

GigE Vision CMOS Model  
GigE Vision 2.1 compatible, new improved functionality

OMRON

# New Small GigE Vision Cameras

M Series

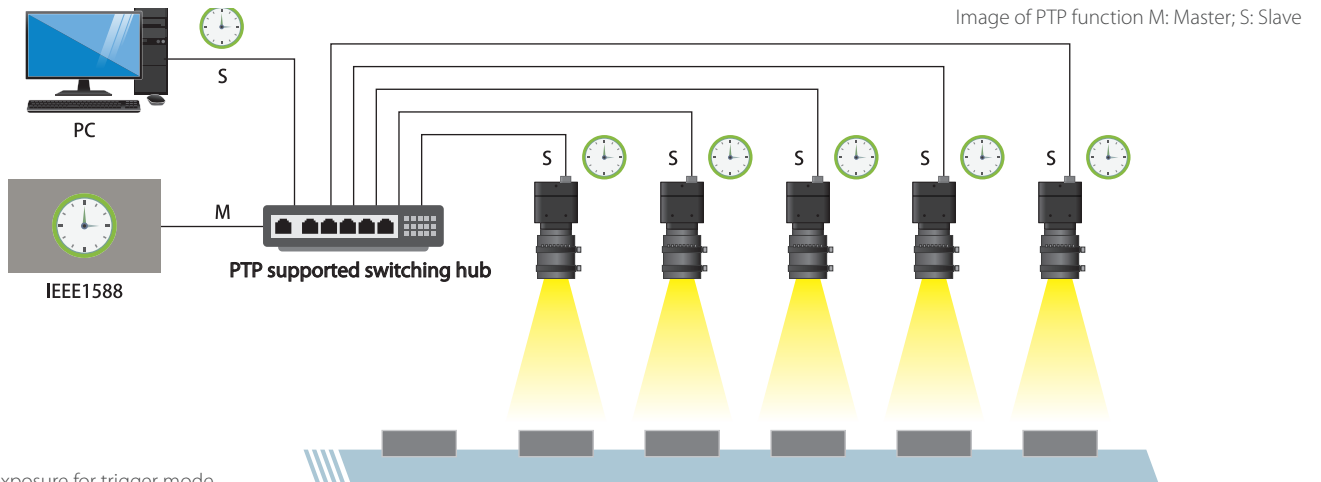


- Wide Range of Resolutions from 0.4MP to 20MP
- Small 29mm x 29mm Form Factor
- Compact size for larger sensor type

# New Functions

## PTP Function

IEEE 1588 PTP (Precision Time Protocol) is a standard for high accuracy synchronization for devices on the same network.



### Synchronizing exposure for trigger mode

When generating "Action Command", action command trigger signal is broadcasting each camera on same network, and each camera starts exposing. When "Action Command" does not include timestamp (exposure starting time), synchronized exposure is not guaranteed. (Action Command) When "Action Command" includes timestamp (exposure starting time), each camera starts exposing at same time. (Scheduled Action Command)

## UserSet

Nine UserSet's (saved set of parameters) including the factory default settings can be saved / loaded. (Factory default settings cannot be overwritten).

### Advantage

The optimal camera settings for different inspection / system setups can be loaded from multiple camera UserSets.

## Chunk Data

The camera setting information that is used for acquiring the image, also contains image data.

### Advantage

The camera settings change for next acquiring image based on camera settings information on image data, or control other devices (e.g. cooling system) in system.

## Event Control

Camera will send notification, which is event occurrence information such as exposure end, to PC using GVCP (GigE Vision Control Protocol).

## Action Control

Action command trigger signal broadcasting each camera on same network, and each camera starts exposing.

# Specifications

## Pin assignment for 6pin connector

Previous models (S series)			
No.	Signal name	In/Out	Signal Voltage
1	GND	IN	0V
2	Output 1	OUT	+3.3V Open Collector
3	Output 2	OUT	+3.3V Open Collector
4	TRG Input - Opt. Isolated -)	IN	Low: +1.0V High: +3.0 ~ +26.4V
5	TRG Input + Opt. Isolated -)	IN	* Voltage difference between "TRG input-" and "TRG input+"
6	POWER IN	IN	+10.8 to +26.4 Vdc

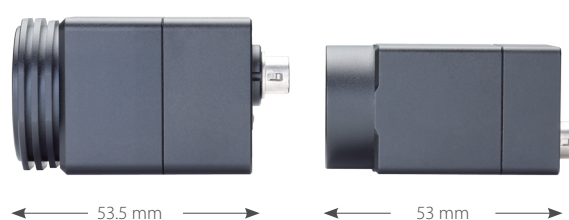
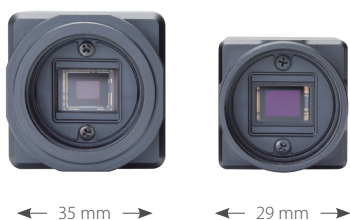
New models (M series)		
Signal name	In/Out	Signal Voltage
POWER IN	IN	+10.8 ~ +24.4 Vdc
Opt-isolated input (Line0)	IN	Low: Less than +1.0 V High: +3.0 to +26.4 V * Voltage difference between this and "opt-isolated GND"
Output 2	IN/ OUT	+3.0 ~ +26.4 V / Open Collector
Opt. Isolated output (Line1)	OUT	Open Collector
Opt. Isolated GND	IN	* Voltage difference between "TRG input-" and "TRG input+"
GND	IN	0V

## Specification differences chart

Previous models (S series)	
Dimensions	35 W x 35 H x 53.5 D mm
Camera Mounting	Top plate: Tripod x1, M4 x 4 Bottom plate: Tripod x 1, M4 x 4
Optical center accuracy	Top plate: Tripod x1, M4 x 4 Bottom plate: Tripod x 1, M4 x 4
Frame Memory	32M
Housing and GND of PCB is connected	conducting
GigE Vision	Vision 1.2
GenICam SNFC	SFNC1.4
PTP	—
Others	
Gamma	LUT control
Event	—
UserSet	1 Set
Chunk Data	—
Action	—
Number of corrective defective pixels	64

New models (M series)	
Dimensions	29 W x 29 H x 53 D mm
Camera Mounting	Top plate: M3 x 2 Bottom plate: M3 x 4
Optical center accuracy	Rotational accuracy of horizontal and vertical +/- 1.5 deg
Frame Memory	20M: 128MB, 20M: 64MB
Housing and GND of PCB is connected	isolating
GigE Vision	Vision 2.1
GenICam SNFC	SFNC2.3
PTP	o
Others	
Gamma	LUT control / GenICam
Event	o
UserSet	8 Set
Chunk Data	o
Action	o
Number of corrective defective pixels	20M: 4,096 / 12M or smaller: 2,046

## Dimensional Differences



# Product Lineup

Model No.	Resolution	Monochrome/ Color	Frame Rate	Effective Pixels	Sensor Size	Lens Mount	Sensor	General Specifications
STC-MBS43POE	0.4M	Monochrome	282.8fps	720x540	1/2.9	C	IMX287	Supported PoE
STC-MCS43POE		Color						
STC-MBS52POE	0.5M	Monochrome	166.5fps	816x624	1/1.7	C	IMX433	Supported PoE
STC-MCS52POE		Color						
STC-MBE132POE	1.3M	Monochrome	61fps	1280x1024	1/1.8	C	EV76C560	Supported PoE
STC-MCE132POE		Color						
STC-MBS163POE	1.6M	Monochrome	70.7fps	1440x1088	1/2.9	C	IMX273	Supported PoE
STC-MCS163POE		Color						
STC-MBS202POE	2M	Monochrome	54.6fps	1624x1240	1/1.7	C	IMX430	Supported PoE
STC-MCS202POE		Color						
STC-MBS231POE	2.3M	Monochrome	41.6fps	1920x1200	1/1.2	C	IMX249	Supported PoE will be released soon
STC-MCS231POE		Color						
STC-MBS312POE	3.2M	Monochrome	34.9fps	2048x1536	1/1.8	C	IMX265	Supported PoE
STC-MCS312POE		Color						
STC-MBS500POE	5M	Monochrome	21.9fps	2448x2048	2/3	C	IMX264	Supported PoE
STC-MCS500POE		Color						
STC-MBA503POE	5M	Monochrome	14fps	2592x1944	1/2.5	C	MT9P031	Supported PoE , Rolling Shutter
STC-MCA503POE		Color						
STC-MBS642POE	6.4M	Monochrome	17.4fps	3072x2048	1/1.8	C	IMX178	Supported PoE , Rolling Shutter
STC-MCS642POE		Color						
STC-MBS881POE	8.9M	Monochrome	12.4fps	4096x2160	1	C	IMX267	Supported PoE
STC-MCS881POE		Color						
STC-MBA1002POE	10M	Monochrome	10.3fps	3856x2764	1/2.3	C	MT9J003	Supported PoE , Rolling Shutter
STC-MBS1242POE	12M	Monochrome	9.2fps	4000x3000	1/1.7	C	IMX226	Supported PoE , Rolling Shutter
STC-MCS1242POE		Color						
STC-MBS122BPOE	12.3M	Monochrome	8.9fps	4096x3000	1.1	C	IMX304	Supported PoE
STC-MCS122BPOE		Color						
STC-MBS2041POE	20.4M	Monochrome	5.5fps	5472x3648	1	C	IMX183	Supported PoE , Rolling Shutter
STC-MCS2041POE		Color						

## Accessories

### Screw-fastened GigE Cables

Model No.	General Specifications
CAB-GE-03-RB	3m , robot cable , RJ45 , with camera-side fastening screws
CAB-GE-05-RB	5m , robot cable , RJ45 , with camera-side fastening screws
CAB-GE-10-RB	10m , robot cable , RJ45 , with camera-side fastening screws
CAB-GE-15-RB	15m , robot cable , RJ45 , with camera-side fastening screws

### AC adapter

Model No.	General Specifications
UN310-6P-M	6P connector , IN : 100-240Vac OUT : 12V1.A , Pin1 = +12V , Pin6 = GND

### Tripod mount

Model No.	General Specifications
TP-KWA	
TP-KWA-IEA	The optical center from bottom plate on M series , adjusts to one on S series.

### 6 pin connector cable for M series

Model No.	General Specifications
CAB-KWA-IEA	6 pin connector cable compatible with S series