

2 Specifications

2.1 Electronic Specifications

2.1.1 STC-MBS500U3V / STC-MCS500U3V

Model Number		STC-MBS500U3V	STC-MCS500U3V
Image Sensor		2/3" 5.1M Progressive Monochrome CMOS (Sony: IMX264)	2/3" 5.1M Progressive Color CMOS (Sony: IMX264)
Shutter Type		Global	
Active Picture Elements		2448 (H) x 2048 (V)	
Cell Size		3.45 (H) x 3.45 (V) μ m	
Sync System		Free run, External trigger(Hardware, Software)	
Maximum Frame Rate (Full Scan)	8bit output	35.8 fps	
	10bit output	35.8 fps	
	10bit Packed output	35.8 fps	
	12bit output	35.8 fps	
	12bit Packed output	35.8 fps	
ADC bit width		10bit / 12bit	
Video Format		8/10/12 bit output (Support packed on 10bit, 12bit)	8/10/12 bit output (Support packed on 10bit, 12bit)
Noise Level	8bit output	≤ 3 LSBs (Gain 0 dB)	
	10bit / 10bitPacked output	≤ 12 LSBs (Gain 0 dB)	
	12bit / 12bitPacked output	≤ 48 LSBs (Gain 0 dB)	
Sensitivity		380 Lux	1030 Lux
Exposure time	8bit output	27.2 μ seconds to 56 seconds	
	10bit output	27.2 μ seconds to 56 seconds	
	10bit Packed output	27.2 μ seconds to 56 seconds	
	12bit output	27.2 μ seconds to 56 seconds	
	12bit Packed output	27.2 μ seconds to 56 seconds	
Gain	Analog Gain	0 to 20.8 dB	
	Digital Gain	0 to 6 dB	
Black Level	8bit output	0 to 31	
	10bit / 10bitPacked output	0 to 127	
	12bit / 12bitPacked output	0 to 511	
White Balance Gain		N/A	-40dB to 12dB
ROI (AOI)		Horizontal: 64 to 2448 (2432 on Packed) / Vertical: 32 to 2048 Adjustable Steps for offset: 16 pixels in horizontal direction (64 pixels on Packed) / 4 lines in vertical direction Adjustable Steps for offset: 4 pixels in horizontal direction / 4 lines in vertical direction	
Gamma		Gamma Table =0.1 to 4.0, Default = 1.0	
Binning		Individual x2 Horizontal, Vertical Binning / OFF (Horizontal: Average, Vertical: Addition) *8	N/A
Decimation		Individual x2 Horizontal, Vertical Decimation	
Image Flip		Horizontal / Vertical / Horizontal and Vertical / OFF	
Pixel Defect Correction		Up to 64 points	
Auto	Auto Exposure	Support (Default: Fix 27.5 mseconds)	

Image	Auto Gain	Support (Default: Fix x1)	
Control	Auto White Balance	N/A	Support (Default: Manual)
Operational Mode		Free-run / Edge-preset Trigger / Pulse width Trigger / Start Stop Trigger	
User Setting Storage		Support	
Communication		Via USB3.0 bus	
Interface		USB3.0 Super speed (USB3.0 Micro B)	
Protocol		USB3 Vision® 1.0.1, GenICam Standard Version (SFNC 2.2, PFNC 2.0) compliant and Sentech's unique protocol (on Normal SDK, Trigger SDK)	
Input / Output		Three GPIO, One Camera Hardware Reset	
Power	Input Voltage	+5V(typ.) (This conforms to the USB standard)	
	Consumption	Max: 3.4W, Typ: 2.8W	

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