

- ✓ 1080P Full HD Image Quality
- ✓ Broadcast Class 4A Auto Control
- ✓ ISO + Low Illumination
- ✓ HDR(High Dynamic Range)
- ✓ Full Function Interfaces
- ✓ ONVIF/GB28181 Protocols

AipStar AS-M1313L 38mm WDR 1080P HD Panasonic CCTV Camera Module, bases on Ambarella S2 series of high-performance image processing engine, supports full real-time Full HD/1080P resolution, provides full function interfaces and matching solution. They are suitable for general bullet cameras, IR bullet cameras, IR dome cameras etc. User who needs full function, small, high resolution, low bit rate modules, they can provide low illumination and high cost-effective IP HD solution.

### 1080P Full HD Image Quality

This module supports Full HD/1080P (1920x1080, 30fps) HD resolution, with standard 16:9 aspect ratio, supporting 1080P + Full D1 + CVBS multiple streams resolution output. Built in gamma compensation and color enhance engine, it can provide excellent 1080P full HD video image.

### High Resolution + Low Bit Rate

This module adopts H.264 compression, based on smart-AVC, dynamic ROI etc video compression optimization techniques, with low delay, lower bit rate, at relative static scenes image can be as low as 600Kbps @1080p30, uttermost to save network bandwidth and storage space.

### Broadcast-class 4A

This series of general modules adopt broadcast class 4A auto control technology, via the auto control of White Balance, Exposure, Gain and Aperture, to provide excellent HD image quality and image color rendition.

### Micro Smart Engine

This module integrates AipStar Micro-Smart™ Engine, supports face detection, motion detection, sensor linkage alarm, boundary violation detection, regional intrusion detection, left objects detection, lens cover, flow statistics, dynamic ROI and correction for lens distortion.

### ISO + Lower Illumination

Based on ISO+ low illumination technologies, at night or at not good illumination occasions, it can still provide excellent low illumination image visible effect.

### HDR-High Dynamic Range

Based on hardware high dynamic range technology, the dynamic range can reach to 96dB. Users can recognize more image details under scenes with large ray of light contrast of brightness and darkness.

### IR LED Synchronization

With 12V DC IR LED power supply and IR LED synchronous control interfaces.

### (Smart IR) Accurate Control Function

Based on active IR LED control technology, through the ADC sampling it directly read photosensitive sensor signal, through the software to set threshold to accurately judge the current light intensity of

illumination and linkage ICR control switch and lamp light, and avoid critical state switch over and over.

### **38mm Dual-board Structure**

This module adopts glaze sensor board, 38x38mm double-layer structure, can effectively avoid the mutual interference between sensor and master chip, to ensure the stable image effect and high rate of finished products, with less late maintenance difficulty.

### **Hardware Clock and Watchdog**

This module adopts integrated hardware clock chip, to avoid recording time error led by accidental power down, at the same time the hardware watchdog can ensure the restorative of the equipment failure.

### **High Performance Ethernet Chip**

This module integrates high performance Ethernet chip, onboard network transformer, stable transmission distance can reach more than 120M.

### **Multiple Interfaces**

This module supply rich interfaces for Ethernet, Power Supply, CVBS, DC-IRIS, Two-way Audio, Alarm Input / Output, IR-Cut, RS485, SDXC and USB.

### **Interface Protection**

This module integrates Ethernet anti-static and anti-thunder, inverse power connection and short-circuit protection.

### **Rich Compatibility and Matching**

This module supplies Onvif, GB/T 28181 protocols, SDK, APP, NVR and CMS.

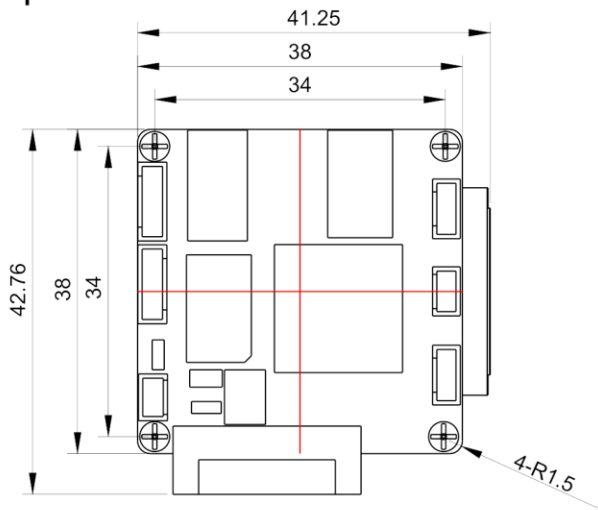
Model NO.	AS-M1313L
Name	38mm WDR 1080P HD Panasonic CCTV Camera Module
<b>Camera and Lens</b>	
Image Sensor	1/2.86" 2.36MP Panasonic Progressive Scanning CMOS
Minimum Illumination	Color:0.01Lux @ F1.2; B/W:0.005Lux @ F1.2, 0Lux with IR
Lens	Optional: M12/M14 or CS mount Megapixel Lens
Auto Iris	Support DC-iris interface DC-drive auto iris lens, P-iris lens could be optional and customized
Day & Night	Via photosensitive signal ADC sampling precisely auto control Day & Night ICR and trigger linkage to the IR LED.
Day & Night Mode	Auto/ timing/Manual/Alarm trigger
WDR	HDR-hardware high dynamic range, dynamic range is around 96dB
DNR	3D-MCTF Digital Noise Reduction
Electronic Shutter	1/10000s to 1/25s
<b>Compression Standard</b>	
Video Compression	H.264 / MJPEG
H.264 Encoding Level	Main Profile @Level 4.1, High Profile @ Level 5.1
Output Bit Rate	32 Kbps ~ 8Mbps, Smart-AVC Stream 600Kbps @1080p30
Audio Compression	G.711 / AAC / MP2
Audio Bit Rate	G.711(64Kbps) / MP2(16kHz 16bit 32kbps)
<b>Video Image</b>	
Max. Resolution	Full HD/1080P(1920x1080)
Frame Rate	25/30fps
Horizontal Resolution	>1000TVL
Multi- Streams	FHD/1080P + Full D1 + CVBS
Video Stream	support multichannel video stream output with full frame rate in maximum resolution ,frame rate and bandwidth adjustable,H.264 support VBR/CBR
Image Settings	<ul style="list-style-type: none"> <li>√ Image format , code rate , luminance, contrast , saturation, sharpness, AWB adjustable</li> <li>√ Multi-zone intelligent OSD: date, time, scene name, user-defined OSD (5 lines &amp; multi-character)</li> <li>√ Image rotation &amp; Mirror (Corridor model )</li> <li>√ Day/Night mode ( Auto/ Manual/Schedule )</li> <li>√ Support privacy zone shelter</li> <li>√ Digital WDR</li> <li>√ 3D-MCTFdigital noise reduction</li> <li>√ Latitude &amp; Longitude image mode</li> </ul>
BLC	ON/OFF
Strong light Inhibition	ON/OFF
Exposure Pattern	Dark exposure, central point exposure, average exposure, designated area exposure etc.

Intelligent Functions	
Dynamic ROI	Dynamic ROI setting, support respective setting fixed area or dynamic tracking.
Off-line Storage	via external extension interface support SDHC, TF card extension
Intelligent Alarm	Face detection, motion detection, sensor linkage alarm, boundary violation detection, regional intrusion detection, left objects detection, lens cover, flow statistics.
Others	Wide-angle lens auto correction for distortion, gamma compensation and color enhancement, a key to restore factory settings, status indicator. Anti-flicker, three streams, heartbeat, image rotation, privacy zone shelter, watermark, set access port.
Network Functions	
Protocols Supported	IPv4, TCP/IP, UDP, HTTP, DHCP, RTP/RTCP/RTSP, FTP, UPnP, DDNS, NTP, IGMP, ICMP
Compatible Protocols	ONVIF, GB/T 28181
Security	Password protect, multi-user access control
API Integration	Supply SDK, HD Live APP, NVR, inControl client-side and VMP/CMS video management center platform
Interfaces	
Video Output	1.1Vp-p±10% composite video output (RL=75Ω)
Audio Interface	linear audio input/output interface (Line In/Out), Vin MAX≤4Vp-p, Vout MAX≤2Vp-p
Communication Interface	1*RJ45 10M/100M self-adaption Ethernet port (optional PoE), integration of 8KV anti-static, anti-thunder protection) 1*RS-485 interface
Alarm Input	1 channel, low level valid, Vin≤0.3V
Alarm Output	1 channel, level signal Vout= +12V, IMAx=5mA(defaulted low level 0V)
ICR Interface	Vout=5V, 500mA>Iout>100mA
IR LED Board	12V DC
IR Synchronization	IR LED control signal input, high level valid, 0.7V<Vin<20V
Reset	Supply Fun function reset button interface
Status Indicator	Supply Status indicator light interface
Basic Parameters	
Temperature & Humidity	-20℃~60℃, humidity less than 95% (non-condensing)
Power Supply	DC12V±20% (externally connected PoE + 24V AC module), integration of lightning protection, inverse connection protection, short-circuit protection
Power Consumption	<2.1W MAX
Size (mm)	38x38mm
Optional	
ICR	*-ICR: IR-Cut dual optical filter switching mechanism, without lens mount(suitable for bullet cameras); *-ICR/M12: IR-Cut with M12 lens mount; *-ICR/CS: IR-Cut with CS lens mount.

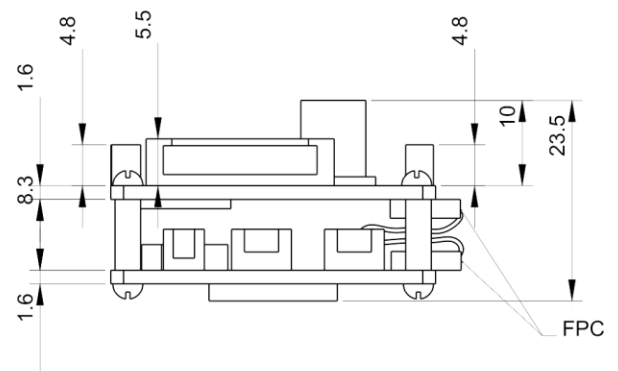
ICR Control Voltage	* standard configuration ICR control voltage is 5V
P-iris	*-PIRIS: support Customized P-iris lens, customer needs select lens.
MVF	*-MVF: motorized zoom lens drive extension interface board
SD Card	*-SD: SDHC/SDXC extension interface board
PoE/24V	*-E-24V: optional PoE + 24V AC dual power supply extension interface board
Cable	*-DWS2A1: optional single function cable (Ethernet +Power) *-DWS2A2: optional full function cable (Ethernet, Power, Audio input/output, Alarm input/output, CVBS)
Remarks	Customized Manual, WEB browser interface, Client-side interface.

### Dimension:

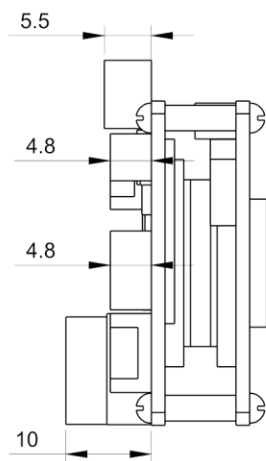
#### Upward View



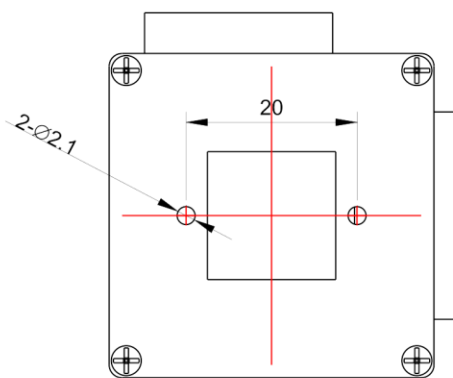
#### Front View



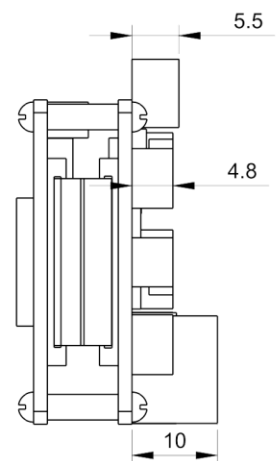
#### Left View



#### Top View



#### Right View



The product appearance design and specifications are subject to change, without prior notice, please in kind prevail.

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