

SIM205 MicroIR™ Imaging Module



The Affordable Solution to High Performance Infrared Imaging Needs

BAE SYSTEMS' SIM205 "Standard Imaging Module" is the solution to many imaging requirements of today's Commercial and Military OEM markets. While focused on high performance, this MicroIR™ product offers users a low cost, light weight, low power alternative to cryogenically cooled products. At the heart of this versatile product is our advanced 320×240 uncooled microbolometer focal plane array (FPA). The array has been "product proven" to meet the most demanding requirements. As an OEM product, our SIM205 module offers performance and integration flexibility, allowing for system development efforts to be tailored to specific markets of interest.

SIM205 Description

The SIM205 module features signal processing electronics, capable of providing RS-170/NTSC or PAL video, as well as either 8 or 16 bit digital video. Optimized for the 7.5 to 14 μ m range, BAE SYSTEMS SIM205 module features excellent sensitivity and an extremely wide dynamic range – an extremely important feature for most applications.

SIM205 Features

Extensive OEM-based experience has shown the need for product features to be embedded at both the hardware and software levels. This offers all customers the ability to easily differentiate their products for effective market penetration. Hardware features include access to numerous electrical I/Os, thermal management and an assortment of optics. Software features allow for custom configurations of on-screen graphics, image feature recognition algorithms, as well as access to various levels of image data.

SIM205 Applications

Integrated into your system, the SIM205 supports such applications as condition monitoring, fire fighting, process control, quality assurance, surveillance and traffic monitoring. The module can be adapted for other applications including vehicle navigation, medical imaging and machine vision.

SIM205 Technical Specifications

Detector	
Detector Type	Uncooled VOx Microbolometer
Spectral Response	7.5-14 microns
Array Size	320 X 240
Detector Pitch	46.25 micron
NETD	<0.1 Deg. C
Video	
Frame Rate	60Hz
Analog Video	RS-170
Digital Video	8 or 16 Bit
Gain /Level Adjustment	Automatic and Manual (Selectable)
Image Polarity	White Hot/Black Hot
Communication Interface	
Serial Interface	RS-422
Electrical	
Input Voltage	4 to 9VDC nominal
Power	4.5 watts nominal (6 watts max.)
Mechanical	
Weight (w/o shutter)	<300 G
Front End Card Dimensions (w/o shutter)	2.5"L x 2.5"W x 0.75"H (Nominal)
Signal Processing Card Dimensions (w/o shutter)	4.1"L x 3.1"W x 1.1"H (Nominal)
Environmental	
Operating Temperature Range	-15 to +55 Deg.C
Non-Operating Temperature Range	-40 to +70 Deg.C

Optics				
Model	Aperture (mm/in)	HFOV (nominal)	f/No.	EFL(mm)
18mm	18/.72	45°	1.0	18
18mm	21/.84	45°	0.87	18

Note: Additional optics are available.

SIM205 Standard Configuration



SIM205 Standard Imaging Module



SIM205S Standard Imaging Module with Shutter



SCC205 Standard Camera Core

ISO 9001 Registered

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