

OPTICAL IMAGER

HIGH PRECISION HIGH PERFORMANCE

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. The IM200 is a versatile imager, based on the ST200 Star Tracker platform. With a dedicated high-speed USB2.0 interface, the IM200 is capable of capturing 5 frames per second at full resolution.The IM200 is also suitable for applications on larger satellite platforms. For these applications, additional interfaces, power supply ranges and optics are available.

KEY HIGHLIGHTS:

- 4 Megapixel imager
- > 30 MPixel/s scan rate
- 16 mm F1.2 or 25, 35, 50 mm F2.0 lens
- TTL UART command interface
- USB, RS422, RS485, I²C are optional
- Monochrome and RGB versions available
- Radiation tolerance qualified up to 9 krad (Si)
- Low mass: 59 g
- Low power: (nominal) < 700 mW



PERFORMANCE

The IM200 comes with a USB2.0 480 Mbps high speed image transfer interface. The medium speed RS422/ RS485 interface is optional.



FLEXIBILITY

The IM200 has a large internal buffer allows for storing up to 25 full-frame images, which can be compressed into JPEG's for fast previewing. The CPU power allows for real-time processing of the images, allowing use of the IM200 as a target-tracking imager, a docking camera or an inspection camera. HERIT.

The IM200 has spaceflight heritage in LEO since 2019. Since the IM200 is a modified version of the AAC Clyde Space ST200 Star Tracker, which has flown on multiple missions since 2015, the IM200's flight heritage can be considered somewhat higher.

11mm

TECHNICAL SPECIFICATIONS

Performance		
Full frame size	2048x1944	pixels
Pixel scan rate	> 30	MPixel/s
Standard lens focal length	16 / 25 / 35 / 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.	Тур.	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.	Тур.	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.



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact: **enquiries@aac-clydespace.com**



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