



## onsemi 8.3 MP Image Sensor Delivers Best-in-Class Dynamic Range in Challenging Lighting Conditions

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*With advanced features and exceptional image quality, the AR0821CS has been integrated into the Basler dart area scan camera module family*

PHOENIX--(BUSINESS WIRE)-- onsemi (Nasdaq:ON), a leader in intelligent power and sensing technologies, announced the availability of a new [1/1.7 inch 8.3 MP CMOS digital image sensor](#) with rolling shutter and [embedded High Dynamic Range \(eHDR\) technology](#).

The [AR0821CS](#) meets the diverse needs of commercial, consumer and industrial applications by providing superior image quality in challenging lighting conditions. These applications include scanners/readers, [machine vision cameras](#), high-end drones, [dashboard cameras](#), and [smart building surveillance/security systems](#).

With an array of versatile features, the AR0821CS delivers 4K video with 8.3 MP resolution at 60 fps while consuming very low power. The advanced sensor includes a 2.1 µm DR-Pix™ backside illuminated (BSI) pixel design exclusive to onsemi, which enables high quantum efficiency, as well as on-chip HDR (eHDR) technology that delivers best-in-class dynamic range in excess of 140 dB. The high quality image data minimizes processing needs, resulting in a faster and more cost effective camera system.

More applications now rely on image data to make informed decisions. The superior pixel design of the AR0821CS addresses these demands by delivering detailed images even in bright daylight or low light conditions. With multiple subsampling modes, the AR0821CS optimizes the amount of data transmitted to provide images at a faster rate as needed by the intended application.

The AR0821CS is supported by the [AP1302 co-processor](#) and by image signal processor (ISP) and system-on-chip (SoC) devices from onsemi technology partners. Further, the industry-renowned DevSuite software provides an integrated platform to develop AR0821CS-based camera systems. Within the DevSuite software, onsemi provides custom firmware to enable system developers to complete their camera designs with minimal effort and bring their products to market quickly.

Alongside onsemi development resources, the AR0821CS has been designed into [Basler's dart family of area scan camera modules](#). The dart camera series enables a wide range of image processing applications and offers the latest machine vision technology in a small format.

"The integration of the new AR0821CS sensor from onsemi into our dart camera family is a significant step towards having a superior solution component for customer projects with HDR requirements. We have already noticed that the high-performance sensor is important for the successful implementation of new applications in light-sensitive conditions," said Malene Fricke, Head of Module Business at Basler.

onsemi [is showcasing the AR0821CS and other intelligent image sensing solutions](#) at [VISION](#), the world's leading trade fair for machine vision. Held Oct. 5-7 at the Messe Stuttgart in Germany, visitors to the onsemi booth (Hall 10, booth G30) will see the latest imaging technology breakthroughs and have the opportunity to discuss applications with technical staff.

The [AR0821CS](#) is now in production, and is available through [local onsemi sales support and authorized distributors](#).

### Additional Resources & Documents:

[onsemi Demonstrates Advanced Machine Vision Solutions at VISION](#)

[Intelligent Image Sensing Solutions](#)

[AR0821CS Evaluation Board](#)

[AR0821CS eHDR Demonstration \(Video\)](#)

### About onsemi

**onsemi** (Nasdaq: ON) is driving disruptive innovations to help build a better future. With a focus on automotive and industrial end-markets, the company is accelerating change in megatrends such as vehicle electrification and safety, sustainable energy grids, industrial automation, and 5G and cloud infrastructure. With a highly differentiated and innovative product portfolio, **onsemi** creates intelligent power and sensing technologies that solve the world's most complex challenges and leads the way in creating a safer, cleaner and smarter world.

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