

BOX PC

## Embedded computer for machine vision applications

Advantech (Taiwan) released the fanless EPC-C301 box PC powered by an eight-core Intel processor. The device offers two isolated CAN ports.

The PC supports four GbE LAN and four USB 3.2 interfaces to accommodate the IP/HD camera inputs required for machine vision applications. The applications include biometric artificial intelligence (face recognition), automated optical inspection (AOI), automated plate number recognition (APNR), etc. For expandability reasons, the platform features four USB 2.0 and four UART interfaces for card readers, barcode scanners, key pads, fingerprint sensors, and other peripherals. Furthermore, it provides two isolated CAN ports designed for use in automation and medical applications. The use of EIA-232, EIA-422, EIA-485, and eight GPIOs (general purpose I/Os) is possible as well.

The integrated 15-Watt eight-core CPU (central processing unit) provides 1.5-times higher performance as its previous generation. The dual-channel DDR4 supports up to 32 GiB of memory. The PC is equipped with an M.2 M-Key 2280 interface for SATA SSDs (solid state drive) or PCIe x4 SSDs. Also included are the M.2 E-Key interfaces for Wi-Fi and Bluetooth, M.2 B-key port for LTE (long term evolution), and a PCIe port.

The device is equipped with Windows and Linux drivers and APIs (application programming interface). It features the Intel Openvino developer kit, compatible with Advantech's Vega-330 AI acceleration card and Ubuntu 18.04 LTS. The system functions with 12-V<sub>DC</sub> to 24-V<sub>DC</sub> in operating temperature from -20 °C to +60 °C. This is typical for outdoor applications such as passenger information/tracking systems (PIS) or smart parking solutions. The computer sizes 170 mm x 118 mm x 70 mm.

Sameer Sharma, General Manager of Smart Cities and Transportation at Intel stated, "With an increase in urban population and road vehicles, there is a significant opportunity to help cities stay ahead of growing demands that put strain on existing road infrastructure. Intel's collaboration with Advantech, coupled with investment in artificial intelligence technologies, including the Intel Distribution of Openvino toolkit, can help accelerate the transformation towards safer, greener and more efficient road infrastructures."



*EPC-C301 provides diverse interfacing and expandability variants (Source: Advantech)*

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