TYAN Packs Lots of Performance in a 1U Package

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Given the explosion of Internet of Things (IoT) devices combined with increased use of artificial intelligence (AI) and machine learning (ML), infinitely more content (data) is now created, stored, and processed at the Edge. Edge servers provide control of massive amounts of locally produced data and while rapid access to that data can be critical to small and medium-sized businesses, until recently, entry-level (affordable) servers did not provide the power they required.

Now however, entry level 1U servers with a very small footprint deliver a high-level of computing power, ease-of-use, scaling, and low power consumption. Housed in a very small flat box, they include a core processor, storage, memory slots, ports and interfaces, and multiple connectivity options to handle on-site processing, storage, and IoT device management.

Creating storage at the Edge, however, has not been without its own challenges. Entry-level storage that combines sufficient performance, small footprint, and good support at a reasonable cost has taken time.

Smaller, Yet Powerful Solution

Edge machine learning, data centers, high performance computing (HPC), and AI workloads involve large data sets on large distributed compute clusters. The recently announced TYAN Thunder CX GX38-B5550 1U compact sever provides several advantages in this space, including a shorter depth when compared to competitive solutions. In most server chassis designs and the servers used in them, for example, 1U is equivalent to 1.7 inches high, 19 inches wide, and 17.7 inches deep. In comparison, the TYAN GX38-5550 dimensions are 1.75 inches high, 16.9 inches wide, and 15 inches deep. The server optimizes a Micro-ATX motherboard and also delivers manageability features to ease the burden on the user.

The TYAN GX38-B5550 is nearly 3" shorter than competitive solutions.

Additional features of the server include support for two 3.5-inch internal Serial ATA (SATA) drive bays for edge computing, 4 Gigabit Ethernet LAN, one FH/HL PCIe Gen.3 x8 slot, and a single 250W power supply.

TYAN entry-level servers deliver the performance power based on Intel® Xeon ® E-2200 processors, combined with the flexibility of a smaller footprint.

At the heart of the GX38-B5550 server is based on the newer Intel Xeon E-2200 series processor that delivers professional-grade performance, security, reliability, and affordability. This platform has the potential to deliver real-time analytics with large memory capacity, enhanced I/O capabilities, and latest SSD storage technology. The top-bin Intel 8-core Xeon E-2200 processor

increases around 25% computing power compared to the top-bin Intel 6-core Xeon E-2100 one. Sixteen threads and up to 5-GHz Intel Turbo Boost Technology, combined with up to 128 Gbytes of DDR4 2666 ECC memory support, to provide TYAN customers with substantial performance in large file processing power, storage, and virtualization.

While the Thunder CX GX38-B5550 targets IoT applications, a second product from TYAN, the Thunder CX GT24E-B5556, is more of an entry-level solution. It's a 1U server that's designed with a single-socket Intel Xeon E-2200 microprocessor. As an Edge-based server, it is well suited for cost-effective Cloud-based gaming applications.

Both solutions described here offer enhanced performance in a compact package. The result is nearly twice as much computing power as was previously available in a similar form factor, and without the thermal issues that previously plagued small footprint solutions. Lots more information is available on TYAN's entry-level servers.