

Portwell Releases Qseven 2.1 Module with Intel Atom® x7000E, Intel® Core™ i3 N-Series and Intel® Processor N

PQ7-M21 empowers dynamic IoT edge applications in intelligent healthcare, medical equipment, digital automation and smart building control

FREMONT, CALIFORNIA, UNITED STATES, November 2, 2023

/EINPresswire.com/ -- American Portwell Technology, Inc.

(<https://www.portwell.com>), a wholly owned subsidiary of Portwell, Inc., a world-leading innovator for Industrial PC (IPC) and embedded computing solutions, and a Titanium Partner of Intel Partner Alliance, announces the [PQ7-M21](#) Qseven 2.1 based module (70mm x 70mm) designed with the low-power Intel Atom® processors x7000E series, Intel® Processor N series, and high-performance Intel® Core™ i3 N-series processors up to 8 cores/8 threads with only up to 15 Watts thermal design power (TDP), codenamed Intel Alder Lake-N.

Built with fanless design (via selected CPU SKUs), the PQ7-M21 module delivers enhanced thermal efficiency. Featuring the Intel processors' greater performance in deep learning inference, graphics capabilities, hardware virtualization, manageability and security, along with optimized



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PQ7-M21

performance and value, the Portwell PQ7-M21 Qseven 2.1 module is an ideal building block for a diverse spectrum of IoT edge applications from intelligent healthcare and digital automation to smart transportation, building and city, such as medical imaging devices, medical diagnostics devices, ultrasound machines, autonomous mobile robots, distributed control networks, industrial gateways, and more.

Furthermore, the PQ7-M21 provides 1x 2.5 Gigabit Ethernet, 2x USB 3.2, 6x USB 2.0, 2x SATA 3.2, and up to 4x PCIe Gen 3 lanes. It also supports onboard interfaces including 1x I2C, 1x HDA, 1x CANbus, 1x SMBus, 1x LPC, 1x UART, 14x GPIO, a JTAG for debugging function, and TPM 2.0 for data security. Moreover, it encompasses onboard LPDDR5 4800 MT/s with IB ECC (In-Band ECC) (Intel Atom SKUs) up to 8GB, and eMMC 5.1 up to 256GB. The multimedia features on PQ7-M21 support dual displays that include dual-channel LVDS up to 1920x1200 @60Hz, plus another DDI option to support either DisplayPort 1.4 up to 8K or HDMI 2.0b up to 4K @60Hz. And for applications that require the 3rd display option, we provide custom design support via BOM selection to implement triple displays that include single-channel LVDS up to 1920x1200 @60Hz, eDP 1.3 up to 4K @60Hz, and either DisplayPort 1.4 up to 8K or HDMI 2.0b up to 4K @60Hz.

Last but not least, in addition to supporting Linux® and Microsoft® Windows® 11, the PQ7-M21 also supports Microsoft® Windows® IoT Enterprise LTSC and Yocto LTS per request. Offered with long life cycle support of 10+ years, the Portwell PQ7-M21 Qseven 2.1 based module can be built with all available Intel Alder Lake-N embedded processors.

CPU specifications:

- Intel Atom x7425E — 4x cores @ 1.5GHz/3.4GHz, 6MB L2 cache, 12W TDP
- Intel Atom x7213E — 2x cores @ 1.7GHz/3.2GHz, 6MB L2 cache, 10W TDP
- Intel Atom x7211E — 2x cores @ 1.0GHz/3.2GHz, 6MB L2 cache, 6W TDP
- Intel Processor N200 — 4x cores/4x threads @ 1.0GHz/3.7GHz, 6MB Intel Smart Cache, 6W TDP
- Intel Processor N97 — 4x cores @ 2.0GHz/3.6GHz, 6MB Intel Smart Cache, 12W TDP
- Intel Processor N50 — 2x cores @ 1.0GHz/3.4GHz, 6MB cache, 6W TDP
- Intel Core i3-N305 — 8x cores/8x threads @ 1.8GHz/3.8GHz, 6MB Intel Smart Cache, 15W TDP (configurable TDP-down 9W)

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Product details:

PQ7-M21 Qseven 2.1 Module based on Intel Atom x7000E Series Processors, Intel Processor N Series, and Intel Core i3 N-series Processors:

<https://portwell.com/products/detail.php?CUSTCHAR1=PQ7-M21>

Product availability:

Samples are available now.

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