



Alecs G1-1242 innovative vision system with Sony IMX545 CMOS global shutter sensor and NVIDIA® Jetson Orin™ NX16 enables developing applications faster. The NVIDIA® Jetson Orin™ NX16 embedded board provides 16 GByte RAM, with power modes up to 25 W. Embedded technologies enable advanced AI models and compute-intensive edge detection: Deep Learning Accelerator (DLA) with dedicated cores offloads the hosts' CPU and GPU and Programmable Vision Accelerator (PVA) with dedicated cores extends the Alvim BSP feature set by NVIDIA vision libraries. Alecs G1 comes with 128 GByte NVMe storage, providing sufficient space for AI models, datasets, and application software.

常规

型号	Alecs G1-1242 NX16
产品系列	Alecs
状态	Available

传感器

传感器类型	Area scan
色度	Color, Mono
光谱	Visible
光谱范围	300 nm to 1100 nm
分辨率	4,128 × 3,008 (12.40 MP)
传感器型号	Sony IMX545
传感器架构 (材料)	cmos
快门类型	Global shutter (GS)
传感器尺寸	11.3 × 8.2 mm (14 mm, Type 1/1.1)
像素尺寸	2.74 μm × 2.74 μm

像素格式

传感器位深度	12-bit
单色像素格式	GREY, RAW10, RAW12, RAW8, Y10, Y12

像素格式

YUV像素格式	UYVY, YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr, YUV422 8-bit
RGB像素格式	BGR8, RGB3, RGB8 (default), RGB888 (default)
拜耳像素格式	BayerRG12

成像性能

量子效率 @ 529 nm	68 %
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时序与增益

最大帧率	40 fps
曝光时间	11 μ s to 10 s
增益	0.0 dB to 48.0 dB

I/O与电源

非电气隔离IO	2 inputs, 2 outputs, 1 trigger input, 1 strobe output
电源供应	24 VDC
功耗	SoM: Max. 10 W to 25 W Carrier board: Max. 2.0 W Camera: Max. 3.2 W Idle state: 8.5 W

工作条件

工作温度 (外壳)	-20 °C to 65 °C ((housing))
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机械特性

机身尺寸 (L x W x H mm)	102 × 72 × 112
镜头接口	C-Mount
重量	810 g

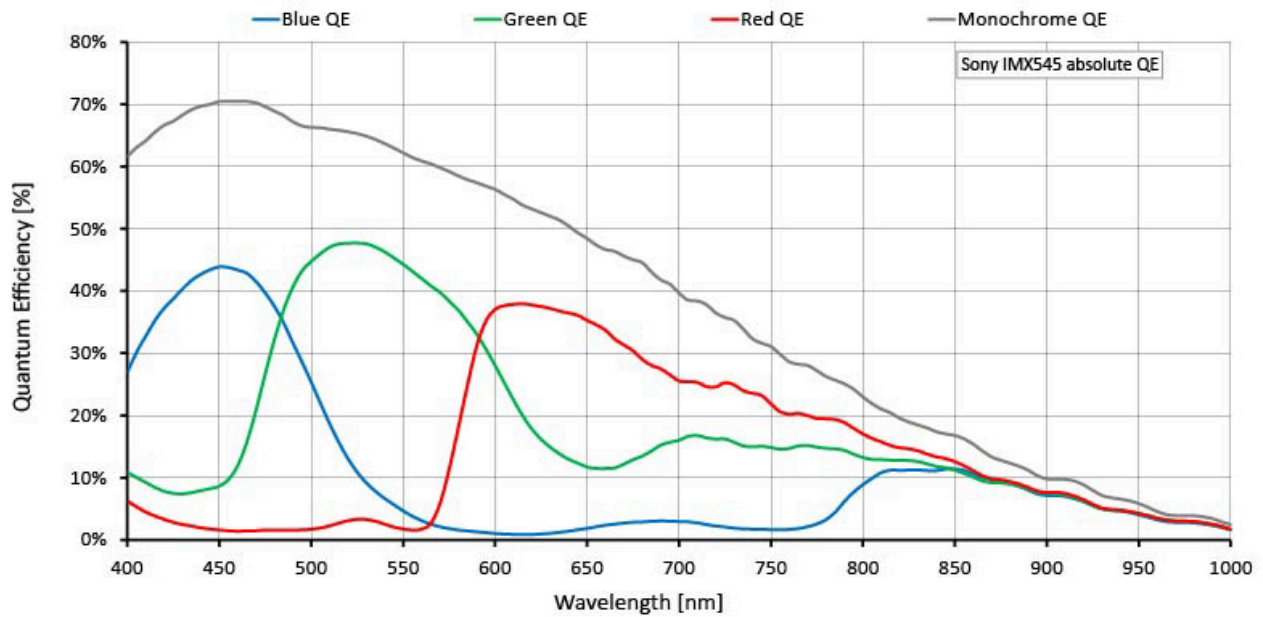
板载内存与FPGA

图像缓存 (RAM)	256 KByte
非易失性存储器 (闪存)	1024 KByte

接口

数字接口	IEEE 802.3 1000BASE-T
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Quantum Efficiency



Technical Drawing

Alecs Main Housing with Lens Tube LT4649

