

### MS-403FHS 2.13 mega pixels HD-SDI high-sensitivity color camera **Power supply superimposed!**

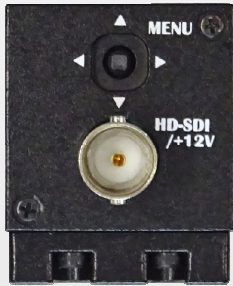
#### Key feature



- Small size at 29(H)×29(W)×29(D)mm
- Uses a 1/2.8-inch, 2.13 mega pixels, back-illuminated CMOS sensor with improved near-infrared sensitivity
- C-mount
- 1080p/30p, HD-SDI, wide dynamic range capability
- The simple picture adjustment function adjusts gamma, sharpness, and color gain
- The D-ZOOM function magnifies a portion of the screen. Magnification is from 1 to 16 times
- There are three levels of DNR to choose from
- The white point correction function corrects for white spots on the screen
- The DEFOG function is a feature to obtain clear images even in foggy or other scenes
- The long exposure function accumulates images to increase sensitivity and can accumulate up to 32 frames
- The ACE function offers three levels of contrast and brightness
- The privacy mask function hides areas on the screen that you do not want displayed
- The motion detection function outputs motion information when there is more than a certain luminance difference between frames
- The ANTI-SAT function prevents saturation in bright locations when in NIGHT mode
- DIS (Digital Image Stabilizer) the function detects image shaking caused by camera shaking and This function stabilizes image output by performing digital correction processing
- The OSD function is a function to set and display specific functions using a predetermined OSD display. Four languages (English, Japanese, Chinese, and Korean) are supported

1/2.8-inch	Back-illuminated CMOS sensor	2.13 mega pixels	Near equatorial sensitivity upward
1080p/30p	ACE	Privacy mask	DNR
DEFOG	Long time exposure	OSD	Motion detection
D-ZOOM 16x	Mirror image, Flip	Shading correction	DIS
ANTI-SAT	C-mount	29(H)×29(W)×29(D)mm	Power supply superimposition

#### External connectors



Power and video BNC connector	
Pin number	Signal name
1	VIDEO/12V
2	GND

MS - 403FHS

#### Model

Lens mount	Lens type
C : C-mount lenses	CH40 (f=4.0mm)
NM : No mount	CH60 (f=6.0mm)
	CH80 (f=8.0mm)
	CH120 (f=12.0mm)
	CH160 (f=16.0mm)
	CH250 (f=25.0mm)

CH40 (f=4.0mm)



CH40 (f=6.0mm)



CH80 (f=8.0mm)



CH120 (f=12.0mm)



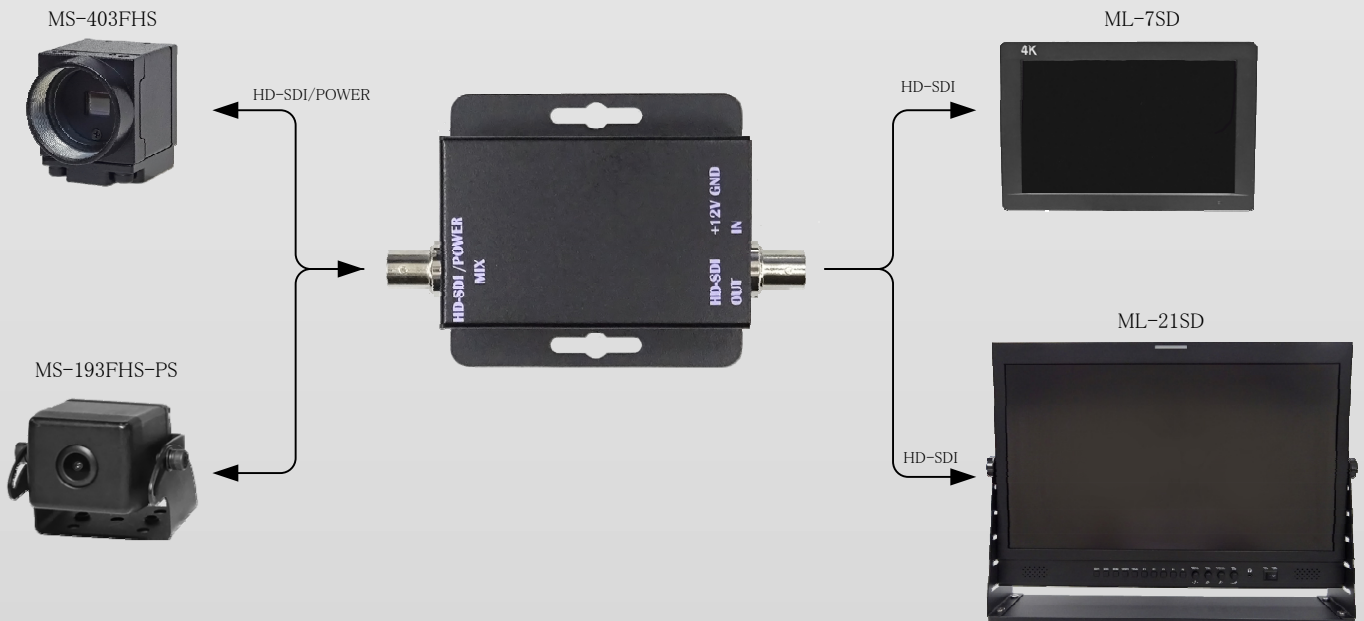
CH160 (f=16.0mm)



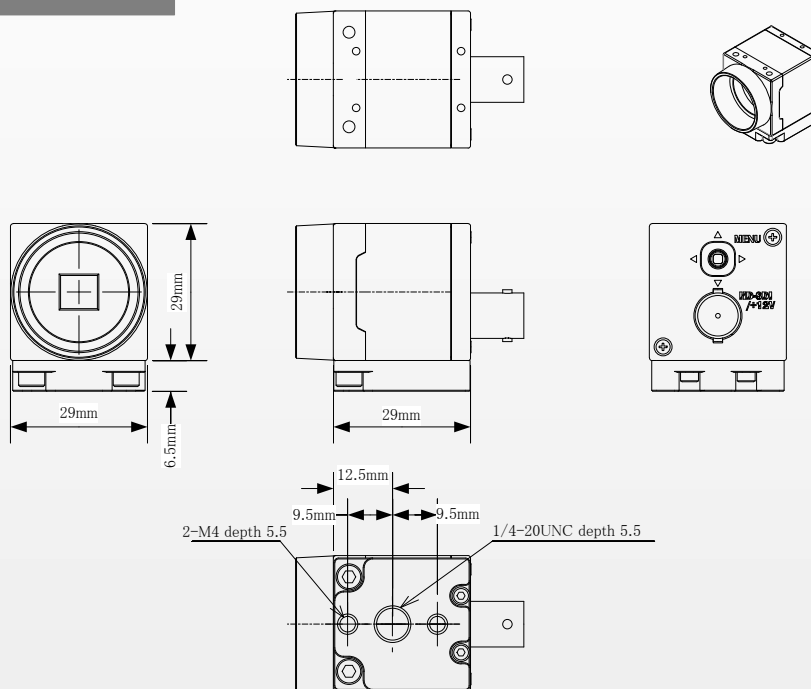
CH250 (f=25.0mm)



#### Examples showing the use



### Externals



### Specifications

Item	Specifications
Model	MS-403FHS
Image size	1/2.8-inch back-illuminated color CMOS sensor (IMX291)
Number of effective pixels	1945(H) × 1097(V)
Number of video output pixels	1920(H) × 1080(V)
Unit cell size	2.9 μm(H) × 2.9 μm(V)
Signal output	HD SDI
Scanning system	Progressive scan method
Video format	1080p/30p
Synchronizing system	Internal synchronization
S/N	46dB
Minimum illumination	0.1 Lux (1080p/30p, DAY mode, long time exposure OFF)
OSD	Set from board internal SW and CN4-11 pin
WDR	LOW, MIDDLE, HIGH
DEFOG	↓
ACE	↓
Privacy mask	BOX, POLYGON
DNR	LOW, MIDDLE, HIGH
Motion detection	DET WINDOW, SENSITIVITY, ESTIMATE
Day-night	AUTO, COLOR, B&W
DIS(Digital image stabilizer)	ON/OFF
D-ZOOM	1 to 16 times
Camera shutter	AUTO/MANUAL(×2, ×4, ×8, ×16, ×32, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/250, 1/700, 1/1000, 1/1600, 1/2500, 1/5000, 1/7000, 1/10000)
Mirror image, Flip	ON/OFF
Lens mount	C-mount
Power consumption	1.8W
Power supply	Power supply superimposition
External dimensions	29(H) × 29(W) × 29(D)mm
Weight	Approx. 160g
Operating temperature	-10°C ~ +50°C
Operating humidity	20% ~ 80%
components	Camera body, Dedicated power supply

### OSD settings

OSD standard setting		
	Feature	Summary
1	IRIS	Switching settings between electronic IRIS and mechanical IRIS
2	FOCUS ADJ	Indication of lens focus degree
3	BACKLIGHT	HLC, BLC, and WDR settings
4	DAY&NIGHT	DAY&NIGHT settings
5	COLOR	Auto and manual white balance settings
6	DNR	Digital noise reduction settings
7	IMAGE	Sharpness, gamma, mirror, zoom, ACE, DEFOG, shading, privacy mask settings
8	DIS	Settings to correct images caused by camera shake
9	MOTION	Motion detection settings
10	SYSTEM	Set camera ID, frame rate, VBS, and camera title

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