

## Benefits

### 1. Real-Time Performance

Mali-C78AE can support up to 4 real-time or up to 16 virtual cameras of varying types, and offers a wide range of data output formats. This provides the flexibility to support both human and machine vision applications, such as production line monitoring, quality control, and ADAS camera systems.

### 2. Safety Features

Mali-C78AE has built-in features to achieve ASIL B/SIL 2 diagnostic requirements and ASIL D/SIL 3 for the avoidance of systematic failure. It enables safe-vision use cases, such as ADAS or industrial mobile robotics.

## Overview

Arm Mali camera image signal processors (ISPs) deliver the highest image quality in the Mali family of processors for embedded and automotive applications.

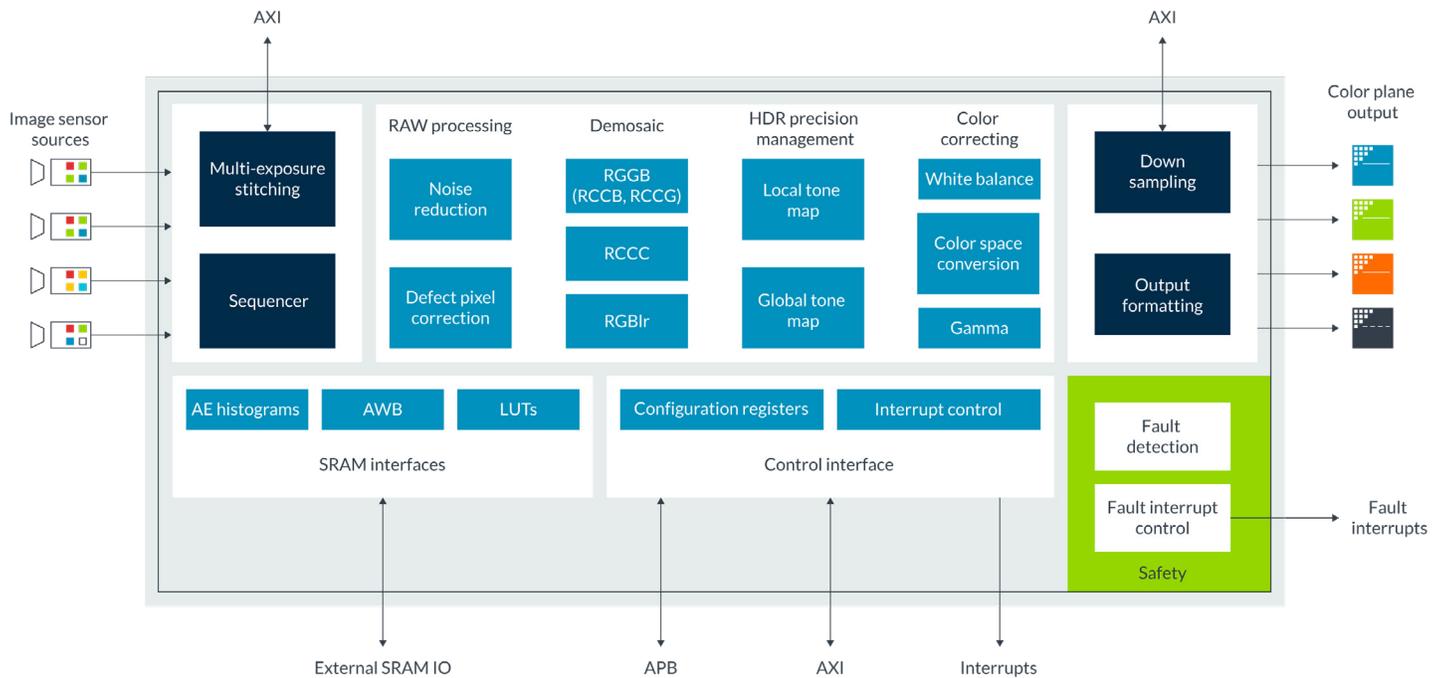
Mali-C78AE is designed for use in combined ADAS and surround-view applications that share cameras for both functions, and contains a range of image quality enhancements for display applications.

Mali-C78AE supports functional safety hardware integrity requirements up to SIL2 and ASIL-B for a variety of applications, from all-round vehicle awareness, surround-view, mirror replacement, and night vision improvement, through to industrial mobile robotics.

## Safety Ready

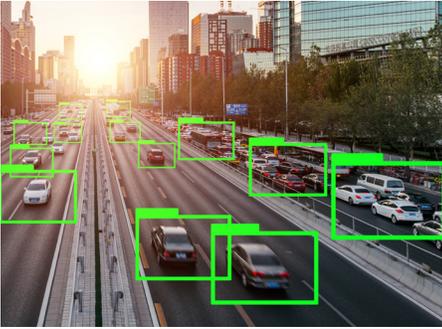
Mali-C78AE provides real-time safety features for functional safety applications and supports automotive vision systems needing to achieve ISO 26262 ASIL B diagnostic requirements in a variety of applications. These safety features also allow Mali-C78AE to achieve IEC 61508 SIL 2 diagnostic requirements in a range of industrial applications, such as mobile robotics and factory automation.





## Specifications

Camera support:	Up to 18Mpix max resolution (5696 x 3328)
Image sensor support:	RGGB, RCCB, RCGG, RYYCyan Up to 4:1 HDR exposure combination
Multi-channel input support:	Up to 4 real-time camera inputs Memory-to-memory processing mode for up to 16 virtual camera inputs
Performance:	Up to 1.2 Gigapixels/second throughput



## Related Products

### Cortex-A78AE

With the flexibility to run different workloads concurrently and a 30% performance uplift compared to its predecessor, Cortex-A78AE offers the scalable, heterogeneous compute required for complex automated driving and industrial autonomous systems.

### Mali-G78AE

Mali-G78AE is a highly scalable GPU that enables configurable workload separation and virtualization. Mali-G78AE is designed to the IEC 61508 and ISO 26262 safety standards for industrial and automotive applications respectively and is ASIL B SIL-2 safety-capable.

### Safety Package

Arm's safety package for Mali-C78AE provides information for partners implementing safety-related features. It includes comprehensive details on specific product safety features, verification and failure mode effects and diagnostic analysis (FMEDA). The safety package simplifies integration of the Mali-C78AE into in systems with ISO 26262 and IEC 61508 requirements.

Learn more at [www.arm.com/safety](http://www.arm.com/safety).

