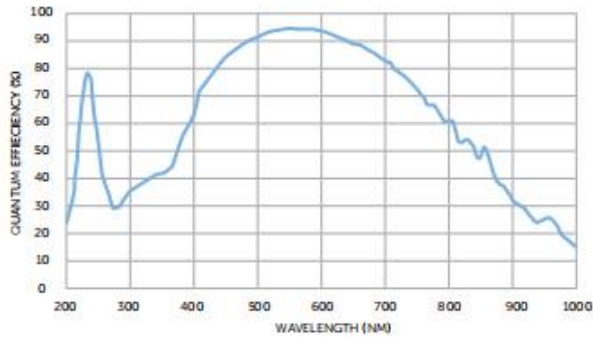




Prime 95B

95% Quantum Efficiency		Prime 95B™ Scientific CMOS Camera Datasheet	
Specifications		Camera Performance	
Sensor	GPixel GSense 144 BSI CMOS Gen IV, Grade 1 in imaging area		
Active Array Size	1200 x 1200 pixels (1.44 Megapixel)		
Pixel Area	11µm x 11µm (121µm²)		
Sensor Area	13.2mm x 13.2mm 18.7mm diagonal		
Peak QE%	>95%		
Read Noise	1.6e- (Median) 1.8e- (RMS)		
Full-Well Capacity	80,000e- (Combined Gain) 10,000e- (High Gain)		
Dynamic Range	50,000:1 (Combined Gain)		
Bit Depth	16-bit (Combined Gain) 12-bit (High Gain)		
Readout Mode	Rolling Shutter Effective Global Shutter		
Binning	2x2 (on FPGA)		
Linearity	>99.5%		
Cooling Performance		Sensor Temperature	Dark Current
Air Cooled	-20°C @ 25°C Ambient		0.55e-/pixel/second
Liquid Cooled	-25°C @ 25°C Ambient		0.3e-/pixel/second
Specification		Camera Interface	
Digital Interface	PCIe, USB 3.0		
Lens Interface	C-Mount		
Mounting Points	2x 1/4" ~20 mounting points per side to prevent rotation		
Liquid Cooling	Quick Disconnect Ports		
Triggering Mode		Function	
Input Trigger Modes	Trigger First: Sequence triggered on first rising edge		
	Edge: Each frame triggered on rising edge		
	SMART Streaming: Fast iteration through multiple exposure times		
Output Trigger Modes	First Row: Expose signal is high while first row is acquiring data		
	Any Row: Expose signal is high while any row is acquiring data		
	All Rows: Effective Global Shutter – Expose signal is high when all rows are acquiring data Signal is high for set Exposure time		
	Rolling Shutter: Effective Global Shutter – Expose signal is high when all rows are acquiring data Signal is High for set Exposure time – Readout Time		
Output Trigger Signals	Expose Out (up to four signals), Read Out, Trigger Ready		

Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax: +86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com



Frame Rate (PCIe interface)		
Array Size	16-bit	12-bit
1200 x 1200	40	80
1200 x 512	94	188
1200 x 256	188	374
1200 x 128	374	737

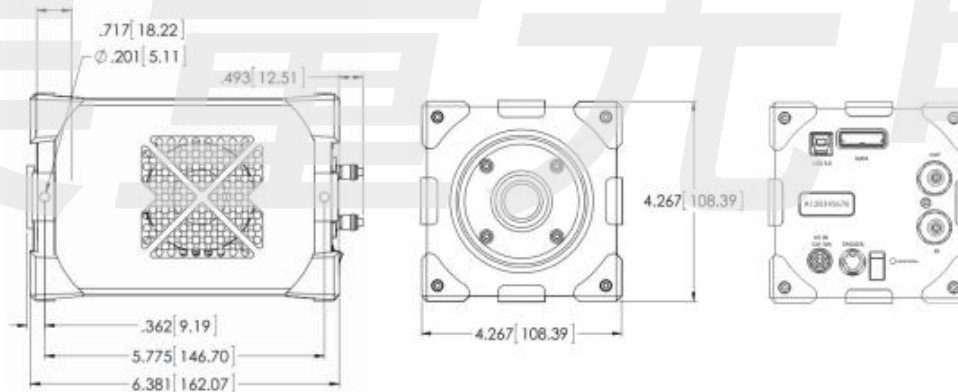
Accessories (Included)

- PCIe Card/Cable
- Power Supply
- USB 3.0 Cable
- Manuals and QuickStart Guide
- Trigger Cables
- Performance and Gain Calibration Test Data

Accessories (Additional)

- Liquid Circulator
- Liquid Cooling Tubes

Distance from C-mount to sensor



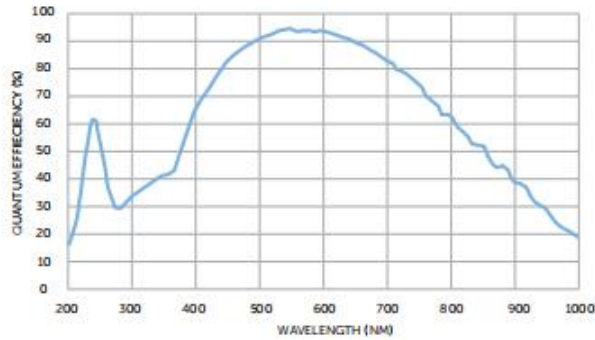
Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax: +86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com



Prime BSI

Focus on the Details		Prime BSI™ Scientific CMOS Camera Datasheet	
Specifications		Camera Performance	
Sensor		Cpixel GSENSE2020BSI Scientific CMOS Sensor	
Active Array Size		2048 x 2048 (4.2 Megapixel)	
Pixel Area		6.5µm x 6.5µm (42.25µm²)	
Sensor Area		13.3mm x 13.3mm 18.8mm diagonal	
Peak QE%		>95%	
Read Noise:	Correlated Multi-Sampling (CMS)	1.0e ⁻ (Median) 1.1e ⁻ (RMS)	
	Combined/High Gain	1.6e ⁻ (Median) 1.8e ⁻ (RMS)	
Full-Well Capacity		45,000e ⁻ (Combined Gain) 10,000e ⁻ (High Gain) 1,000e ⁻ (CMS)	
Dynamic Range		25,000:1 (Combined Gain)	
Bit Depth		16-bit (Combined Gain) 12-bit (CMS) 11-bit (High Gain)	
Readout Mode		Rolling Shutter Effective Global Shutter Programmable Scan Mode (PCI-E only)	
Binning		2x2 (on FPGA)	
Linearity		>99.5%	
Cooling Performance		Sensor Temperature	
Air Cooled		-20°C @ 30°C Ambient	
Liquid Cooled		-30°C @ 30°C Ambient	
		Dark Current	
		0.5e ⁻ /pixel/second	
		0.12e ⁻ /pixel/second	
Specification		Camera Interface	
Digital Interface		PCIe, USB 3.0	
Lens Interface		C-Mount	
Mounting Points		2x 1/4"-20 mounting points per side to prevent rotation	
Liquid Cooling		Quick Disconnect Ports	
Triggering Mode		Function	
Input Trigger Modes		Trigger First: Sequence triggered on first rising edge Edge: Each frame triggered on rising edge SMART Streaming: Fast iteration through multiple exposure times	
Output Trigger Modes		Any Row: Expose signal is high while any rows acquiring data Rolling Shutter: Effective Global Shutter - Expose signal is high when all rows are acquiring data Signal is High for set Exposure time - Readout Time First Row: Expose signal is high while first row is acquiring data Line Output: Expose signal provides rising edge for each row advanced by the rolling shutter readout	
Output Trigger Signals		Expose Out (up to four signals), Read Out, Trigger Ready	
Programmable Scan Mode		Function	
Scan Modes		Auto: Normal camera operation Line Delay: Control rolling shutter propagation rate by adding delays to the line time Scan Width: Control number of rows between reset and readout signal in the rolling shutter	
Scan Direction		Down: Rolling shutter readout begins at the top of the sensor Up: Rolling shutter readout begins at the bottom of the sensor Down/Up Alternate: Rolling shutter readout alternates direction after starting at the top of the sensor	

Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax: +86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com



Accessories (Included)

- USB 3.0 Cable
- Trigger Cable
- Power Supply
- Quickstart Guide

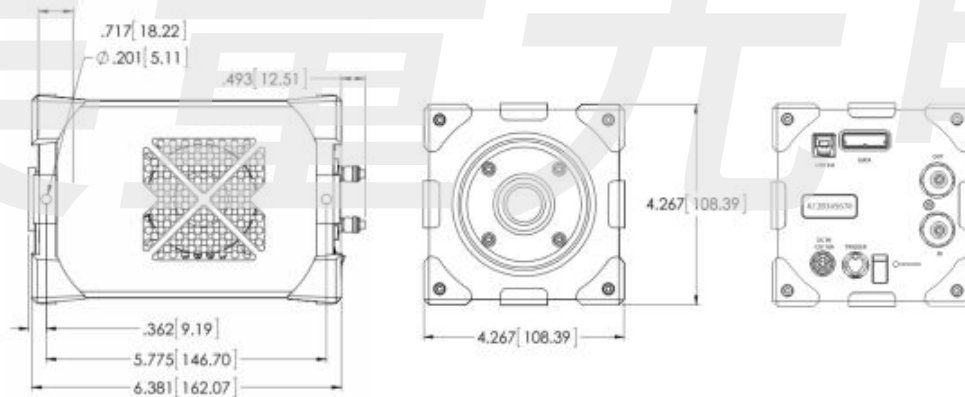
Accessories (Additional)

- PCIe Card/Cable
- Liquid Circular
- Liquid Cooling Tubes

Frame Rate

Array Size	PCI-Express		USB 3.0	
	16-bit / 12-bit	11-bit	16-bit / 12-bit	11-bit
2048 x 2048	43	63	43	63
2048 x 1024	87	125	87	125
2048 x 512	173	250	173	250
2048 x 256	346	497	346	497
2048 x 128	687	979	687	979

Distance from C-mount to sensor

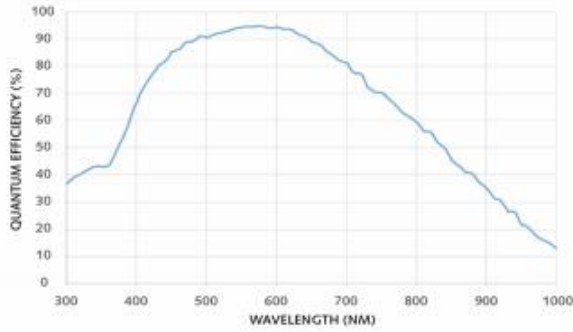


Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax:+86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com

Prime BSI Express

95% Quantum Efficiency		Prime BSI Express™ Scientific CMOS Camera Datasheet	
Specifications		Camera Performance	
Sensor	Gpixel GSENSE2020BSI Scientific CMOS sensor		
Active Array Size	2048 x 2048 (4.2 Megapixel)		
Pixel Area	6.5µm x 6.5µm (42.25µm ²)		
Sensor Area	13.3mm x 13.3mm, 18.8mm diagonal		
Peak QE%	>95%		
Read Noise	Correlated Multi-Sampling (CMS)	1.0 e ⁻ (Median)	<ul style="list-style-type: none"> Cameras that excel in a wide range of applications Flexible and customizable branding options Unique part number/Bill of Materials (BOM) Bill of Materials (BOM) supports a wide range of product offerings Strategically located global service centers Dedicated support from a focused OEM team
	Combined/High Gain	1.1e ⁻ (RMS)	
Full-Well Capacity	45,000e ⁻ (Combined Gain)	1.6e ⁻ (Median)	
	10,000e ⁻ (High Gain)	1.8e ⁻ (RMS)	
Dynamic Range	1,000e ⁻ (CMS)		
	25,000:1 (Combined Gain)		
Bit Depth	16-bit (Combined Gain)		
	12-bit (CMS)		
Readout Mode	11-bit (High Gain)		
	Rolling Shutter, Effective Global Shutter, Programmable Scan Mode		
Binning	2x2 (on FPGA)		
Cooling		Sensor Temperature	Dark Current
Air Cooled		0°C @ 25°C Ambient	1.5e ⁻ /pixel/second
Specifications		Camera Interface	
Digital Interface	USB 3.2 Gen 2		
Lens Interface	C-Mount		
Mounting Points	One ¼ 20" mounting point on each side of the camera		
Programmable Scan Mode	Function		
Scan Modes	Auto: Normal camera operation Line Delay: Control rolling shutter propagation rate by adding delays to the line time Scan Width: Control number of rows between reset and readout signal in the rolling shutter		
Scan Direction	Down: Rolling shutter readout begins at the top of the sensor Up: Rolling shutter readout begins at the bottom of the sensor Down/Up Alternate: Rolling shutter readout alternates direction after starting at the top of the sensor		

Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax:+86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com

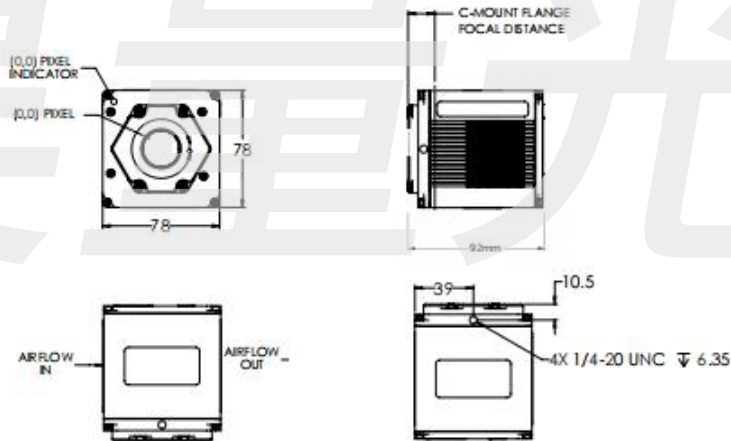


Accessories (Included)

- USB 3.2 Gen 2 Cable
- Power Supply
- Manual
- Quick Start Guide

Frame Rate

Array Size	16-bit	11-bit	12-bit (CMS)
2048x2048	43	95	43
2048x1024	87	188	87
2048x512	174	375	174
2048x256	347	745	347
2048x128	690	1468	690



Aunion Tech Co.,Ltd
 Floor 3, Building 6, No. 2007 Hongmei road, Shanghai 201103 P.R. China
 Tel: +86-21-51083793 Fax: +86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com