

# Omron Sentech USB3.0 Series

## USB3.0 Compact CMOS Camera

### Features

- Sony CMOS [Pregius] adopted cameras are lined up
- High resolution-high speed CMOS sensors adopted
- Compact, robust and easy to attach



### Product Line-Up

Model	Monochrome	STC-MBS43U3V	STC-MBE132U3V	STC-MBS163U3V	STC-MBCM200U3V	STC-MBS231U3V	STC-MBS241U3V
	Color	STC-MCS43U3V	STC-MCE132U3V	STC-MCS163U3V	STC-MCCM200U3V	STC-MCS231U3V	STC-MCS241U3V
	NIR				STC-CMB2MPOE-IR		
Resolution		0.4M	1.3M	1.6M	2M	2.3M	2.3M
Frame Rate		527.1fps	60fps	238.0fps	167fps	41.6fps	163fps
Effective Pixels		720 × 540	1280 × 1024	1440 × 1080	2048 × 1088	1920 × 1200	1920 × 1200
Sensor Size		1/2.9	1/1.8	1/2.9	2/3	1/1.2	1/1.2
Cell Size(HxV, μm)		6.9 × 6.9	5.3 × 5.3	3.45 × 3.45	5.5 × 5.5	5.86 × 5.86	5.86 × 5.86
Sensor		IMX287	EV76C560	IMX273	CMV2000	IMX249	IMX174
Lens Mount		C	CS	C	C	C	C
General Specifications		USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available

Model	Monochrome	STC-MBS312U3V	STC-MBS322U3V	STC-MBCM401U3V	STC-MBS500U3V	STC-MBS510U3V	STC-MBA5MUSB3
	Color	STC-MCS312U3V	STC-MCS322U3V	STC-MCCM401U3V	STC-MCS500U3V	STC-MCS510U3V	STC-MCA5MUSB3
	NIR			STC-MBCM401U3V-NIR			
Resolution		3.2M	3.2M	4M	5M	5M	5M
Frame Rate		56fps	121fps	89fps	35.8fps	75.7fps	14fps
Effective Pixels		2048 × 1536	2048 × 1536	2048 × 2048	2448 × 2048	2448 × 2048	2592 × 1944
Sensor Size		1/1.8	1/1.8	1	2/3	2/3	1/2.5
Cell Size (HxV, μm)		3.45 × 3.45	3.45 × 3.45	5.5 × 5.5	3.45 × 3.45	3.45 × 3.45	2.2 × 2.2
Sensor		IMX265	IMX252	CMV4000	IMX264	IMX250	MT9P031
Lens Mount		C	C	C	C	C	CS
General Specifications		USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available	Rolling Shutter, USB3.0Vision not available

Model	Monochrome	STC-MBS881U3V	STC-MBS891U3V	STC-MBS122BU3V	STC-MBS123BU3V
	Color	STC-MCS881U3V	STC-MCS891U3V	STC-MCS122BU3V	STC-MCS123BU3V
	NIR				
Resolution		8.9M	8.9M	12M	12M
Frame Rate		32.2fps	42.3fps	23.4fps	30.5fps
Effective Pixels		4096 × 2160	4096 × 2160	4096 × 3000	4096 × 3000
Sensor Size		1	1	1.1	1.1
Cell Size (HxV, μm)		3.45 × 3.45	3.45 × 3.45	3.45 × 3.45	3.45 × 3.45
Sensor		IMX267	IMX255	IMX304	IMX253
Lens Mount		C	C	C	C
General Specifications		USB3Vision Available	USB3Vision Available	USB3Vision Available	USB3Vision Available

\* 8.9M, 12M cameras may not have sufficient supply power with USB bus supply only depending on PC spec. We recommend you to use external power.

# Omron Sentech USB3.0 Series

## Accessories

Screw Lock USB3.0 Cables		
Model	Applicable Model	Specification
NU3MBASU3S-2m	All USB3.0 Cameras	2m,USB3.0 MicroB, wish camera-side fastening screws
NU3MBASU3S-3.5m	All USB3.0 Cameras	3.5m,USB3.0 MicroB, wish camera-side fastening screws
NU3MBASU3B-2m	All USB3.0 Cameras	2m,USB3.0 MicroB, wish camera-side fastening screws, robot cables
NU3MBASU3B-3.5m	All USB3.0 Cameras	3.5m,USB3.0 MicroB, wish camera-side fastening screws, robot cables

\* Please make sure that USB 3.0 cables operate correctly under your environment beforehand

CS to C-Mount Conversion Adapter		
Model	Applicable Model	Specification
CS-C-R	CS Mount Series	

Tripod Mount		
Model	Relevant Cameras	Specification
TP-JVA	Except for STC-MCE/ MBE132U3V, STC-MBA/ MCA5MUSB	

USB 3.0 4ch Frame Grabber Board		
Model	Applicable Model	Specification
USB3-4ch	USB 3.0 Camera	

\* Please make sure that USB 3.0 cameras operate correctly under your environment beforehand.

## External Connector Specification

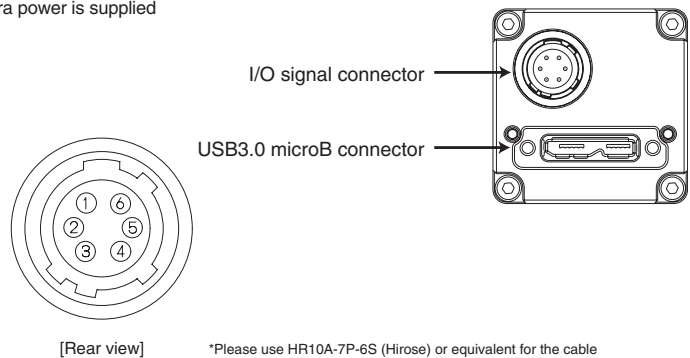
External Connectors	USB: USB3.0 MicroB type, I/O signals: HR10A-7R-6PB(Hirose) or equivalent
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- ▶ This connector is for the output signal, not for the power of the camera. The camera power is supplied in +5V from the USB cable  
It does not affect the voltage for the input signal

### Pin Assignment

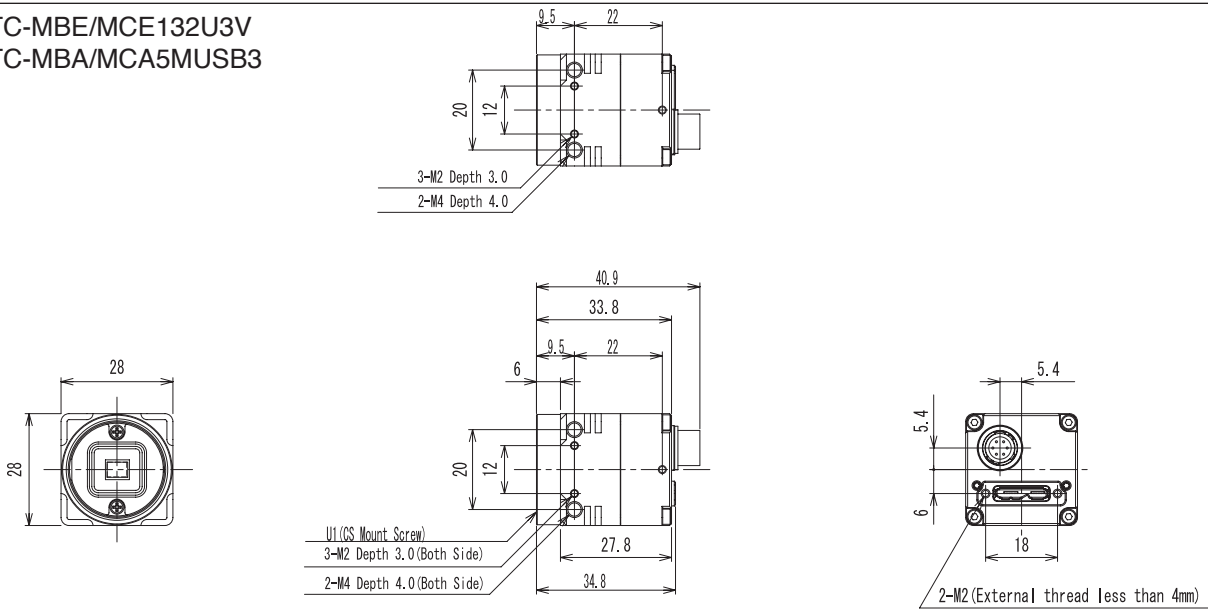
Pin No.	Signal Name	I/O	Signal Voltage	
			Low	High
1	GND for I/O signal	-	0V	
2	Output 2(IO3)	OUT	0.8V or lower	+3.3 - +24V
3	Output 1(IO2)	OUT	0.8V or lower	+3.3 - +24V
4	Input 2(IO1)	IN	0.7V or lower	+2.5 - +5V
5	Input 1(IO0)	IN	0.7V or lower	+2.5 - +5V
6	Power supply for output signal (IO_VCC)	-	+3.3 to +24 Vdc	

\*Example shown for reference

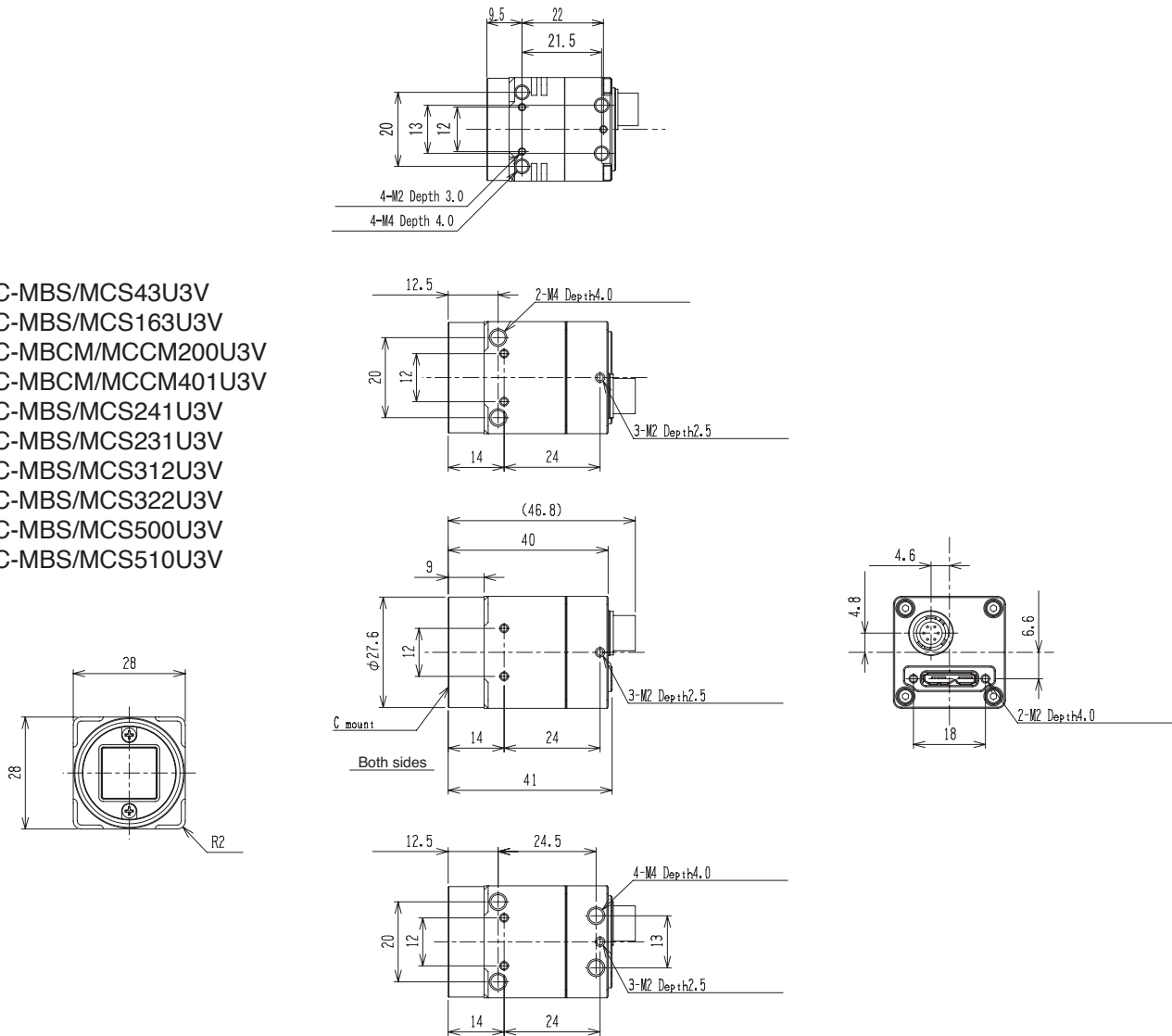


# Drawing Dimension

STC-MBE/MCE132U3V  
STC-MBA/MCA5MUSB3

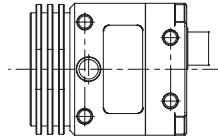
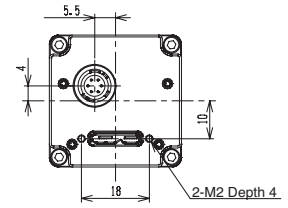
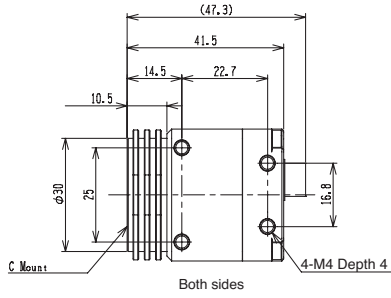
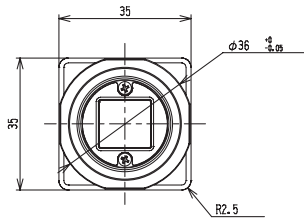
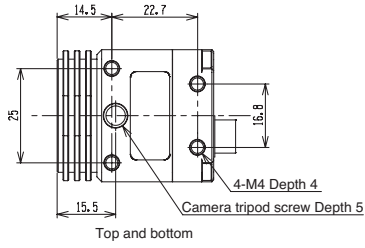
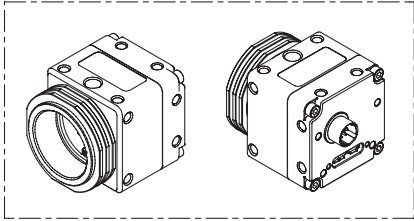


STC-MBS/MCS43U3V  
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STC-MBS/MCS241U3V  
STC-MBS/MCS231U3V  
STC-MBS/MCS312U3V  
STC-MBS/MCS322U3V  
STC-MBS/MCS500U3V  
STC-MBS/MCS510U3V



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STC-MBS/MCS881U3V  
 STC-MBS/MCS891U3V  
 STC-MBS/MCS122BU3V  
 STC-MBS/MCS123BU3V



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