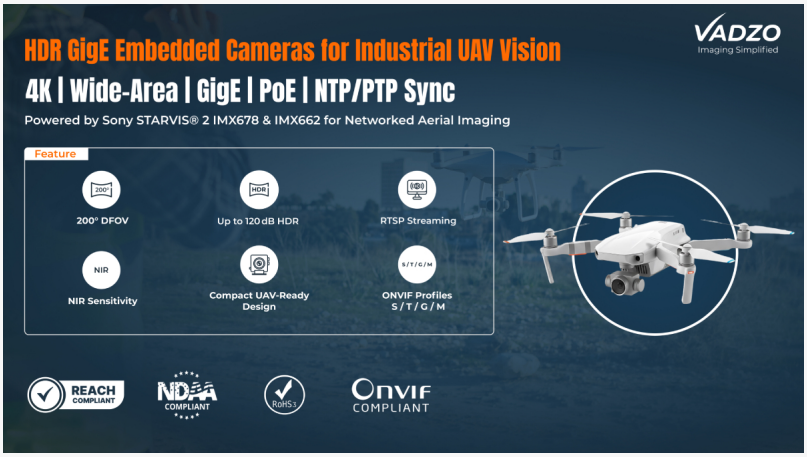
Vadzo Imaging Launches HDR GigE Embedded Cameras for Drone and UAV Applications - Powered by Sony STARVIS(R) 2 Sensors

4K and wide-area GigE cameras with PoE, ONVIF Profile S/T/G/M, RTSP streaming, built-in OTA platform, and NTP/PTP for drones, UAVs, and factory automation.



HDR GigE cameras for Drones

TEL AVIV, ISRAEL, June 3, 2026 /EINPresswire.com/ -- Vadzo Imaging, a global leader in embedded vision, announces the availability of its HDR GigE embedded camera lineup, the Innova-678CRS and Innova-662CRS, now recommended for industrial drone and UAV applications alongside their use in surveillance, smart city, traffic management, and factory automation.

Powered by the Sony IMX678 STARVIS® 2 and Sony IMX662 STARVIS® 2 sensors, these cameras deliver 4K resolution, 120+ dB HDR, Power over Ethernet, ONVIF Profile S/T/G/M compliance, RTSP streaming, NTP and PTP synchronization, and a built-in OTA platform for secure remote update and maintenance, making them the most integration-ready GigE cameras in Vadzo's portfolio for networked aerial and industrial vision deployments.

Highlights:

Innova-678CRS delivers 8.4MP imaging with Sony IMX678 STARVIS® 2, 120+ dB HDR, PoE 802.3af, and ONVIF Profile S/T/G/M for high-resolution industrial UAV inspection

Innova-662CRS pairs Sony IMX662 STARVIS® 2 Clear HDR and NIR sensitivity with a 200° DFOV, NTP/PTP synchronization, and onboard dewarping for wide-area perimeter and surveillance UAVs.

Both cameras support RTSP streaming and are managed via Vadzo NXT software and VISPA NXT SDK for network control, streaming control, user management, and camera configuration in C, C++, and Python

Built-in OTA platform enables secure, failsafe remote firmware update, maintenance, and troubleshooting over the air

Compact non-PoE variants with 5VDC or 12VDC input available on request for builds requiring lighter, simpler power architecture

Optics customization including zoom lens configurations available for specific aerial inspection and surveillance requirements

Why GigE Is the Right Interface for Industrial UAV and Networked Vision Applications

USB reliably operates to approximately 5 meters. MIPI CSI-2 is constrained to board-level proximity. For industrial UAV architectures where the camera payload is physically separated from the onboard compute unit, tethered inspection drones, multi-rotor platforms with distributed compute, or drones operating over fixed network infrastructure, GigE is the correct interface. It supports cable runs up to 100 meters over standard Cat5e/Cat6, delivers power via PoE over the same cable, and integrates with ONVIF-compatible Video Management Systems that industrial and security operators already use. NTP and PTP synchronization enable precise timestamping across multi-camera deployments. And Vadzo's built-in OTA platform means cameras deployed in remote locations can be updated, diagnosed, and maintained entirely over the network without physical intervention.

"Industrial UAV operators need cameras that integrate into their existing network infrastructure, synchronize precisely across multiple units, and can be maintained remotely without grounding the platform. The Innova-678CRS and Innova-662CRS are built around exactly those requirements. From ONVIF Profile G for recorded video access to PTP synchronization for multi-sensor fusion and OTA updates for fleet management at scale," said Ashu Gupta, Product Manager, Vadzo Imaging.

Innova-678CRS - Sony IMX678 STARVIS® 2 8.4MP 4K HDR GigE Camera

Powered by the Sony IMX678 STARVIS® 2 sensor with a 1/1.8" optical format and 2.0 µm pixel size, the Innova-678CRS delivers 8.4MP (3856×2180) 4K imaging over Gigabit Ethernet with ONVIF Profile S, T, G, and M compliance, PoE 802.3af (36-57V), and GPIO for external trigger and strobe synchronization. Its 120+ dB wide dynamic range and enhanced NIR sensitivity deliver accurate detail across high-contrast inspection environments. Operating from −30°C to 70°C and weighing 20g, it is designed for tethered industrial inspection drones, 4K infrastructure monitoring, offshore platform surveillance, and smart traffic systems. Zoom lens configurations are available through Vadzo's optics customization program for applications requiring variable focal length at altitude. For UAV builds where PoE is not preferred, compact non-PoE variants with 5VDC or 12VDC input are available on request, reducing payload weight and simplifying drone power architecture.

Key specs: 8.4MP 4K (3856×2180) | Sony IMX678 STARVIS® 2 | 1/1.8" | 2.0 µm | GigE (100/1000Base-T) | PoE 802.3af | ONVIF Profile S/T/G/M | RTSP |NTP/PTP | OTA platform | 105° DFOV | Non-PoE 5VDC/12VDC variant on request

Innova-662CRS - 2MP Sony IMX662 STARVIS® 2 Wide-Area HDR GigE Camera

The Innova-662CRS pairs the Sony IMX662 STARVIS® 2 sensor with GigE, ONVIF Profile S, T, G, and M compliance, PoE (802.3af), NTP and PTP synchronization, onboard dewarping, and a 200° diagonal field of view. At 2MP (1920×1080) and up to 60fps, its Clear HDR and NIR sensitivity extend reliable imaging from full daylight through near-total darkness without manual switching or IR illuminator changes. For UAV applications, the 200° DFOV reduces the number of cameras required for complete perimeter or area coverage. PTP synchronization enables sub-microsecond timestamp alignment across multi-camera drone payloads. Onboard dewarping corrects fisheye distortion in-camera, reducing post-processing load on the host. Non-PoE compact variants with 5VDC or 12VDC input are available on request for weight-sensitive UAV builds. Zoom optics available via customization for extended-range surveillance configurations.

Key specs: 2MP FHD (1920×1080) | Sony IMX662 STARVIS® 2 | 1/2.8" | 2.9 µm | GigE | ONVIF Profile S/T/G/M | RTSP | PoE 802.3af | NTP/PTP | Clear HDR | 200° DFOV | NIR | Onboard dewarping | OTA platform

UAV and Drone Applications

Tethered Industrial Inspection Drones : Innova-678CRS IMX678 4K HDR GigE Camera

Power transmission towers, bridges, wind turbines, and offshore structures require 4K resolution at altitude to resolve fine structural detail, hairline cracks, corrosion patches, fastener conditions, without requiring the drone to descend for close passes. The Innova-678CRS delivers 8.4MP 4K at 120+ dB HDR over GigE cable runs that USB physically cannot match. Its OTA platform allows firmware updates and diagnostics to be pushed remotely to cameras mounted in difficult-to-access positions without grounding the platform.

Wide-Area Perimeter and Surveillance UAVs : Innova-662CRS IMX662 2MP HDR GigE Camera

The Innova-662CRS's 200° DFOV minimizes camera count on surveillance UAV payloads while ONVIF Profile G enables direct recording access from connected VMS platforms. Clear HDR and NIR sensitivity deliver reliable imagery from dusk through full night. PTP synchronization ensures footage timestamps align precisely with radar, AIS, and other networked sensors in multi-system perimeter deployments. For fixed-wing surveillance UAVs operating on pre-programmed routes, the OTA platform enables over-the-air mission parameter updates and camera health monitoring without requiring the aircraft to return to base.

Multi-Camera and Multi-UAV Deployments

PTP synchronization across both Innova cameras enables frame-accurate coordination in multi-camera drone payloads and across UAV fleets operating in the same airspace. ONVIF Profile M adds metadata handling for AI-generated event data, enabling cameras to transmit object detection and classification results alongside video to downstream VMS and analytics platforms.

VISPA NXT SDK: Camera Control for Developers

Both cameras are fully supported by Vadzo's VISPA NXT SDK, providing programmatic control over all camera functions for developers building custom UAV software, fleet management platforms, and embedded vision applications. VISPA NXT SDK covers network configuration and discovery, streaming control and codec management, camera parameter control including exposure, gain, ROI, and white balance, Smart GPIO and trigger control, user and access management, and secure OTA firmware management. APIs are available in C, C++, and Python, with Windows, Linux, and Android support.

Frequently Asked Questions

Q: Are these cameras only for drones? - No. The Innova-678CRS and Innova-662CRS are general-purpose Gigabit Ethernet cameras actively deployed in smart surveillance, traffic management, industrial automation, healthcare monitoring, and smart parking. UAV and drone deployment is a recommended use case given their long-cable GigE capability, PoE simplicity, ONVIF integration, and HDR performance.

Q: Standard PoE GigE cameras add weight and require network hardware. How does Vadzo address this for UAV builds? - This is a real consideration for weight-sensitive drone payloads. Vadzo offers compact non-PoE variants of both cameras with 5VDC or 12VDC direct power input on request, reducing payload weight and eliminating the need for a PoE injector or switch in the drone's power chain. For OEM integrators requiring further board-level or form factor customization to fit specific airframe constraints, Vadzo's customization program supports these modifications. Contact Vadzo's engineering team at vadzoimaging.com/contact-us to discuss requirements.

Q: What is the difference between NTP and PTP synchronization, and which should I use? - NTP (Network Time Protocol) provides time synchronization accurate to milliseconds - sufficient for single-camera deployments and applications where frame timestamps need to align with external event logs. PTP (Precision Time Protocol, IEEE 1588) provides synchronization accurate to sub-microseconds, enabling frame-accurate alignment across multiple cameras in the same payload or across a multi-UAV fleet.

Q: What does the built-in OTA platform provide, and why does it matter for drone deployments? -

Vadzo's built-in OTA platform enables secure, failsafe remote firmware update, camera maintenance, and troubleshooting over the network without physical access to the camera. For cameras deployed in remote locations, OTA eliminates the need to physically retrieve and reconnect the camera for every firmware update or diagnostic session. Failsafe architecture ensures the camera remains operational if an update is interrupted, preventing brick scenarios in the field.

Q: What ONVIF profiles are supported and what does each enable? - Both cameras support ONVIF Profile S (live streaming and basic camera control), Profile T (advanced streaming including H.265 and metadata), Profile G (onboard and network recording access), and Profile M (metadata for AI analytics including object detection and classification results). Profile G is particularly relevant for UAV deployments where the camera records locally and footage must be accessed by a VMS over the network post-flight.

Q: Can the optics be customized for aerial zoom requirements? - Yes. Vadzo's optics customization program supports zoom lens configurations for both cameras, enabling variable focal length for extended-range inspection and surveillance applications. S-Mount (M12) lens holders on both cameras also accept standard third-party M12 lenses. Contact Vadzo's engineering team to discuss focal length, FOV, and format compatibility for your specific altitude and ground resolution requirements.

Q: What is the difference between the Innova-678CRS and Innova-662CRS? - The Innova-678CRS delivers 4K (8.4MP) at 120+ dB HDR, best suited for high-resolution inspection and applications where fine spatial detail at distance is the primary requirement. The Innova-662CRS delivers 2MP at 60fps with a 200° ultra-wide DFOV and Clear HDR, optimized for wide-area coverage, smooth video, and deployments where field of view, low-light sensitivity, and frame rate matter more than resolution.

Availability

The Innova-678CRS and Innova-662CRS are available now for evaluation and production orders. Non-PoE compact variants, zoom optics, and board customization options are available on request for OEM drone integrators. Contact Vadzo at +1 817-678-2139 or www.vadzoimaging.com to request an evaluation kit or discuss customization requirements.

About Vadzo Imaging

Vadzo Imaging is a global leader in embedded vision solutions, providing developers and OEMs with high-performance cameras and imaging platforms for UAVs, robotics, edge AI, industrial automation, and medical devices. Products are optimized for NVIDIA Jetson, Raspberry Pi, Qualcomm RB series, and NXP i.MX platforms. Vadzo supports customers with hardware customization, firmware development, VISPA NXT SDK, and VISPA ARC SDK to accelerate vision product development. Learn more at www.vadzoimaging.com

Alwin Vincent
Vadzo Imaging
+1 817-678-2139
alwin@vadzoimaging.com
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