

MAT821

MetaSilicon MAT Series CMOS Image Sensor For Automotive Applications

MAT821是一款面向车载视觉应用的具备超高动态范围、高帧率、高感度等特点的车规级CMOS图像传感器产品。产品搭载LED闪烁抑制功能，可适配车载ADAS前视、周视、后视、舱内乘员监控系统(OMS)摄像头以及E-Mirror电子后视镜等应用。

MAT821采用Stack BSI工艺，遵循AEC-Q100 Grade 2、ISO 21434汽车网络安全及ISO 26262 ASIL-B功能安全标准设计，在元视芯自研的优化LOFIC HDR技术及MTHDR®技术支持下，能够实现140dB的超高动态范围。此外，产品支持RAW格式输出，并可提供iBGA和COB两种封装形式。

Item	Parameters
Resolution	8.0MP
Process	Stack BSI
Pixel Size	2.1μm × 2.1μm
Pixel Array	3840H × 2160V
Optical Format	1/1.7 inch
Max Frame Rate	60fps @3840 × 2160
Output Format	RAW
Output Interface	CSI-2 MIPI: MIPI 4-Lane, Max 1.0GHz
CRA	18°
Dynamic Range	140dB
Operation Temperature	-40°C ~ +105°C
Power Supply	Analog: 2.8V @AVDD Digital: 1.2V @DVDD IO: 1.8V @DOVDD
Package	iBGA / COB / RW

CMOS IMAGE SENSOR



MAT Series: MAT821

Features

- 符合AEC-Q100 Grade 2
- 符合ISO 26262 功能安全 ASIL-B
- ISO 21434 汽车网络安全
- 140dB高动态范围
- 60fps @3840 × 2160 高帧率影像输出
- 具备LFM（LED闪烁抑制）功能
- 支持外部帧同步控制
- 高感度

Applications

- 车载ADAS前视、周视、后视
- 舱内乘员监控系统(OMS)
- 电子后视镜（CMS）应用

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MetaSilicon MAT Series CMOS Image Sensor For Automotive Applications

MAT821 is an automotive grade CMOS image sensor product featuring ultra-high dynamic range (HDR), high frame rates, and high sensitivity for automotive vision applications. Equipped with LED Flicker Mitigation (LFM), it is ideally suited for automotive applications including ADAS front-view, surround-view, rear-view, Occupant Monitoring Systems (OMS), and E-Mirror systems.

Built on Stacked BSI architecture, the MAT821 meets the stringent requirements of AEC-Q100 Grade 2, ISO 21434, and ISO 26262 ASIL-B. Leveraging MetaSilicon's proprietary LOFIC HDR and MTHDR® technologies, it delivers an exceptional 140dB ultra-high dynamic range. The sensor supports RAW output and offers flexible packaging options including iBGA and COB.

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Features

- ✓ AEC-Q100 Grade 2
- ✓ ISO 26262 ASIL-B
- ✓ ISO 21434
- ✓ 140dB high dynamic range
- ✓ 60fps @3840×2160 high frame rate video output
- ✓ LED flicker suppression
- ✓ High sensitivity

Applications

- ✓ ADAS front-view, surround-view, rear-view
- ✓ Occupant Monitoring Systems (OMS)
- ✓ E-Mirror