



HYPERION TECHNOLOGIES

IM200 Series Smart Optical Imager



DESCRIPTION

The IM200 Series Smart Optical Imager is a low mass, low power, general purpose imager aimed at providing medium resolution imaging capability to small platforms, such as nano-satellites. It offers on-board image compression and holds a frame-buffer which can contain up to 25 full frame raw images.

The default version uses USB2.0 for image transfers, which presents itself to the host system as a mass storage device. Raw images are shot, and a preview (compressed) image is generated, avoiding unnecessary bandwidth usage.

The IM200 is also suitable for applications on larger satellite platforms. For these applications, additional interfaces, power supply ranges and optics are available.

HIGHLIGHTS

- 4 Megapixel imager
 - > 30 MPixel/s scan rate
 - 16 mm F1.2 or 50 mm F2.0 lens
 - USB2.0 480 Mbps high speed image transfer interface. Medium speed RS422/RS485 is optional.
 - TTL UART command interface. USB, RS422, RS485, I²C are optional
 - Monochrome and RGB versions available
 - Radiation tolerance qualified up to 9 krad (Si) for all components¹.
 - Plug-and-play design
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- Low mass: 59 g
 - Low power: (nominal) < 700 mW
 - Outer dimensions: 29 x 29 x 70.7 mm

¹ Final radiation tolerance of the product can be tailored to customer needs. Please contact Hyperion Technologies for information.



SPECIFICATIONS

Performance				
Full frame size	2048x1944			pixels
Pixel scan rate	> 33			MPixel/s
Standard lens focal length	16 / 50			mm
Standard lens F-number	1.2 / 2.0			-
Dimensions				
Outer Dimensions	29 x 29 x 70.7			mm
Mass (using 50mm F2.0 lens)	59			g
Environmental				
Operating temperature	-20 - +40			°C
Radiation tolerance	> 9			krad (Si)
Electrical				
	Min.	Typ.	Max.	
Supply voltage	3.6	3.65 ¹	5.0	V
Bus logic level voltage	Referenced to VREF ⁴			V
Power and current consumption				
	Min.	Typ.	Max.	
Current consumption	110	190 ²	200	mA
Power consumption	400	700 ³	1000	mW

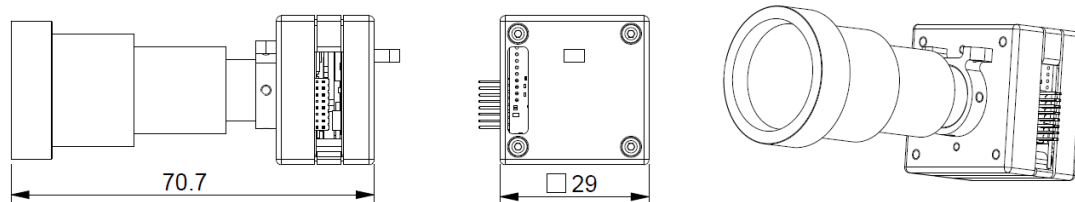
¹ Maximum efficiency is reached when operating at the lowest voltage

² At 5Hz update rate

³ At 3.65V, at 5Hz full frame capture rate

⁴ VREF can range from 1.8 to 5.1V for I²C and UART interfaces.

MECHANICAL CHARACTERISTICS



Standard version of the IM200.50 Outer dimensions [mm]

(note: the standard version does not include a baffle or an RS422/RS485 command interface)

For pricing, delivery, configuration and ordering information please contact Hyperion Technologies B.V. at info@hyperiontechnologies.nl, or visit Hyperion Technologies' website at www.hyperiontechnologies.nl.

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