

DDR4 NVDIMM

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SMART's DDR4 NVDIMM combine non-volatile memory functionality with the latest DDR4 DRAM technology. DDR4 NVDIMM are designed to provide a persistent memory solution while improving application performance and data integrity in server and storage environments.

SMART's DDR4 NVDIMM feature proprietary SafeStor™ technology, the engine which initiates backup and restore operations upon command from the host controller. The NVDIMM also support multiple command delivery options to trigger SafeStor™ backup during a host detected power outage and recovery events. The SafeStor™ engine also employs multi-channel NAND Flash and high-speed switching circuitry to provide robust backup and restore capability, all while functioning as a JEDEC standard DDR4 RDIMM during normal operation.

NVDIMM-enabled System Compatibility

Supermicro Systems	Intel Systems	AMD
X10DRi(-T)	S2600WT2	Zeppelin Reference System
X10DRH-C/i(T)	S2600CW	
X10DRT-P/PT/PIBF	S2600KP	
X10DRT-H/HIBF	S2600TP	
X10DRC/i-LN4+/T4+	S2600WF	
X10DRU-i+	S2600BP	
X10DRFR(N)(T)	S2600ST	
X10DRS-2U		
X10DDW-i(N)		
X10DRW-i(T)		
X10DRW-E/N(T)		
X10DRFF(-C)		
X10DRT-L(IBQ/IBF)		
X10DRG-Q		
X10DRX		
X10DRD-LTP/i(N)TP		
X10DRD-L/i(N)T		

Features & Benefits

- Fits standard 288-pin DIMM socket
- During normal operation, NVDIMM will function as a standard RDIMM module
- During a power loss, the contents of the DRAM are automatically backed up to Flash

Product Family Overview

Capacity	Speed	Configuration
4GB to 32GB	2133/2400/2666	1Rx8, 1Rx4, 2Rx4

Applications

High performance servers

- Database and analytics servers
- High performance replacement for existing NVRAM PCIe cards
- Journaling & check-pointing for In-memory databases
- Real-time response in financial trading & social media

High performance storage servers

- SAN appliances and arrays
- NAS filers
- Distributed storage systems
- High performance replacement for existing NVRAM PCIe cards
- Tiering and caching
- Meta data storage
- SSD address mapping table







DDR4 NVDIMM Ordering Information

288 PIN - DDR4 NVDIMM

SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Command Set	Temp
SH4097NR420472SB	32GB	31.25	4G x72	2G x4	2400 MT/s	1.2V	SMART	0°C to +70°C
SH2047NJ420493MB	16GB	31.25	2G x72	2G x4	2666 MT/s	1.2V	JEDEC	0°C to +70°C
SH2047NJ420472SB2	16GB	31.25	2G x72	2G x4	2400 MT/s	1.2V	JEDEC	0°C to +70°C
SH2047NR420472SB2	16GB	31.25	2G x72	2G x4	2400 MT/s	1.2V	SMART	0°C to +70°C
SH2047NJ420451SB2	16GB	31.25	2G x72	2G x4	2133 MT/s	1.2V	JEDEC	0°C to +70°C
SH2047NR420451SB2	16GB	31.25	2G x72	2G x4	2133 MT/s	1.2V	SMART	0°C to +70°C
SH1027NJ410472SE	8GB	31.25	1G x72	1G x4	2400 MT/s	1.2V	JEDEC	0°C to +70°C
SH1027NR410472SE	8GB	31.25	1G x72	1G x4	2400 MT/s	1.2V	SMART	0°C to +70°C
SH1027NR410851SB1	8GB	31.25	1G x72	1G x8	2133 MT/s	1.2V	SMART	0°C to +70°C
SH1027NR410872SB1	8GB	31.25	1G x72	1G x8	2400 MT/s	1.2V	SMART	0°C to +70°C
SH1027NJ410851SB	8GB	31.25	1G x72	1G x8	2133 MT/s	1.2V	JEDEC	0°C to +70°C
SH1027NR410851SB	8GB	31.25	1G x72	1G x8	2133 MT/s	1.2V	SMART	0°C to +70°C
SH5127NR451872SE1	4GB	31.25	512M x72	512M x8	2400 MT/s	1.2V	SMART	0°C to +70°C
SH5127NJ451851SD	4GB	31.25	512M x72	512M x8	2133 MT/s	1.2V	JEDEC	0°C to +70°C
SH5127NR451851SD	4GB	31.25	512M x72	512M x8	2133 MT/s	1.2V	SMART	0°C to +70°C
SH5127NJ451851SE	4GB	31.25	512M x72	512M x8	2133 MT/s	1.2V	JEDEC	0°C to +70°C
SH5127NR451851SE	4GB	31.25	512M x72	512M x8	2133 MT/s	1.2V	SMART	0°C to +70°C

DDR4 NVDIMM Supercap Module Ordering Information

Supercap Modules

	SMART Part Number	Description/ Form Factor	Dimensions (mm)	DDR4 NVDIMM Density Supported
	SSC15241SMT0051B	2.5" Supercap Module (SSD Form Factor)	98.50 x 14.20 x 29.00	4GB, 8GB
	SSC20041SMT0051B	2.5" Supercap Module (SSD Form Factor)	98.50 x 14.20 x 29.00	16GB
	SSCA8062SMTH061B	2.5" Supercap Module (SSD Form Factor)	98.50 x 14.20 x 29.00	32GB
	SSC36041INT0011B	Intel Half Width Hybrid Cell, Chassis-Mounted	66.00 x 16.77 x 30.00	4GB, 8GB
	SSC5604INT0011B	Intel Half Width Hybrid Cell, Chassis-Mounted	66.00 x 22.97 x 30.00	16GB
	SSC20041INT0021B SSC15241INT0021B	Intel RAID Supercap Backup Unit	82.00 x 18.47 x 53.50	4GB, 8GB, 16GB
	SSC30442SMT0041B	PCIe Supercap Module (Half Height Half Length)	159.35 x 17.02 x 28.90	4GB, 8GB, 16GB
	SSC40442SMT0071B	PCIe Supercap Module (Half Height Half Length)	159.35 x 17.02 x 28.90	32GB

NVDIMM/Supercap Example Configurations



Contact information

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