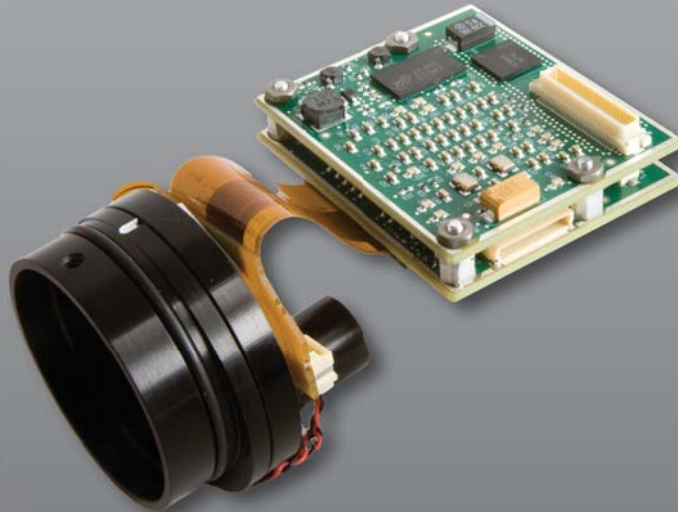


Infrared Products

THERMAL-EYE SERIES 17-640

The Thermal-Eye Series 17-640 gives you 17-micron microbolometer technology with impressive image quality and longer range in a small lightweight design.



Dual mini digital with 28° f/1.2 lens



Digital configuration with 28° f/1.2 lens



Analog configuration with 28° f/1.2 lens

OVERVIEW

- 17 μ m 640 x 480 format assures better target resolution and longer stand-off range
- Compared to 25 μ m, 17 μ m allows ~30% reduction in lens length and diameter while maintaining range performance
- 17 micron detector – Wafer level packaging enables small detector size
- Size, weight and power – Compact design weighs less than 95g without lens
- Three configurations – Analog, digital, or dual mini digital cores are available with or without lens
- Sophisticated GUIs – Flexible OEM customization
- Open architecture – Expansion port provides access to digital data along video processing chain for advanced OEMs
- Integration Support – Efficient and knowledgeable technical support available



Infrared Products

THERMAL-EYE SERIES 17-640

FOCAL PLANE ARRAY

Material, Structure & Format: Uncooled Amorphous Silicon Microbolometer, 17 micron, 640 x 480 pixels

Spectral Response: LWIR (7.5 – 13.5µm)
 Thermal Sensitivity: ≤50 mK
 Refresh Rate: 30 Hz

INTERFACE/CONTROLS

Camera Setup: USB and RS-232 available
 Discrete Controls: Programmable Electronic Zoom, Polarity and Touchup signals

THERMAL IMAGING SYSTEM PERFORMANCE

Start-up Time: ≤ 5 seconds
 Brightness/Contrast: Advanced Image Processing Utilizing AGC and Histogram Equalization Modes

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: -40°C to 85°C
 Storage Temperature: -45°C to 100°C

ADDITIONAL CAMERA FUNCTIONS

Extensive customization and control available through USB interface or serial communication interface

Programmable E-Zoom Settings
 Real-time control of touch up parameters
 Digital data accessible through the expansion port

OPTICS

Focus Type	HFOV	FL (mm)	HD Range	FOV	FL (mm)	HD Range	FOV	FL (mm)	HD Range
Manual (Available)	14°*	46	1.3km	28°	22	670m	55°	10	350m
Manual (Planned)	20°	31	930m	40°	15	500m			

Cores of all three configurations (digital, analog, or dual-mini) are available without lenses

HD Range = Human Detection Range assuming a 0.75m x 0.75m target. 50% confidence. Calculated using NVTherm.
 All lenses are f/1.0 athermalized unless otherwise specified. FOV & FL values are nominal.
 *14° lens is f/1.2. Non-athermalized 14° f/1.0 lenses are available.

VIDEO	Digital	Analog
Analog Output	N/A	NTSC (monochrome)
Digital Output	8-bit digital, or 16-bit NUC, or raw data	N/A
Output Resolution	640 x 480	
POWER	Digital	Analog
Input Voltage	3.3V, 5V Regulated	8-32V single supply
Power Dissipation @ 25°C Ambient	<1.8 Watts RMS	<2.4 Watts (@12VDC) RMS
DIMENSIONS (w/o Lens, LWH)	Weight w/o Lens	Size CCA's (LWH)
Digital 4" x 1.7" x 1.7"	<71g	1 circuit card 2.73" x 1.67" x 0.42"
Analog 4" x 1.7" x 1.7"	<92g	2 circuit cards 2.73" x 1.67" x 0.67"
Dual Mini Digital 3.6" x 2.0" x 1.7"	<74g	2 circuit cards 1.70" x 2.00" x 0.60"

REV E SERIES 17-640 November 2009

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communications
 Infrared Products

L-3. Headquartered in New York City, L-3 Communications is a prime contractor in aircraft modernization and maintenance, C3ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems.