

USB3.0 工业相机 YMZTP-IUA 系列

YMZTP-IUA 系列主要应用在生物医疗和工业领域,芯片尺寸横跨 1/2.8"~1.1",分辨率覆盖从 1.7M-45MP。该系列相机采用 USB3.0 接口,快速实时传输非压缩图像的图像采集设备,支持通过客户端软件进行图像数据采集和参数设置(如工作模式、图像参数调节等)。支持外触发,内置硬件 ISP 图像处理引擎,确保色彩还原度与相机速度。



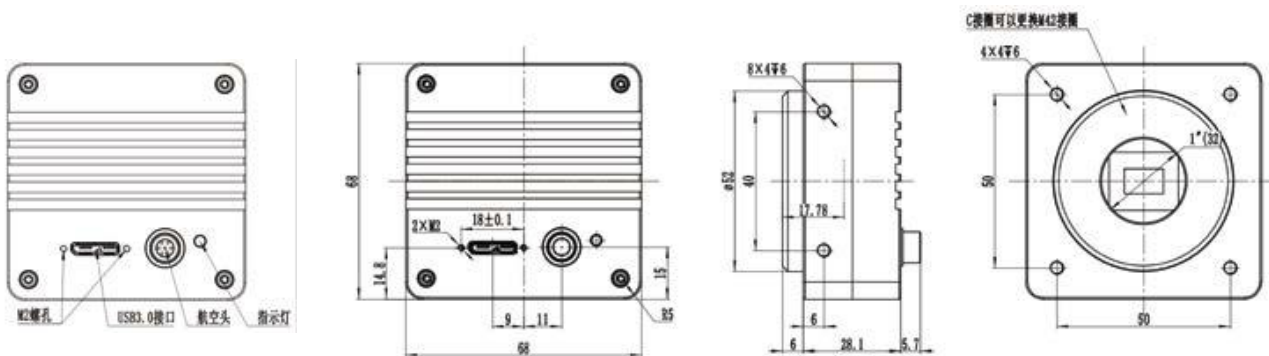
YMZTP-IUA 系列

产品特性

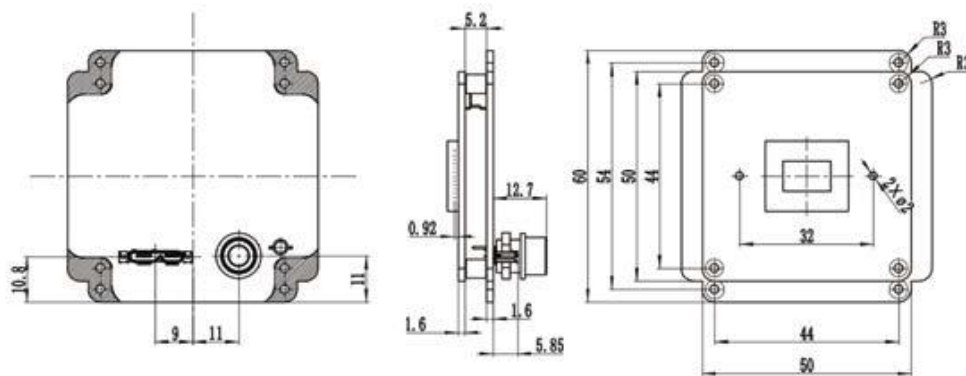
Sony 背照式 CMOS 传感器	高速 USB3.0 接口,传输速度高达 5Gbits/s
支持硬触发、软触发、自由运行模式	符合 CE、FCC、RoHS 认证
支持 ROI、翻转、位深度切换等功能	提供高级视频与图像处理应用软件
支持固件现场升级	提供 Win32/WinRT/Linux/macOS/Android 多平台 SDK

相机接口及外观尺寸

YMZTP-IUA 整机尺寸(单位: mm)



YMZTP-IUA 裸板尺寸(单位: mm)



规格参数

型号	传感器/尺寸	像元 (μm)	G 光灵敏度 动态范围 信噪比	帧速/分辨率	Binning	曝光范围
YMZTP-IUA287M	0.4M/IMX287LLR(M,GS) 1/2.9" (4.97x3.73)	6.9	7320mv with 1/30s 0.76mv with 1/30s	101.5fps@720x540	1x1	6us~15s
YMZTP-IUA426M	0.5M/IMX426LLJ(M,GS) 1/1.7" (7.2x5.58)	9.0	8100mv with 1/30s 0.3mv with 1/30s	79.8fps@800x620	1x1	6us~15s
YMZTP-IUA433M	0.5M/IMX433LLJ(M,GS) 1/1.7" (7.2x5.58)	9.0	8100mv with 1/30s 0.3mv with 1/30s	79.8fps@800x620	1x1	6us~15s
YMZTP-IUA273M	1.5M/IMX273LLR(C,GS) 1/2.9" (4.97x3.73)	3.45	1830mv with 1/30s 0.15mv with 1/30s	235fps@1440x1080 523fps@720x540	1x1 1x1	15us~15s
YMZTP-IUA273C	1.5M/IMX273LQR(C,GS) 1/2.9" (4.97x3.73)	3.45	1146mv with 1/30s 0.15mv with 1/30s	235fps@1440x1080 523fps@720x540	1x1 1x1	15us~15s
YMZTP-IUA432M	1.7M/IMX432LLJ(M,GS) 1.1" (14.4x9.9)	9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6fps@1600x1100	1x1	6us~15s
YMZTP-IUA432C	1.7M/IMX432LQJ(C,GS) 1.1" (14.4x9.9)	9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6fps@1600x1100	1x1	6us~15s
YMZTP-IUA174M	2.3M/IMX174LLJ(M,GS) 1/1.2" (11.25x7.03)	5.86	1650mv with 1/30s 0.15mv with 1/30s	164.5fps@1920x1200	1x1	15us~15s
YMZTP-IUA174C	2.3M/IMX174LQJ(C,GS) 1/1.2" (11.25x7.03)	5.86	1016mv with 1/30s 0.15mv with 1/30s	164.5fps@1920x1200	1x1	15us~15s
YMZTP-IUA249M	2.3M/IMX249LLJ(M,GS) 1/1.2" (11.25x7.03)	5.86	1650mv with 1/30s 0.15mv with 1/30s	30fps@1920x1200	1x1	42us~15s
YMZTP-IUA249C	2.3M/IMX249LQJ(C,GS) 1/1.2" (11.25x7.03)	5.86	1016mv with 1/30s 0.15mv with 1/30s	30fps@1920x1200	1x1	42us~15s
YMZTP-IUA421M	2.8M/IMX421LLJ(M,GS) 2/3" (8.71x6.59)	4.5	3354mv with 1/30s 0.15mv with 1/30s	121fps@1936x1464 425fps@968x732	1x1 1x1	6us~15s
YMZTP-IUA421C	2.8M/IMX421LQJ(C,GS) 2/3" (8.71x6.59)	4.5	2058mv with 1/30s 0.15mv with 1/30s	121fps@1936x1464 425fps@968x732	1x1 1x1	6us~15s
YMZTP-IUA264M	5.0M/IMX264LLR(M,GS) 2/3" (8.45x7.07)	3.45	1830mv with 1/30s 0.15mv with 1/30s	35.6fps@2448x2048 87.6fps@1224x1024	1x1 1x1	15us~15s
YMZTP-IUA264C	5.0M/IMX264LQR(C,GS) 2/3" (8.45x7.07)	3.45	1146mv with 1/30s 0.15mv with 1/30s	35.6fps@2448x2048 87.6fps@1224x1024	1x1 1x1	15us~15s
YMZTP-IUA547M	5.1M/IMX547-AAMJ-C(M,GS) 1/1.8" (6.71x5.61)	2.74	2252mv with 1/30s 0.15mv with 1/30s	63fps@2448x2048 208.4fps@1224x1024	1x1 2x2	30us~15s
YMZTP-IUA547C	5.1M/IMX547-AAQJ-C(C,GS) 1/1.8" (6.71x5.61)	2.74	1337mv with 1/30s 0.15mv with 1/30s	63fps@2448x2048 159fps@1224x1024	1x1 2x2	30us~15s
YMZTP-IUA178M	6.3M/IMX178LLJ(M,RS) 1/1.8" (7.37x4.92)	2.4	760mv with 1/30s 0.15mv with 1/30s	59.9fps@3072x2048 59.9fps@1536x1024	1x1 2x2	17us~15s
YMZTP-IUA178C	6.3M/IMX178LQJ(C,RS) 1/1.8" (7.37x4.92)	2.4	425mv with 1/30s 0.15mv with 1/30s	59.8fps@3072x2048 59.5fps@1536x1024	1x1 2x2	17us~15s

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YMZTP-IUA428M	7.1M/IMX428LJ(M,GS) 1.1" (14.4x9.9)	4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3fps@3200x2200 133.8fps@1584x1100	1x1 1x1	6us~15s
YMZTP-IUA428C	7.1M/IMX428LQJ(C,GS) 1.1" (14.4x9.9)	4.5	2058mv with 1/30s 0.15mv with 1/30s	51.4fps@3200x2200 133.8fps@1584x1100	1x1 1x1	6us~15s
YMZTP-IUA485C	8.3M/IMX485LQJ-C(C,RS) 1/1.2" (11.14x6.26)	2.9	2188mv with 1/30s 0.15mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
YMZTP-IUA585C	8.3M/IMX585-AAQJ1-C (C,RS) 1/1.2" (11.14x6.26)	2.9	5970mv with 1/30s 0.13mvwith 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
YMZTP-IUA545M	12.3M/IMX545-AAMJ-C (M,GS) 1.1"(11.22x8.22)	2.74	2252mv with 1/30s 0.15mv with 1/30s	28,2fps@4096x3000 100.9fps@2048x1500 100.9fps@1024x750	1x1 2x2 4x4	30us~15s
YMZTP-IUA545C	12.3M/IMX545-AAQJ-C (C,GS) 1.1"(11.22x8.22)	2.74	1337mv with 1/30s 0.15mv with 1/30s	28,2fps@4096x3000 100.9fps@2048x1500 100.9fps@1024x750	1x1 2x2 4x4	30us~15s
YMZTP-IUA183M	20.0M/IMX183CLK(M,RS) 1" (13.06x8.84)	2.4	777mv with 1/30s 0.2mv with 1/30s	19.0fps@5440x3684 49.9fps@2736x1824 59.5fps@1824x1216	1x1 2x2 3x3	53us~15s
YMZTP-IUA183C	20.0M/IMX183CQK(C,RS) 1" (13.06x8.84)	2.4	462mv with 1/30s 0.2mv with 1/30s	19.0fps@5440x3684 48.8fps@2736x1824 59.4fps@1824x1216	1x1 2x2 3x3	53us~15s
YMZTP-IUA541M	20.4M/IMX541-AAMJ-C (M,GS) 1.1" (12.32x12.32)	2.74	2649mv with 1/30s 0.15mv with 1/30s	17.5fps@4496x4496 64.4fps@2240x2240 64.4fps@1120x1120	1x1 2x2 4x4	30us~15s
YMZTP-IUA541C	20.4M/IMX541-AAQJ-C (C,GS) 1.1" (12.32x12.32)	2.74	1574mv with 1/30s 0.15mv with 1/30s	17.5fps@4496x4496 64.4fps@2240x2240 64.4fps@1120x1120	1x1 2x2 4x4	30us~15s
YMZTP-IUA492M	45M/IMX492(M) 4/3" (19.11x13.00)	2.315	176mv with 1/30s 0.03mv with 1/30s	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720	1x1(3:2) 2x2(3:2) 1x1(4:3) 2x2(4:3) 1x1(17:9) 2x2(17:9) 3x3(17:9) 4x4(17:9)	0.1ms~15s
特别波段 (UV, NIR)						
YMZTP-IUA462R	2.1M/IMX462LQR (C,RS,NIR) 1/2.8" (5.57x3.13)	2.9	2376mv with 1/30s 0.15mv with 1/30s	120.3fps@1920x1080	1x1	11us~15s

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YMZTP-IUA464R	4.1M/IMX464LQR(C,RS,NIR) 1/1.8" (7.8x4.41)	2.9	2376mv with 1/30s 0.15mv with 1/30s	90fps@2688 x 1520	1x1	11us~15s
YMZTP-IUAG1605 UV	0.5M/GLUX1605BSI (M,UV,RS) 1"(12.8x9.6)	16	6.4x108 (e-/((W/m2).s)) QE91%@550nm 50(e-/s/pix)	60fps@800x600 60fps@400x300	1x1 2x2	27us~60s
YMZTP-IUAG9701 UV	1.3M/GLUX9701BSI (M,UV,RS) 1"(12.49x9.99)	9.76	2.57x108 (e-/((W/m2).s)) QE89%@610nm 1140(e-/s/pix)	30fps@1280x1024 30fps@640x512	1x1 2x2	63us~60s
YMZTP-IUAG2020 R	4.2M/GSENSE2020e (M,NIR,RS) 1.2"(13.31x13.31)	6.5	8.1x107 (e-/((W/m2).s)) QE73%@595nm 13(e-/s/pix)	45fps@2048x2048 45fps@1024x1024	1x1 2x2	21us~60s
YMZTP-IUAG2020 UV	4.2M/GSENSE2020BSI (M,UV,RS) 1.2"(13.31x13.31)	6.5	1.1x108 (e-/((W/m2).s)) QE93.7%@550nm 80(e-/s/pix)	32fps@2048x2048 32fps@1024x1024	1x1 2x2	21us~60s
YMZTP-IUAG400 UV	4.2M/GSENSE400BSI (M,UV,RS) 2.0"(22.53x22.53)	11.0	3.25x108 (e-/((W/m2).s)) QE95.3%@560nm 345(e-/s/pix)	37fps@2048x2048 37fps@1024x1024	1x1 2x2	21us~60s
YMZTP-IUA487U V	8.0M/IMX487-AAMJ (M,UV,GS) 2/3" (7.78x7.78)	2.74	145mv with 1/30s 0.15mv with 1/30s	45fps@2840x2840 198fps@1420x1420	1x1 2x2	30us~15s

电源和 IO 接口定义

	颜色	管脚	信号	信号描述说明
	白色	1	GND	非隔离信号及电源地
	红色	2	12V	12V DC 电源输入或输出
	蓝色	3	OPTO_GND	光耦隔离信号地
	黄色	4	DIR_GPIO0	非隔离信号（软件可配置输入/输出）（line2）
	黑色	5	DIR_GPIO1	非隔离信号（软件可配置输入/输出）（line3）
	绿色	6	OPTO_IN	光耦隔离输入信号（line0）
	粉色	7	OPTO_OUT	光耦隔离输出信号（line1）

