



THEIA HD300M/HD600M Continuous Zoom Midwave Infrared Imager

High Definition 1280 x 1024 Sensor

THEIA high definition MWIR OEM camera cores are among the most advanced cooled OEM sensor packages produced today. With a 1280 x 1024 InSb sensor, THEIA camera cores provide the superior performance of a mid wave sensor in a package specifically configured for applications where size, weight and power are critical considerations.

The THEIA cores can be configured with a choice of continuous zoom optics, and can be adapted to support custom lens designs. Both camera and optics can be controlled through a single integrated communications interface.

Flexible digital and analog outputs, low power consumption and unmatched thermal sensitivity result in a high performance infrared imaging solution appropriate for mission critical fixed, mobile and airborne applications.

THEIA KEY PRODUCT FEATURES

1280 x 1024 high 10 μ m HD focal plane array	NE δ T <30mK at 70% well fill capacity
Open frame OEM configuration	Multiple user interface options
15mm - 300mm or 30mm - 600mm f/4 zoom optic	Gaussian noise reduction filter
Electronic zoom	Local area processing routines
Up to six non uniformity correction tables	External sync capability

IMAGING PERFORMANCE	THEIA HD300M	THEIA HD600M
Detector type	Indium Antimonide (InSb)	
Spectral range	3.6 μ m - 4.9 μ m with standard cold filter	
Resolution (pixels)	1280 x 1024, 10 μ m pitch	
Responsivity	<30mK typical	
Frame rate	60Hz @ 720P resolution; 30Hz @ 1080P resolution	
Image presentation	Local area processing routines; Gaussian noise reduction filter; AGLC routines (full manual, ROI linear, or ROI histogram); electronic zoom (1x, 2x, or 4x edge preserving); monochrome and false color palettes; black hot / white hot polarity; user symbology overlay; center reticle on / off	
IMAGING ELECTRONICS		
Digital display video	HD-SDI	
Digital data streaming	Base Camera Link or Gig-E (both optional)	
Command and control	RS232 (standard), RS422, Camera Link COM or Ethernet (optional)	
Synchronization modes	Internal / External sync and clock (optional)	
External sync	Sync I/O	
Non uniformity correction	Up to 6 on board tables	
OPTICS		
Prescription	f/4.0, 15 – 300mm	f/4.0, 30 – 600mm
Field of view	2.4° to 48.0° (H) x 1.9° to 38.4° (V)	1.2° to 24.0° (H) x 1.0° to 19.2° (V)
Motion	Motorized continuous zoom, motorized focus	
Features	Direct Control of the Lens Motors via camera commands; temperature curve fit focus infinity positions over zoom range; built-in electronic / mechanical bore sighting provisions; integrated shutter for one-point NUC; commanded and continuous auto-focus routines	
GENERAL		
Power input	+12VDC nominal	
Power consumption	< 15W Nominal @ 23°C Ambient Steady State < 24W Nominal @ 23°C Ambient During Cooldown	
Weight (with optic)	2.2Kg	5.4Kg
Size (maximum dimensions)	254 mm (L) x 105 mm (W) x 106 mm (H)	378 mm (L) x 173 mm (W) x 173 mm (H)
Operating temperature	-30°C to + 65°C	
Storage temperature	-40°C to + 70°C	