



Q14

Multifunctional Thermal Imaging Monocular

Armasight is proud to introduce the Q14 Long-wave Infrared Multifunctional Thermal Imaging Monocular (LIMTIM) representing the latest evolution in our never-ceasing quest to reduce size, weight, and power (SWaP) while maximizing the number of available features and functions. The LIMTIM's remarkably compact size ensures that it can be concealed in a shirt pocket and its featherweight mass at 240g with battery gives claim to it being the lightest fully multi-functional thermal imager currently on the market. The LIMTIM has a wide range of features incorporated into the unit that put it at the forefront of all other miniature thermal imagers in its class. It can be equipped with either a visible or near-IR laser pointer intended for handing off targets of interest to non-thermal equipped assets in the field. It has two integral rail mounts so that it is not necessary to disengage the head/helmet mount interface in order to mount the unit on a weapon as a stand-alone short-range weapon sight. The mini-rail design allows for mounting on a wide variety of in-service head mounts, helmet mounts, reflex cameras, digital video recorders, and MIL-STD-1913 weapon rail systems using the optional quick-release interfaces. The mini-rails are non-invasive enough where handheld operation is comfortable and ergonomically optimized to the operator's hands - NOMEX gloved or not. Equipped with digital compass and inclinometer, the Q14 LIMTIM offers the operator the tools necessary to interpolate accurate distance to target and target orientation.

Additional Armasight proprietary hyper-image processing (HIP) code provides the LIMTIM with a robust library of software features to tailor the image to the optimum standards required of the operator. These features include direct button functions such as display brightness, palette selection, electronic zoom, manual non-uniformity correction (NUC) using a simple, intuitive three button keypad. Menu driven features incorporate desirable operator-specific adjustments such as palette selection, reticule selection and color, weapon boresight, scene-related imaging corrections, stored rifle caliber profiles, format selection, compass calibration sequence, and a "factory settings" default option. The wireless remote capability and Bluetooth features prevents the Q14 LIMTIM from becoming obsolete as new applications and software reaches maturity and comes to market. The nine-pin connector on the Q14 reveals the dynamic nature of this mite-sized powerhouse. Through the multi-pin connector, the operator can record video using the Armasight Digital Video Recorder (DVR), augment the battery life by attaching to external battery options, inject target range data from an externally mounted Armasight laser rangefinder and update/upload new software revision and applications from personal accounts associated with the Armasight customer access web sites. The Q14 LIMTIM is designed from inception to be waterproof to 20 meter and meet all the established environmental requirements of MIL-STD-810(G).

Operating off a variety of 123A format commercial expendable and rechargeable batteries, the Q14 LIMTIM offers a respectable 1+ hours run time for the 640x512 focal plane array format. With a diopter range of -5 to +5 diopters and a focus range of 20cm to infinity, the LIMTIM demonstrates its operational flexibility for all mission applications.

- Ⓐ **Weight 240 g**
- Ⓐ **MIL-810G rugged, waterproof glass fiber reinforced construction**
- Ⓐ **FLIR Quark 2 VOx microbolometer in 640 and 336 options**
- Ⓐ **Fast Germanium objective lens**
- Ⓐ **800x600 organic LED display**
- Ⓐ **Drop-down menu**
- Ⓐ **Simple, intuitive 3-button control**
- Ⓐ **User-adjustable Image Enhancement Tools**
- Ⓐ **Polarity control (Black Hot/ White Hot)**
- Ⓐ **Color & monochrome palettes**
- Ⓐ **Digital Zoom up to 8x**
- Ⓐ **NTSC/PAL field switchable video output**
- Ⓐ **Easy adaptability to wide selection of head, helmet, and weapon mounts with Quick Rail/ Dove Tail/ Bayonet interfaces (i.e. Armasight, Wilcox, Norotos, or Cadex)**
- Ⓐ **Fast time to image (< 3 sec)**
- Ⓐ **One CR123A battery operation**
- Ⓐ **Made in the USA**



SPECIFICATIONS

Model Name	Q14 TIMM 336	Q14 TIMM 640
SYSTEM DATA:		
Refresh Rate	30 Hz / 60 Hz	30 Hz / 60 Hz
Magnification (NTSC/PAL)	Unity (1x)	
Objective Lens Type	Germanium	
Type of Focal Plane Array	FLIR Quark 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
Digital Compass	Yes	
Digital Inclinomometer	Yes	
Laser Pointer	Yes	
Image Palettes	White Hot, Black Hot, Fusion, Rainbow, Sepia, Rain	
Reticle Type	Dot 4 MOA, Line Dot, Cross Center Dot, Cross, Crosshair, and “No Reticle”	
Reticle Color	Black	
Boresight Adjustment	Digital	
Analog Input and Output Format (resolution)	NTSC (640x480 pixels) / PAL (768x574 pixels)	
Remote Control	Wireless (5 buttons)	
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	13 mm	19 mm
Objective F-number	F/1.25	F/1.25
Field of View (ang.)	25° x 19°	33° x 26°
Exit Pupil Diameter	5 mm	
Eye Relief	16 mm	
Focus Method	Manual	
Focusing Range	0.2m to inf.	0.25m to inf.
Diopter Adjustment	Manual	
Diopter Adjustment Range	±5 diopter	
ELECTRICAL DATA:		
Battery	One CR123A 3V Lithium battery, CR123 rechargeable battery, or 16650 rechargeable battery with voltage from 3.0V to 3.6V	
Battery Life at 20 °C (68 °F)	CR123A - up to 1.5 hr CR123 Rechargeable (650mAh) - up to 1 hr 16650 Rechargeable (2000mAh) - up to 2.6 hr	
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	6V-12V DC / 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	Waterproof	
MECHANICAL DATA:		
Overall Dimensions	100x63x40mm (3.94x2.48x1.57 in)	
Weight (w/o Batteries)	240 g (0.53 lbs)	
WARRANTY DATA:		
Warranty	3 years	
Warranty on FLIR detector	10 years	

STANDARD COMPONENTS



OPTIONAL EQUIPMENT

