PRODUCT NEWS

Product Discontinuation Notices

OMRON

Issue Date
Month Day, Year

May 15ᵗʰ 2023

Product Discontinuation	Recommended Replacement
Vision Sensors / Machine Vision System	Vision Sensors / Machine Vision System
STC-MBA5MUSB3	**STC-MBS500U3V**
STC-MCA5MUSB3	**STC-MCS500U3V**

[Final order entry date]
The end of April 2024

[Date of The Last Shipping]
The end of March 2025

[Scheduled date of maintenance close]
The end of March 2030

[Caution on recommended replacement]
Since the external dimensions and mounting dimensions are different, please review the installation environment according to the changed camera specifications.
Also, since the specification of the camera are different, the image capture time and image brightness may change depending on the customer's usage environment. Please perform performance verification in advance before using.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimen-sions	Wire connection	Mounting Dimensions	Charac-teristics	Operation ratings	Operation methods
STC-MBS500U3V	**	*	*	*	--	*	**
STC-MCS500U3V	**	*	*	*	--	*	**

** : Compatible
* : The change is a little/Almost compatible
-- : Not compatible
\- : No corresponding specification
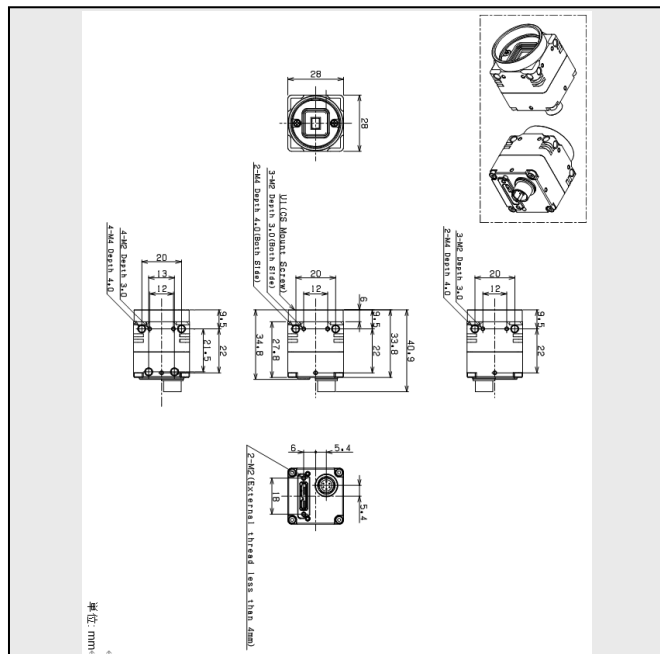
[Product Discontinuation and recommended replacement]

Product discontinuation	Recommended replacement
STC-MBA5MUSB3	STC-MBS500U3V
STC-MCA5MUSB3	STC-MCS500U3V

[Dimensions]

Product discontinuation Model STC-MxA5MUSB3	Recommendable replacement Model STC-MxS500U3V
Dimensions 28 (W) x 28 (H) x 33.8 (D) mm.	**Dimensions** The external dimensions are different. 28 (W) x 28 (H) x 40 (D) mm Lens mount is different.
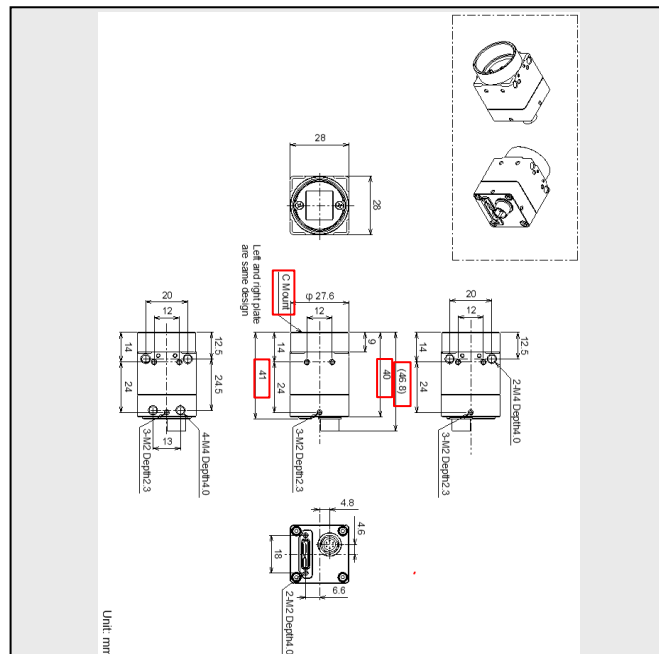
[Wire connection]
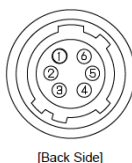
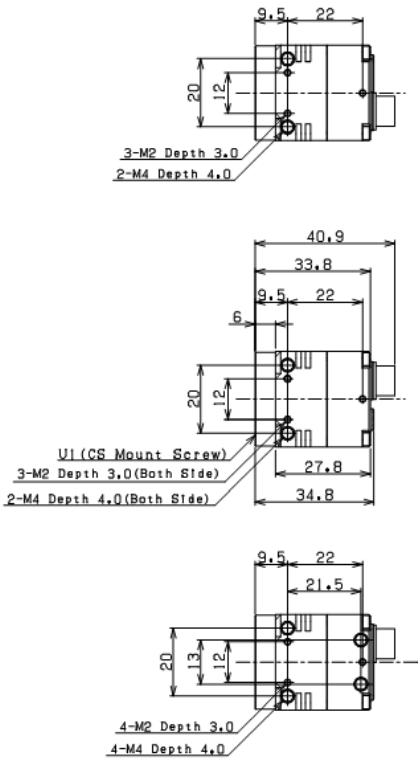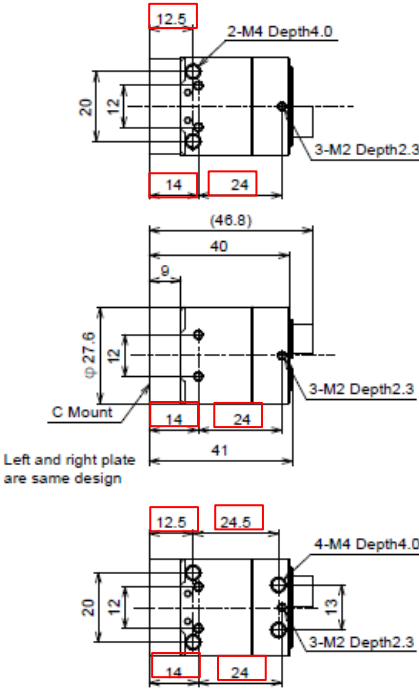| Product discontinuation Model STC-MxA5MUSB3	Recommendable replacement Model STC-MxS500U3V
I/O Connector Two Inputs and Two Outputs	**I/O Connector** Three GPIOs, One Camera Hardware Reset The input/output voltages of the 2nd to 4th pins of the input/output signal connector are different. The signals of pin 5 and pin 6 are different.
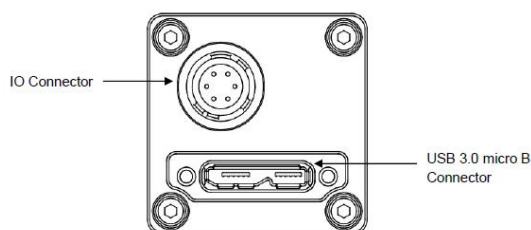
Pin Assignment

Pin No.	Signal Name	IN / OUT	Voltage	
			Low	High
1	GND (IO_GND)	-	0V	
2	Output 2 (IO3)	OUT	Smaller than 0.8 V	+3 to +26.4 V
3	Output 1 (IO2)	OUT	Smaller than 0.8 V	+3 to +26.4 V
4	Input 2 (IO1)	IN	Smaller than 0.7 V	+1.7 to +5 V
5	Input 1 (IO0)	IN	Smaller than 0.7 V	+1.7 to +5 V
6	Power Input (IO_VCC)	-	+3 to +26.4 Vdc	

[Back Side]
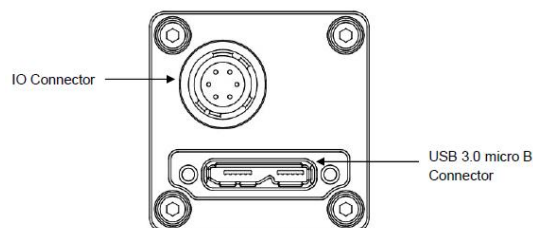
Input Output DC characteristics

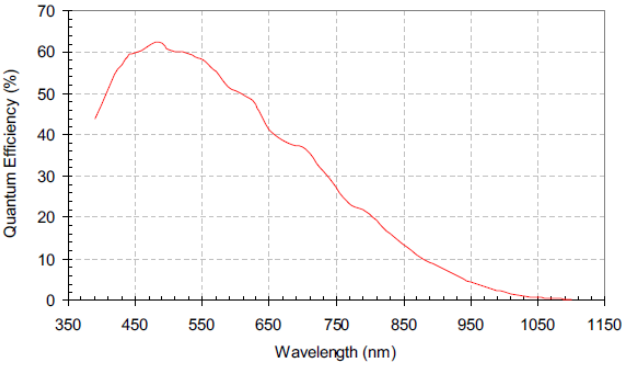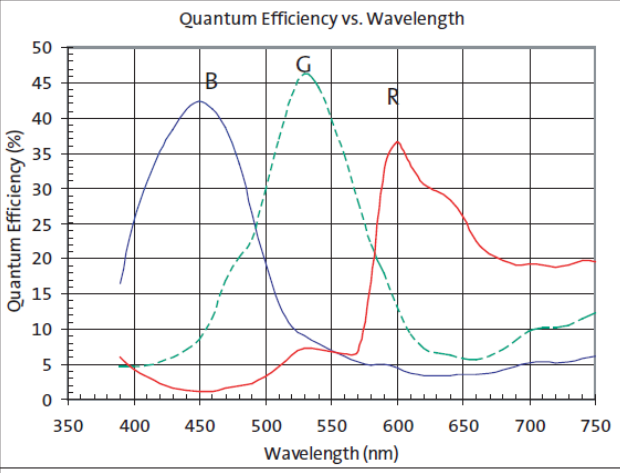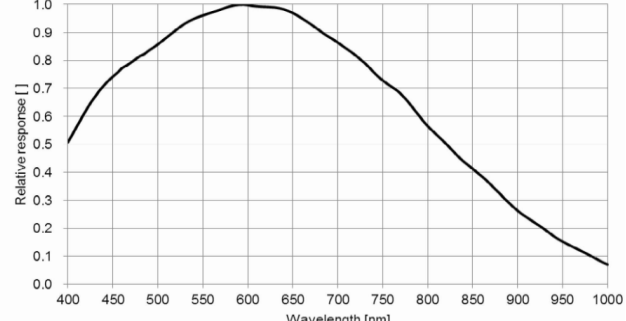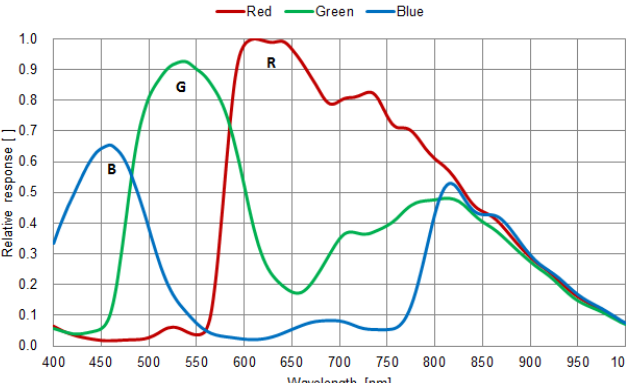| Pin No.	Signal Name	Function	IN/OUT		Voltage		Current	Reference
					Low Voltage	High Voltage		
1	IO_GND	GND	-		-	-	-	-
2	GPIO2	General Purpose Input Output	IN/OUT	IN	Less than +1.00 V	+3.00 to +24 V	4 μA (typ.) (*4)	2
				OUT	0 to +2.20V (*1)	+3.00 to +24 V (*2)	15 mA (Max.) (*3)	3,4
3	GPIO1	General Purpose Input Output	IN/OUT	IN	Less than +1.00 V	+3.00 to +24 V	4 μA (typ.) (*4)	2
				OUT	0 to +2.20 V (*1)	+3.00 to +24 V (*2)	15 mA (Max.) (*3)	3,4
4	GPIO0	General Purpose Input Output	IN/OUT	IN	Less than +1.00 V	+3.00 to +24 V	4 μA (typ.) (*4)	2
				OUT	0 to +2.20 V (*1)	+3.00 to +24 V (*2)	15 mA (Max.) (*3)	3,4
5	CAM_RESET	Camera Hardware Reset	IN	IN	Less than +0.80 V	+3.00 to +24 V	4 μA (typ.)(*4)	1
6	N.C.	NC	-		-	-	-	-

[Mounting dimensions]

Product discontinuation Model STC-MxA5MUSB3	Recommendable replacement Model STC-MxS500U3V
Camera fixing screw position	**Camera fixing screw position** The positions of the screw holes are different.

[Characteristics]

Item	Product discontinuation Model STC-MxA5MUSB3	Recommendable replacement Model STC-MxS500U3V
Image Sensor	1/2.5" 5.03M pixels	2/3" 5.07M pixels
Shutter Type	Rolling Shutter	Global Shutter
Active Picture Elements	2,592 (H) x 1,944 (V)	2,448 (H) x 2,048 (V)
Cell Size	2.2 (H) x 2.2 (V) μm	3.45 (H) x 3.45 (V) μm
Maximum Frame Rate	14 fps	35.8 fps
ADC bit width	12bits	10bits / 12bits
Sensitivity	570 Lux / 1,160 Lux	380 Lux / 1030 Lux
Exposure Time	32 μseconds to 38 seconds	27.2 μseconds to 56 seconds
Analog Gain	Analog Gain	0 to 19.2 dB
Digital Gain	x1 to x4	x1 to x2
Black Level	8bits : 0 to 15 digits	8bits : 0 to 31 digits
	10bits : 0 to 63 digits	10bits : 0 to 127 digits
	12bits : 0 to 255 digits	12bits : 0 to 511 digits
ROI	Horizontal: 32 to 2,592 pixels / Vertical: 32 to 1,944 lines Adjustable Steps for size: 4 pixels in horizontal direction / 4 lines in vertical direction Adjustable Steps for offset: 2 pixels in horizontal direction / 2 lines in vertical direction	Horizontal: 64 to 2,448 (2,432 on Packed) pixels / Vertical: 32 to 2,048 lines Adjustable Steps for image size: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
Multi ROI	One region	N/A
Binning	Horizontal: Off, 1/2, 1/4 / Vertical: Off, 1/2, 1/4	Individual x2 Horizontal, x 2 Vertical Binning / Off
Decimation	Horizontal: Off, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7 / Vertical: Off, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8	Individual x2 Horizontal, x2 Vertical Decimation / Off
Protocol	Sentech's original protocol (on Standard SDK, Trigger SDK)	USB3 Vision 1.0.1, GenICam Standard Version (SFNC 2.2, PFNC 2.0) compliant and Sentech's original protocol (on Standard SDK, Trigger SDK)
Input / Output	Two Inputs and Two Outputs	Three GPIOs, One Camera Hardware Reset
Consumption	Less than 4.0 W	Max: 3.4 W, Typ: 2.8 W
Lens Mount	CS Mount	C Mount
Weight	Approximately 38 g	Approximately 48 g

[Operation ratings]

Product discontinuation Model STC-MxA5MUSB3	Recommendable replacement Model STC-MxS500U3V
Spectral Sensitivity Characteristics STC-MBA5MUSB3 STC-MCA5MUSB3 	**Spectral Sensitivity Characteristics** Spectral Sensitivity Characteristics is different. STC-MBS500U3V STC-MCS500U3V

Specifications and prices in this product news are as of the issue date and are subject to change without notice.
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.