

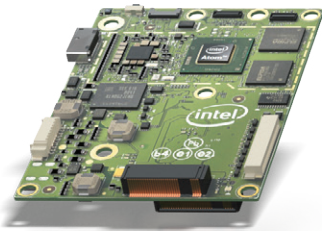
PRODUCT BRIEF

Intel® Aero Compute Board
Intel® Aero Vision Accessory Kit
Intel® Aero Enclosure Kit



Add Vision to Your Future

Connect the Intel® Aero Vision Accessory Kit to the Intel® Aero Compute Board, install into the Aero Enclosure Kit and attach to your drone, for accelerated application development and rapid prototyping.



Intel® Aero Compute Board

The Intel® Aero Compute Board is a purpose-built, UAV developer kit powered by a quad-core Intel® Atom™ processor and geared toward UAV developers, educators, and researchers. While only the size of a standard playing card, it features abundant storage capabilities, 802.11ac Wi-Fi*, support for multiple cameras including the Intel® RealSense™ R200 camera, (part of the optional Vision Accessory Kit), industry standard interfaces, and reconfigurable I/O to facilitate connecting to a broad variety of drone hardware subsystems. The Compute Board ships with open-source embedded Linux* and offers sample applications and APIs for flight and vision interfaces, reducing hurdles for developers of sophisticated drone applications.



Intel® Aero Vision Accessory Kit

This three-camera kit includes the Intel® RealSense™ camera R200 with stereo 3D imaging and depth sensing for development of obstacle sense and avoid algorithms, an 8 MP RGB camera for high-resolution photo and video capture, and a monochrome VGA camera with global shutter for development of optical flow algorithms. These cameras connect directly to the Intel® Aero Compute Board through dedicated low-profile connectors using the supplied cables. All cameras are supported with Linux drivers.

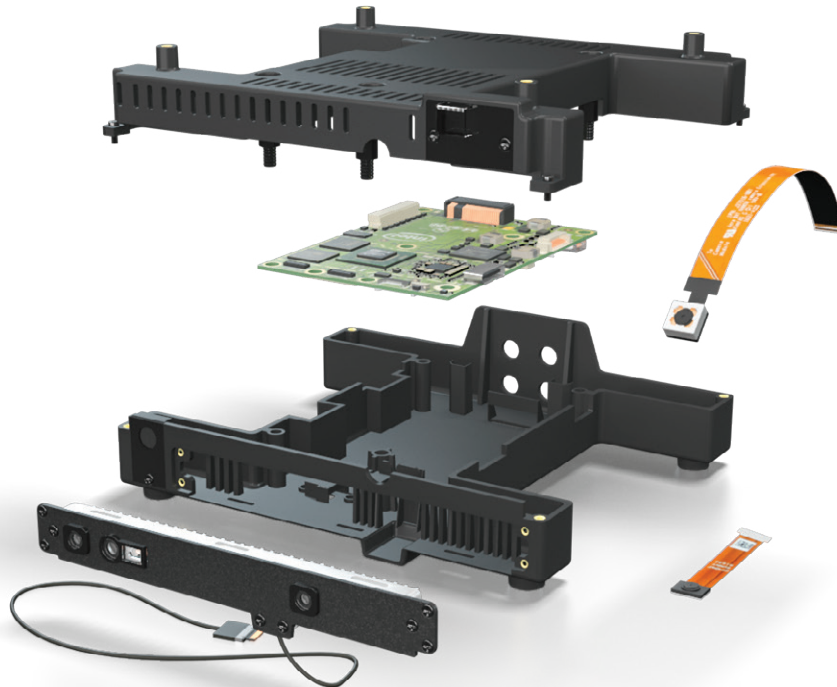


Intel® Aero Enclosure Kit

This mechanical enclosure is designed specifically to hold the Intel® Aero Compute Board and the three camera modules included in the Intel® Aero Vision Accessory Kit. The enclosure is a two-piece plastic assembly with mounting features to allow relatively easy attachment to most UAV airframes. When fully assembled, the enclosure holds both the Intel® RealSense R200 camera and the 8MP RGB camera along the front panel. The VGA camera is held in a compartment facing downward. A clear lens cover protects both the 8MP and VGA cameras.



Technical Specifications



INTEL® AERO VISION ACCESSORY KIT

Depth Sensing and Vision Camera	Intel® RealSense™ camera R200 with extension cable
8 MP RGB Camera	Omnivision* OV8858 with FPC extension cable
VGA Camera	Omnivision* OV7251 with FPC extension cable

INTEL® AERO ENCLOSURE KIT

Outer Dimensions	X: 144.8 mm Y: 125.7 mm Z: 47.7 mm
Mass	158 grams
4 Mounting Holes	Separation: 94 x 105.4 mm Size: M3 x 0.5

INTEL® AERO COMPUTE BOARD

Operating System	Embedded Linux* 4.4.3-yocto-standard, Yocto Project* 2.1 (Krogoth)
BIOS	Insyde Software InsydeH2O* UEFI BIOS optimized for the Intel® Aero Platform for UAVs
Processor	Intel® Atom™ x7-Z8750 processor
Display	1 micro HDMI 1.4b
USB	1 USB 3.0 On-the-Go (OTG) connector
Wi-Fi*	Intel® Dual Band Wireless-AC 8260; 802.11ac, 2x2 MIMO
Memory	4 GB LPDDR3-1600
Storage Embedded	32 GB eMMC
Storage Expansion	microSD* memory card slot M.2 connector 1 lane PCIe for SSD
Camera Interfaces	MIPI* CSI-2 (4 lanes + 1 lane), Dedicated USB 3.0 port for Intel® RealSense™ camera R200
I/O Expansion	28 FPGA GPIOs (3.3V) and 5 FPGA analog inputs (0 to 3 V) accessed via the Altera® MAX® 10 FPGA, 6 processor GPIOs, 1 HSUART, 1 CAN bus
Dimensions	88 mm × 63 mm × 20 mm (includes heatsink)
Weight	30 g board only; less than 60 g board with heatsink



For more information, visit www.intel.com/aero

*Other names and brands may be claimed as the property of others.

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