Swissbit N-20m2 - a small form factor, low power, robust SSD with 4x PCIe-3.1 interface

Small size, highly reliable PCIe M.2 SSD for true industrial applications

WESTFORD, MASSACHUSSETTS, USA, October 8, 2020 /EINPresswire.com/ -- Swissbit announces the introduction of its N-20m2 SSD module, which delivers high speed PCIe performance from a small M.2 2230 form factor. The module utilizes Swissbit's recently launched EN-20 PCIe-BGA component to minimize PCB space requirements while offering a wide storage capacity range of up to 480 GB as well as 4-lane PCIe-3.1 and NVMe-1.3 compliance. The memory storage solution is targeted at small

Swissbit's PCIe-M.2 SSD product N-20m2 is available in three different sizes.

embedded systems and routers where the N-20m2 acts as a perfect boot device. Alongside the M.2 2230 size, the module is also available in standard dimensions of 2242 and 2280.

The new product range features industrial grade 3D-NAND that supports an ambient temperature range from -40°C to +85°C. The SSD-module combines high grade NAND flash chips, a sophisticated PCIe controller and firmware that supports demanding applications. The PCIe 4-lane interface with backwards compatibility to single or dual lane system designs operates according to the latest PCIe-3.1 specification and offers high bandwidth up to 1600 MB/s for sequential read and 770 MB/s for sequential write. Random performance surpasses 145,000 / 130,000 IOPS for read and write and nearly doubles the bandwidth of SATA SSDs.

Features for product robustness
For low power consumption without sacrificing performance, the new Swissbit SSD-module N-20m2 has an HMB (host memory buffer) feature, which uses system DRAM memory to maintain the flash translation table. Intelligent thermal management protects the long-term stability of the controller and maintains a continuous bandwidth even at the highest specified temperature of 85°C ambient. Other reliability and security features are End-to-End Data Path Protection (ETEP), AES-256 encryption, LDPC error correction with full page fail recovery and a protection against sudden power loss. Data care management adds extra protection of the stored data at high operating temperatures. For long term mechanical stability, the N-20m2 is designed with a 30 µinch gold-plated connector.

Designed for long service life

The NVMe protocol has been designed to efficiently use the bandwidth with a native nonvolatile memory command set resulting in ultra-low latency.

Swissbit thus offers a high performance, high reliability, cost efficient, true industrial SSD with up to 1 DWPD (Drive Writes Per Day) endurance. For even higher endurance requirements, N-26m2 offers a 10-fold writability in full pSLC mode.

A solution for demanding markets

"The N-20m2 is our dedicated solution for the latest PCIe based industrial and NetCom systems that demand increased performance without sacrificing stability, thermal resistance and endurance. With the development of our EN-20 BGA our designers have created a really small but powerful and robust module. Comprehensive and detailed SMART information combined with our monitoring tool lets users easily control the life time status of the SSD and schedule maintenance. What you get is a product that perfectly meets the requirements of the next generation of IoT systems" explains Roger Griesemer, General Manager Memory Solutions at Swissbit AG.

Mr Kim Sauer
miXim on behalf of Swissbit
+44 7906 019022
email us here

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