intel BLOCKSCALE™

Custom ASIC for blockchain acceleration

Product Brief

Energy efficient hashing for the future
Cryptocurrency mining increasingly demands customized solutions to meet power, efficiency and other unique requirements.

Building on years of experience with optimized hashing functions, Intel delivers the Intel® Blockscale™ ASIC, a SHA-256 (Secure Hash Algorithm-256) hardware accelerator for blockchain proof-of-work consensus applications.

Optimized for energy efficient hashing, the accelerator enables customized cryptocurrency mining, thereby lowering the total cost of ownership by allowing system designs to be tailored to end user requirements.

A new generation of ASICs
Intel Blockscale ASICs are built for the demanding environment of cryptocurrency mining. Each ASIC has built-in temperature and voltage sensor capabilities. The accelerator can be operated across a range of frequencies, enabling system designers to balance performance and efficiency.

The Intel Blockscale ASIC is supported by a reference hardware design and software stack to jump-start system development.

Intel Blockscale Technology sets a new standard for customizable, energy efficient cryptocurrency mining.

Features

- Uni-cast, multi-cast & broadcast capability to SHA-256 cores

- Support for up to 256 integrated circuits per chain

- UART Interface with variable baud-rate (Max 10 Mbps)

- On-chip temperature and voltage sensing capability

ASIC Specifications

Hash Rate (GH/s)	≤593 GH/s
Power Consumption	4.8 – 22.7 W
Power Efficiency	≥27 J/TH
Operating Temperature (T_j)	50ºC to 85ºC
Package	Flip-chip LGA 7.5 x 7 mm

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