Shasta (IG5208)

Shasta (IG5208) is an industry-leading PCIe Gen3 x2, NVMe 1.3 SSD controller with capacity up to 2TB.

Featuring a DRAM-less architecture with full support of the HMB function and Intelligent Power Management Unit, Shasta delivers high performance, ultra-low power, and low cost by removing expensive DRAM in SSDs. Shasta has four NAND channels, supporting SLC, MLC, TLC, and QLC NAND flash with either ONFI 4.0 or Toggle 3.0 interface. Shasta's low power and small size make it an ideal solution for BGA and M.2 SSDs in popular form factors.

Additionally, Shasta supports multiple advanced features, including Smart Cache, integrated Power-On Reset (POR) function, multi-level power management, NAND boot partition, simplified PCB design, etc.

Shasta targets applications that require ultra-thin and light form factor, ultra-long battery lifespan, and outstanding performance without the need of complicated thermal solutions, such as client/edge computing, server boot drive, industrial control, embedded systems, and external storage. It's especially ideal for IoT and consumer electronics.

FEATURES

Programmable RAID

NVM Open Channel

Proprietary 2K LDPC ECC

HMB Data Integrity Protection

ECC Protection for TCM/Cache/SRAM

AES 128/256, SM 2/3/4, SHA3-256

SPECIFICATIONS

INTERFACE	PCIe Gen3 x2	
PACKAGE	195-ball VFBGA (9mm x 10mm)	187-ball TFBGA (7mm x 10.5mm)
MAX PERFORMANCE	Sequential Read: 1750 MB/s	Sequential Write: 1500 MB/s
	Random Read: 250K IOPs	Random Write: 200K IOPs
POWER CONSUMPTION	PEAK	0.9W
	PS3	50mW
	PS4	<1mW