

# L<sup>3</sup> Architecture

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## SATA 3ME4 Series

### Featuring L<sup>3</sup> Architecture Firmware

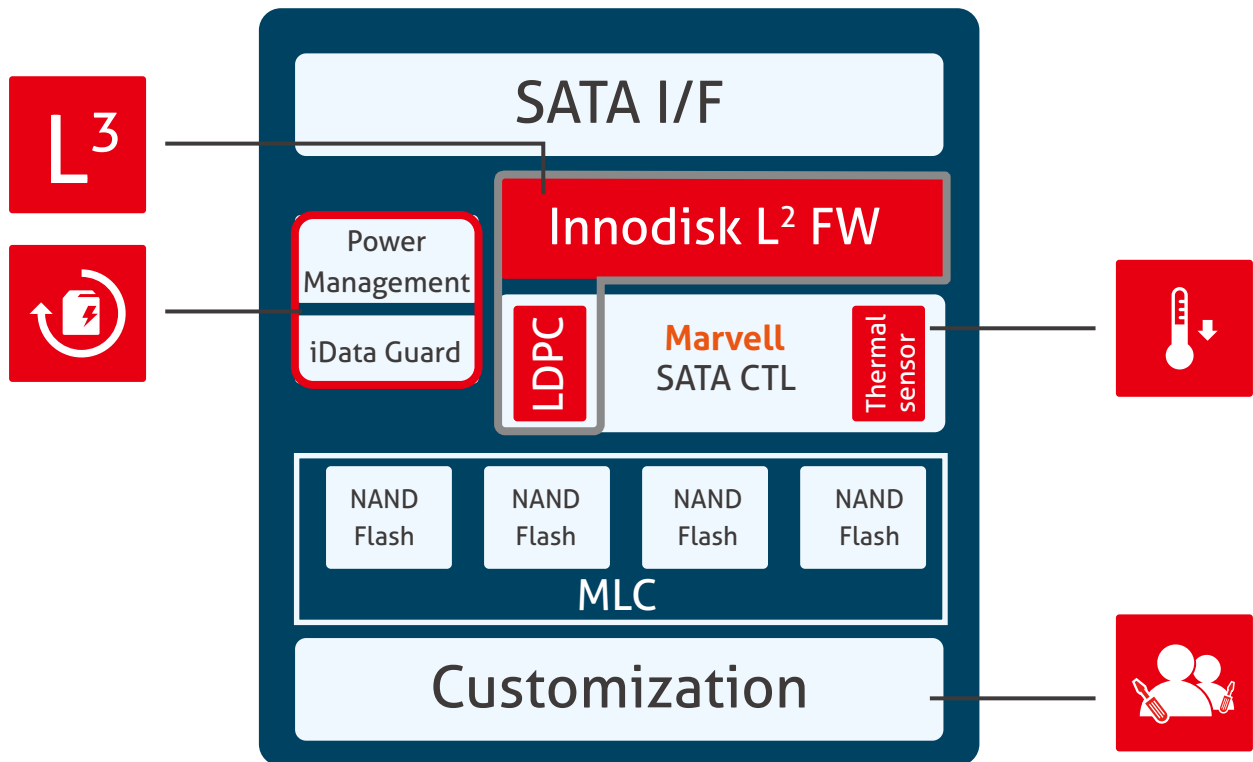
Innodisk's SATA 3ME4 series, featuring Innodisk's exclusive L<sup>3</sup> Architecture firmware, yields a prolonged lifespan, exceptional reliability and high performance. Innodisk's exclusive industrial-oriented firmware also provides a flexible customization service, making it perfect for a variety of industrial applications.

#### Benefits:

- Extended lifespan with L<sup>3</sup> Architecture
- Increased SSD reliability with integrated LDPC technology
- Excellent IOPS to boost system performance
- DRAM-less, 100% data integrity
- Thermal sensor technology to ensure data stability in extreme temperatures
- Advanced power management and iData Guard to prevent data loss during an abnormal power failure
- Sophisticated customization service with Innodisk's exclusive industrial firmware

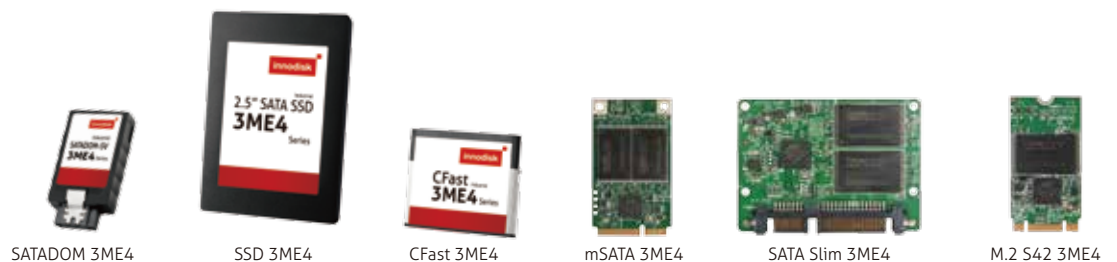
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# L<sup>3</sup> Architecture = Long Life x LDPC



L2 (Long Life) Architecture is Innodisk's exclusive 4K mapping algorithm that reduces WAI and features a real-time wear leveling algorithm to enhance endurance.

LDPC (Low Density Parity Check), a very powerful ECC technology, is now being used in MLC NAND flash memory to increase endurance and reliability.



|                               |   |
|-------------------------------|---|
| <b>Model</b>                  | SATA 3ME4   |
| <b>Interface</b>              | SATA III  |
| <b>Form Factor</b>            | 2.5" SSD (16GB - 256GB)<br>SATA Slim (16GB - 256GB)<br>mSATA (16GB - 256GB)<br>CFast (16GB - 256GB)<br>M.2 S42 (16GB - 128GB)<br>SATADOM (16GB - 128GB) |
| <b>Performance R/W (MB/s)</b> | 530/210   |

\*Product specifications are subject to change without prior notice.

## Innodisk Corporation

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# DRAM At-a-Glance

## The Innodisk Advantage

### Customer Design Options

Innodisk offers hardware and firmware customization services to ensure successful application needs.

### Conformal Coating

Innodisk conformal coating is the chemical material layered on to components. The coating thickness ranges between 0.03 mm and 0.13 mm and protects against moisture, contaminants, dust and acid-or-alkaline materials, while meeting electronic components IPC-A-610 standards.

### Rugged Design

Rugged DIMM modules are designed with a pair of mounting holes, 10 mm apart, for more secure mounting on the CPU board. Compliant with JEDEC standards, they are resistant to shock and vibration for stable system operations.

### Side Fill

Side fill technology improves the device's reliability and extend product life while it's operating during strong tremors or stringent thermal cycling. By applying resin to three sides of the DRAM IC and reinforcing the BGA and the PCB joints, it can tolerate 1.5 times the amount of tension.

### Wide Temperature

Innodisk's Wide Temperature DRAM modules are designed for applications operating in harsh conditions. These modules use industrial-grade SDRAM components with 30u" Gold fingers to ensure memory quality at temperatures ranging from -40°C to 85°C.

### Warranty

Innodisk offers a Lifetime Warranty on DRAM products that includes examination, repair and replacement parts.

## DRAM Series

Innodisk's industrial-grade DRAM series, DDR4, DDR3, DDR2, DDR1, and SDRAM, are high-quality memory modules designed and developed for embedded and server needs providing a complete turnkey solution. They come with a warranty and value adds that include conformal coating, wide temperature, rugged design, and side fill allowing for customized design options.



### Registered DIMM

Ideal for Server Applications

- Capacity: 1/2/4/8/16/32/64/128GB
- Generation: DDR3/DDR4
- Speed: 1333/1600/1866/2133/2400/2666 MT/s



### Load Reduced DIMM

Ideal for High Performance Applications

- Capacity: 32/64/128GB
- Generation: DDR3/DDR4
- Speed: 1333/1600/2133/2400/2666 MT/s



### Mini DIMM

Ideal for Networking and Telecommunication

- Capacity: 2/4/8/16GB
- Generation: DDR3/DDR4
- Speed: 1333/1600/2133/2400 MT/s
- Functionality: Registered, ECC, non-ECC



### Very Low Profile Series

Ideal for Height-Constraint Platforms

- Capacity: 1/2/4/8/16GB
- Generation: DDR2/DDR3/DDR4
- Speed: 533/667/800/1333/1600/2133/2400 MT/s
- Functionality: Registered, ECC, non-ECC



### XRDIMM

Ideal for Aerospace and Defense

- Capacity: 4/8/16GB
- Generation: DDR3/DDR4
- Speed: 1333/1600/2133/2400 MT/s
- 300pins Board-to-Board Connector
- Functionality: ECC, non-ECC



### Wide Temperature Series

Ideal for Harsh and Wide Temp Environments

- Capacity: 512MB, 1/2/4/8/16GB
- Generation: DDR1/DDR2/DDR3/DDR4
- Speed: 333/400/533/667/800/1333/1600/2133/2400 MT/s
- Functionality: ECC, non-ECC



# DRAM Series



## ECC series

Ideal for IPC and Embedded Systems

- Capacity: 512MB,1/2/4/8/16GB
- Generation: DDR2/DDR3/DDR4
- Speed: 667/800/1333/1600/2133/2400 MT/s
- Functionality: ECC



## Non-ECC series

Ideal for IPC and Embedded Systems

- Capacity: 128/256/512MB, 1/2/4/8/16GB
- Generation: SDRAM/DDR1/DDR2/DDR3/DDR4
- Speed: 100/133/333/400/533/667/800/1333/1600/2133/2400 MT/s
- Functionality: non-ECC



## 32bit / 36bit

Ideal for Low Performance ARM-based CPUs

- Capacity: 1/2/4GB
- Generation: DDR3/DDR4
- Speed: 1600/2133/2400 MT/s
- Functionality: ECC, non-ECC



## Mounting Rugged SODIMM

Ideal for Harsh Vibration Heavy Environments

- Capacity: 4/8/16GB
- Generation: DDR3/DDR4
- Speed: 1333/1600/2133/2400 MT/s
- 2 Screw Hold Design



## Single Sided DIMM (Front/Back)

Ideal for Tight Space Constraint Platforms

- Capacity: 512MB,1/2/4/8/16GB
- Generation: DDR2/DDR3/DDR4
- Speed: 667/800/1333/1600/2133/2400 MT/s
- Functionality: ECC, non-ECC



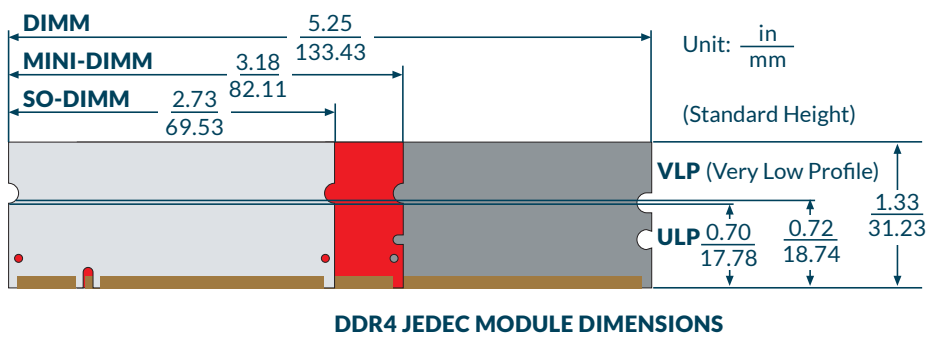
## Conformal Coating

Ideal protection against moisture, contaminants, dust, corrosion, electrical/thermal conduction, and acid or alkaline materials; in line with IPC-A-610 standards for electronic components.



## Side Fill

Side fill is an efficient and cost effective technology that applies resin along the sides of the DRAM integrated circuits (IC) and PCB dramatically increasing the modules ability to withstand mechanical and thermal stress.



# About Innodisk

Innodisk is a service-driven provider of flash memory, DRAM modules and embedded peripherals for industrial and enterprise applications.

Founded in 2005 and headquartered in Taipei, Taiwan, Innodisk services clients globally with engineering experts and sales teams providing service to satisfied customers across the embedded, aerospace and defense, cloud storage markets and more. Demonstrating technical experience, a commitment to dependable products and unparalleled service, Innodisk develops products with excellent quality, remarkable performance and the highest reliability.

For more information about Innodisk, please visit <http://www.innodisk.com>.