Embedded

Embedded Long-DIMM

Long-DIMM modules are general DRAM modules meant to be used as standard products for general embedded applications. These modules are compliant with JEDEC standards and available in DDR1, DDR2, and DDR3.

Series	Standard Solution	Standard Solution
Module Type	DDR3 LONG DIMM	DDR2 LONG DIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB/4GB/8GB	512MB/1GB/2GB/4GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	240pin	240pin
Width	64Bits	64Bits
Voltage	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Series	Standard Solution	Standard Solution
Module Type	DDR LONG DIMM	SDRAM LONG DIMM
Frequency	400Mhz/333Mhz/266MHZ	PC133/PC100
Capacity	128MB/256MB/512MB/1GB	128MB/256MB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	184pin	168pin
Width	64Bits	64Bits
Voltage	2.6V	3.3V
PCB Height	1.25 Inches	1.25 Inches
Operation Temperature	0 ~ 70°C	0 ~ 70°C

Embedded SO-DIMM

Small-outline DIMMs (SO-DIMM) modules are general DRAM modules meant to be uses as standard products for embedded applications with limited space. These modules are compliant with JEDEC standards and help in eliminating the need for changing designs due to space issues.

Series	Standard Solution	Standard Solution
Module Type	DDR3 SODIMM	DDR2 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB/4GB/8GB	512MB/1GB/2GB/4GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	204pin	200pin
Width	64Bits	64Bits
Voltage	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85℃	0 ~ 85℃

Series	Standard Solution	Standard Solution
Module Type	DDR SODIMM	SDRAM SODIMM
Frequency	400Mhz/333Mhz/266MHZ	PC133/PC100
Capacity	128MB/256MB/512MB/1GB	128MB/256MB/512MB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	200pin	144pin
Width	64Bits	64Bits
Voltage	2.6V	3.3V
PCB Height	1.25 Inches	1.25 Inches
Operation Temperature	0 ~ 70℃	0 ~ 70℃

Embedded Low-Profile DIMM

Low-Profile DIMM modules are specialized for use in 1U systems, such as the blade server data center, where the system height is lower than 1.18 inches. The design of these modules improves air flow inside a compact system and reduces thermal impact.



Series	Very Low-Profile (VLP) Solution	Very Low-Profile (VLP) Solution	Very Low-Profile (VLP) Solution
Module Type	DDR3 LONG DIMM	DDR3 SODIMM	DDR2 LONG DIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB/4GB/8GB	1GB/2GB/4GB/8GB	1GB/2GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	240pin	204pin	240pin
Width	64Bits	64Bits	64Bits
Voltage	1.5V/1.35V	1.5V/1.35V	1.8V
PCB Height	0.72 Inches	0.72 Inches	0.72 Inches
Operation Temperature	0 ~ 85˚C	0 ~ 85˚C	0 ~ 85˚C



Series	Very Low-Profile (VLP) Solution	Very Low-Profile (VLP) Solution	Very Low-Profile (VLP) Solution
Module Type	DDR2 SODIMM	DDR LONG DIMM	SDRAM LONG DIMM
Frequency	800Mhz/667Mhz/533Mhz/400Mhz	400Mhz/333Mhz/266MHZ	PC133/PC100
Capacity	512MB/1GB	512MB	128MB/256MB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	200pin	184pin	168pin
Width	64Bits	64Bits	64Bits
Voltage	1.8V	2.6V	3.3V
PCB Height	0.72 Inches	0.72 Inches	0.72 Inches
Operation Temperature	0 ~ 85˚C	0 ~ 70˚C	0 ~ 70˚C

Embedded Unbuffered DIMM with ECC

ECC modules are designed to detect and correct single-bit errors that occur during data storage and transmission. ECC modules use Hamming Code or Triple Modular Redundancy for error detection and correction, and manage error corrections on their own, without requesting that the data source resend original data.

Series	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution
Module Type	DDR3 LONG DIMM	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz
Capacity	1GB/2GB/4GB/8GB	1GB/2GB/4GB/8GB
Function	With ECC Unbuffer Memory	With ECC Unbuffer Memory
Pin Number	240pin	204pin
Width	72Bits	72Bits
Voltage	1.5V/1.35V	1.5V/1.35V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85˚C	0 ~ 85˚C

Series	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution
Module Type	DDR2 LONG DIMM	DDR2 SODIMM	DDR LONG DIMM
Frequency	800Mhz/667Mhz/533Mhz/400Mhz	800Mhz/667Mhz/533Mhz/400Mhz	400Mhz/333Mhz/266MHZ
Capacity	1GB/2GB	256MB/512MB/1GB/2GB	128MB/256MB/512MB/1GB
Function	With ECC Unbuffer Memory	With ECC Unbuffer Memory(PLL)	With ECC Unbuffer Memory
Pin Number	240pin	200pin	184pin
Width	72Bits	72Bits	72Bits
Voltage	1.8V	1.8V	2.6V
PCB Height	1.18 Inches	1.18 Inches	1.25 Inches
Operation Temperature	0 ~ 85˚C	0 ~ 85˚C	0 ~ 70˚C

Server

Server Registered DIMM

Registered DIMM modules are designed to ensure data integrity at both the device- and system-level of the server. In addition, all Innodisk Registered DIMM modules are tested for a 24-hour period in our special-built factory to ensure stable performance.

Series	Server Solution	Server Solution
Module Type	DDR3 LONG DIMM	DDR2 LONG DIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB/4GB/8GB/16GB	512MB/1GB/2GB/4GB
Function	Registered DIMM	Registered DIMM
Pin Number	240pin	240pin
Width	72Bits	72Bits
Voltage	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Server LR-DIMM

Load-reduction DIMM modules are designed with a special buffer to reduce heavy-load data to single-load data (up to 8-rank DIMM). In addition, these modules allow more DIMMs to be added per channel in order to reduce power levels and increase memory capacity and system speed.

Series	Server Solution	Server Solution
Module Type	DDR3 Load reduced DIMM	DDR3 Load reduced DIMM
Frequency	1333Mhz/1066Mhz	1333Mhz/1066Mhz
Capacity	32GB	64GB
Function	IMB	IMB
Pin Number	240pin	240pin
Width	72Bits	72Bits
Voltage	1.5V/1.35V	1.5V/1.35V
PCB Height	1.18 Inches	2.21 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Server Unbuffered DIMM with ECC

ECC modules are designed to detect and correct single-bit errors that occur during data storage and transmission. ECC modules use Hamming Code or Triple Modular Redundancy for error detection and correction, and manage error corrections on their own, without requesting that the data source resend original data.

Series	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution
Module Type	DDR3 LONG DIMM	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz
Capacity	1GB/2GB/4GB/8GB	1GB/2GB/4GB/8GB
Function	With ECC Unbuffer Memory	With ECC Unbuffer Memory
Pin Number	240pin	204pin
Width	72Bits	72Bits
Voltage	1.5V/1.35V	1.5V/1.35V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Series	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution
Module Type	DDR2 LONG DIMM	DDR2 SODIMM	DDR LONG DIMM
Frequency	800Mhz/667Mhz/533Mhz/400Mhz	800Mhz/667Mhz/533Mhz/400Mhz	400Mhz/333Mhz/266MHZ
Capacity	1GB/2GB	256MB/512MB/1GB/2GB	128MB/256MB/512MB/1GB
Function	With ECC Unbuffer Memory	With ECC Unbuffer Memory(PLL)	With ECC Unbuffer Memory
Pin Number	240pin	200pin	184pin
Width	72Bits	72Bits	72Bits
Voltage	1.8V	1.8V	2.6V
PCB Height	1.18 Inches	1.18 Inches	1.25 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 70°C

Wide Temperature

Wide Temperature Unbuffered DIMM

Designed for industrial systems, Innodisk's Wide Temperature DRAM modules are best suited for applications that must work in extreme temperatures. These modules use industrial-grade SDRAM components with 30u" Gold finger to ensure that the memory maintains its high-quality signal, even at temperatures as low as -40ºC or as high as 85ºC.



Series	Wide Temperature	Wide Temperature	Wide Temperature
Module Type	DDR3 LONG DIMM	DDR2 LONG DIMM	DDR LONG DIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz	400Mhz/333Mhz/266MHZ
Capacity	1GB/2GB/4GB/8GB	512MB/1GB/2GB/4GB	512MB/1GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	240pin	240pin	184pin
Width	64Bits	64Bits	64Bits
Voltage	1.5V/1.35V	1.8V	2.6V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	-40 ~ 85˚C	-40 ~ 85˚C	-40 ~ 85˚C

Wide Temperature Unbuffered SO-DIMM

Designed for industrial systems, Innodisk's Wide Temperature DRAM modules are best suited for applications that must work in extreme temperatures. These modules use industrial-grade SDRAM components with 30u" gold finger to ensure that the memory maintains its high-quality signal, even at temperatures as low as -40ºC or as high as 85ºC.



Series	Wide Temperature	Wide Temperature	Wide Temperature
Module Type	DDR3 SODIMM	DDR2 SODIMM	DDR SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz	400Mhz/333Mhz/266MHZ
Capacity	1GB/2GB/4GB/8GB	512MB/1GB/2GB/4GB	512MB/1GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	204pin	200pin	200pin
Width	64Bits	64Bits	64Bits
Voltage	1.5V/1.35V	1.8V	2.6V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	-40 ~ 85˚C	-40 ~ 85˚C	-40 ~ 85˚C

Special / Customized

32-Bit

32-Bit DRAM modules are customized for the non-x86 design system and work especially well on Advanced RISC Machine (ARM) base tablet PCs and mobile devices.

Series	32 bits	32 bits
Module Type	DDR3 SODIMM	DDR2 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB	128MB/1GB/2GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	204pin	200pin
Width	32Bits	32Bits
Voltage	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Rugged

Rugged DIMM modules are designed with a pair of mounting holes for more secure mounting on the CPU board. Resistant to shock and vibration, they allow stable system operation for automobile and harsh environment applications. In addition, these modules are compliant with JEDEC standards, with dimensions extended by 10 mm.

Series	Rugged DIMM (Wide Temp)	Rugged DIMM
Module Type	DDR2 SODIMM	DDR2 SODIMM
Frequency	800Mhz/667Mhz/533Mhz/400Mhz	800Mhz/667Mhz/533Mhz/400Mhz
Capacity	1GB/2GB	1GB/2GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	200pin	200pin
Width	64Bits	64Bits
Voltage	1.8V	1.8V
PCB Height	1.57 Inches	1.57 Inches
Operation Temperature	-40 ~ 85°C	0 ~ 85°C

Mini DIMM

VLP Mini DIMM modules are designed with 17.9mm high dimensions specifically for networking applications. They are compliant with JEDEC standards and are designed to improve thermal resistance. With the ECC function, the VLP Mini DIMM also ensures that data is corrected when corrupted data bits are found during data retrieval.

Series	Mini DIMM-VLP	Mini DIMM-VLP
Module Type	DDR3 SODIMM	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz
Capacity	2GB/4GB/8GB	2GB/4GB/8GB
Function	None ECC Unbuffer Memory	with ECC Unbuffer Memory
Pin Number	244pin	244pin
Width	64Bits	72Bits
Voltage	1.35V / 1.5V	1.35V / 1.5V
PCB Height	0.72 Inches	0.72 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Series	Mini R-DIMM-VLP	Mini R-DIMM
Module Type	DDR3 SODIMM	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz
Capacity	2GB/4GB/8GB/16G	2GB/4GB/8GB/16G
Function	Registered Memory	Registered Memory
Pin Number	244pin	244pin
Width	72Bits	72Bits
Voltage	1.35V / 1.5V	1.35V / 1.5V
PCB Height	0.72 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Single Side

Single Side modules are often used in small form factor (SFF) systems that require a high-density module to be installed in a strictly limited space. The Innodisk-designed low-profile PCB with a JEDEC standard connector requirement fits into any SFF system—something that most standard modules cannot do—without any modification to the hardware design. Single Side modules deliver excellent thermal resistance and help make systems more reliable.

Series	Single DIMM(Front Side)	Single DIMM(Back Side)
Module Type	DDR3 SODIMM	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz	1600Mhz/1333Mhz/1066Mhz
Capacity	1GB/2GB/4GB/8GB	1GB/2GB/4GB/8GB
Function	Non-ECC Unbuffer Memory	Non-ECC Unbuffer Memory
Pin Number	204pin	204pin
Width	64Bits	64Bits
Voltage	1.35V / 1.5V	1.35V / 1.5V
PCB Height	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C

Registered SO-DIMM

Registered SO-DIMM modules are designed to ensure data integrity at both the device- and system-level of server applications with space limitations. In addition, these modules are tested for a 24-hour period in our special-built factory to ensure stabile performance.

Series	Registered SO-DIMM
Module Type	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz
Capacity	1GB/2GB/4GB/8GB
Function	Registered SO-DIMM Memory
Pin Number	204pin
Width	72Bits
Voltage	1.35V / 1.5V
PCB Height	1.18 Inches
Operation Temperature	0 ~ 85°C

Unbuffered SO-DIMM with ECC

ECC modules are designed to detect and correct single-bit errors that occur during data storage and transmission. These modules use Hamming Code or Triple Modular Redundancy for error detection and correction, and manage error corrections on their own, without requesting that the data source resend original data.

Series	Unbuffered w/ECC Solution
Module Type	DDR3 SODIMM
Frequency	1600Mhz/1333Mhz/1066Mhz
Capacity	1GB/2GB/4GB/8GB
Function	With ECC Unbuffer Memory
Pin Number	204pin
Width	72Bits
Voltage	1.5V/1.35V
PCB Height	1.18 Inches
Operation Temperature	0 ~ 85°C