

Vadzo Imaging launches MerlinPlus-234CGS Global Shutter Color USB2.0 UVC camera with On-Board Storage

Onsemi AR0234 Color Global Shutter | Dual Endpoint H.264 Streaming | On-Board Storage Capability | Upto 360° On-Board Dewarping | NDAA Compliant UVC Camera

FORT WORTH, TX, UNITED STATES, January 13, 2026 /EINPresswire.com/ -- Vadzo Imaging has introduced the MerlinPlus-234CGS, an AR0234 based global shutter color USB 2.0 UVC

embedded camera engineered for motion-sensitive vision applications. Powered by the Onsemi AR0234 2.3MP global shutter sensor, the camera combines onboard processing features, such as dual video endpoints, local storage, and real-time dewarping, to offload processing from the host and simplify embedded system design. Designed for developers and OEMs building cost-

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MerlinPlus-234CGS delivers global shutter imaging over USB 2.0 by combining the AR0234 sensor with onboard processing, dual-stream output, and local storage for predictable edge vision.”

Ashu Gupta, Product Manager



AR0234 Dual Endpoint Global Shutter Color USB UVC Camera

effective and power-constrained vision systems, the MerlinPlus-234CGS delivers global shutter performance with the simplicity of USB connectivity, enabling reliable deployment in industrial, robotics, drones and smart vision applications, including regulated environments that require NDAA-compliant cameras.

The key features of the camera include:

Global Shutter Imaging with the Onsemi [AR0234 Camera](#) : The MerlinPlus-234CGS is built around the Onsemi AR0234 2.3MP global shutter CMOS sensor, delivering resolutions

up to 1920 × 1200 with 3.0 μm pixels. The AR0234 [global shutter camera](#) ensures accurate capture of fast-moving objects, making the camera well suited for motion-critical applications where rolling shutter artifacts are unacceptable. A high-performance onboard ISP provides flexible control over exposure, windowing, binning, and frame acquisition, enabling both continuous video streaming and precise single-frame capture based on application needs.

Dual-Endpoint Video Streaming over USB 2.0 : The MerlinPlus-234CGS supports dual video endpoint streaming over a single USB 2.0 interface, allowing two independent video streams to be accessed simultaneously from the same global shutter camera. This enables use cases such as concurrent live viewing and recording or parallel analysis, without the need for additional cameras or external splitters. The camera enables simultaneous streaming of two H.264 streams or one H.264 and one MJPEG in parallel which can be configured during run-time.

Integrated On-Board Storage for Edge Capture : The Merlin Plus-234CGS incorporates on-board SD card storage to support local buffering and recording directly at the camera. This enables operation independent of a continuous host connection, supporting scenarios such as event-based recording, temporary host disconnection, and controlled data offloading. By integrating storage at the camera level, this AR0234-based global shutter camera helps system designers simplify host architecture and reduce system-level complexity. SD card capacity can be selected based on application requirements.

On-Board Dewarping for Wide-Angle Optics (upto 360° FOV) : The camera features on-board dewarping, performing geometric correction directly within the camera pipeline. This is particularly valuable when using wide-angle lenses with fields of view up to 360° FOV. By executing dewarping at the edge, the Merlin Plus-234CGS reduces host processing requirements and delivers corrected image streams directly to the application, simplifying software development and improving system efficiency.

UVC-Compliant USB Integration : As a UVC-compliant global shutter USB camera, the MerlinPlus-234CGS offers true plug-and-play video streaming on Windows, Linux and Android using native drivers. This enables rapid evaluation and deployment without custom driver development, while advanced camera controls and features are accessible through Vadzo's VISPA SDK.

NDAA Compliant Camera Design for Regulated Deployments : The Merlin Plus-234CGS is designed using NDAA-compliant components and architecture, making it suitable for procurement and deployment in regulated and security-sensitive environments. This positions the camera as a reliable NDAA-compliant global shutter camera for government, public-sector, and security-focused applications.

Target Application Areas

The MerlinPlus-234CGS is well suited for embedded and edge-based vision systems that require global shutter performance, deterministic USB connectivity, onboard processing capabilities and NDAA compliance. Typical application areas include:

- Industrial Vision and Inspection : Motion-accurate capture for fast-moving parts, inspection lines, and automation systems
- Barcode Reading and Optical Tracking : Reliable decoding and tracking in dynamic

environments where rolling shutter artifacts cannot be tolerated

- Gesture Recognition and Human-Machine Interfaces (HMI) : Accurate frame capture for interaction and control applications
- Autonomous Mobile Platforms (Secondary or Auxiliary Vision) : Compact, low-bandwidth vision nodes for navigation, monitoring, or situational awareness
- Smart Access Systems and Video Doorbells : Edge processing and local storage for responsive, always-on vision
- Portable Surveillance and Monitoring Systems : Self-contained capture and recording for temporary or mobile deployments

VISPA ARC SDK

The MerlinPlus-234CGS along with the VISPA ARC SDK provided extensive flexibility in terms of advanced controls that are beyond UVC. VISPA ARC SDK, , which is Vadzo's unified software platform for camera control, video streaming, and hardware management. The VISPA ARC SDK provides developers to capture the imaging capabilities of the camera to the advanced level. Some of the core features of the VISPA ARC SDK are:

- Precise Exposure Control
- Bit rate controls for H.264
- Compression factor control for MJPEG
- Dual endpoint configurations
- Firmware Management

The VISPA ARC SDK offers API that can be used with C, C++, C#, and Python programming languages, thus allowing developers to integrate their work in several environments for embedded vision applications.

Camera Availability

The MerlinPlus-234CGS (2MP AR0234 based USB2.0 UVC color camera with on-board storage and dual endpoint streaming) is now available for evaluation, with volume pricing starting at USD 75 for 5,000 units and USD 68 for 10,000 units.. More technical specifications and evaluation units are accessible at www.vadzoimaging.com

About Vadzo Imaging

Vadzo Imaging delivers advanced embedded camera solutions across USB, MIPI, GigE, WIFI, and SerDes platforms, enabling innovation across healthcare, industrial automation, Robotics, Edge AI, and Smart mobility. Vadzo products are engineered to deliver performance, reliability, and adaptability for modern vision-driven systems.

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