Quick Disconnect

Simple Calibration Software
Allows for Dual Mode Use

Athermalized Optics
For Increased Performance

Standard Optic
Allows for both Dedicated / Clip-On

Approved Optic
Works Perfect with Approved Optics

IR HUNTER™ MARK II / MARK III
THERMAL WEAPON SIGHT

INTELLIGENT RETICLES

The IR Hunter uses its processing power to deliver precion sighting reticles.

MOA Calibrated

Works the Same as First Focal Plane

Selectable Reticles

Intelligent Auto-Contrast

LEARN MORE - HD Looking Reticles

We generate our reticles so that they are 1:1 to the pixels in the display so our reticles are ultra crisp and detailed. Many companies generate the reticles using the processor of the thermal engine and you will notice that when the image is sent to the display it is not a 1:1 pixel ration so the reticles will appear blurred.
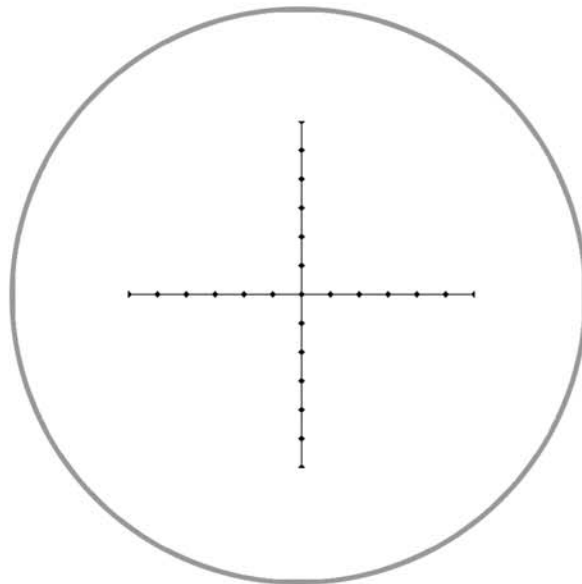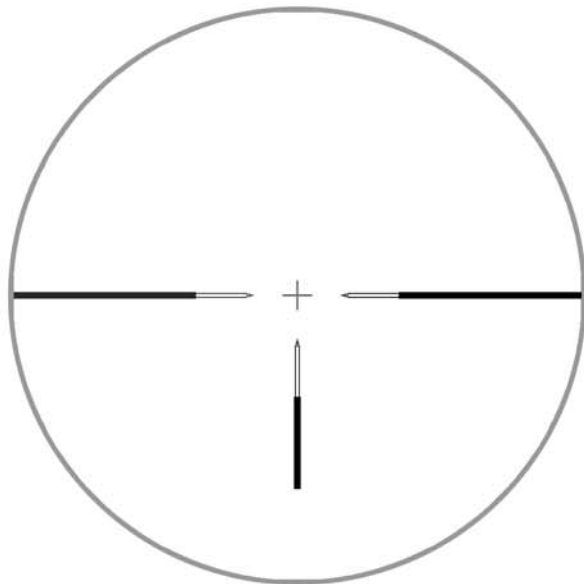
OUR WEAPON RECOIL MACHINE

Model No.	Lens Size	Zoom Level	Sensor	Field of View	Pixel Per MOA	MOA Per Pixel
IRHM2-640-19	19mm	1x	640x480	22.4°	0.5	2.1
IRHM2-640-35	35mm	2x	640x480	6.2°	1.7	0.6
IRHM3-640-35	35mm	2x	640x480	6.2°	1.7	0.6

1X ZOOM

2X ZOOM

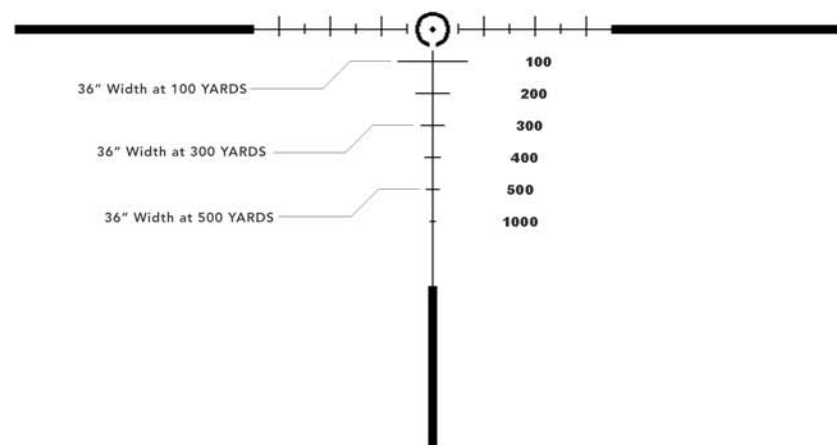
4X ZOOM

TSR - THERMAL SUBTENSION RETICLE

For shooting at extended distances the TSR reticle provides some basic ranging data for the user. The width for each of the elevation marks is based at 36" wide for the distance readout in yards to the right of the mark. As you zoom in the reticle works the same as a first focal plane sight where the reticle scales as you zoom. It is just that easy.

RETICLE **SUBTENSIONS**

Man sized target @ 200 yards

Man sized target @ 500 yards

100
200
300
400
500
1000

36" Width at 100 YARDS — 100
200
36" Width at 300 YARDS — 300
400
36" Width at 500 YARDS — 500
1000

Please Note - All Images are 100% taken with the IR Hunter System and are actual images.
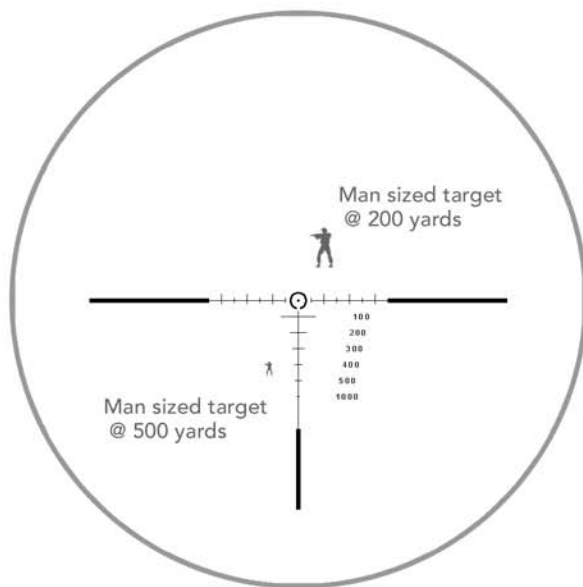
1X ZOOM

2X ZOOM

4X ZOOM

TCR - THERMAL COMBAT RETICLE

One of the easiest reticles to use is our TCR Thermal Combat Reticle that is a simple crosshair in the center. The width of the crosshair is always 36 MOA or 36" at 100 yards. Half of the crosshair is 18 MOA which is the width of a man at 100 yards. If a man sized target is the height of the crosshair then he will be 200 yards out. As you zoom the reticle also zooms so you are always 36 MOA.

RETICLE SUBTENSIONS

36"@100 YARDS

18" @ 100 YARDS

36" @ 100 YARDS

72" @ 100 YARDS

Hog sized target
@ 200 yards

Hog sized target
@ 100 yards

TCR-35-640-1X   36 MOA

Please Note - All Images are 100% taken with the IR Hunter System and are actual images.
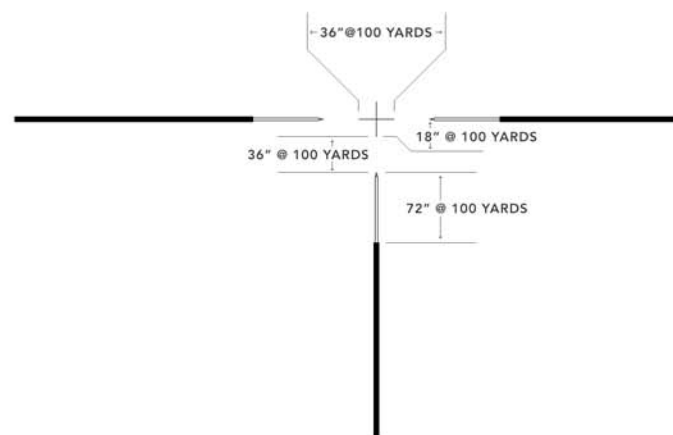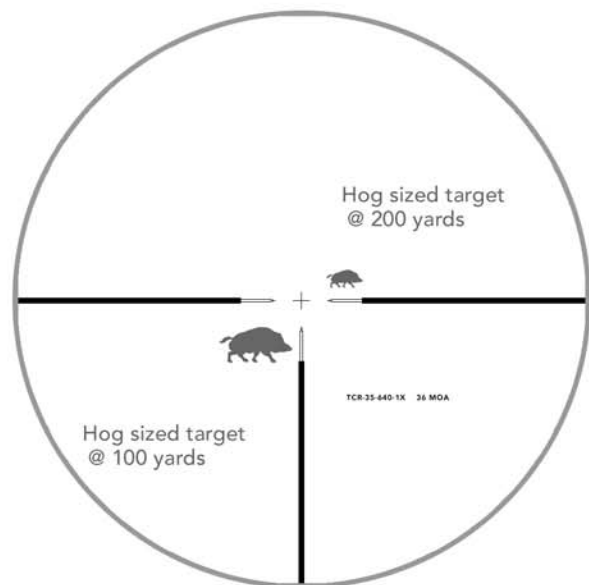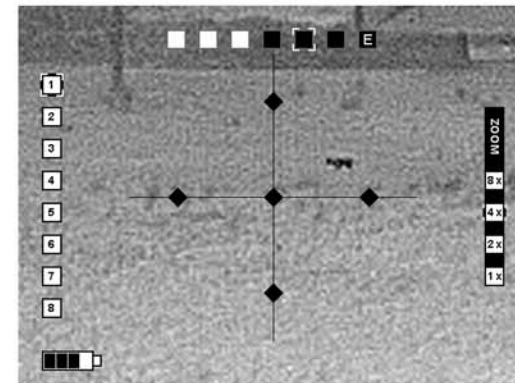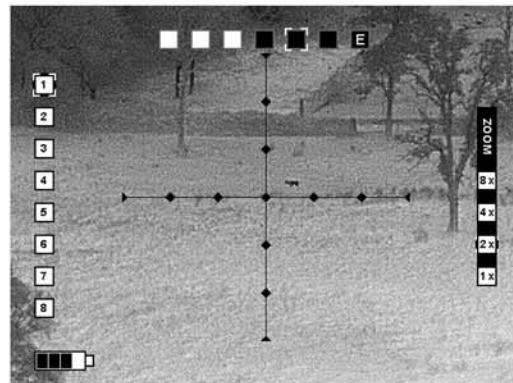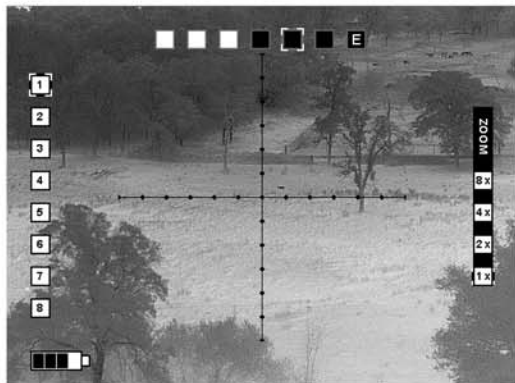
TDR - THERMAL DOT RETICLE

The IR HUNTER along with other thermal weapon sights is primarily used at night and with lower magnifications then standard day optics. Because of this the engagment ranges at night are much shorter. To deal with this the IR HUNTER uses a DOT reticle system similar to the MIl DOT but instead of each dot representing 1000:1 our system is calibrated at 100:1, so the distance between dots is 100 yards.

Man sized target @ 200 yards

Man sized target @ 100 yards

RETICLE SUBTENSIONS

36" @ 500 YARDS

36" @ 50 YARDS

18"@50 YARDS

36" @ 20 YARDS

36" @ 100 YARDS
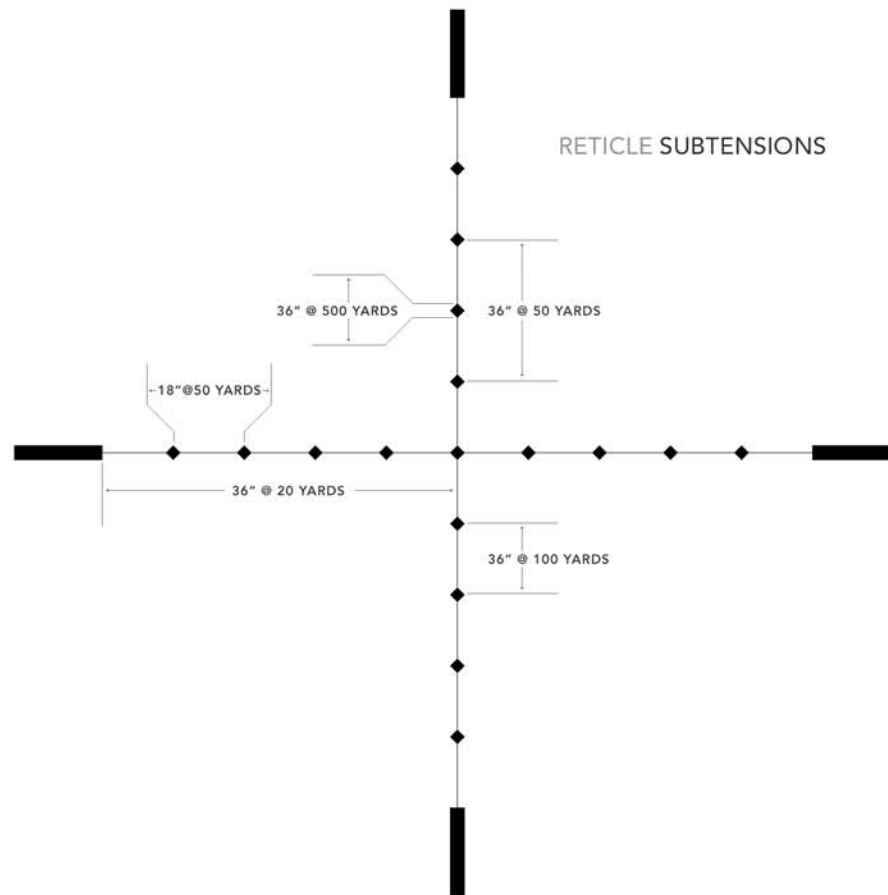
Please Note - All Images are 100% taken with the IR Hunter System and are actual images.

THERMAL SENSOR

The eye of the IR PATROL using military technology to detect the slightest temperature difference.

The IR Patrol ™ utilizes the MicroIR thermal core from BAE Systems. Featuring a 12um (Micron) detector, the core delivers high performance, clean 640x480 imagery at an outstanding 60hz frame rate.

12um MICRON

LWIR (Long Wave Infra-Red)

Uncooled Technology

*60hz High Speed Frame Rate

VOx (Vanadium Oxide)

High Sensitivity

BAE SYSTEMS

Miniaturized Circuitry
Longer Battery Life

Integral Heat Sync
For Thermal Stability
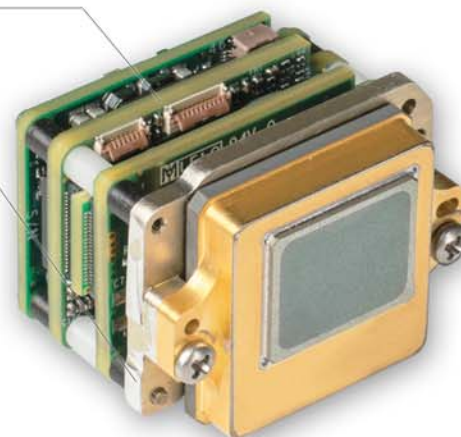
*M250 and M300W only - the LE100 and LE100C are only 30hz.

Sensor	Type	Spectral Band	Native Resolution	Micron Pitch	Sensitivity
640x480 MicroIR	VOx	7.5 - 13.5 µm	640 x 480 pixels	12 µm	<50 mK at f/1.0

640x480 12um MICRON
Using the Same Lens

12UM

CORE TECHNOLOGY COMPARISON
REAL IMAGES

17UM

640x480 17um MICRON
Using the Same Lens
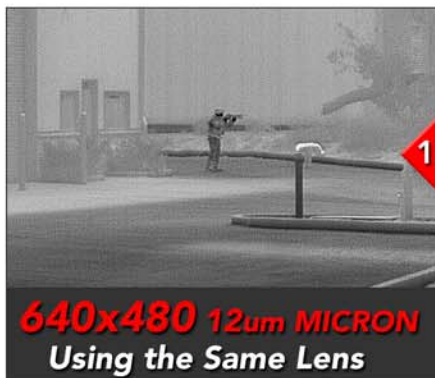
MICRO DISPLAY

IDENTIFY.... DETECT....

The IR Patrol™ offers unsurpassed image clarity and detail because of its 1:1 pixel to pixel ratio (sensor to display). Many thermal systems on the market upscale or downscale their imagery, and in the process, lose detail.

Actual Image taken with IR PATROL at night.

Display	Display Type	Resolution	Color	Gray Levels	Contrast	Rate	Pitch
EMAGIN	OLED	VGA 640x480	30 Bit	256	10,000:1	60hz	15 μm

CORE TECHNOLOGY COMPARISON

REAL IMAGES

640

320

640x480
Over 300,000 pixels

320x240
Less than 80,000 pixels

GERMANIUM LENS

The IR Hunter uses only the best materials in the objective lens assemblies.

Protective Window

DLC Hard Carbon Coated

AR Coated Germanium Lenses

Thermally Stabilized

High Environmental Durabiliy

Shock resistant

OPHIR® Optics
A Newport Corporation Brand

Lens Size	Speed	Lens Type	640x480 12um MICRON	2X zoom - Equals 320x240	4X zoom - Equals 160x120
19mm	F/1.1	Athermalized	22.4° FOV Horizontal	11.2° FOV Horizontal	5.6° FOV Horizontal
35mm	F/1.2	Athermalized	12.4° FOV Horizontal	6.2° FOV Horizontal	3.1° FOV Horizontal

Please Note - All Images are 100% taken with the IR Hunter MKII System and are actual images and not touched up.

50 YARDS

640x480 Sensor

12um MICRON

Man Size Target
50 Yards

19mm LENS - 22° FOV

35mm LENS - 12° FOV

100 YARDS

640x480 Sensor

12um MICRON

Man Size Target
100 Yards

19mm LENS - 22° FOV

35mm LENS - 12° FOV

200 YARDS

640x480 Sensor

12um MICRON

Man Size Target
200 Yards

19mm LENS - 22° FOV

35mm LENS - 12° FOV

MICRON PITCH

Advanced Technology

Most thermal sights on the market today feature 17 micron cores and 5 years ago 25 micron was the standard. We are focused on tomorrow bringing you 12 micron core technology.

What this means is that you get more magnification using the same identical lens, about 50% more. To prove this we took a 35mm lens and attached it to 12, 17 and 25 micron cores providing the images below to show you exactly the difference between the different technologies and just what Micron Pitch can do for you.

640x480 at 2x Zoom
showing 320 x 240
12um MICRON
35mm Lens

System Magnification
6° FOV

IR HUNTER™ MARK II

**Image taken with
640 x 480 Sensor
12um MICRON
35mm Lens**

System Magnification
12° FOV

IR HUNTER™ MARK II

**Image taken with
320 x 240 Sensor
17um MICRON
35mm Lens**

System Magnification
9° FOV

**Image taken with
640 x 480 Sensor
17um MICRON
35mm Lens**

System Magnification
17° FOV

**Image taken with
320 x 240 Sensor
25um MICRON
35mm Lens**

System Magnification
12° FOV

160 x 120 Sensor
Man Holding a Stick

320 x 240 Sensor
Man Holding a Stick

640 x 480 Sensor
Man Holding a Stick

160 x 120 Sensor
Man Holding a Gun

320 x 240 Sensor
Man Holding a Gun

640 x 480 Sensor
Man Holding a Gun

Please Note - All Images are 100% taken with the IR Hunter System and are actual images and not touched up.

ETR ENHANCED TARGET RECOGNITION

INCREASED TARGETING

Enhanced Target Recognition is a capital feature of the IR HUNTER! While using other thermal scopes, important imagery is often washed out against the sky and horizon even with the use of frequent recalibrations. The IR HUNTERs ETR focuses it's processing power on your target, resulting with enhanced precisely detailed target images. This mean more hits for the shooter.

LEARN MORE - ETR

Scene wash out occurs when the horizon has a lot of sky behind the target resulting in a large difference in temperature. The thermal system has to divide this difference into shades of gray and there are only so many available. The ETR tells the sensor to perform its auto calibration within the brackets which will have a smaller temperature difference giving you more detail on the target area.

NO ETR

ETR TURNED ON

ETR LEVELS
E1
E2
E3
E4

NO ETR

ETR TURNED ON

ETR LEVELS
E1
E2
E3
E4

Please Note - All Images are 100% taken with the IR Hunter System and are actual images.

1X

2X

4X

E-ZOOM **DIGITAL MAGNIFICATION**

DIGITAL ZOOM

The ability to effectively and efficently zoom in and out is a very beneficial feature and with the turrets that are built into the IR HUNTER you will find that there is not a better way to perform these functions at night in the dark. Buttons are difficult to navigate but our turret knobs are instinctively easy to operate.

FIRST FOCAL PLANE

In order for our reticles to be accurate, the size of the crosshair needs to equate to something such as the TCR reticle in the images equals 36 MOA. As you use the digital zoom the images size increases along with the reticle. This is identical to a first focal plane rifle scope, now you can use the zoom and use the reticle for ranging. We also have two other reticles such as the TDR Thermal Dot Reticle, which is very similar to a MILDOT pattern.

MAXPOL MULTI POLARITY CONTROL

ADVANCED POLARITY MODE

Most thermal sights have one choice for black-hot/white-hot commonly referred to as polarity. The IR Patrol™ has MaxPol technology. Multi-polarity control provides three modes of white and black-hot allowing the user to better bring out the target or the background depending on conditions.

EDGE DETECT - Not available on LE100 /LE100C models
The seventh mode of polarity is edge detect which allows the user to better identify targets at a distance. Its unique trace-outline image provides additional perspective for any thermal image viewed.

EDGE MODE

EDGE MODE

BLACK HOT

WHITE HOT
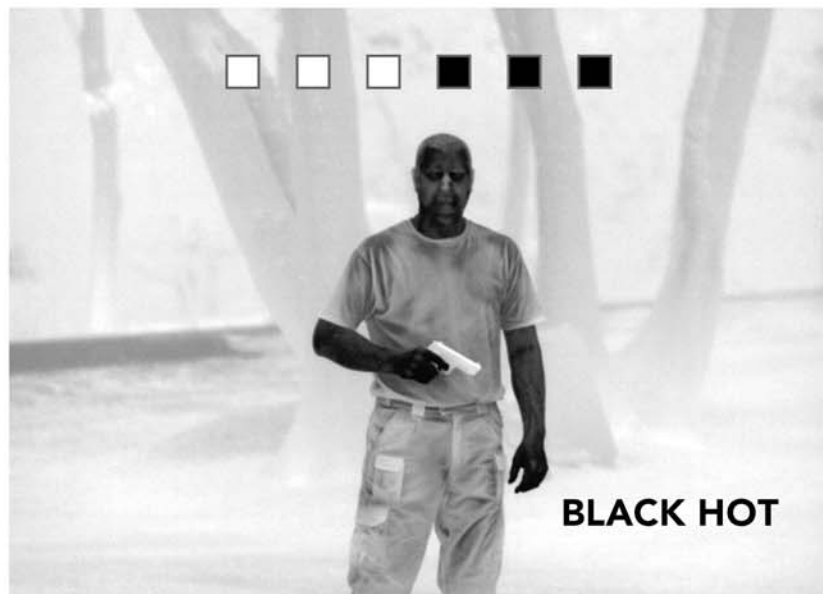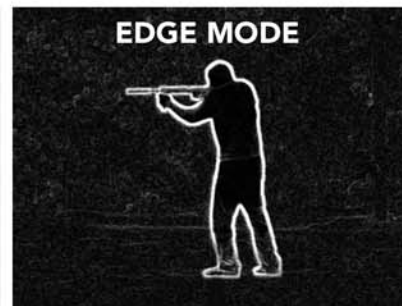
Please Note - All Images are taken with the IR Hunter and IR Patrol Systems and are actual images.

DFC DIGITAL FOCUS CONTROL

DIGITAL IMAGE ENHANCEMENT

Providing the user many tools to refine an image was a goal during IR Patrol's design. Digital Focus Control (DCF) is one such tool. DCF control is quick and easy to use. The DCF feature will help the user better define the images viewed through the IR Patrol™.

SOFT FOCUS ←

→ **SHARP FOCUS**

Please Note - All Images are 100% taken with the IR HUNTER and IR PATROL Systems.

Identifying a target is the most important job of any thermal viewer. The IR Patrol™ finishes the job with DFC Control. This feature takes a great image to the next level. Finer detail, more contrast, and greater depth are simply achieved with a toggle and press of the joystick.

MAGNIFIER LENSES The IR PATROL can accept these Afocal Magnifier Lenses for increased magnification.

DLC Hard Carbon Coated

AR Coated Germanium Lenses

High Environmental Durabiliy

Shock resistant

Easy to Add or Remove

Magnification when you need it.

The standard 1x lens on the IR Patrol™ is optimum for head mounted operation. It provides a wide field of view, increasing awareness and reaction time. With a simple twist of an attachment clamp, the IR Patrol™ quickly becomes a 3x thermal viewer with the capability to provide long range reconnaissance.

With 2X Afocal

Specification	640x480 *without Magnifier*	640x480 *with 2x Magnifier*	640x480 *with 3x Magnifier*
Field of View	22.4° FOV Horizontal	11.2° FOV Horizontal	5.6° FOV Horizontal
12um Lens Equivelant	19mm	38mm	57mm
17um Lens Equivelant	27mm	54mm	81mm

IR PATROL™

640 x 480 Sensor
12um MICRON
TRUCK @ 75 Yards
No Magnifier

Without a magnifier, will provide a **22°** field of view image.

IR PATROL™

640 x 480 Sensor
12um MICRON
MAN @ 25 Yards
No Magnifier

Without a magnifier, will provide a **22°** field of view image.

IR PATROL™

640 x 480 Sensor
12um MICRON
TRUCK @ 75 Yards
2x Magnifier

With a 2x magnifier, will provide a **11°** field of view image.

IR PATROL™

640 x 480 Sensor
12um MICRON
MAN @ 25 Yards
2x Magnifier

With a 2x magnifier, will provide a **11°** field of view image.

IR PATROL™

640 x 480 Sensor
12um MICRON
TRUCK @ 75 Yards
3x Magnifier

With a 3x magnifier, will provide a **5.5°** field of view image.

IR PATROL™

640 x 480 Sensor
12um MICRON
MAN @ 25 Yards
3x Magnifier

With a 3x magnifier, will provide a **5.5°** field of view image.

BRIDGES SINGLE AND DUAL BRIDGE ASSEMBLIES by **WILCOX**®

ADVANCED TACTICAL EQUIPMENT

The bridge adaptor provides the operator with a helmet mounted hands free solution, for the IR PATROL. Ideal for surveillance and overwatch situations, this adaptor adds versatility giving the end user an optimal mounting solutions

ITEM	PART NO.	PRICE
SINGLE BRIDGE ASSEMBLY	IRDMNT-9974	$599.00
DUAL BRIDGE ASSEMBLY	IRDMNT-9975	$799.00

DUAL BRIDGE ASSEMBLY

SINGLE BRIDGE ASSEMBLY

HELMET MOUNTS COMBAT TYPE MOUNTS by WILCOX®

ADVANCED TACTICAL EQUIPMENT

The Wilcox L4 G41 Low Profile Breakaway Mount allows firm attachment of a variety of NVGs to MICH/ACH and ECH helmets using a one or three-hole Hybrid Shroud. This NVG mounting system allows the mount to "break-away" from the base under a stressed conditions. The Wilcox L4 G41 option features a Wilcox Hybrid shroud, and provides easy attachment of the mount to any helmet drilled with a standard one or three-hole configuration.

ITEM	PART NO.	PRICE
G24 MOUNT - BLACK	IRDMNT-9980	$599.00
G24 MOUNT - TAN	IRDMNT-9981	$599.00
G41 HYBRID MOUNT - BLACK	IRDMNT-9982	$749.00
G41 HYBRID MOUNT - TAN	IRDMNT-9983	$749.00

G24 Mount In Position

G24 Mount Flipped Up

FLIP MOUNT WEAPON MOUNT ASSEMBLY by WILCOX®

ADVANCED TACTICAL EQUIPMENT

The mount is designed to flip out of the way when not in use and return to zero when back in operational mode. These are lightweight with a field proven dovetail attachment system and are made of high grade aluminum construction for increased durability over currently fielded products.

ITEM	PART NO.	PRICE
FLIP MOUNT ASSEMBLY	IRDMNT-9971	$499.00

ACCESSORY ITEMS IR PATROL ADD-ON's

TACTICAL ADD-ON ITEMS

We have several must have items for the IR PATROL which are included on this page. The first is the Battery Extender which will let the IR PATROL use 2 batteries and over double the time between battery changes.

The next item is the Download / Video Cable which will let you use the video out option if you have a M250 or M300W which also has a USB for image download if you have the LE100C, M250 or the M300W. The image download requires included PC software.

And third is the Amber Filter which helps reduce eye fatigue when using the system for long periods of time.

BATTERY EXTENDER
IRDACC-6180

AMBER FILTER
IRDACC-9967

DOWNLOAD CABLE
IRDACC-9704

ITEM	PART NO.	PRICE
BATTERY EXTENDER	IRDACC-6180	$99.00
AMBER FILTER	IRDACC-9967	$69.00
CABLE DOWNLOAD and VIDEO	IRDACC-9704	$200.00

Helmet and G24 Mount Not Included

IR PATROL™ M250-K HELMET MOUNTED KIT

INCLUDES:

IR PATROL 640x480 Thermal Monocular

Wilcox Interface Shoe

Wilcox Helmet Mount Interface Kit

60hz High Speed Frame Rate

Download/Video Cable

Manual and QRG Guide

Tactical Soft Case

M250 SYSTEM KIT Part No. IRP-M250-K

IR PATROL™ **M300W-K** WEAPON MOUNTED KIT

INCLUDES:

IR PATROL 640x480 Thermal Monocular

Reticle System (with Clip-On mode)

Wilcox Interface Shoe

Wilcox Flip Mount Weapon Base

60hz High Speed Frame Rate

Download/Video Cable

Manual, QRG Guide and Tactical Soft Case

M300W SYSTEM KIT Part No. IRP-M300W-K

MODEL NO. SYSTEM DESCRIPTION	IR PATROL™ LE100 IRP-LE100 HAND-HELD SYSTEM	IR PATROL™ LE100C IRP-LE100C IMAGE CAPTURE SYSTEM	IR PATROL™ M250 IRP-M250 HELMET MOUNTED SYSTEM	IR PATROL™ M250-K IRP-M250-K HELMET MOUNTED KIT	IR PATROL™ M300W IRP-M300W WEAPON MOUNTED SYSTEM
SYSTEM	IR PATROL LE100	IR PATROL LE100C	IR PATROL M250	IR PATROL M250 Kit	IR PATROL M300W
SENSOR RESOLUTION	640x480 307,200 PIXELS	640x480 307,200 PIXELS	640x480 307,200 PIXELS	640x480 307,200 PIXELS	640x480 307,200 PIXELS
SENSOR MICRON	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um
SENSOR TYPE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE
FIELD of VIEW	22° FOV	22° FOV	22° FOV	22° FOV	22° FOV
MAGNIFICATION E-ZOOM	1x OPTICAL 8x DIGITAL	1x OPTICAL 8x DIGITAL	1x OPTICAL 8x DIGITAL	1x OPTICAL 8x DIGITAL	1x OPTICAL 8x DIGITAL
OBJECTIVE LENS	19MM F/1.1	19MM F/1.1	19MM F/1.1	19MM F/1.1	19MM F/1.1
DISPLAY TYPE	EMAGIN OLED 640x480 Pixels	EMAGIN OLED 640x480 Pixels	EMAGIN OLED 640x480 Pixels	EMAGIN OLED 640x480 Pixels	EMAGIN OLED 640x480 Pixels
BATTERY TYPE REQUIRED	123 LITHIUM 1 or 2 each	123 LITHIUM 1 or 2 each	123 LITHIUM 1 or 2 each	123 LITHIUM 1 or 2 each	123 LITHIUM 1 or 2 each
BATTERY LIFE	2.5 HOURS @ 30hz 1 battery	2.5 HOURS @ 30hz 1 battery	2.5 HOURS @ 30hz 1 battery	2.5 HOURS @ 30hz 1 battery	2.5 HOURS @ 30hz 1 battery
FRAME RATE	30HZ	30HZ	60HZ	60HZ	60HZ
USER INTERFACE	THUMB STICK	THUMB STICK	THUMB STICK	THUMB STICK	THUMB STICK
POLARITY/ZOOM/DFC	✓	✓	✓	✓	✓
IMAGE CAPTURE	✗	✓	✓	✓	✓
EDGE DETECT	✗	✗	✓	✓	✓
SHOE INTERFACE	✗	✗	✓	✓	✓
CONFIGURATION LEVEL	✗	✗	✓	✓	✓
VIDEO OUT	✗	✗	✓	✓	✓
RETICLE FEATURE	✗	✗	✗	✗	✓
HELMET MOUNT KIT	✗	✗	✗	✓	✗
WEAPON FLIP MOUNT KIT	✗	✗	✗	✗	✗

IRD

SPEC	IR PATROL M300W-K (IRP-M300W-K WEAPON MOUNTED KIT)	IR PATROL M350B (IRP-M350B BINOCULAR SYSTEM)	IR HUNTER MARK II (IRHM2-640-20)	IR HUNTER MARK II (IRHM2-640-35)	IR HUNTER MARK III (IRHM3-640-35-K)
SYSTEM	IR PATROL M300W Kit	IR PATROL M350B	IR HUNTER MKII 20MM	IR HUNTER MKII 35MM	IR HUNTER MKIII Kit
SENSOR RESOLUTION	640x480 307,200 PIXELS	2x 640x480 307,200 PIXELS	640x480 307,200 PIXELS	640x480 307,200 PIXELS	640x480 307,200 PIXELS
SENSOR MICRON	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um	BAE MicroIR 12um
SENSOR TYPE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE	VOx VANADIUM-OXIDE
FIELD of VIEW	22° FOV	22° FOV	22° FOV	12° FOV	12° FOV
MAGNIFICATION E-ZOOM	1x OPTICAL 8x DIGITAL	1x OPTICAL 8x DIGITAL	1.5x OPTICAL 12x DIGITAL	2.5x OPTICAL 20x DIGITAL	2.5x OPTICAL 20x DIGITAL
OBJECTIVE LENS	19MM F/1.1	19MM F/1.1	19MM F/1.1	35MM F/1.2	35MM F/1.2
ATHERMALIZED	EMAGIN OLED 640x480 Pixels	2x EMAGIN OLED 640x480 Pixels	✓	✓	✓
FRAME RATE	123 LITHIUM 1 or 2 each	123 LITHIUM 4 each	60HZ	60HZ	60HZ
DISPLAY TYPE	2.5 HOURS @ 30hz 1 battery	2.5 HOURS @ 30hz 1 battery	EMAGIN OLED	EMAGIN OLED	EMAGIN OLED
HD GRAPHICS	60HZ	60HZ	640x480	640x480	640x480
DISPLAY SIZE	THUMB STICK	THUMB STICK	✓	✓	✓
BATTERY TYPE	✓	✓	123 LITHIUM 2 EACH	123 LITHIUM 2 EACH	123 LITHIUM 2 EACH
BATTERY LIFE	✓	✓	4.5 HOURS @ 30hz	4.5 HOURS @ 30hz	4.5 HOURS @ 30hz
ETR ENHANCEMENT	✓	✓	✓	✓	✓
DFC DIGITAL FOCUS	✓	✓	✓	✓	✓
USER CONTRAST	✓	✓	✓	✓	✓
USER INTERFACE	✓	✓	TURRET KNOBS	TURRET KNOBS	TURRET KNOBS
IMAGE CAPTURE	✓	✗	✓	✓	✓
VIDEO OUTPUT	✗	✓	✓	✓	✓
RANGE FINDER	✓	✗	NO	NO	YES

IR DEFENSE COPRORATION

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