



SLX CONDOR II HIGH PERFORMANCE DWIR THERMAL IMAGING CAMERA

Selex ES's new SLX-Condor II thermal imaging camera uses the latest Dual Waveband Infra-Red (DWIR) "3rd Generation" detector technology to provide the optimum passive thermal images irrespective of environmental conditions in land, sea and airborne operations.

The DWIR camera uses the standard TV resolution "Condor-II" MCT detector array developed by Selex ES under UK MOD funding. The detector is manufactured using Selex ES's proprietary MOVPE on GaAs process and operates in two different spectral wavebands, at 3-5 μ m and 8-10 μ m. Coupled with Selex ES's latest generation of advanced image processing electronics, the resulting camera produces near simultaneous images in both bands.

The SLX-Condor II camera enables the user to select the optimum thermal imaging waveband for the prevailing conditions at the time of operation. For the first time in a single camera, the natural resolution advantage of the MWIR waveband can be fully exploited without sacrificing any of the traditional advantages of the LWIR waveband.

KEY BENEFITS

- Affordable, high performance 3rd generation camera
- Dual waveband operating concurrently:
 - 3-5 μ m Midwave
 - 8-10 μ m Longwave
- Image resolution - 640 x 512
- (1280 x 1024 with Microscan)
- Optional Microscan providing:
 - 1.3 Megapixel resolution imagery
 - and/or combined e-zoom and Microscan for enhanced narrow FoV capability: reducing lens size, complexity and cost
- Military specification
- Lightweight, compact design
- Flexible architecture enables remote location of processing electronics for small enclosures
- Ease of system integration
- Flexible video output and control interface
- Low through-life cost of ownership
- No ITAR-controlled components.



MWIR image

2-colour DWIR image (MWIR shown in blue, LWIR in red)

LWIR image

Both wavebands can be displayed side-by-side on the video output for direct comparison of the images. The camera also enables both wavebands to be fused in real time to create a unique true two-colour thermal image of the scene, clearly showing spectral anomalies in the scene.

An integrated microscan module is optional, to provide 1.3-megapixel resolution in each waveband and enhanced range performance using digital zoom technology.

The SLX-Condor II DWIR camera has been designed as a compact, high performance unit which can be applied to a wide range of thermal imaging applications by system integrators and OEMs.

FEATURES

- Programmable configuration
- Auto or manual gain and offset, independently controlled in each waveband
- Single band MWIR or LWIR operation
- Frame Sequential Dual Waveband operation
- Simultaneous Dual Waveband operation in each frame
- User definable automatic gain and offset region
- User selectable image orientation permits camera to be mounted in any position
- User definable text displays and symbols
- Colour text and graphics
- MWIR & LWIR in camera image fusing
- Colour image mapping with user definable palette
- Freeze frame

TECHNICAL SPECIFICATIONS

Operating waveband	3 - 5µm 8 - 9.4µm
Resolution 640 x 512	(1280 x 1024 with optional Microscan)
Noise Equivalent Temperature Difference	
(Single band NETD)	15mK MWIR (typ.) 25mK LWIR (typ.)
(Simultaneous NETD)	24mK MWIR (typ.) 26mK LWIR (typ.)
Non-uniformity correction	User selectable 1, 2 or 3 point NUC
User control	RS422
Video	625 line 50 Hz 525 line 60 Hz RGB VESA
Digital video output	16 bit full dynamic range or 8 bit video. Optional DVI & HDMI
Dimensions (L x W x H)	195 x 115 x 95 mm (exc. lens)
Power supply	28V DC (Max 36V, Min 18V)
Power consumption	<40 watts operating
Weight	<4kg
Operating temperature	-40 °C to +55 °C
Environmental	DEFSTAN 00-35 MIL STD 810E810E