

# Innodisk DRAM At-a-Glance

# The Innodisk Advantage

# **Customer Design Options**

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

# **Rugged Design**

Rugged DIMM modules are designed with a pair of mounting holes, for more secure mounting on the CPU board. They are resistant to shock and vibration for stable system operations.

#### **Heat Spreader**

DRAM module add-on that helps to passively disperse heat by cooling the module by 4 to 5 percent.

#### Warranty

Lifetime Warranty on DRAM products includes examination, repair and replacement parts.

#### **Conformal Coating**

Conformal coating is the chemical material layered over the components to protect against moisture, contaminants, and dust and acid-or-alkaline materials. The coating thickness ranges between 0.03mm and 0.13 mm and meets electronic components IPC-A-610 standards.

#### Wide Temperature

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

#### **Anti-sulfuration**

Anti-sulfuration effectively covers the resistors with a sulfur resistant material, ensuring smooth operation in harsh environments. It is available on all DDR4 modules.

#### Side Fill

Side fill technology improves the device's reliability and extend product life during strong tremors or stringent thermal cycling. Resin is applied to 3 sides of the DRAM IC reinforcing the BGA and the PCB joint, so it can tolerate 1.5 times the amount of tension.

# **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.



#### **Registered DIMM**

# Ideal for Server and AIOT

- · Capacity: 2/4/8/16/32/64 · Generation: DDR3/DDR4
- · Speed: 1333/1600/1866/2133/2400/ 2666/2933/3200 MT/s



# Mini DIMM

# Ideal for Server

- · Capacity: 2/4/8/16GB
- · Generation: DDR3/DDR4
- · Speed: 1600/2133/2400 MT/s

Mounting Rugged SODIMM

· Speed: 2133/2400/2666 MT/s ·

Functionality: ECC, non-ECC

Customizable Mounting Holes ·

Ideal for Ruggedized

· Capacity: 4/8/16GB

Generation: DDR4

· Functionality: Registered, non-ECC



# Non-ECC Series

# Ideal for AIOT and Industrial

- · Capacity: 128/256/512MB, 1/2/4/8/16/32GB
- Generation: SDRAM/DDR1/DDR2/DDR3/ DDR4
- Speed: 100/133/333/400/533/667/ 800/1333/1600/1866/2133/2400/2666/ 2933/3200 MT/s



#### **Wide Temperature Series**

# Ideal for Ruggedized, Industrial, and Server

- · Capacity: 1/2/4/8/16GB/32GB
- · Generation: DDR2/DDR3/DDR4
- Speed: 533/667/800/1333/1600/1866/2133 /2400/2666/2933/3200 MT/s
- · Functionality: Registered, ECC, non-ECC,



# **Very Low Profile Series**

# Ideal for Server, AIOT, and Industrial

- · Capacity: 1/2/4/8/16GB/32GB
- · Generation: DDR2/DDR3/DDR4
- · Speed: 1333/1600/1866/2133/2400/2666 /2933/3200 MT/s
- · Form factor: SODIMM, UDIMM, RDIMM
- · Functionality: Registered, ECC, non-ECC





# ECC Series Ideal for AIOT and Industrial

- · Capacity: 1/2/4/8/16/32GB
- · Generation: DDR2/DDR3/DDR4
- · Speed: 667/800/1333/1600/1866/ 2133/2400/2666/2933/3200 MT/s
- · Functionality: ECC

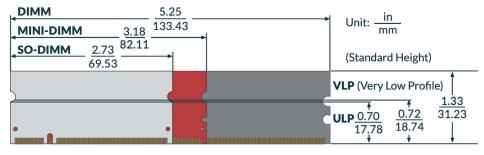
# **Original IC**





# **iRAM**

Innodisk's proprietary iRAM stress testing software integrates a wide range of test patterns and system levels to ensure the quality and reliability of our modules are defect and issue free. Compared with existing testing software on the market, iRAM is able to reduce testing time by half and increase test stringency by 150 to 200%.



**DDR4 JEDEC MODULE DIMENSIONS** 

DRAM Vertical Markets			
Server	AIOT	Ruggedized	Industrial
Networking/5G	Manufacturing	Smart In-Vehicle	Healthcare
High Performance Computing	Kiosk/Retail	Outdoor Signage	Gaming
Cloud Computing	Robotics/AI	Aerospace	Surveillance

# **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.

