

onsemi Introduces Lowest Power Image Sensor Family for Smart Home and Office

10/10/2023

Hyperlux LP Image Sensors can extend battery life by up to 40%¹

SCOTTSDALE, Ariz.--(BUSINESS WIRE)-- **What's New:** Today, onsemi introduced the Hyperlux LP image sensor family ideally suited for industrial and commercial cameras such as smart doorbells, security cameras, AR/VR/XR headsets, machine vision and video conferencing. These 1.4 μm pixel sensors deliver industry-leading image quality and low power consumption while maximizing performance to capture crisp, vibrant images even in difficult lighting conditions.

Size of Hyperlux LP image sensors compared to the size of a AAA battery. (Graphic: Business Wire)

The product family also features a stacked architecture design that minimizes its footprint and

at its smallest approaches the size of a grain of rice, making it ideal for devices where size is critical. Depending on the use case, customers can choose between the 5-megapixel AR0544, the 8-megapixel AR0830 or the 20-megapixel AR2020.

Why It Matters: Home and business owners continue to choose cameras to protect themselves more than any other security measure, with the market expected to triple by the end of the decade.² As a result, consumers are demanding devices that offer better image quality, reliability and longer battery life to improve the overall user experience.

With the image sensors, cameras can deliver clearer images and more accurate object detection even in harsh weather and lighting conditions. Additionally, these cameras are often placed in locations that can be difficult to

access to replace or recharge batteries, making low power consumption a critical feature.

How It Works: The Hyperlux LP family is packed with features and proprietary technologies that optimize performance and resolution including:

- Wake on Motion – Enables the sensors to operate in a low-power mode that draws a fraction of the power needed in the full-performance mode. Once the sensor detects movement, it moves to a higher performance state in less time than it takes to snap a photo.
- Smart ROI – Delivers more than one region of interest (ROI) to give a context view of the scene at reduced bandwidth and a separate ROI in original detail.
- Near-Infrared (NIR) Performance – Delivers superior image quality due to the innovative silicon design and pixel architecture, with minimal supplemental lighting.
- Low Power – Reduces thermal noise which negatively impacts image quality and eliminates the need for heat sinks, reducing the overall cost of the vision system.

Supporting Quotes:

“By leveraging our superior analog design and pixel architecture, our sensors elevate the two most important elements people consider when buying a device: picture quality and battery life. Our new image sensor family delivers performance that matters with a significantly increased battery life and exquisite, highly detailed images,” said Ross Jatou, senior vice president and general manager, Intelligent Sensing Group, onsemi.

In addition to smart home devices, one of the other applications the Hyperlux LP family can improve is the office meeting experience with more intuitive, seamless videoconferencing solutions.

“Our video collaboration solutions require high-quality image sensors that bring together multiple factors for the best user experience. The superior optical performance, innovative features and extremely low power consumption of the Hyperlux LP image sensors enable us to deliver a completely immersive virtual meeting experience in highly intelligent and optimized videoconferencing systems,” said Ashish Thanawala, Sr. Director of Systems Engineering, Owl Labs.

What's Next: The Hyperlux LP Image Sensor Family will be available in the fourth quarter of 2023.

More Information: Learn more about **the AR2020**, **the AR0830** and **the AR0544**.

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. **onsemi** offers a highly differentiated and innovative product portfolio, delivering intelligent power and sensing technologies that solve the world's most complex challenges and leads the way to creating a safer, cleaner and smarter world. onsemi is recognized as a Fortune 500® company and included in the Nasdaq-100 Index® and S&P 500® index. Learn more about onsemi at www.onsemi.com.

onsemi and the onsemi logo are trademarks of Semiconductor Components Industries, LLC. All other brand and product names appearing in this document are registered trademarks or trademarks of their respective holders.

1 Based on internal tests conducted under specific conditions. Actual results may vary based on device, usage patterns, and other external factors.

2 Status of the CMOS Image Sensor Industry, Yole Intelligence Report, 2023

Media Contact:

Krystal Heaton

Director, Head of Public Relations

onsemi

(480) 242-6943

Krystal.Heaton@onsemi.com

Source: onsemi