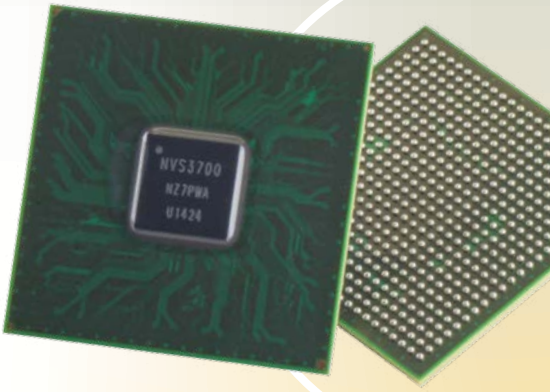
NVS3700/NVS3900/NVS5700/NVS5900

FLASH STORAGE PROCESSOR



Processor Features

- Host Interface
  - SATA 6Gb/s, 3Gb/s and 1.5Gb/s
  - Native PCIe Gen2 x2/x4, NVMe

- NAND Flash Memory Support
  - 1y/1x/2x/3x nm SLC/MLC/eMLC/TLC from All NAND Vendors
  - ONFI 2.0/3.0 and Toggle 1.0/2.0 Interface up to DDR-533
  - HLNAND Interface with up to DDR-800
  - 4/8/16/32KB Page NAND

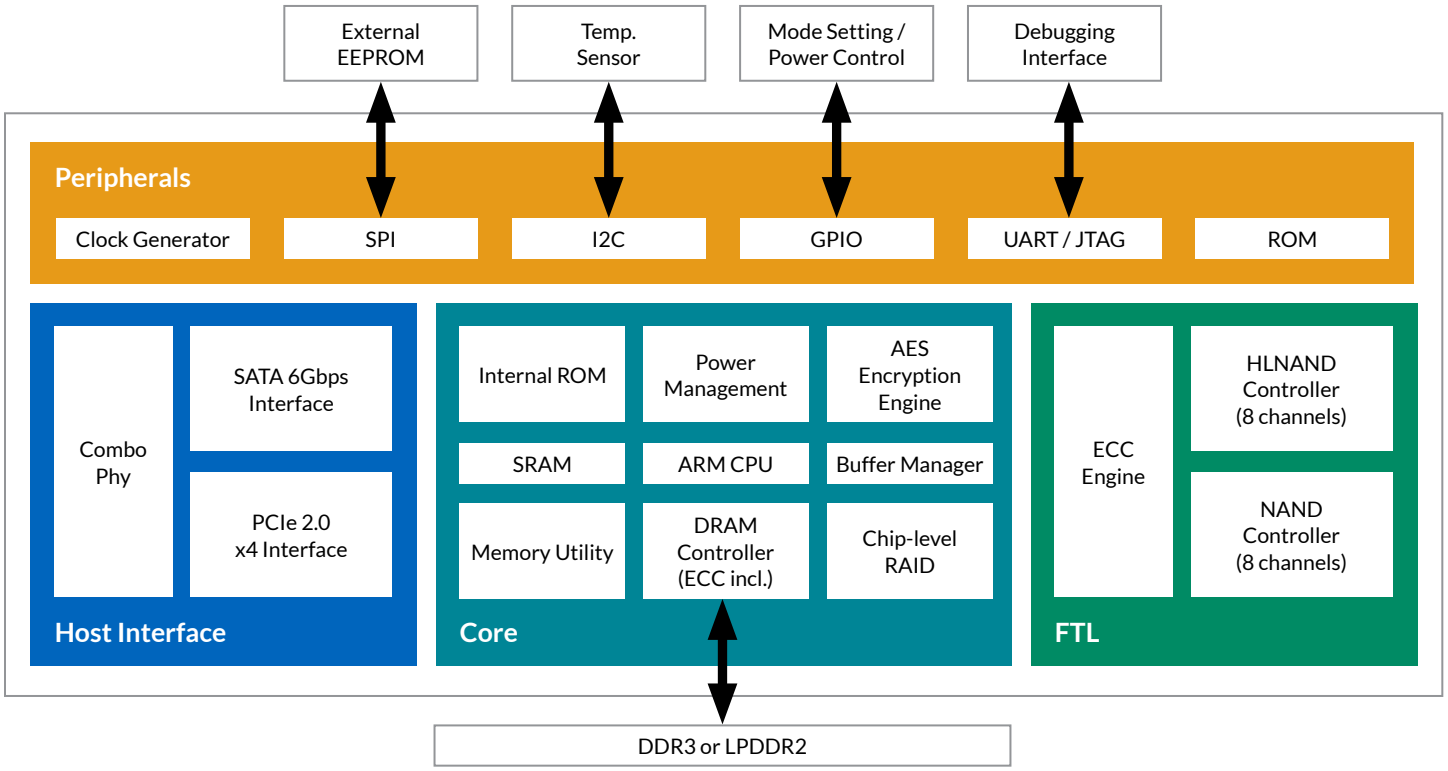
Max. Capacity
  - 2TB with ONFI NAND and Toggle NAND
  - 16TB with HLNAND

- Reliability
  - Up to 128bit BCH ECC & Enhanced ECC for Metadata, Max. 2KB Unit
  - Enhanced NAND Reliability with Static & Dynamic Wear Leveling
  - Read Refresh by Bit Error Monitoring
  - 2 Dimension Data Randomization
  - 2-level Bad Block Management
  - Intelligent Sudden Power-off Recovery
  - Data Path Protection (DPP)
  - Hardware-based RAID
  - End-to-end Data Protection

- Low Power Consumption Design
  - Smart Peak Power Control
  - Low Power Design – HW Controlled IO/Low Clock & MCU/HW Read-retry/28nm Process Technology
  - Supports ASPM : L0/L1/L1.1/L1.2 (PCIe only), DEVSLP (SATA only)

- Security
  - Full Disk Encryption
  - AES128/256 ECB/CBC/CTR/XTS
  - TCG OPAL 2.0

- Package
  - 508-ball CABGA, 17 x 17mm, 0.65mm Ball Pitch



NVS Flash Controller Family	SATA3		PCIe	
	NVS3700	**NVS3900**	**NVS5700**	**NVS5900**
Applications	Client	Client / Data Center	Client / Data Center	Data Center
Host Interface	SATA 6Gb/s	SATA 6Gb/s	PCIe Gen2 x2/x4 (NVMe)	PCIe Gen2 x2/x4 (NVMe)
Max Capacity Supported[1]	2 TB	16 TB	2 TB	16 TB
NAND Flash Support	MLC/TLC 1y/1x/2x/3x nm ONFI 2/3, Toggle 1/2	HLNAND	SLC/MLC/TLC/eMLC 1y/1x/2x/3x nm ONFI 2/3, Toggle 1/2	HLNAND
NAND Page Size Support	4/8/16/32KB			
Sector Size Support	512B/4096B			
Security	Full Disk Encryption AES128/256 ECB/CBC/CTR/XTS TCG OPAL 2.0			
Reliability	Up to 128bit BCH ECC & Enhanced ECC for Metadata, Max. 2KB Unit Enhanced NAND Reliability with Static & Dynamic Wear Leveling Read Refresh by Bit Error Monitoring 2 Dimension Data Randomization 2-level Bad Block Management			
Data Protection	Data Path Protection (DPP), Hardware-based RAID, End-to-end Data Protection			
Power Fail Protection	Intelligent Sudden Power-off Recovery			
Power Saving	Smart Peak Power Control, DEVSLP		Smart Peak Power Control, ASPM : L0/L1/L1.1/L1.2	
Package	508-ball CABGA, 17 x 17mm, 0.65mm pitch			
Compliance	RoHS, Halogen-Free, Green			

1. *One gigabyte (GB) is equal to one billion bytes, one terabyte (TB) equals 1,000GB (one trillion bytes), and one petabyte (PB) equals 1,000TB (one quadrillion bytes) when referring to hard drive or solid state drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the drive, the computer's operating system, and other factors.*

Powered by HLNAND