# TAMRON

Industry-First\* Embedded VC Ultra-Compact Camera Module With Unrivaled Optical Vibration-Compensation Performance



# MP1010M-VC MP1110M-VC

Image shows MP1110M-VC.

**Embedded with Industry-First\* Optical Vibration-Compensation** 

Miniature size and light-weight (a total length of 58.4 mm and a weight of 77g) Supporting 10x Optical Zoom

Compatible with 1080/60 Full HD

Versatile Miniature-Size Camera Module with Optical Vibration-Compensation

## Embedded with Industry-First\* **Optical Vibration-Compensation**

Tamron's proprietary optical vibrationcompensation employed in MP1010M-VC /MP1110M-VC suppresses the effect of vibration and assures unrivaled crisp and clear image quality; an advantage that particularly stands out in the telephoto range.

\*For MP1010M-VC, in mass-production miniature-size camera module (survey by Tamron, effective as of January, 2016)

#### [Optical Vibration-Compensation (VC) feature: Comparison of VC ON/OFF image qualities]



\*Part of image enlarged.

Optical Vibration-Compensation (VC) feature: Comparison of VC ON/OFF video qualities (sample video)

Interface

Features

Slow shutter Picture effects (Black White) Picture freeze Electronic-Flip (E-Flip) Mirror image Temperature readout Title display

Wide-D Defog

Video output (HD) Video output (SD)

Camera control interface

VC (Vibration Compensastion)

Noise reduction (3D+2D) Digital output Privacy zone masking Motion detection

URL http://www.tamron.biz/vcsample/



## Miniature size and light-weight

Ultimate small size and weight (a total length of 58.4 mm and a weight of 77g) with integrated powerful 10x optical zoom; distinctive advantage for re-using current housings or for installation in limited spaces.

# Compatible with Full HD

High image-quality camera module with video outputs compatible with 1080/60 Full HD and other video formats; powerful solution for myriad applications.

> IP1010M-VC MP1110M-VC Digital: Y/Pb/Pr 4:2:2 (LVDS)

VISCA protocol \*VISCA is a trademark of Sony Corporation.

Standard features

CVBS

### MP1010M-VC / MP1110M-VC SPEC

Camera		
	MP1010M-VC	MP1110M-VC
Image sensor (Effective number of pixels)	1/3-type CMOS (Progressive Scan) (Approx. 4,080,000 pixels)	
Pixel output	1920x1080, 1280x720	
Signal system (HD)	1080p/60, 1080p/50, 1080p/30, 1080p/25, 1080i/60,1080i/50, 720p/60, 720p/50, 720/30p, 720/25p	1080p/60, 1080p/59,94, 1080p/50, 1080p/30, 1080p/29,97, 1080p/25, 1080i/60, 1080i/59,94, 1080i/50, 720p/60, 720p/59,94, 720p/50, 720p/30, 720p/29,97, 720p/25
Signal system (SD)	-	NTSC/PAL
Minimum illumination	0.5lx (1/30sec, F1.8, 50%)	
Recommended illumination	100 lx to 100,000 lx	
S/N ratio	More than 50dB	
Gain	Auto / Manual	
Shutter speed	1/1 to 1/10,000 sec	
Sync system	Internal	
Exposure compensation	-12dB to +12dB (Total 13 steps)	
Backlight compensation	ON/OFF	
Gamma	Standard/Straight	
Aperture control	16 steps	
White balance	ATW1 (Narrow), ATW2 (Wide), One push, Manual (B, R)	
AE (Auto exposure mode)	Auto, Manual, Priority mode (shutter/iris)	
Lens	10x optical zoom f=3.3 mm (wide) to 33.0 mm (tele) F1.8 to F3.4	
Zoom mode	Standard /Variable/Direct	
Zoom movement speed (wide to tele)	1.4 sec	
Digital zoom	-	16x
Focusing system	Auto, Manual, One push, AF sensitivity	
Horizontal viewing angle (wide to tele)	58.2 degrees to 6.9 degrees	
Minimum object distance (wide to tele)	10mm to 800mm	
Horizontal resolution	800 TV lines	

#### General

Power requirement	8 V to 12 V DC	
Power consumption	Approx. 3W (Approx. 4.5W during motor operation)	
Operating temperature	-5°C to +60°C	
Storage temperature	-40°C to +60°C	
Operating humidity	20% to 80% (no condensation)	
Storage humidity	20% to 90% (no condensation)	
Dimensions (W x H x D)	31.9 x 41.5 x 58.4 mm	
Weight	Approx. 77g	



Manufacturer of precise and sophisticated optical products for a broad range of industrie

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· Product specifications, appearance and performance are subject to change without notice



#### Management on Quality and Environment

Tamron is certified with international standards: ISO 9001 for quality and ISO14001 for environmental management at its headquarters, domestic sales offices, China plant as well as three production facilities in Aomori, Japan, and is fully committed to striving for continued and sustainable improvementat all levels and facets of its business operations.