

## PRESS RELEASE

## Miniaturized highly reliable PCIe M.2 BGA SSD for ultra-small industrial applications

### Swissbit EN-20 - a high performance, high endurance, low power single component SSD with 4x PCIe interface

**Bronschhofen, Switzerland. 6 August 2020 – Swissbit launches EN-20, a new single chip solution which offers high speed PCIe SSD performance in a 3.2cm<sup>2</sup> BGA package. The device acts as a true industrial grade SSD with up to 480GB capacity and 4 lane PCIe 3.1 / NVMe 1.3 specification. It enables high performance and high reliability for small size embedded systems, factory automation, routers and switches, Internet of Things (IoT), cloud computing, and medical systems.**

The EN-20 product series features industrial grade 3D NAND supporting an ambient temperature range from -40°C to 85°C. The managed device 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.

The single chip has a dimension of 16 x 20mm and a 0.8mm pitch compatible with standard PCB routing guidelines. For low power consumption without sacrificing performance, EN-20 substitutes a local DRAM cache by using the 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 highest specified temperatures. 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.

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

EN-20 offers a high performance, high reliability, cost efficient, true industrial SSD in a single BGA chip with up to 1 DWPD endurance. For even higher endurance requirements, EN-26 in full pSLC mode provides a 10-fold endurance.

EN-20 has already been successfully qualified by key industrial customers and is currently available with densities from 15 GB to 240 GB in the TLC version and with 5 GB to 80GB for EN-26. An extension to 480 / 160 GB will follow later this year.

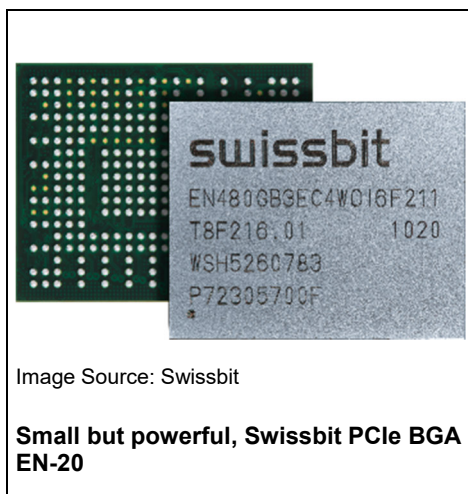
The small size and integrated metal heat spreader allows the use of EN-20 not just as a single BGA device but also on a variety of m.2 module form factors from a tiny 2230 length to the standard 2280 variant. EN-20 also powers the soon to be introduced Swissbit G-20 CFexpress™ cards with the same extensive feature set.

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### Available images

The following images are available for download in printable format at:

<http://www.htcm.de/kk/swissbit>



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### About Swissbit

Swissbit AG is the only independent European manufacturer of storage and embedded IoT solutions for demanding applications. Swissbit combines its unique competences in storage and embedded IoT technology with its advanced packaging know how. This expertise allows our customers to reliably store and protect data in industrial, NetCom, automotive, medical and finance applications as well as across the Internet of Things (IoT).

Swissbit develops and manufactures industrial-grade storage and security products “Made in Germany” with long-term availability, high reliability and custom optimization.

Swissbit's storage range includes SSDs with PCIe and SATA interface such as mSATA, Slim SATA, CFAST™, M.2 and 2.5" as well as CompactFlash, USB flash drives, SD, micro SD memory cards and managed NAND BGAs. Security products for embedded IoT applications are available in various application specific editions as USB flash drives, SD, and micro SD memory cards.

Swissbit was founded in 2001 and has offices in Switzerland, Germany, USA, Japan and Taiwan.

**For further information, please visit [www.swissbit.com](http://www.swissbit.com)**

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