

APPLICATIONS

- Surveillance
- Force Protection
- Border Patrol
- Special Ops
- Recon
- Fire Fighting
- Unmanned Vehicle

HIGH PERFORMANCE IMAGING FROM THE WORLD'S SMALLEST INFRARED CAMERA

FEATURES AND BENEFITS

Omega is the world's smallest thermal imaging camera, yet it delivers performance and features typically found only on larger more expensive infrared systems. This unique robust little camera is perfect for stand-alone imaging applications, or as an OEM core where space, weight and power are constraints and high performance is critical. The tiny Omega sets new standards for ease of integration and offers the versatility of placement, low power consumption, low heat load, and long battery life.

SMALL SIZE WITHOUT COMPROMISE

Omega is the ultra-compact, lightweight, fully integrated design that puts thermal imaging where it has never fit before. Its modular, highly flexible architecture supports a wide range of features, options and accessories for customized configurations.

CORE BY INDIGO

The Omega features Indigo produced VOx microbolometer detectors combined with proprietary on-focal plane signal processing producing uncompromising image quality and incredible thermal resolution (<40mK when normalized to f/1.00).

IMPRESSIVE IMAGERY

Omega's complete elimination of traditional thermoelectric (TE) stabilization allows operation with ultra-low power and time to first image of less than 2 seconds. It features both analog RS-170A (CCIR) and 14 bit digital outputs for direct support of machine vision and imaging applications.

MODULAR OPTIMIZATION

In the world of infrared applications, one camera does not necessarily fit all applications. Why pay the price of size, power, features or functions that are not needed? Omega addresses this problem with a highly modular, flexible architecture that supports custom adaptation to specific applications.



SYSTEM SPECIFICATIONS

Detector	Uncooled Microbolometer
Array Format	160 H x 120 V (RS-170A display); 160 H x 128 V (CCIR display)
Pixel Size	51 x 51 microns
Optical Fill Factor	65%
Spectral Response	7.5 to 13.5 microns
Thermal Stabilization	Not required
Cal Source	Internal to camera (offset only)
Video Output	RS-170A; Optional CCIR
Frame Rate	30Hz RS-170A; 25Hz CCIR
NEΔT	≤ 85 mK (equivalent to 40mK at f/1.0)
Operability	≥98%
Time to Image	2 seconds max
Cooling Method	Conduction to camera bottom
Mounting Interface	1 helicoil insert in camera base, guide-pin hole
Dimensions	1.35"W x 1.45"H x 1.90"D without lens
Weight	≤120 g, lens dependent
Power	< 1.5 W nominal
Input/Output	18-pin connector for video, power, communication, digital data
Serial Commands	RS-232 interface
Digital Data*	Optional real-time, 14-bit, pixel replaced, normalized digital video
Operating Temp Range*	0 to +40 °C standard; optional -40 to +55 °C extended temp range available
Scene Temp Range*	to 150 °C standard; optional auto-gain mode extends range to 400 °C
Humidity	95% non-condensing

*Some features are options that will influence price, including: highlight color; digital data; interchangeability of lenses; extended temperature range; tamper protection; extended warranty.

OPTICS

Optics Material	Germanium
f-number	1.6
Lens Focal Lengths	11mm, 18mm, 30mm
Fields of View (degrees)	40x30, 25x19, 15x11, respectively
IFoV (milliradians)	4.64, 2.83, 1.70, respectively



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