

HELIOS

Thermal Imaging Bi-Oculars

The Armasight Helios is the latest and most technologically-advanced family of thermal imaging bi-oculars for the sporting, law enforcement, and military markets. The Helios product line is based on the latest FLIR Tau 2 VOx microbolometer core, and is composed of different models – each optimized for performance, price, and state-of-the-art technology that is suitable for a variety of uses and missions.

The Helios is a solid state, uncooled, long-wave infrared, magnified, dedicated handheld thermal imager intended for day and nighttime missions.

The 24/7 mission capability is only one of the strengths of the Helios line. The thermal imaging technology also allows you to detect targets by cutting through snow, dust, smoke, fog, haze, and other atmospheric obscurants. Unlike the use of laser targeting or near-infrared illumination to augment night vision equipment, the Helios thermal imager is extremely difficult to detect with other devices, as it emits no visible light or RF energy.

The Helios is available in different versions, with optical magnifications ranging from 2x to 5x. Helios series also provides up to 8x digital zoom for models based on 640x512 cores and up to 4x digital zoom for models based on a 336x256 core.

The Helios is powered by two CR123A (2x3V) batteries. The Extended Battery Pack or 6VDC/ 600mA power source can also be used to power the Helios.

The Helios can be controlled by a wireless remote control.



- Ⓐ Multiple versions with optical magnifications ranging from 2x to 5x
- Ⓐ High-performance thermal imaging camera
- Ⓐ Lightweight and robust design
- Ⓐ Easy to operate
- Ⓐ Manually adjustable eyepiece and objective lens
- Ⓐ Real-time display
- Ⓐ Digitally controlled features:
 - Palette
 - Enhancement
 - Settings
 - Display Brightness
 - Electronic Magnification
 - User-Controlled Manual Non-Uniformity Correction/ Flat-Field Correction (UCMNUC/ FFC)
- Ⓐ Current operational state information display (battery status, active profile, palette setting)
- Ⓐ Wireless remote control
- Ⓐ Analog video input and output (NTSC/PAL)
- Ⓐ Powered by two standard CR123A batteries
- Ⓐ Power input capability
- Ⓐ Digital video recorder (optional)
- Ⓐ Serviceability under severe conditions
- Ⓐ Filled with dry nitrogen to prevent internal fogging
- Ⓐ Water and fog-resistant
- Ⓐ Limited 3-year warranty
- Ⓐ 10-year warranty on FLIR detector

SPECIFICATIONS

| Model Name | Helios 336 3-12X42 | Helios 336 5-20X75 | Helios 640 2-16X42 | Helios 640 3-24X75 |
|---|--|----------------------------|---------------------------|----------------------------|
| SYSTEM DATA: | | | | |
| Refresh Rate | 30 Hz / 60 Hz | | | |
| Magnification (NTSC/PAL) | 2.8x / 3.4x | 5.0x / 6.0x | 1.5x / 1.8x | 2.7x / 3.2x |
| Objective Lens Type | Germanium | | | |
| Type of Focal Plane Array | FLIR Tau 2 | | | |
| Pixel Array Format | 336x256 | | 640x512 | |
| Pixel Size | 17 μm | | | |
| Display Type | AMOLED SVGA 060 | | | |
| Pixel Display Format | 800x600 | | | |
| Display Brightness | Discretely Adjustable to 8 Levels | | | |
| Turn-on Time, max | 3 sec | | | |
| Digital Zoom | 1x, 2x, 4x | | 1x, 2x, 4x, 8x | |
| Image Palettes | White Hot, Black Hot, Fusion, Rainbow, Globow, Ironbow1, Ironbow2, Sepia, Color1, Color2, Ice-Fire, Rain, and OEM | | | |
| Analog Input and Output Format (resolution) | PAL (768x574 pixels)* / NTSC (640x480 pixels) | | | |
| Video Recording | Optional Digital Video Recorder with SD card slot | | | |
| Remote Control | Wireless | | | |
| 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 | | | |
| Information-Based Histogram Equalization (IBHEQ) – “SKY/SEA” | Yes | | | |
| User-Controlled Manual Non-Uniformity Correction/ Flat-Field Correction (UCMNUC/ FFC) | Yes | | | |
| Silent Shutterless NUC™ (SSN) | Yes | | | |
| OPTICAL DATA: | | | | |
| Objective Focal Length | 42mm | 75mm | 42mm | 75mm |
| Objective F-number | F/1.1 | F/1.3 | F/1.1 | F/1.3 |
| Field of View (ang.) | 7.8° x 5.9° | 4.3° x 3.3° | 14.8° x 11.8° | 8.3° x 6.6° |
| 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. |
| Diopter Adjustment | Manual | | | |
| Diopter Adjustment Range | ±5 diopter | | | |
| ELECTRICAL DATA: | | | | |
| Battery | Two CR123A 3V Lithium batteries or CR123 type rechargeable batteries with voltage from 3.0V to 3.7V (2)** | | | |
| Battery Life at 20 °C (68 °F) | up to 4 hr (optional up to 12 hrs) | | | |
| Extended Battery Pack | Two 18650 rechargeable batteries (3.7V), four CR123 rechargeable batteries with voltage 3.7V max, or four standard CR123A 3V Lithium batteries (operational time up to 8 hr) | | | |
| External Power Supply | 6VDC / 600 mA | | | |
| ENVIRONMENTAL DATA: | | | | |
| Operating Temperature | -40 to +50°C (-40 to +122°F) | | | |
| Storage Temperature | -50 to +70°C (-58 to +158°F) | | | |
| Recoil Resistance | 700 g | | | |
| Environmental Rating | Water and Fog-Resistant | | | |
| MECHANICAL DATA: | | | | |
| Overall Dimensions (mm/in) | 238x100x62 9.4x3.9x2.4 | 258x100x68 10.1x3.9x2.7 | 238x100x62 9.4x3.9x2.4 | 258x100x68 10.1x3.9x2.7 |
| Weight (w/o Batteries) | 0.8 kg 1.8 lbs | 0.9 kg 2 lbs | 0.8 kg 1.8 lbs | 0.9 kg 2 lbs |
| WARRANTY DATA: | | | | |
| Warranty | 3 years | | | |
| Warranty on FLIR detector | 10 years | | | |

*Default setting (may be altered at the customer's request)

** Rechargeable batteries with voltage 3.0V-3.7V can be used only in devices with serial number starting from 140885

STANDARD COMPONENTS


BATTERY CASSETTE



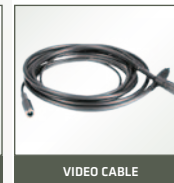
CR123 BATTERY



ADVANCED WIRELESS
REMOTE CONTROL



PICATINNY ADAPTER



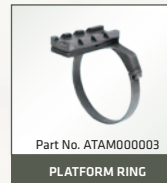
VIDEO CABLE



OPERATOR MANUAL



CARRYING CASE

OPTIONAL EQUIPMENT


Part No. ATAM000003

PLATFORM RING



Part No. ATAM000005

HD DVR DIGITAL VIDEO
RECORDER



Part No. ATAM000004

RECORDER DT DIGITAL
VIDEO RECORDER



Part No. ATAM000008

EXTENDED BATTERY PACK



Part No. ANHC000001

HARD SHIPPING/
STORAGE CASE #101