



# HELIOS PRO

## Thermal Imaging Bi-Ocular

The Helios PRO line of high performance handheld magnified thermal bi-oculars take full advantage of the technology and advancements that Armasight has developed for its uncooled thermal weapon sight programs. Due to design concepts emphasizing shared sub-assemblies, the Helios PRO handheld thermal bi-ocular exhibits the same performance as the Zeus Pro and Apollo Pro. The Helios Pro can withstand the most brutal environmental shocks typically associated with heavy caliber shooting. Based around a common cores of electronics, signal processing, and lens interfaces, a version of the Helios PRO can be ordered to meet virtually any requirement for an affordable uncooled magnified thermal bi-ocular.

Utilizing the latest FLIR TAU-2 Technology, the Helios PRO is offered in 336x256 or 640x512 pixel formats. These options are further enhanced by professional military-grade 50mm, 100mm Germanium (Ge) objective lenses creating a wide variety of optical magnifications and range performance capabilities that the customer can select from. Armasight has introduced a unique dual battery option for the Helios PRO Thermal bi-ocular consisting either of four 3.0VDC 123A batteries all oriented in the same direction to prevent confusion in replacement, or four 1.5VDC AA batteries pre-loaded in a cartridge. In a pinch, a single 123A 3.0VDC battery can power the Zeus Pro for just over one hour.

The Helios PRO Thermal Imager is characterized by its simple and intuitive controls, functions, and features that are layered among direct button adjustments, direct combination button functions, and electronic menu selections. Armasight has included all of the key bells and whistles found in the Zeus and Apollo Pro series devices including electronic compass and inclinometer. The Helios PRO uses a 9-pin multi-pin connector to provide video-in imagery, where there may be a need for map or rangefinder display overlays, and external power access. In support of these capabilities, Armasight offers an optional laser range-finder, external battery pack, digital video recorder, and other accessories designed to attach on the MIL-STD-1913 rail of the Helios PRO. The Helios PRO has Bluetooth® wireless capability and can directly interface with most smart phones with the potential for engaging a series of current and future applications.

The Helios PRO is the ideal tool for scouting and target detection where the ambient environment is oriented for concealment. The Helios PRO is also an extremely useful tool for viewing scenes through environmental obscurants such as smoke, haze, fog, or dust. The Helios PRO marks the pinnacle of Armasight's handheld uncooled thermal imaging family of products.

- Ⓐ **24/7 Operation in presence of environmental obscurants (smoke, dust, haze, fog)**
- Ⓐ **Superior engineering and design**
- Ⓐ **Rugged MIL-STD-810 compliant performance**
- Ⓐ **Water and fog-resistant**
- Ⓐ **Operates on 123A or AA batteries**
- Ⓐ **Objective Germanium Lens Options**
- Ⓐ **TAU-2 17µm Pitch Thermal Sensor**
- Ⓐ **SVGA 800x600 OLED Display**
- Ⓐ **Digital Compass**
- Ⓐ **Digital Inclinometer**
- Ⓐ **Battery Status Indicator**
- Ⓐ **Selectable Palettes: White Hot/ Black Hot/ Sepia/ OEM Custom/ Other Color Variants**
- Ⓐ **User-adjustable Image Enhancement Tools**
- Ⓐ **Wireless 5-button Remote**
- Ⓐ **Tracking Digital e-Zoom: 2x / 4x / 8x (640x512 only)**
- Ⓐ **Still Picture and Video Recording Capability (Mounted DVR Option)**
- Ⓐ **Made In The USA**



## SPECIFICATIONS

Model Name	Helios-Pro 336 4-16x50	Helios-Pro 336 8-32x100	Helios-Pro 640 2-16x50	Helios-Pro 640 4-32x100
SYSTEM DATA:				
Refresh Rate	30 or 60 Hz			
Magnification (NTSC/PAL)	3.3x / 4x	6.7x / 8x	1.8x / 2.1x	3.5x / 4.2x
Objective Lens Type	Germanium			
Type of Focal Plane Array	FLIR Tau 2			
Pixel Array Format	336x256		640x512	
Pixel Size	17 μm			
Resolution	0.34 mRad (70 SOA)	0.17 mRad (35 SOA)	0.34 mRad (70 SOA)	0.17 mRad (35 SOA)
Display Type	AMOLED SVGA 060			
Pixel Display Format	800×600			
Display Brightness	Discretely Adjustable to 8 Levels			
Turn-on Time, max	3 sec			
Digital Zoom	up to 4x		up to 8x	
Digital Compass	Yes			
Digital Inclinomater	Yes			
Digital Angle Cosine Indicator	Yes			
Battery Status Indicator	Yes			
Image Palettes	White Hot, Black Hot, Sepia, Fusion, Rainbow, and Rain			
Analog Input and Output Format (resolution)	PAL (768×574 pixels)/ NTSC (640×480 pixels)			
Video Recording	Optional Digital Video Recorder with SD card slot			
Remote Control	Wireless 5-button			
SPECIAL USER-ADJUSTABLE IMAGING TOOLS:				
Active Contrast Enhancement (ACE) - "CONTRAST"	Yes			
Second Generation Digital Detail Enhancement (DDE) — "SHARPNESS"	Yes			
Smart Scene Optimization (SSO) — "SMART SCENE"	Yes			
Linear Automatic Gain Control - "LINEAR AGC"	Yes			
Information-Based Histogram Equalization (IBHEQ) — "SKY/SEA"	Yes			
User-Controlled Manual Non-Uniformity Correction/ Flat-Field Correction (UC-MNUC/ FFC)	Yes			
Silent Shutterless NUC™ (SSN)	Yes			
OPTICAL DATA:				
Objective Focal Length	50mm	100mm	50mm	100mm
Objective F-number	1:1.4	1:1.4	1:1.4	1:1.4
Field of View (ang.)	6.5°x5°	3.3°x2.5°	12.5°x10°	6.2°x5°
Exit Pupil Diameter	14 mm			
Eye Relief	16 mm			
Focus Method	Manual			
Focusing Range	5m to inf.	10m to inf.	5m to inf.	10m to inf.
Dioptr Adjustment	Manual			
Dioptr Adjustment Range	±5 diopter			
ELECTRICAL DATA:				
Battery	Four CR123A 3V Lithium batteries or four AA 1.5V			
Battery Life at 20 °C (68 °F)	up to 7 hr (optional up to 14 hrs)			
Extended Battery Pack (optional)	Two 18650 rechargeable batteries (3.7V) or four CR123 type rechargeable batteries with voltage 3.7V max or four standard CR123A 3V Lithium batteries (operational time up to 7 hr)			
External Power Supply	6 VDC/ 600mA			
ENVIRONMENTAL DATA:				
Operating Temperature	-51 to +57°C (-59 to +134°F)			
Storage Temperature	-57 to +85°C (-70 to +185°F)			
Recoil Resistance	0.50 BMG weapon shock and recoil			
Environmental Rating	Waterproof and fog-resistant			
MIL-STD-810 Compatibility	Yes			
MECHANICAL DATA:				
Overall Dimensions	241×102×60 mm 9.5×4.0×2.4 in	309×102×90 mm 12.1×4.0×3.5 in	241×102×60 mm 9.5×4.0×2.4 in	309×102×90 mm 12.1×4.0×3.5 in
Weight (w/o Batteries)	1.05 kg 2.3 lbs	1.4 kg 3.1 lbs	1.05 kg 2.3 lbs	1.4 kg 3.1 lbs
WARRANTY DATA:				
Warranty	3 years			
Warranty on FLIR detector	10 years			

## STANDARD COMPONENTS



BATTERY CARTRIDGE



BATTERY BOX  
EXTENDER RING



ARMASIGHT KEY



SET OF BATTERIES



ADVANCED WIRELESS  
5-BUTTON REMOTE



PICATINNY ADAPTER



VIDEO CABLE



OPERATOR MANUAL



CARRYING CASE

## OPTIONAL EQUIPMENT



Part No. ATAM000008  
EXTENDED BATTERY PACK



Part No. ATAM000004  
RECORDER DT DIGITAL  
VIDEO RECORDER



Part No. ATAM000005  
HD DVR DIGITAL VIDEO  
RECORDER



Part No. IALA00AMRF22001  
AMRF2200 ADVANCED  
MODULAR RANGE FINDER



Part No. ANHC000001  
HARD SHIPPING/  
STORAGE CASE #101