Allied Vision

Manta
G-040

- Sony IMX287 CMOS sensor
- Power over Ethernet option
- Angled-head and board level variants
- Video-iris lens control

简化多相机应用设置

搭载千兆网接口的模块化机器视觉相机

Manta G-040 搭载 Sony IMX287 传感器，在 286.3MP 分辨率下速度可达 0.4 帧/秒。

Manta 是 Allied Vision 用途最广泛的千兆网口相机系列。该系列相机可提供最丰富的图像传感器选项，并且凭借先进的功能组合简化了多相机应用设置。模块化硬件概念更是让 Manta 相机可提供近乎无限的配置选择，以灵活满足各种应用的需求。

Easy software integration with Allied Vision's Vimba Suite and compatibility to the most popular third party image-processing libraries.
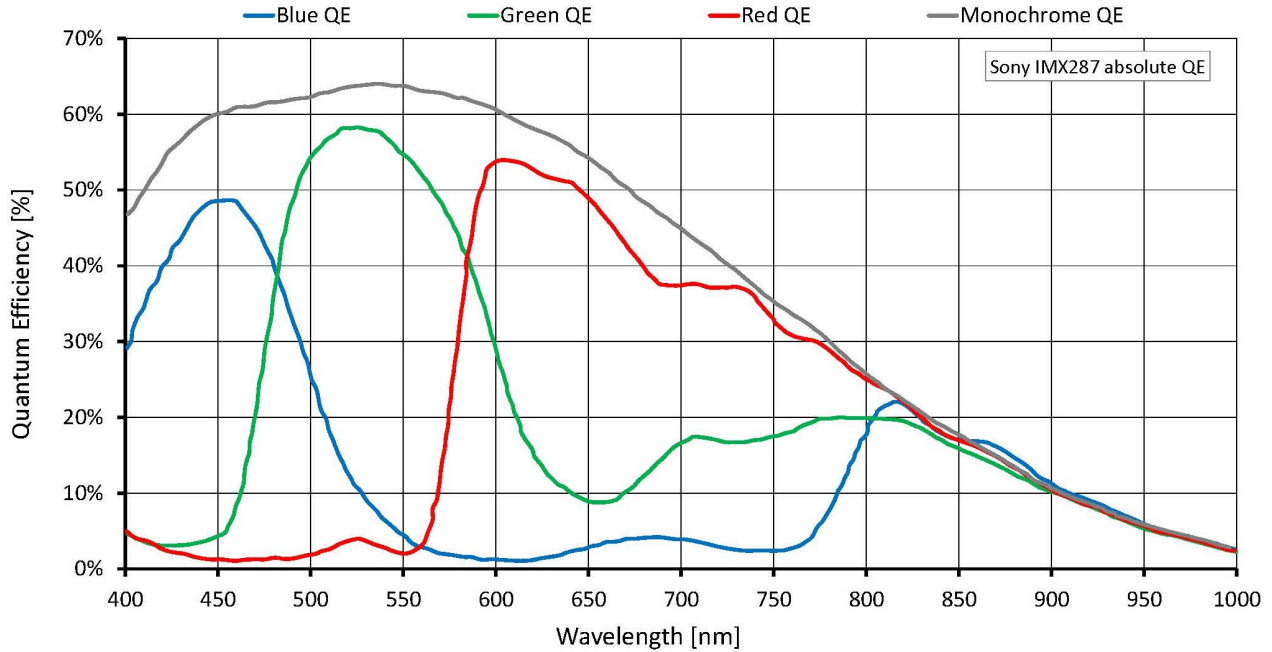
See the Modular Concept for lens mount, housing variants, optical filters, case design, and other modular options. See the Customization and OEM Solutions webpage for additional options.

性能参数

Manta G-040	
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
分辨率	728 (H) × 544 (V)
传感器	Sony IMX287
传感器类型	CMOS
快门种类	Global shutter
传感器尺寸	Type 1/2.9
像元尺寸	6.9 μm × 6.9 μm
Lens mounts (available)	C-Mount, CS-Mount, S-Mount

Manta G-040	
最大满帧帧率	286.3 fps
ADC	12 Bit
缓存 (RAM)	128 MByte
非易失性内存 (Flash)	1024 KByte (for selected models only)
成像性能	

成像性能数据是基于欧洲机器视觉协会（EMVA）1288 发布的 3.1 版图像传感器和像机特征描述标准中的评估方法。测量值是在没有光学滤波片的全分辨率下，测量单色模型的典型值。请联系销售或工程师了解更多信息。

在波长为 529nm 下，量子转换效率	64 %
暗噪声	3.1 e^-
饱和电子数	20800 e^-
动态范围	74.4 dB
绝对灵敏度阈值	4.0 e^-
输出	
Bit 位数	8-12 Bit
黑白像素格式	Mono8, Mono12Packed, Mono12
YUV 彩色像素格式	YUV411Packed, YUV422Packed, YUV444Packed
RGB 彩色像素格式	RGB8Packed, BGR8Packed
原始像素格式	BayerRG8, BayerRG12, BayerRG12Packed
通用输入输出口 (GPIOs)	
光耦 I/Os	2 inputs, 2 outputs
RS232	1
工作条件/尺寸	
工作温度	+5 °C to +45 °C ambient (without condensation)
电源要求 (DC)	8 to 30 VDC AUX or IEEE 802.3af PoE
功耗	External power: 2.77 W at 12 VDC | Power over Ethernet: 3.23 W
重量	190 g; 200 g (PoE models)
尺寸 (L × W × H in mm)	86.34 × 44 × 29 (including connectors)
符合规范	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-3 (B)

量子转换效率

特性

Image optimization features:

- Auto gain (manual gain control: 0 to 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-040C only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (G-040C only)
- Decimation
- Gamma correction
- Three look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

Camera control features:

Auto-iris (video type)

Event channel

Image chunk data

IEEE 1588 Precision Time Protocol

Storable user sets

StreamBytesPerSecond (easy bandwidth control)
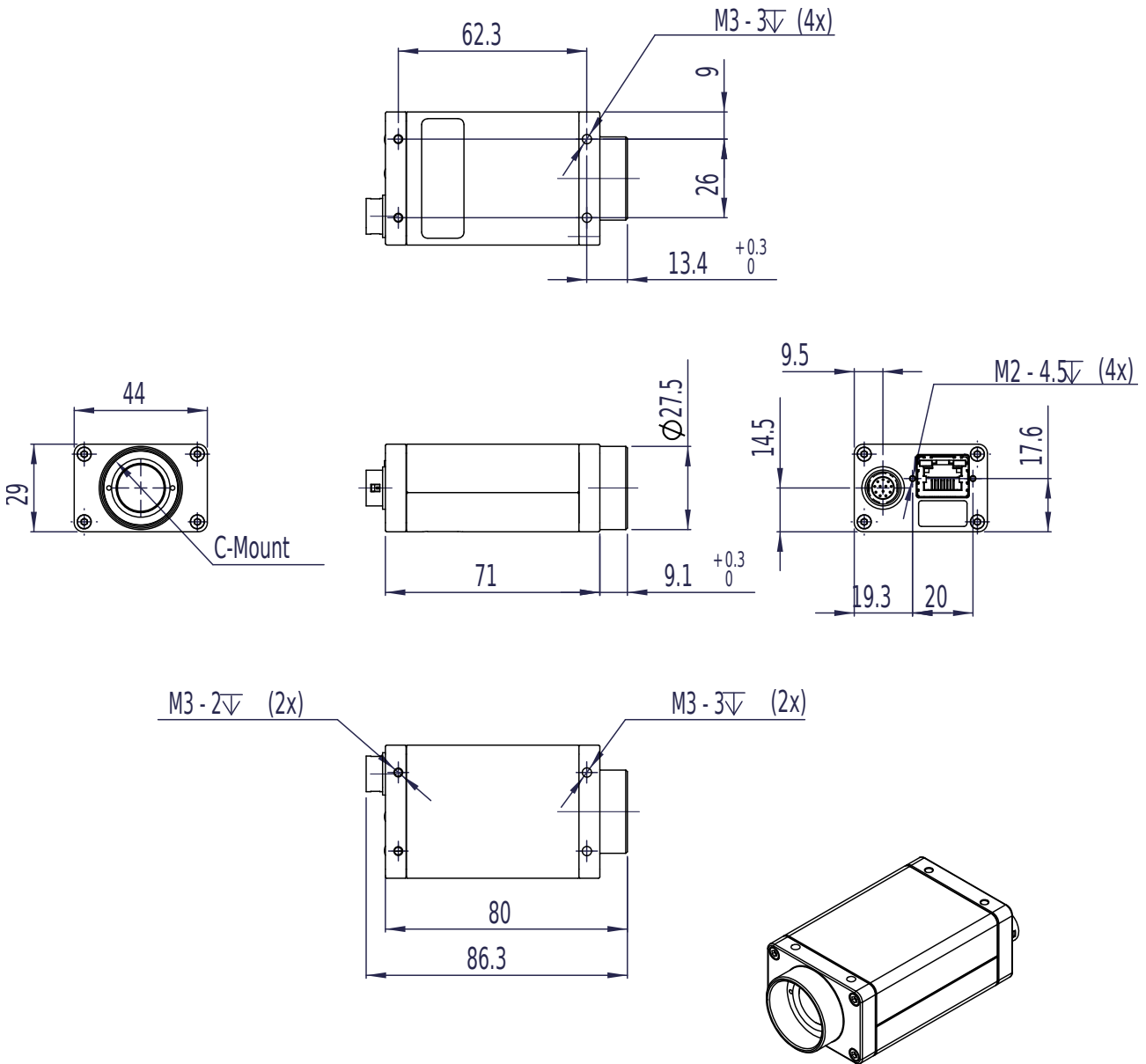
Stream hold

Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO

Temperature monitoring (main board)

Trigger over Ethernet (ToE) Action Commands

Non-volatile memory 1024 KByte (for selected models only)

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外形尺寸

应用场景

The Manta G-040 is the perfect model for industrial applications that require accurate imaging of fast-moving subjects. Equipped with a Pregius global shutter function, the camera provides high-quality image capture that is not affected by focal plane distortion or flash bands. The Sony IMX287's 6.9 μm x 6.9 μm pixel size achieves sensitivity four times that of the IMX273. This means that the same

sensor output can be obtained with a shorter shutter time, making it possible to increase inspection speeds in factories. In addition, high sensitivity is achieved even in the near-infrared wavelength band that generally has low quantum efficiency, thereby realizing superior performance.

Manta G-040 is ideal for a wide range of applications including:

- Machine Vision

- Industrial inspection

- Security and surveillance

- Intelligent traffic solutions (ITS) including traffic monitoring, speed enforcement, and toll collection

- Low light and/or high sensitivity conditions

- Outdoor applications with dynamic lighting situations