

Product Catalogue 2016

Innodisk Embedded Solutions
Flash Storage, DRAM Module and
Embedded Peripheral



innodisk

Innodisk is a service driven provider of flash memory and DRAM products for the industrial and enterprise applications. With satisfied customers across the embedded, aerospace and defense, cloud storage markets and more, we have set ourselves apart with a commitment to dependable products and unparalleled service. This has resulted in products including embedded peripherals designed to supplement existing industrial solutions and high IOPS flash arrays for industrial and enterprise applications. The expanded business lines are leading our next step in being a comprehensive solution and service provider in industrial storage industry.

Absolute Service

Service is not just what we do. It's who we are.

Absolute Service is our pledge and our guide. It infuses everything we do at Innodisk.

Absolute Service is our promise to deliver the most comprehensive service in every situation. It's the philosophy that guides us in all interactions with our customers and business partners. It's the spirit of friendliness and enthusiasm that fills each member of the Innodisk team.

Absolute Service is our absolute commitment to our customers.

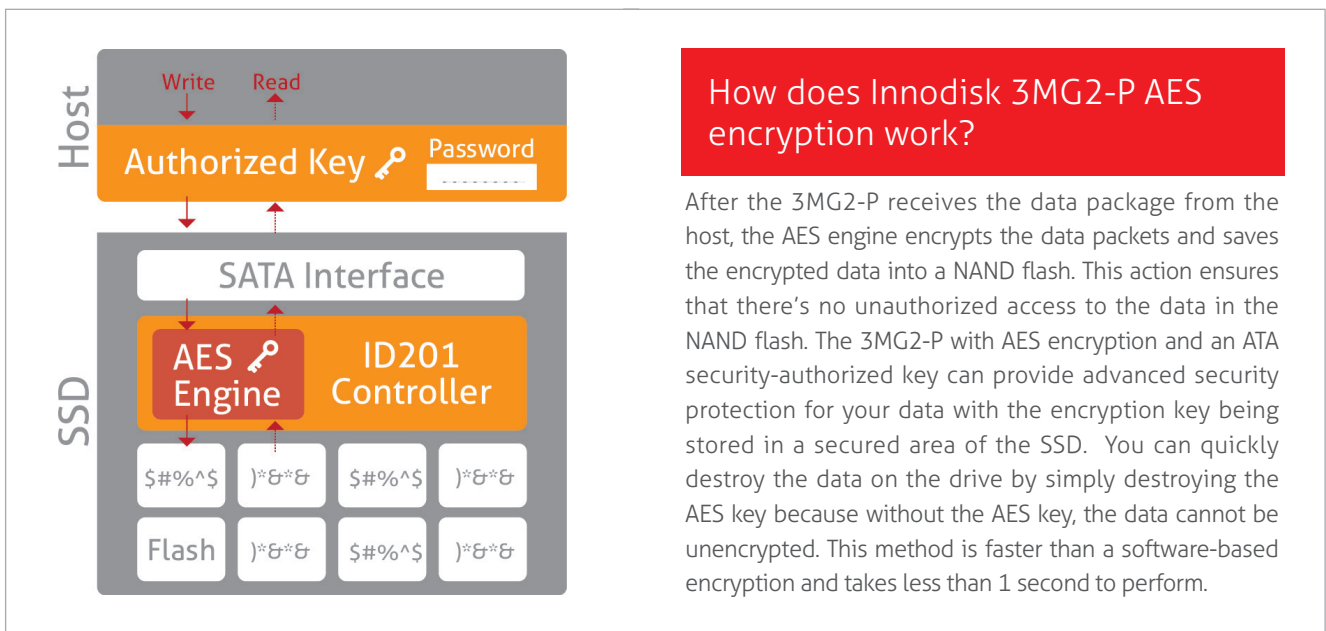


3MG2-P SSD with AES engine enhances data security

Data security is critical for many industries in need of protecting their personal information as well as corporate and national security. Adding encryption has been a common method to ensure the security of data. Currently, the US Government protects their classified data by adopting AES (Advanced Encryption Standard). AES offers an effective way to protect all types of classified data. It is widely used for securing sensitive information throughout various industries such as medical and military. To support the requirements and demands of market, Innodisk developed the 3MG2-P SSD equipped with an AES 256-bit engine. This product combines a reliable and rugged design with superior performance.

Features

- Equipped with hardware-based AES 256 bits Key
- Instant data erase when destroying the AES key
- TCG OPAL 2.0: independent access control to read/write/erase
- Largest capacity up to 2TB
- Exclusive L² architecture
- iData Guard technology for abnormal power failure
- DEVSLP supported for lower power consumption
- Supports wide temperature from -40°C to 85°C



How does Innodisk 3MG2-P AES encryption work?

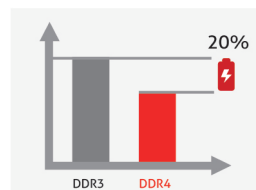
After the 3MG2-P receives the data package from the host, the AES engine encrypts the data packets and saves the encrypted data into a NAND flash. This action ensures that there's no unauthorized access to the data in the NAND flash. The 3MG2-P with AES encryption and an ATA security-authorized key can provide advanced security protection for your data with the encryption key being stored in a secured area of the SSD. You can quickly destroy the data on the drive by simply destroying the AES key because without the AES key, the data cannot be unencrypted. This method is faster than a software-based encryption and takes less than 1 second to perform.



DDR4 Server DRAM

Brings More Power to Server Infrastructures

Benefits



Lower power consumption
DDR4 technology improves upon DDR3 with at least 20% lower voltage, which is more suitable for handheld devices.



Greater Performance
DDR4 technology improves performance up to 30% (comparing the mainstream DRAM of DDR4-2133 SODIMM with DDR3-1600 SODIMM).

DDR4 Series

Series	Server solution
Module Type	DDR4 Long DIMM
Frequency	2133MHz /2400MHz
Capacity	8GB/16GB/32GB
Function	Registered DIMM
Pin Number	288pin
Voltage	1.2V



Thermal Sensor

Thermal Sensors
Innodisk DDR4 UDIMM/SODIMM/ ECC have built-in thermal sensors to prevent failures due to overheating, which is especially practicable for the fanless system.



Gold finger 30μ"

Gold Finger 30μ"
Innodisk DDR4 UDIMM/SODIMM/ ECC with our exclusive Gold Finger technology surpasses the JEDEC's standard 3u" specification and delivers a 30μ" pin-width to DRAM modules for extra protection against scratches and environmental damage.

A Commitment to Technical Innovation

Innodisk continues to bring the most innovative products to a range of industries by developing outstanding proprietary technologies. Here are just few examples of Innodisk's breakthroughs and innovations.

Pin 7 Pin 8 *Cable-less SATA Power*



Innodisk's patented Pin 7 and Pin 8 SATA Power technologies take the cable-less concept to the next step by also eliminating the need for power cables for a 100% cable-less, shock resistant, space saving plug-and-play storage solution that optimizes airflow and makes the best use of limited board space in embedded and rackmount server systems.

iCell



iCell is a smart data protection technology that is built into Innodisk's SSDs. iCell is crucial for mission-critical applications, where working under extreme conditions and without backup power is unavoidable. Our iCell technology provides a mechanism to instantaneously discharge data stored in temporary volatile DRAM buffers to flash storage, to ensure the safety of data during power failures.

iSMART



iSMART is a powerful, easy-to-use SSD and HDD health monitoring tool. It allows system integrators to track important disk information, such as temperature, storage space, bad blocks, lifespan, and firmware, all under one platform. With iSMART, system integrators can better manage disk usage and know exactly when to replace a disk, before the end of its life cycle.

iData Guard



Innodisk's iData Guard is a comprehensive data protection mechanism that functions before and after a sudden power outage to the SSD. Low-power detection terminates data writing before an abnormal power-off, while table-remapping after power-on deletes corrupt data and maintains data integrity. Innodisk's iData Guard provides effective power cycling management, preventing data stored in flash from degrading with use.

Thermal Sensor



Innodisk's Thermal Sensor is a robust heat and workload management technology that is built into our DRAM modules and flash storage. It is a crucial solution for industrial & aerospace and defense applications, which are often susceptible to extreme heat and performance stress. Innodisk's Thermal Sensors help to lower the working temperature while distributing workloads, which prevents modules from overworking and overheating, and greatly enhances system performance and system stability.

Garbage Collection/ TRIM



Innodisk's Garbage Collection/TRIM technology is used to maintain data consistency and perform continual data cleansing on SSDs. It runs as a background process, freeing up valuable controller resources while sorting good data into available blocks, and deleting bad blocks. It also significantly reduces write operations to the drive, thereby increasing the SSD's speed and lifespan. With Innodisk Garbage Collection/TRIM technology, an SSD's health and performance is optimized.

Our Focus

Innodisk focuses on providing reliable memory products and technologies for mission-critical applications. We understand the importance of quality in industrial embedded flash and DRAM storage products. So, we manufacture all of our products in our own purpose-built memory production facility. And to meet the individual needs of each application, our experienced in-house firmware development team delivers fast turnaround and knowledgeable support whenever firmware customization is required.



Industrial/Embedded

Our products can be found in a wide range of industrial/embedded applications, from automation, telecommunications, and medical equipment to transportation. We also offer product customization to suit various working conditions and temperatures.

Industrial/Embedded

Cloud Computing

Cloud Computing

Our comprehensive server-grade storage products are designed to support different levels and scales of cloud computing and high-performance computing server applications. Our products can be customized to meet specific needs, such as higher speed, higher density, or lower power consumption.



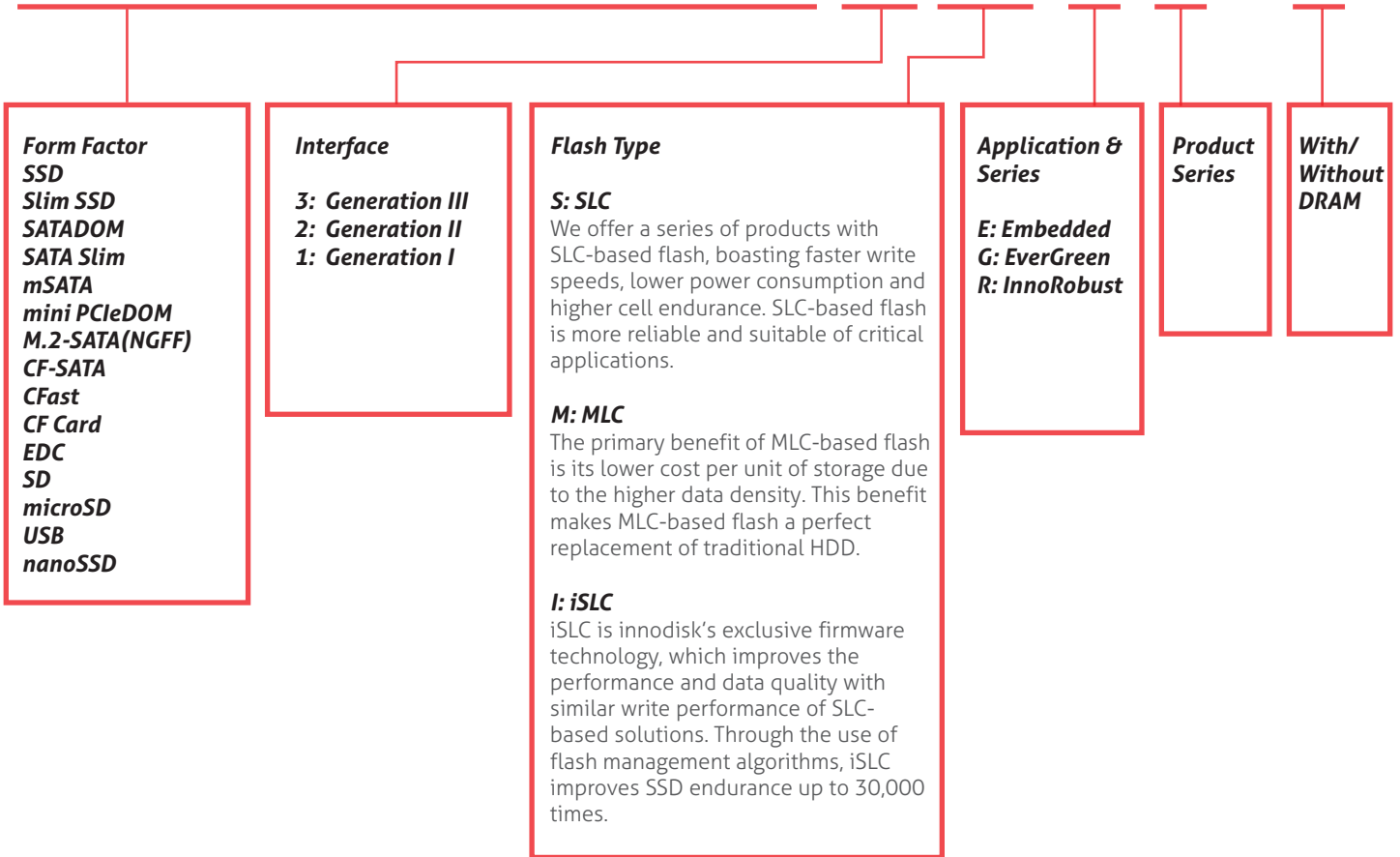
Aerospace and Defense

When it comes to aerospace and defense applications, we offer some of the most rugged and robust memory products in the market. Our products not only meet the industries' stringent standards but also exceed many critical performance requirements, such as reliability and data security.

Aerospace and Defense

New Flash Product Naming Rule

2.5" SATA SSD 3MG2-P



G: EverGreen

EverGreen Series is applied with an evolved L² Architecture which significantly improves SSD random data transfer rate and lifespan. These features are suitable for specific applications and are best suited for data file sizes smaller than or equal to 128KBytes. When used in that way, EverGreen lifespan can be extended over 30 times than general MLC-based SSD.

R: InnoRobust

InnoRobust series meets all of today's aerospace and defense application requirements. InnoRobust storage products are fully compliant with aerospace and defense standards, including MIL-STD-810F/G and MIL-I-46058C. InnoRobust products are fully protected against heat, dust, extreme temperatures, shock, vibration, and other environmental stresses. We also deliver industry-leading data protection technologies to keep sensitive information secure.

E: Embedded

Embedded series is the best solution for the industrial embedded system because it offers reliability, high performance and long endurance. We offer complete form factors to fulfill customer and business needs, including 2.5" SSD, 1.8" SSD, SAT.ADOM, mSATA, SATA Slim, SATADOM, iCF & CFast, EDC, and SD.

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Flash Memory

Innodisk flash memory products are designed to be highly reliable and stable, and provide longer life cycles for the embedded and industrial systems in which they are used. Innodisk offers the industry's widest selection of flash memory form factors, including standard 1.8" and 2.5" Industrial SSDs, SATADOM—the smallest high-speed SATA storage in the industry, CompactFlash Cards, mSATA , SATA Slim, and USB Flash Drives. Our products are available in single-layer cell (SLC) and multi-layer cell (MLC) flash types.

nanoSSD

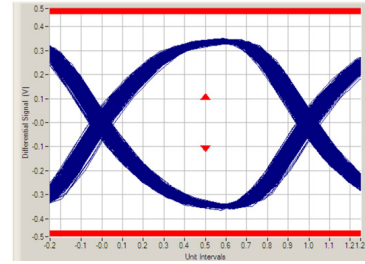
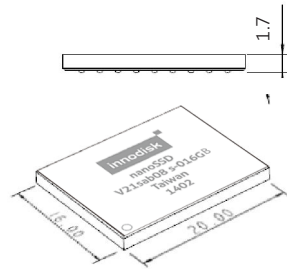
The Innodisk nanoSSD is an integrated SATA storage device. It combines Innodisk's ID106 NAND flash controller and latest NAND flash in a JEDEC MO-276(SATA μ SSD) form factor with one single ball grid array (BGA) package, which makes nanoSSD within a tiny dimension, and very easy to design in. The Innodisk nanoSSD, supporting SATA III 6.0Gbps, offers excellent high data transfer rates, along with lower power consumption. It is an ideal solution for any kind of miniaturization applications.

Benefits of nanoSSD

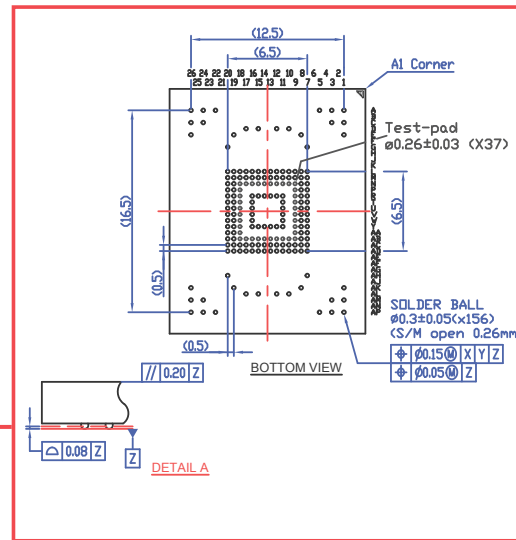
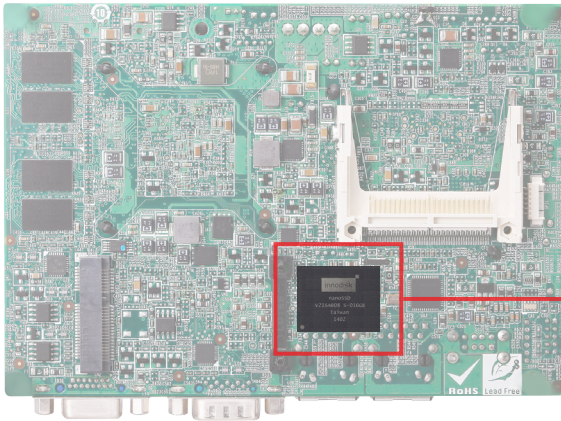
- Chip type, easy to design in without mechanical interference
- SATA interface, highly compatible with x86 system
- Excellent data transfer rates
- Fully compliant with industrial standard
- Suitable for ultra-thin or compact system
- Zero peripheral circuit

Features

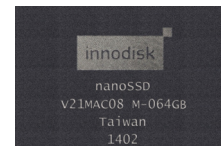
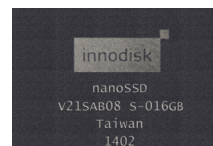
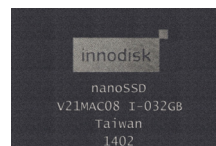
- Integrated NAND Flash controller with Flash in a single chip
- Compliant with JEDEC MO-276 (SATA μ SSD) specification
- Adopted SATA III interface with BGA package
- Intelligent Flash management & real time garbage collection



The Innodisk nanoSSD SATA Eye Pattern



The Innodisk nanoSSD mechanical drawing



Model Name	nanoSSD 3IE	nanoSSD 3SE	nanoSSD 3ME
Key Features	1. Using BGA package to make controller and flash as single chip 2. Adopt SATA III interface, well Compatibility 3. Compliant with JEDEC MO-276 SPEC		
Interface	SATA III 6.0Gb/s		
Flash Type	iSLC	SLC	MLC
Capacity	8GB-32GB	2GB-16GB	8GB-64GB
Max. Channel	4		
Sequential R/W (MB/sec, max.)	480/270	450/200	480/160
Max. Power Consumption	2.5W		
Thermal Sensor	N		
External DRAM Buffer	N		
iCell	N		
TRIM	N		
ATA Security	Y		
S.M.A.R.T	Y		
Dimension (WxLxH/mm)	16.0 x 20.0 x 1.7		
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours		
Standard Temp. OP (0°C~+70°C)	DHNSD-XXXD062C***	DENS-XXXD065C***	DENS-XXXD065C***
Wide Temp. OP (-40°C~+85°C)	N/A	DENS-XXXD065W***	N/A
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) *** = flash configuration (internal control code)		

SSD

Innodisk SSDs bring a whole new level of high performance to memory storage. Our wide selection of SSDs are designed for different applications, including industrial/embedded, enterprise server, aviation, defense, and other semi-industrial applications, such as thin clients, POS, and kiosk. Our SSDs come in iSLC, SLC and MLC types, and support PATA/IDE 44 pin, SATA II (3.0Gb/s), and SATA III (6.0Gb/s).



Model Name	2.5" SATA SSD 3IE3	2.5" SATA SSD 3SE3-P	2.5" SATA SSD 3SE3	2.5" SATA SSD 3SR3-P
Key Features	1. Cost-effective industrial Flash with iSLC 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC	1. Built-in DRAM buffer 2. Intelligent error recovery system 3. Excellent data transfer speed 4. iData Guard protection	1. Intelligent error recovery system 2. Excellent data transfer speed 3. iData Guard protection	1. Compliant with MIL-STD-810-F/G 2. HW/SW Data Security (QEraser/ Destroy/ SEraser/ Write Protect) 3. iCell supported, 100% data protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	iSLC	SLC	SLC	SLC
Capacity	8GB-256GB	8GB-512GB	8GB-128GB	8GB-512GB
Max. Channel	4	4	4	4
Sequential R/W (MB/sec, max.)	440/240	470/340	360/210	490/340
Max. Power Consumption	4.3W (5V x 870mA)	3.15W (5V x 630mA)	1.65W (5V x 330mA)	3.25W (5V x 650mA)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	N	Y	N	Y
iCell	N	Optional	N	Y
TRIM	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	69.8 x 100.1 x 6.8	69.8 x 99.8 x 9.2	69.8 x 99.8 x 9.2	69.8 x 99.8 x 9.2
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours			
Standard Temp. OP (0°C~+70°C)	DHS25-XXXD08BC***	DES25-XXXD70SC***(P)	DES25-XXXD08SC***	DRS25-XXXD70SC***
Wide Temp. OP (-40°C~+85°C)	DHS25-XXXD08BW***	DES25-XXXD70SW***(P)	DES25-XXXD08SW***	DRS25-XXXD70SW***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12, 1TB=01T, 2TB=02T) ***= flash configuration (internal control code) %=Flash			

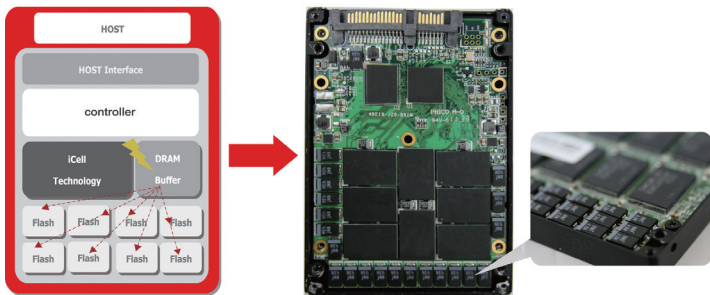


Model Name	2.5" SATA SSD 3MR3-P	2.5" SATA SSD 3ME2	2.5" SATA SSD 3ME3	2.5" SATA SSD 3MG2-P
Key Features	1. Compliant with MIL-STD-810-F/G 2. HW/SW Data Security (QEraser/ Destroy/ SEraser/ Write Protect) 3. iCell supported, 100% data protection	1. High IOPS with DRAM-less design 2. 7mm height mechanical design 3. Low power consumption	1. High IOPS with DRAM-less design 2. 7mm height mechanical design 3. Low power consumption	1. EverGreen L ² architecture 2. High Sequential/ IOPS performance 3. Support DEVSLP 4. iData Guard Protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	MLC	MLC	MLC
Capacity	64GB-512GB	16GB-512GB	8GB-512GB	8GB-2TB
Max. Channel	4	4	4	4
Sequential R/W (MB/sec, max.)	480/220	520/330	415/200	520/450
Max. Power Consumption	3.8W (5V x 760mA)	1.7W (5V x 335mA)	2.73W (5V x 545mA)	6W (5V x 1.2A)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	Y	N	N	Y
iCell	Y	N	N	Optional
TRIM	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	69.8 x 100.1 x 9.3	69.8 x 100.1 x 6.8	69.8 x 100.1 x 6.8	69.8 x 100.1 x 6.8
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours			
Standard Temp. OP (0°C~+70°C)	DRS25-XXXD70% C***	DES25-XXXD72% C***	DES25-XXXD09% C*** DES25-XXXD08% C***	DGS25-XXXD81% C***(P)
Wide Temp. OP (-40°C~+85°C)	DRS25-XXXD70% W***	DES25-XXXD72% W***	DES25-XXXD09% W*** DES25-XXXD08% W***	DGS25-XXXD81% W***(P)
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12, 1TB=01T, 2TB=02T) ***= flash configuration (internal control code) %=Flash Type			



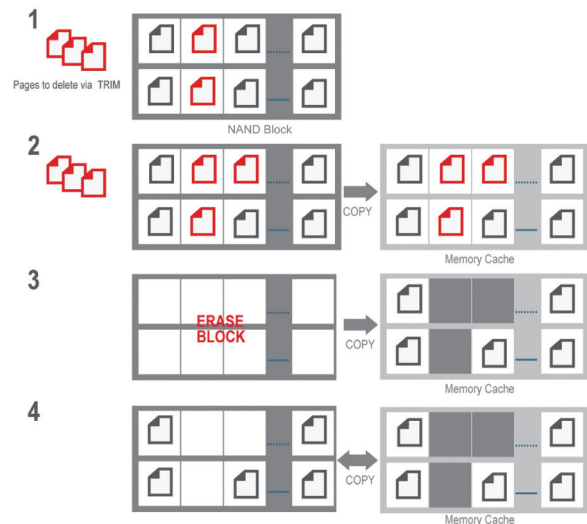
Model Name	1.8" SATA SSD 3SR3-P	1.8" SATA SSD 3MG2-P	1.8" SATA SSD 3MG3-P	Slim SSD 3ME3	PATA 1MG3-P
Key Features	1. Compliant with MIL-STD-810-F/G 2. SW Data Security (QEraser/ Destroy/ SEraser/ Write Protect)	1. Built-in DRAM buffer 2. Intelligent error recovery system 3. Excellent data transfer speed and high IOPS performance 4. iData Guard for abnormal power failure	1. Built-in DRAM buffer 2. Intelligent error recovery system 3. Excellent data transfer speed 4. iData Guard Protection	1.8" housing, 50% space saving	1. Built-in DRAM buffer 2. Intelligent error recovery system 3. Excellent data transfer speed 4. iData Guard Protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	PIO Mode 0-4 Ultra DMA 0-5
Flash Type	SLC	MLC	MLC	MLC	MLC
Capacity	8GB-512GB	32GB-1TB	8GB-512GB	8GB-256GB	8GB-512GB
Max. Channel	4	4	4	4	4
Sequential R/W (MB/sec, max.)	490/340	520/450	480/220	420/140	90/100
Max. Power Consumption	3.25W (5V x 650mA)	5W (5V x 1A)	6W (5V x 1.2A)	1.6W (5V x 315mA)	2W (5V x 400mA)
Thermal Sensor	STD : N , W/T : Y				
External DRAM Buffer	Y	Y	Y	N	Y
iCell	N	N	N	N	N
TRIM	Y	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	54.0 x 78.5 x 5.0	54.0x78.5x5.0	54.0 x 78.5 x 5.0	54.0 x 39.8 x 4.0	69.8 x 100.1 x 9.2
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million				
Standard Temp. OP (0°C~+70°C)	DRS18-XXXX70%C***	DGS18-XXXX81%C***	DGS18-XXXX70%C***	DEMLM-XXXX09%C*** DEMLM-XXXX08%C***	DGP25-XXXX70%C***
Wide Temp. OP (-40°C~+85°C)	DRS18-XXXX70%W***	DGS18-XXXX81%W***	DGS18-XXXX70%W***	DEMLM-XXXX09%W*** DEMLM-XXXX08%W***	DGP25-XXXX70%W***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12, 1TB=01T, 2TB=02T) ***= flash configuration (internal control code) %=Flash Type				

What is iCell?



Innodisk's R&D team has developed iCell Technology into several SSD drives. iCell Technology ensures reliable and accurate data transfers, even in the event of an abnormal power failure.

What is TRIM?



SSDs are made up of millions of NAND flash cells. They can be written into groups called pages (generally 4KB in size) but can only be erased in larger groups called blocks (generally 128 pages or 512KB). The addresses of the deleted files, or HDD formats are sent along with the TRIM command to the SSD's controller so the drive can function optimally. TRIM commands clean up garbage data on the SSD that can slow performance down. The TRIM command is generally sent from the OS when the system is idle this cleans up the blocks with data that need to be erased so that the drive can perform like new.

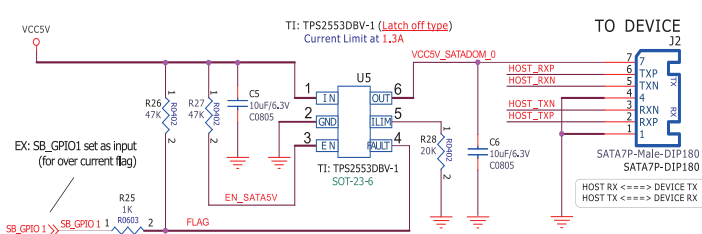
SATADOM

Innodisk's Serial ATA Disk on Module (SATADOM) is the world's smallest form factor with exclusive Pin 7 and Pin 8 VCC built-in, which simplifies motherboard design. Since it has no external cables, it is more robust and enhances the disk functions of various industrial and enterprise applications. Innodisk's SATADOM also supports the SATA II and SATA III interface with faster data transfer rates and is available in capacities ranging from 512MB up to 256GB.

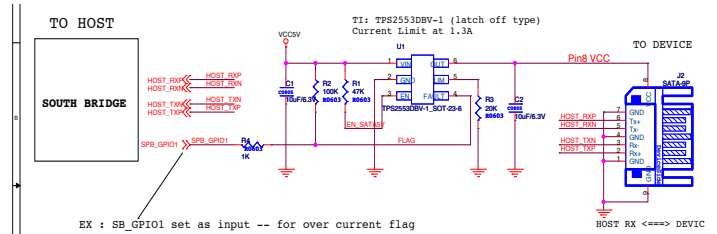
Recommendation for Pin 7 and Pin 8 VCC issues

Innodisk suggests that customers who want to use products with the Pin7 and Pin 8 VCC feature do so as a design-in feature, including a fuse circuit to prevent over-current issues. We recommend our reference circuit to protect the motherboard and device by using either a "POWER SWITCH" or "JUMPER + FUSE"

*Warning DO NOT lay out 5V VCC on the SATA socket directly.



Pin7 VCC MB Reference Circuit Design



Pin8 VCC MB Reference Circuit Design

SATADOM advantage

- Smallest high speed SATA storage, supports low profile 1U Rack-mounted
- Up to 256GB, great for SATA storage device
- Reliable industrial grade quality wide temperature
- No moving parts for better vibration and shock resistance
- Custom Firmware service available
- Qualified by Intel, Supermicro...etc.
- Available in Standard & Industrial temperatures



Model Name	SATADOM-SL 3ME3 V2	SATADOM-SL 3IE3 V2	SATADOM-SV 3ME3 V2	SATADOM-SV 3IE3 V2	SATADOM-SH 3IE3 V2	SATADOM-ML 3ME3 V2
Key Features	1. Vertical and low-profile design for 1U server 2. High IOPS 3. Best boot drive solution 4. Lower power consumption 5. Cable-Less SATA Power Technology	1. Compatible with VMware ESXi 6.0.0 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC 4. Cable-Less SATA Power Technology	1. Vertical version 2. High IOPS 3. Best boot drive solution 4. Cable-Less SATA Power Technology	1. Compatible with VMware ESXi 6.0.0 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC 4. Cable-Less SATA Power Technology	1. Low profile horizontal design 2. High IOPS 3. Cable-Less SATA Power Technology	1. Vertical and low-profile design for 1U server 2. High IOPS 3. Best boot drive solution 4. Lower power consumption 5. Cable-Less SATA Power Technology
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	iSLC	MLC	iSLC	iSLC	MLC
Capacity	8GB-128GB	8GB-64GB	8GB-128GB	8GB-64GB	8GB-64GB	8GB-256GB
Max. Channel	2	2	2	2	2	4
Sequential R/W (MB/sec, max.)	200/80	240/160	200/80	240/160	240/160	400/140
Max. Power Consumption	0.65W (5V x 125mA)	0.65W (5V x 125mA)	0.65W (5V x 125mA)	0.65W (5V x 125mA)	0.65W (5V x 126mA)	1.2W (5V x 239mA)
Thermal Sensor	STD : N , W/T : Y					
External DRAM Buffer	N	N	N	N	N	N
iCell	Y	Y	Y	Y	Y	Y
TRIM	Y	Y	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	30 x 28.4 x 7.4	30 x 28.4 x 7.4	18 x 39.2 x 7.5	18 x 39.2 x 7.5	18.0 x 31.5 x 15.1	33.6 x 30.0 x 8.1
Environment	Vibration: 20G@7~2000Hz Shock: 1500G@0.5ms Storage Temperature: -55°C ~ +95°C MTBF: >3 million					
Standard Temp. OP (0°C~+70°C)	DESSL-XXXD09BC***#	DHSSL-XXXD09BC***#	DESSV-XXXD09BC***#	DHSSV-XXXD09BC***#	DHSSH-XXXD09BC***#	DESML-XXXD08BC***#
Wide Temp. OP (-40°C~+85°C)	DESSL-XXXD09BW***#	DHSSL-XXXD09BW***#	DHSSL-XXXD09%W***#(F)	DHSSV-XXXD09BW***#	DHSSH-XXXD09BW***#	DESML-XXXD08BW***#
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) #=power supply method(A=pin 8/ external power cable, B=Pin 7+ Pin 8)					



Model Name	SATADOM-SV 3SE	SATADOM-ML 3SE-P	SATADOM-SL 3SE	SATADOM-ML 3MG-P
Key Features	1. Vertical version 2. Anti-vibration mechanical design	1. Vertical and low-profile design for 1U server 2. High IOPS 3. Write protect switch 4. High performance SATADOM	1. Vertical and low-profile design for 1U server 2. Best boot drive solution 3. Lower power consumption	1. Vertical and low-profile design for 1U server 2. High IOPS 3. Write protect switch 4. High performance SATADOM
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	SLC	SLC	SLC	MLC
Capacity	512MB-32GB	8GB-64GB	512MB-32GB	16GB-128GB
Max. Channel	2	4	2	4
Sequential R/W (MB/sec, max.)	300/130	480/240	300/130	500/160
Max. Power Consumption	0.65W (5V x 130mA)	2W (5V x 400mA)	0.65W (5V x 130mA)	2.79W (5V x 558mA)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	N	Y	N	Y
iCell	N	N	N	N
TRIM	N	Y	N	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	20.9 x 39.5 x 7.9	35.5 x 30.0 x 9.5	32.9 x 29.5 x 8.0	35.5 x 30.0 x 9.5
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million			
Standard Temp. OP (0°C~+70°C)	DESSV-XXXD075C*** (F)	DESML-XXXD675C*** (F)	DESSL-XXXD075C*** (F)	DGSML-XXXD675C*** (F)
Wide Temp. OP (-40°C~+85°C)	DESSV-XXXD075W*** (F)	DESML-XXXD675W*** (F)	DESSL-XXXD075W*** (F)	DGSML-XXXD675W*** (F)
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) % = Flash Type			



Model Name	SATADOM-ML 3ME3	SATADOM-SL 3ME3	SATADOM-SV 3ME3	SATADOM-ML 3SE3
Key Features	1. Low-profile design for 1U server 2. High IOPS 3. Write protect switch	1. Vertical and low-profile design for 1U server 2. High IOPS 3. Best boot drive solution 4. Lower power consumption	1. Vertical version 2. High IOPS 3. Best boot drive solution	1. Vertical and low-profile design for 1U server 2. Write protect switch 3. High performance SATADOM
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	MLC	MLC	SLC
Capacity	16GB-256GB	4GB-128GB	4GB-128GB	8GB-64GB
Max. Channel	4	2	2	4
Sequential R/W (MB/sec, max.)	355/135	200/75	200/75	400/250
Max. Power Consumption	1W (5V x 200mA)	0.65W (5V x 125mA)	0.65W (5V x 125mA)	2W (5V x 400mA)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	N	N	N	N
iCell	N	N	N	N
TRIM	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	35.5 x 30 x 9.5	32.9 x 29.5 x 8.0	20.9 x 39.5 x 7.9	35.5 x 30 x 9.5
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million			
Standard Temp. OP (0°C~+70°C)	DESML-XXXD08BC*** (F)	DESSL-XXXD09BC*** (F)	DESSV-XXXD09BC*** (F)	DESML-XXXD08SC*** (F)
Wide Temp. OP (-40°C~+85°C)	DESML-XXXD08BW*** (F)	DESSL-XXXD09BW*** (F)	DESSV-XXXD09BW*** (F)	DESML-XXXD08SW*** (F)
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) % = Flash Type			



Model Name	SATADOM-MV 3ME3	SATADOM-SH 3SE	SATADOM-SH Type C 3SE	SATADOM-SH Type D 3SE
Key Features	1. Vertical version. 2. High IOPS 3. Write protect switch 4. Supports TRIM	1. Low profile horizontal design 2. Only expose 12mm height on the motherboard when applying in practical	Low profile horizontal design	Low profile horizontal design
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	SLC	SLC	SLC
Capacity	16GB-128GB	512MB-32GB	512MB-32GB	512MB-32GB
Max. Channel	4	2	2	2
Sequential R/W (MB/sec, max.)	355/135	300/130	300/130	300/120
Max. Power Consumption	1W (5V x 200mA)	0.65W (5V x 130mA)	0.65W (5V x 130mA)	0.65W (5V x 130mA)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	N	N	N	N
iCell	N	N	N	N
TRIM	Y	N	N	N
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	25.3 x 41.5 x 6.8	18.0 x 30.3 x 12.5	30.3 x 18 x 10.4	30.3 x 20.3 x 12.0
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C - +95°C/MTBF: >3 million			
Standard Temp. OP (0°C-+70°C)	DESMV-XXXD09BC*** (F) DESMV-XXXD08BC*** (F)	DESSH-XXXD07*C*** (F)	DESSF-XXXD07*C*** (F)	DESSF-XXXD07*C*** (F)
Wide Temp. OP (-40°C-+85°C)	DESMV-XXXD09BW*** (F) DESMV-XXXD08BW*** (F)	DESSH-XXXD07*W*** (F)	DESSF-XXXD07*W*** (F)	DESSF-XXXD07*W*** (F)
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type			



Model Name	SATADOM-MH 3ME3	SATADOM-SH Type C 3ME3	SATADOM-SH Type D 3ME3	SATADOM-MH 3SE3
Key Features	1. Horizontal design 2. High IOPS 3. Write protect switch	1. Low profile horizontal design 2. High IOPS	1. Low profile horizontal design 2. High IOPS	1. Low-profile design 2. Write protect switch 3. High performance SATADOM
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	MLC	MLC	SLC
Capacity	8GB-128GB	4GB-128GB	4GB-128GB	4GB-64GB
Max. Channel	2	2	2	2
Sequential R/W (MB/sec, max.)	200/75	200/75	200/75	260/130
Max. Power Consumption	1W (5V x 200mA)	0.65W (5V x 125mA)	0.65W (5V x 125mA)	1.8W (5V x 360mA)
Thermal Sensor	STD : N , W/T : Y			
External DRAM Buffer	N	N	N	N
iCell	N	N	N	N
TRIM	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	40.0 x 30.0 x 12.3	18.0 x 30.3 x 12.5	30.0 x 27.5 x 12.0	40.0 x 30.0 x 12.3
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C - +95°C/MTBF: >3 million			
Standard Temp. OP (0°C-+70°C)	DESMH-XXXD09BC*** (F)	DESSC-XXXD09BC*** (F)	DESSF-XXXD09BC*** (F)	DESMH-XXXD09BC*** (F)
Wide Temp. OP (-40°C-+85°C)	DESMH-XXXD09BW*** (F)	DESSC-XXXD09BW*** (F)	DESSF-XXXD09BW*** (F)	DESMH-XXXD09BW*** (F)
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type			

SATA Slim

The Innodisk SATA Slim is compliant with the JEDEC SFF-8156 standard form factor and ATA protocol. It does not require drivers, and can be configured as a boot device or a data storage device. It is also suitable for portable/hand-held devices, thin clients, and industrial applications that require the effective reduction of operation system boot time and power consumption. With a 7+15 pin SATA interface, the Innodisk SATA Slim supports most platforms with a standard SATA port.



Model Name	SATA Slim 3IE3	SATA Slim 3SE3	SATA Slim 3MG2-P
Key Features	1. Cost-effective industrial Flash with iSLC 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC	1. Compliant with standard JEDEC M0297 2. Half Slim, space saving 3. High quality SLC-based solution	1. EverGreen L ² architecture 2. High Sequential/IOPS performance 3. Support DEVSLP 4. iData Guard protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	iSLC	SLC	MLC
Capacity	8GB-128GB	8GB-128GB	8GB-256GB
Max. Channel	4	4	4
Sequential R/W (MB/sec, max.)	420/140	370/220	520/290
Max. Power Consumption	1.6W (5V x 315mA)	2W (5V x 400mA)	2.6W (5V x 520mA)
Thermal Sensor	STD : N , W/T : Y		
External DRAM Buffer	N	N	Y
iCell	N	N	N
TRIM	Y	Y	Y
ATA Security	Y	Y	Y
S.M.A.R.T	Y	Y	Y
Dimension (WxLxH/mm)	54.0 x 39.8 x 4.0	54.0 x 39.8 x 4.0	54.0 x 39.8 x 4.0
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million		
Standard Temp. OP (0°C~+70°C)	DHSLM-XXXD08%C***	DESLM-XXXD08SC***	DGSLM-XXXD81%C***
Wide Temp. OP (-40°C~+85°C)	DHSLM-XXXD08%W***	DESLM-XXXD08SW***	DGSLM-XXXD81%W***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type		



Model Name	SATA Slim 3ME2	SATA Slim 3ME3
Key Features	1. Compliant with standard JEDEC M0297 2. Half Slim, space saving 3. High IOPS 4. Budget-friendly MLC-based solution	1. Compliant with standard JEDEC M0297 2. Half Slim, space saving 3. High IOPS 4. Budget-friendly MLC-based solution
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	MLC
Capacity	32GB-256GB	8GB-256GB
Max. Channel	4	4
Sequential R/W (MB/sec, max.)	440/160	420/140
Max. Power Consumption	1.67W (5V x 335mA)	1.6W (5V x 310mA)
Thermal Sensor	STD : N , W/T : Y	
External DRAM Buffer	N	N
iCell	N	N
TRIM	Y	Y
ATA Security	Y	Y
S.M.A.R.T	Y	Y
Dimension (WxLxH/mm)	54.0 x 39.8 x 4.0	54.0 x 39.8 x 4.0
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million	
Standard Temp. OP (0°C~+70°C)	DESLM-XXXD72%C***	DESLM-XXXD09%C*** DESLM-XXXD08%C***
Wide Temp. OP (-40°C~+85°C)	DESLM-XXXD72%W***	DESLM-XXXD09%W*** DESLM-XXXD08%W***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type	

mSATA

mSATA, which is compliant with JEDEC MO300/MO300B standard, was announced by the Serial ATA International Organization on September 21, 2009. Applications include netbooks, portable devices and other devices that require a smaller solid-state drive. The connector is similar in appearance to a PCI Express Mini Card interface and is electrically compatible; however, the data signals need a connection to the SATA host controller instead of the PCI-express host controller. Innodisk's mSATA supports high-performance data transfer rates of 1.5 Gb/s, 3.0 Gb/s and 6.0 Gb/s.



Model Name	mSATA 3SE-P	mSATA 3SE	mSATA 3SE3	mSATA 3ME2	mSATA 3ME3
Key Features	1. Excellent data transfer speed and IOPS 2. Support TRIM command 3. Built-in DRAM buffer	1. Excellent data transfer speed and IOPS 2. High quality SLC-based solution	1. Excellent data transfer speed and IOPS 2. High quality SLC-based solution 3. High capacity	1. Excellent data transfer speed and IOPS 2. Budget- friendly MLC-based solution	1. Excellent data transfer speed and IOPS 2. Budget- friendly MLC-based solution
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	SLC	SLC	SLC	MLC	MLC
Capacity	4GB-128GB	4GB-64GB	4GB-256GB	16GB-512GB	8GB-512GB
Max. Channel	4	4	4	4	4
Sequential R/W (MB/sec, max.)	460/230	460/230	370/220	510/280	400/200
Max. Power Consumption	1.2 W (3.3V x 360mA)	1.2 W (3.3V x 360mA)	1.2 W (3.3V x 360 mA)	2.6W (3.3V x 810mA)	1.4W (3.3V x 434mA)
Thermal Sensor	STD : N , W/T : Y				
External DRAM Buffer	Y	N	N	N	N
iCell	N	N	N	N	N
TRIM	Y	N	Y	Y	Y
ATA Security	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.3	29.8 x 50.8 x 3.4	29.8 x 50.8 x 3.3
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours***				
Standard Temp. OP (0°C~+70°C)	DEMSR-XXXD67SC***	DEMSR-XXXD06SC*** DEMSR-XXXD07SC***	DEMSR-XXXD09SC*** DEMSR-XXXD08SC***	DEMSR-XXXD72SC***	DESLM-XXXD09BC*** DESLM-XXXD08BC***
Wide Temp. OP (-40°C~+85°C)	DEMSR-XXXD67SW***	DEMSR-XXXD06SW*** DEMSR-XXXD07SW***	DEMSR-XXXD08SW*** DEMSR-XXXD09SW***	DEMSR-XXXD72SW***	DESLM-XXXD09BW*** DESLM-XXXD08BW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code)%=Flash Type				



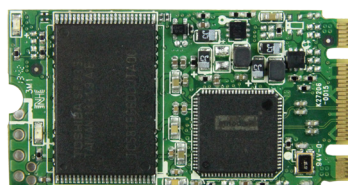
Model Name	mSATA 3MG2-P	mSATA 3IE3	mSATA mini 3ME3	mSATA mini 3ME2	mSATA mini 3IE3
Key Features	1. High IOPS by on-board DRAM design 2. Featuring L ² architecture, the lifespan is maximized 3. DEVSLP supported	1. Lifespan 10 times longer than MLC 2. Performance and data quality congruent to SLC	1. Half mSATA 50% space saving 2. Low power consumption	1. Half mSATA, 50% space saving 2. Low power consumption 3. Built-in thermal sensor	1. Lifespan 7 times longer than MLC 2. Performance and data quality congruent to SLC
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	iSLC	MLC	MLC	iSLC
Capacity	8GB-512GB	8GB-256GB	8GB-128GB	16Gb-128GB	16GB-64GB
Max. Channel	4	4	2	2	2
Sequential R/W (MB/sec, max.)	520/355	440/ 220	220/80	330/160	230/170
Max. Power Consumption	2.2 W (3.3 V x 0.66mA)	1.4 W (3.3V x 434mA)	0.5W (3.3V x 150mA)	1.48W (3.3V x 450mA)	0.6 W (3.3V x 190 mA)
Thermal Sensor	STD : N , W/T : Y				
External DRAM Buffer	Y	N	N	N	N
iCell	N	N	N	N	N
TRIM	Y	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	29.8 x 50.8 x 3.6	29.8 x 50.8 x 3.3	29.8 x 26.8 x 3.7	29.85 x 26.8 x 3.7	29.8 x 26.8 x 3.7
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours***				
Standard Temp. OP (0°C~+70°C)	DGMSR-XXXD81%C***	DHMSR-XXXD08BC*** DHMSR-XXXD09BC***	DEMMS-XXXD09BC***	DEMMS-XXXD72SC***	DHMSM-XXXD09BC***
Wide Temp. OP (-40°C~+85°C)	DGMSR-XXXD81%W***	DHMSR-XXXD08BW*** DHMSR-XXXD09BW***	DEMMS-XXXD09BW***	DEMMS-XXXD72SW***	DHMSM-XXXD09BW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code)%=Flash Type				

M.2-SATA(NGFF)

M.2-SATA (NGFF) stands for Next Generation Form Factor, which is comprised of several interfaces and the corresponding system interconnect based on 67pin edge card connectors. The Innodisk M.2-SATA (NGFF) offers wide range capacities in several standard form factors to fulfill different applications, including type 2242, type 2260, type 2280, and 22110.

Benefits

- Small form factor, M.2 (S42) save about 40% PCB dimension compared to Mini PCIe form factor
- Innodisk's exclusive iData Guard ensures reliable data transfers in the event of an abnormal power failure
- Fully compliant with industrial standard
- Suitable for ultra-thin or compact system



M.2-2242

Features

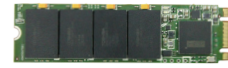
- Adopted SATA III 6.0 Gb/s interface, compliant with M.2 (NGFF) type 2242 and 2280
- Excellent data transfer speed in small form factor
- iCell technology for data protection
- Supports iSMART disk health monitoring



M.2-2280



Model Name	M.2 (S42) 3SE	M.2 (S80) 3MG2-P	M.2 (S42) 3ME3
Key Features	1. Type 2242-D2-B-M 2. High quality SLC-based solution 3. iData Guard Protection	1. Type 2280-D2-B-M 2. High Sequential/IOPS performance 3. Support DEVSLP 4. iData Guard protection	1. Type 2242-D2-B-M 2. High IOPS 3. iData Guard protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	SLC	MLC	MLC
Capacity	1GB-32GB	128GB-1TB	8GB-128GB
Max. Channel	2	4	2
Sequential R/W (MB/sec, max.)	300/130	500/450	200/75
Max. Power Consumption	0.5W (3.3V x 150mA)	3.63W (3.3V x 1.1mA)	0.5W (3.3V x 150mA)
Thermal Sensor	STD : N , W/T : Y		
External DRAM Buffer	N	Y	N
iCell	N	N	N
TRIM	N	Y	Y
ATA Security	Y	Y	Y
S.M.A.R.T	Y	Y	Y
Dimension (WxLxH/mm)	22.0 x 42.0 x 3.4	22.0 x 80.0 x 3.5	22.0 x 42.0 x 3.4
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours		
Standard Temp. OP (0°C~+70°C)	DEM24-XXXD07SC***	DGM28-XXXD81%C***	DEM24-XXXD09%C***
Wide Temp. OP (-40°C~+85°C)	DEM24-XXXD07SW***	DGM28-XXXD81%W***	DEM24-XXXD09%W***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type		



Model Name	M.2 (S42) 3IE3	M.2 (S80) 3SE3
Key Features	1. Type 2242-D2-B-M 2. High IOPS 3. iData Guard Protection 4. Cost-effective industrial flash with iSLC	1. Type 2280-D2-B-M 2. High quality SLC-based solution 3. iData Guard protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	iSLC	SLC
Capacity	8GB-64GB	32GB-256GB
Max. Channel	2	4
Sequential R/W (MB/sec, max.)	240/170	380/240
Max. Power Consumption	1.2W (3.3V x 150mA)	1.3W (3.3V x 390mA)
Thermal Sensor	STD : N , W/T : Y	
External DRAM Buffer	N	N
iCell	N	N
TRIM	Y	Y
ATA Security	Y	Y
S.M.A.R.T	Y	Y
Dimension (WxLxH/mm)	22.0 x 42.0 x 3.4	22.0 x 80.0 x 3.5
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours	
Standard Temp. OP (0°C~+70°C)	DHM24-XXXD09%C***	DEM28-XXXD08SC***
Wide Temp. OP (-40°C~+85°C)	DHM24-XXXD09%W***	DEM28-XXXD08SW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type	

Mini PCIeDOM

The Innodisk Mini PCIeDOM is a Flash based disk module with standard Mini PCIe form factor, and PCI Express Gen.1 interface. It is suitable for board maker or SI to design in the product as a boot drive or a storage device. Meanwhile, it supports multiple operation systems and no driver needed, including Windows XP, Windows 7, and Linux based OS.



Model Name	Mini PCIeDOM 1SE	Mini PCIeDOM 1ME3	Mini PCIeDOM 1E3
Key Features	1. Standard Mini PCIe form factor 2. Driver-less 3. PCIe Gen.1,x1	1. Standard Mini PCIe form factor 2. Driver-less 3. PCIe Gen.1,x1	1. Standard Mini PCIe form factor 2. Driver-less 3. PCIe Gen.1,x1
Interface	PCI Express Gen.1 x1	PCI Express Gen.1 x1	PCI Express Gen.1 x1
Flash Type	SLC	MLC	iSLC
Capacity	4GB-64GB	8GB-256GB	8GB-128GB
Max. Channel	4	2	2
Sequential R/W (MB/sec, max.)	85/85	130/100	130/110
Max. Power Consumption	2.3 W (3.3V x 700mA)	2 W (3.3V x 6200mA)	2 W (3.3V x 6200mA)
Thermal Sensor	STD: N , W/T: Y		
External DRAM Buffer	N	N	N
iCell	N	N	N
TRIM	N	Y	Y
ATA Security	Y	Y	Y
S.M.A.R.T	Y	Y	Y
Dimension (WxLxH/mm)	30.0 x 50.95 x 5.0	30.0 x 50.9 x 5.0	30.0 x 50.9 x 5.0
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours		
Standard Temp. OP (0°C~+70°C)	DEEDM-XXXJ30AC***	DEEDM-D09%C***	DHEDM-D09%C***
Wide Temp. OP (-40°C~+85°C)	DEEDM-XXXJ30AW***	DEEDM-D09%W***	DHEDM-D09%W***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code) %=Flash Type		

CFast

The Innodisk CFast is a small form factor card standard with high data storage capacity. It is suitable for semi-industrial applications. Compliant with the CFast 2.0 standard, it is designed with a 7+17 pin connector and is SATA compatible. The Innodisk CFast offers data transfer rates of sequential read up to 470 MB/sec. and of sequential write up to 280MB/sec.



Model Name	CFast 3SE	CFast 3ME3	CFast 3ME2	CFast 3IE3
Key Features	1. Compliant with CFast 2.0 standard 2. Excellent data transfer speed 3. Support hardware write protect	1. Compliant with CFast 2.0 standard 2. Budget friendly MLC-based solution 3. Support hardware write protect 4. High IOPS	1. Compliant with CFast 2.0 standard 2. Budget friendly MLC-based solution 3. Support hardware write protect 4. High IOPS	1. Cost-effective industrial Flash with iSLC 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC 4. Support hardware write protect
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Connector	7+17pin	7+17pin	7+17pin	7+17pin
Flash Type	SLC	MLC	MLC	MLC
Capacity	1GB-64GB	8GB-256GB	16GB-128GB	8GB-128GB
Max. Channel	4	2	4	2
Sequential R/W (MB/sec, max.)	470/250	220/130	440/150	240/160
Max. Power Consumption	1.1W (3.3V x 360mA)	1.5W (3.3V x 420mA)	1.5W (3.3V x 420mA)	1.5W (3.3V x 420mA)
Thermal Sensor				
External DRAM Buffer	N	N	N	N
iCell	N	N	N	N
TRIM	N	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	42.8 x 36.4 x 3.6	42.8 x 36.4 x 3.6	42.8 x 36.4 x 3.6	42.8 x 36.4 x 3.6
Environment				
Standard Temp. OP (0°C~+70°C)	DECFA-XXXD06SC***	DECFA-XXXD09%C***	DECFA-XXXD72%C***	DHCFA-XXXD09%C***
Wide Temp. OP (-40°C~+85°C)	DECFA-XXXD06SW***	DECFA-XXXD09%W***	DECFA-XXXD72%W***	DHCFA-XXXD09%W***
Note				

CF Card

Innodisk's Industrial CompactFlash Memory Card (iCF) complies with the PCMCIA* ATA standard. Designed to replace traditional rotating disk drives, Innodisk iCFs are embedded solid-state data storage systems that are designed for mobile computing and the industrial work place.



Model Name	iCF 9000	iCF 1SE	iCF 1ME
Key Features	1. High sustained data transfer speed 2. Enhanced power cycling management	High quality SLC-based solution	1. Budget friendly MLC-based solution 2. Enhanced power cycling management
Interface	PATA	PATA	PATA
Connector	50pin CF connector	50pin CF connector	50pin CF connector
Flash Type	SLC	SLC	MLC
Capacity	1GB-64GB	512MB-8GB	8GB-256GB
Max. Channel	4	2	2
Sequential R/W (MB/sec, max.)	110/100	50/40	110/75
Max. Power Consumption	1.05W (5V x 210mA) 0.76W (3.3V x 230mA)	0.75W (5V x 150mA) 0.5W (3.3V x 150mA)	1.05W (5V x 150mA) 0.69W (3.3V x 150mA)
Thermal Sensor	N	N	N
ATA Security	Y	Y	Y
S.M.A.R.T	Y	Y	Y
Dimension (WxLxH/mm)	42.8 x 36.4 x 3.3	42.8 x 36.4 x 3.3	42.8 x 36.4 x 3.3
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours		
Standard Temp. OP (0°C~+70°C)	DC1M-XXXD71%C***	DC1M-XXXD41AC***	DECFC-XXXD53%C***
Wide Temp. OP (-40°C~+85°C)	DC1M-XXXD71%W***	DC1M-XXXD41AW***	DECFC-XXXD53%W***
Note	PIO mode 0-6 UDMA mode 0-7	PIO mode 0-6 UDMA mode 0-4	PIO mode 0-6 UDMA mode 0-7
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28) ***= flash configuration (internal control code) % =Flash Type		

ServerDOM

Innodisk ServerDOM is dedicated to the future of server design. By using ServerDOM as a boot drive, there is more space for hot-swappable data storage.



Model Name	ServerDOM-L 3ME	ServerDOM-L 3IE	ServerDOM-L 3SE	ServerDOM-H 3ME
Key Features	1. Vertical and low-profile design for server 2. High capacity 3. Best boot drive solution	1. Vertical and low-profile design for server 2. Cost-effective industrial Flash with iSLC 3. Best boot drive solution 4. Lifespan 7 times longer than MLC 5. Performance and data quality congruent to SLC	1. Vertical and low-profile design for server 2. High performance 3. Extreme lifespan	1. Low profile horizontal design for server 2. High capacity 3. Best boot drive solution
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	MLC	iSLC	SLC	MLC
Capacity	8GB-64GB	8GB-32GB	2GB-16GB	8GB-64GB
Max. Channel	4	4	4	4
Sequential R/W (MB/sec, max.)	480/160	480/270	450/200	480/160
Max. Power Consumption	2.5W	2.5W	2.5W	2.5W
Thermal Sensor	N	N	N	N
External DRAM Buffer	N	N	N	N
iCell	N	N	N	N
TRIM	N	N	N	N
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	25.0 x 29.4 x 7.7	25.0 x 29.4 x 7.7	25.0 x 29.4 x 7.7	25.0 x 21.8 x 13.3
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours			
Standard Temp. OP (0°C~+70°C)	DESNL-XXXD06SC***#	DHSNL-XXXD063C***#	DESNL-XXXD06SC***#	DESNH-XXXD06SC***#
Wide Temp. OP (-40°C~+85°C)	N/A	N/A	DESNL-XXXD06SW***#	N/A
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code) #=power supply type			



Model Name	ServerDOM-H 3IE	ServerDOM-H 3SE	ServerDOM-V 3ME	ServerDOM-V 3IE	ServerDOM-V 3SE
Key Features	1. Low profile horizontal design for server 2. Cost-effective industrial Flash with iSLC 3. Best boot drive solution 4. Lifespan 7 times longer than MLC 5. Performance and data quality congruent to SLC	1. Low profile horizontal design for server 2. High performance 3. Extreme lifespan	1. Vertical version with housing for server 2. High capacity 3. Best boot drive solution	1. Vertical version with housing for server 2. Cost-effective industrial Flash with iSLC 3. Best boot drive solution 4. Lifespan 7 times longer than MLC 5. Performance and data quality congruent to SLC	1. Vertical version with housing for server 2. High performance 3. Extreme lifespan
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	iSLC	SLC	MLC	iSLC	SLC
Capacity	8GB-32GB	2GB-16GB	8GB-64GB	8GB-32GB	2GB-16GB
Max. Channel	4	4	4	4	4
Sequential R/W (MB/sec, max.)	480/270	450/200	480/160	480/270	450/200
Max. Power Consumption	2.5W	2.5W	2.5W	2.5W	2.5W
Thermal Sensor	N	N	N	N	N
External DRAM Buffer	N	N	N	N	N
iCell	N	N	N	N	N
TRIM	N	N	N	N	N
ATA Security	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	25.0 x 21.8 x 13.3	25.0 x 21.8 x 13.3	20.2 x 30.7 x 8.6	20.2 x 30.7 x 8.6	20.2 x 30.7 x 8.6
Environment	Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours				
Standard Temp. OP (0°C~+70°C)	DHSNH-XXXD062C***#	DESNH-XXXD06SC***#	DESNV-XXXD06SC***	DHSNV-XXXD062C***	DESNV-XXXD06SC***
Wide Temp. OP (-40°C~+85°C)	N/A	DESNH-XXXD06SW***#	N/A	N/A	DESNV-XXXD06SW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code) #=power supply type				

USB

The Innodisk industrial-grade USB series is built using SLC NAND flash and features an attractive small form factor. It provides high-capacity flash memory storage while delivering faster data transmission with high reliability. It also complies with the high-speed USB 3.0 interface and is backward compatible with USB 1.1. The Innodisk USB series has a variety of special features, from plastic and metal housing to secure mounting holes to EDC choices.



Model Name	Industrial Nano USB	USB Drive 3SE	USB Drive 3ME	USB Drive 2SE	USB Drive 2ME
Key Features	1. Only expose 5mm height on the motherboard when applying in practical 2. Smallest USB drive for industrial application 3. Very low power consumption	1. Metal housing to enhance ESD protection 2. 30μ golden finger for highly reliable data transfer quality		1. Metal housing to enhance ESD protection 2. 30μ golden finger for highly reliable data transfer quality	
Interface	USB 2.0	USB 3.0		USB 2.0	
Connector	Type A	Type A		Type A	
Flash Type	SLC	SLC	MLC	SLC	MLC
Capacity	1GB-8GB	4GB-32GB	8GB-64GB	512MB-16GB	8GB-64GB
Max. Channel	1	1	1	1	1
Sequential R/W (MB/sec, max.)	19/17	110/85	105/50	28/24	26/10
Max. Power Consumption	0.45W (5V x 90mA)	0.70W (5V x 140mA)		0.85W (5V x 170mA)	
Dimension (WxLxH/mm)	15.4 x 19.4 x 6.9	16.5 x 45.8 x 7.4		16.5 x 45.8 x 7.4	
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours				
Standard Temp. OP (0°C~+70°C)	DEUN-XXXS24AC***	DEUA1-XXXI61SC***	DEUA1-XXXI61%6C***	DEUA1-XXXI72AC***	DEUA1-XXXI72%6C***
Wide Temp. OP (-40°C~+85°C)	DEUN-XXXS24AW***	DEUA1-XXXI61SW***	DEUA1-XXXI61%6W***	DEUA1-XXXI72AW***	DEUA1-XXXI72%6W***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code)				



Model Name	USB EDC Vertical 3SE	USB EDC Vertical 3ME	USB EDC Horizontal 2SE	USB EDC Horizontal 2ME	USB EDC Vertical 2SE	USB EDC Vertical 2ME
Key Features	1. High performance with USB 3.0 interface 2. Low power consumption 3. Wear-Leveling supported		1. Supported mounting hole 2. 2.0/2.54 pin pitch		1. Very low profile 2. Low power consumption	
Interface	USB 3.0		USB 2.0		USB 2.0	
Connector	Standard, 20pin, 2.00mm		Standard, 9pin, 2.54mm Low profile, 9pin, 2.00mm		Standard, 9pin, 2.54mm	
Flash Type	SLC	MLC	SLC	MLC	SLC	MLC
Capacity	4GB-32GB	8GB-64GB	512MB-32GB	8GB-128GB	512MB-16GB	8GB-64GB
Max. Channel	1	1	1	1	1	1
Sequential R/W (MB/sec, max.)	110/85	100/50	28/24	26/10	28/24	26/10
Max. Power Consumption	0.79W (5V x 158)		0.85W (5V x 170mA)		0.85W (5V x 170mA)	
Dimension (WxLxH/mm)	24.0 x 22.0 x 5.0		26.6 x 36.9 x 9.6 (Pin Pitch 2.54) 26.6 x 36.9 x 6.6 (Pin Pitch 2.00)		15.2 x 34.1 x 6.4	
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours					
Standard Temp. OP (0°C~+70°C)	DEUV1-XXXI61SC***	DEUV1-XXXI61%6C***	DEUH1-XXXI72AC*** DEUH2-XXXI72AC***	DEUH1-XXXI72%6C*** DEUH2-XXXI72%6C***	DEUV1-XXXI72AC***	DEUV1-XXXI72%6C***
Wide Temp. OP (-40°C~+85°C)	DEUV1-XXXI61SW***	DEUV1-XXXI61%6W***	DEUH1-XXXI72AW*** DEUH2-XXXI72AW***	DEUH1-XXXI72%6W*** DEUH2-XXXI72%6W***	DEUV1-XXXI72AW***	DEUV1-XXXI72%6W***
Notes	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28, 256GB=B56, 512GB=C12) ***= flash configuration (internal control code)					

EDC

The Innodisk Embedded Disk Card (EDC) complies with PCMCIA* ATA standards and fits into all platforms with an IDE connector. The Innodisk Embedded Disk Card comes in capacities ranging from 512MB to 256GB and is available in 40-pin and 44-pin connector packages.



Model Name	EDC 1SE Vertical Type	EDC 1SE Horizontal Type	EDC 1ME Vertical Type	EDC 1ME Horizontal Type
Key Features	1. Dust prevention 2. High quality SLC-based solution	1. High quality SLC-based solution 2. Supported mounting hole	1. Budget- friendly MLC-based solution 2. High performacne PATA solution	1. Budget- friendly MLC-based solution 2. High performacne PATA solution
Connector	40/44 pin	40/44 pin	44 pin	44 pin
Interface	PATA	PATA	PATA	PATA
Flash Type	SLC	SLC	MLC	MLC
Capacity	512MB-4GB	512MB-8GB	8GB-128GB	8GB-256GB
Max. Channel	2	2	2	2
Sequential R/W (MB/sec, max.)	40/28	40/28	110/75	110/75
Max. Power Consumption	0.75W (5V x 150mA) 0.5W (3.3V x 150mA)	0.75W (5V x 150mA) 0.5W (3.3V x 150mA)	1.05W (5V x 150mA) 0.69W (3.3V x 150mA)	1.05W (5V x 150mA) 0.69W (3.3V x 150mA)
Thermal Sensor	N	N	N	N
External DRAM Buffer	N	N	N	N
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	40 pin: 60.2 x 27.3 x 6.4 44 pin: 50.3 x 27.3 x 5.8	40 pin (A,B type): 55 x 32.4 x 12.9 40 pin (C,D type): 55 x 32.4 x 14.6 40 pin (E,F type): 55 x 32.4 x 18.3 44 pin (A,B type): 55 x 32.4 x 6.7 44 pin (C,D type): 55 x 32.4 x 9.6 44 pin (E,F type): 48 x 32.4 x 12.9	50.3 x 27.3 x 5.8	55 x 32.4 x 6.7
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours			
Standard Temp. OP (0°C~+70°C)	DE0H-XXXD41AC*** DE4H-XXXD41AC***	DE0P%-XXXD41AC*** DE4P%-XXXD41AC***	DEE4H-XXXD53#C***	DEE4%-XXXD53#C***
Wide Temp. OP (-40°C~+85°C)	DE0H-XXXD41AW*** DE4H-XXXD41AW***	DE0P%-XXXD41AW*** DE4P%-XXXD41AW***	DEE4H-XXXD53#W***	DEE4%-XXXD53#W***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G, 128GB=A28) *** = flash configuration (internal control code) % = Horizontal type (A, B, C, D, E, F) # = Flash Type			

SD/micro SD

Innodisk SD and microSD are single-level flash devices built for rugged applications in the embedded field. As an industrial-grade SD/microSD card, these cards deliver outstanding performance of up to 20MB per second as well as excellent endurance and reliability, especially compared to other cards used in the mobile market. The Innodisk SD and microSD cards are compatible with SD 2.0 standards and support SDHC Class 10. They also feature SMART technology, which monitors the reliability of these SD cards.



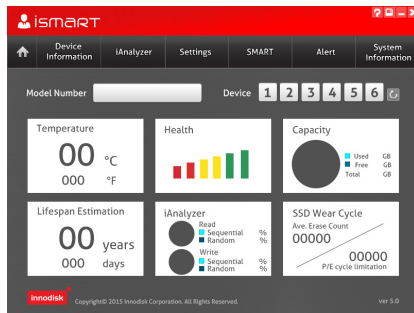
Model Name	Industrial micro SD Card	MicroSD 3ME	Industrial SD Card
Key Features	Enhanced power cycling management	Support Class 10 with UHS-I	1. Designed for industrial applications 2. High reliability 3. Customizeable 4. Power fail mangement
Interface	SD 1.01/2.00	SD 3.0	SD 3.00
Flash Type	SLC	MLC	SLC/MLC
Capacity	1G-8GB	8GB-64GB	SLC: 128MB-32GB MLC: 4GB-64GB
Max. Channel	1	1	1
Sequential R/W (MB/sec, max.)	20/16	44/34	SLC: 23/21 MLC: 45/21
Max. Power Consumption	0.17W (3.3V x 50mA)	0.4W (3.3V x 125mA)	0.22W (3.3V x 69mA)(SLC) 0.22W (3.3V x 77mA)(MLC)
S.M.A.R.T	Y	Y	Y
Dimension (WxLxH/mm)	11.0 x 15.0 x 1.0	11.0 x 15.0 x 1.0	24.0 x 32.0 x 2.1
Environment	Vibration: 20G@7-2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours		
Standard Temp. OP (-20°C~+85°C)	DS2M-XXXI81AC***	DESDM-XXXS27SEASN	DESDC-XXXY81%C***
Wide emp. OP (-40°C~+85°C)	DS2M-XXXI81AW***	NA	DESDC-XXXY81%W***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G) *** = flash configuration (internal control code) % = Flash Type		



Download our iSMART to monitor the health of storage

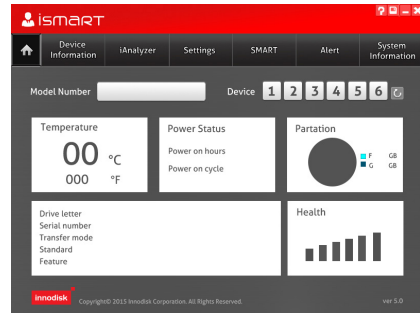
iSMART 5.1.6 is designed to simplify the SMART information and provide an easy-to-read interface for all our users. The iSMART tool monitors the health and lifespan of Innodisk's SSD as well as providing details on usage patterns and setting up alert settings before total failure. With iSMART, our customers are able to properly integrate Innodisk's SSDs into their solutions by carefully monitoring the behavior and lifespan during development, integration, and mass production.

Dashboard



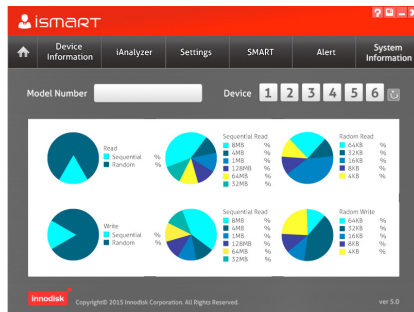
The Dashboard's home tab aims to provide a summary or quick snapshot of each installed disk in the system. This page offers accurate data information regarding Temperature, Health, Capacity, Lifespan, iAnalyzer, and Notifications.

Device Information



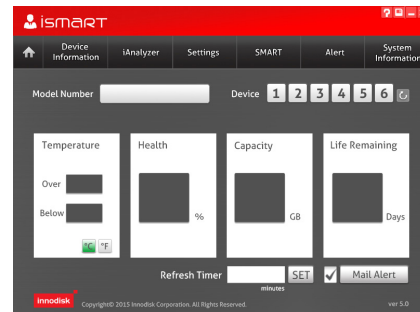
The Device Information page provides additional functions, such as Power Status, Partitions, and detailed information of the device such as Serial Number, Firmware Version, Interface, and Features. To learn more about SMART information, go to SMART values and refer to the SMART tab.

iAnalyzer



When activated, the iAnalyzer tab displays the read/write behaviors of the SSD in real time. This allows the user to understand their application usage of the SSD. Sequential and Random I/Os are easily broken down into percentages making them easy to read.

Alert

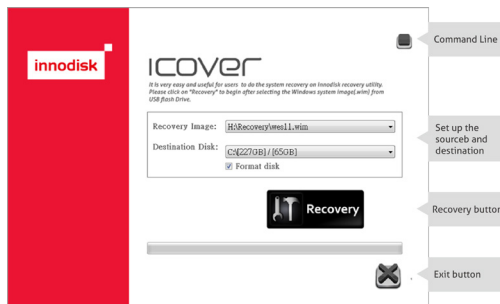


The Alert tab helps the user set trigger points with Temperature, Health percentage, Remaining Capacity or Life Remaining. If these trigger points exceed their boundaries, the iSMART utility can send a warning and email to the user notifying them that something may fail.



Rely on iCover to Recover & Backup Your System Easily

iCover is a professional, easy-to-use, highly customized system recovery and backup software tool that is designed for industrial PC usage, fully compatible with Microsoft Windows including embedded OS. Quick recovery works to protect the system from crashing and helps to restore it efficiently if it does.

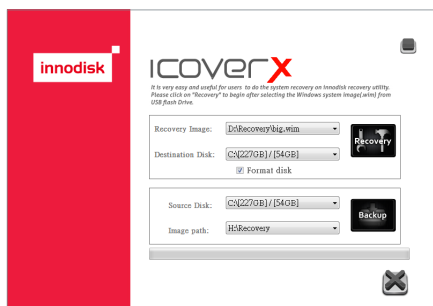


iCover UI is a simple one-page splash screen that is extremely clear and intuitive for users. The single Recovery button is easily accessible.

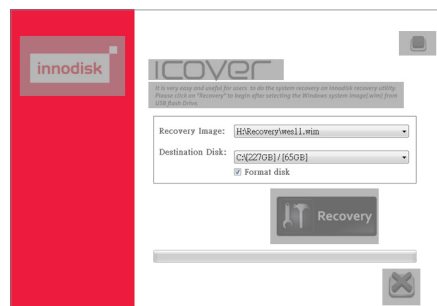
iCover series - OS support

- iCover series supports all windows kernel system :
- Windows XP Kernel
 - Windows 7 Kernel
 - Windows 8.1 Kernel
 - Windows 10 Kernel
 - Windows XP Embedded (XPE)
 - Windows Embedded Standard 2009/7/8
 - POSReady 2009/7
 - Windows Embedded 8.1 Industry

iCover fully supports all x86 devices with Windows kernel, including Windows embedded OS.



iCoverX provides system recovery and backup function simultaneously. It allows users to manage multiple system versions by simply clicking on the single Backup button.



High customization of the user interface provides customers with flexibility and individuality. It is easy to replace the logo, buttons, background and name.

DRAM Modules

Innodisk's industrial-grade DRAM series is high-quality memory modules that have been specially designed and developed for industrial PCs and other PC-like applications. Our specialized SPD team is ready to provide system designers with a complete turn-key solution for any engineering requirements.

Innodisk's DRAM modules are categorized to meet different systems' needs, and support DDR4, DDR3, DDR2, DDR, and SDRAM. Our DRAM modules are available in 4 product lines, including Embedded, Server, Wide Temperature, and Special Customized.

Innodisk's comprehensive range of DRAM modules specialized from Unbuffered DIMM, Unbuffered SO-DIMM, Unbuffered ECC DIMM, Unbuffered ECC SO-DIMM, Mini-DIMM and LR-DIMM, registered DIMM, and conformal coated DRAM.

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, DDR3, and DDR4.



Series	Standard Solution	Standard Solution	Standard Solution
Module Type	DDR4 LONG DIMM	DDR3 LONG DIMM	DDR2 LONG DIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB/8GB/16GB	1GB/2GB
Function	Non-ECC Unbuffered Memory	Non-ECC Unbuffered Memory	Non-ECC Unbuffered Memory
Pin Number	288pin	240pin	240pin
Width	64Bits	64Bits	64Bits
Voltage	1.2V	1.5V/1.35V	1.8V
PCB Height	1.23 Inches	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Value-Added Service (*Optional)	*Conformal Coating		



Series	Standard Solution	Standard Solution
Module Type	DDR LONG DIMM	SDRAM LONG DIMM
Data Rate	266MT/s/333MT/s/400MT/s	PC100/PC133
Capacity	256MB/512MB/1GB	128MB/256MB
Function	Non-ECC Unbuffered Memory	Non-ECC Unbuffered 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
Value-Added Service (*Optional)	*Conformal Coating	

Embedded SO-DIMM

Small-outline DIMMs (SO-DIMM) modules are general DRAM modules meant to be used 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	Standard Solution
Module Type	DDR4 SODIMM	DDR3 SODIMM	DDR2 SODIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB/8GB/16GB	1GB/2GB
Function	Non-ECC Unbuffer Memory		
Pin Number	260pin	204pin	200pin
Width	64Bits	64Bits	64Bits
Voltage	1.2V	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Value-Added Service (*Optional)	*Conformal Coating		



Series	Standard Solution	Standard Solution
Module Type	DDR SODIMM	SDRAM SODIMM
Data Rate	266MT/s/333MT/s/400MT/s	PC100/PC133
Capacity	256MB/512MB/1GB	128MB/256MB/512MB
Function	Non-ECC Unbuffered Memory	Non-ECC Unbuffered 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°C	0 ~ 70°C
Value-Added Service (*Optional)	*Conformal Coating	

Embedded Low-Profile DIMM

Low-Profile DIMM modules are specialized for using 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
Module Type	DDR4 LONG DIMM	DDR4 SODIMM
Data Rate	2133MT/s/2400MT/s	2133MT/s/2400MT/s
Capacity	4GB/8GB/16GB	4GB/8GB/16GB
Function	Non-ECC Unbuffered Memory	
Pin Number	288pin	260pin
Width	64Bits	64Bits
Voltage	1.2V	1.2V
PCB Height	0.72 Inches	0.72 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C
Value-Added Service (*Optional)	*Conformal Coating	



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
Data Rate	1066MT/s/1333MT/s/1600MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	1GB/2GB/4GB/8GB	1GB/2GB/4GB	1GB/2GB
Function	Non-ECC Unbuffered 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	1.0 Inches	0.72 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Value-Added Service (*Optional)	*Conformal Coating		



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
Data Rate	400MT/s/533MT/s/667MT/s/800MT/s	266MT/s/333MT/s/400MT/s	PC100/PC133
Capacity	1GB	512MB	128MB/256MB/512MB
Function	Non-ECC Unbuffered 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
Value-Added Service (*Optional)	*Conformal Coating		

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	DDR4 LONG DIMM	DDR4 SODIMM
Data Rate	2133MT/s/2400MT/s	2133MT/s/2400MT/s
Capacity	4GB/8GB/16GB	4GB/8GB/16GB
Function	With ECC Unbuffered Memory	
Pin Number	288pin	260pin
Width	72Bits	72Bits
Voltage	1.2V	1.2V
PCB Height	1.23 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√
Value-Added Service (*Optional)	*Conformal Coating	



Series	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution
Module Type	DDR3 LONG DIMM	DDR3 SODIMM
Data Rate	1066MT/s/1333MT/s/1600MT/s	1066MT/s/1333MT/s/1600MT/s
Capacity	1GB/2GB/4GB/8GB/16GB	1GB/2GB/4GB/8GB/16GB
Function	With ECC Unbuffered 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
Golden finger 30μ"	√	√
Value-Added Service (*Optional)	*Conformal Coating	



Series	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution
Module Type	DDR2 LONG DIMM	DDR2 SODIMM	DDR LONG DIMM
Data Rate	400MT/s/533MT/s/667MT/s/800MT/s	400MT/s/533MT/s/667MT/s/800MT/s	266MT/s/333MT/s/400MT/s
Capacity	512MB/1GB/2GB	512MB/1GB/2GB	256MB/512MB/1GB
Function	With ECC Unbuffered Memory	With ECC Unbuffered Memory(PLL)	With ECC Unbuffered 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
Value-Added Service (*Optional)	*Conformal Coating		

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 purpose-built factory to ensure stable performance.



Series	Server Solution	Server Solution	Server Solution
Module Type	DDR4 LONG DIMM/DDR4 VLP LONG DIMM	DDR3 LONG DIMM/DDR3 VLP LONG DIMM	DDR2 LONG DIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	4GB/8GB/16GB/32GB/64GB upto 128GB	1G/2G/4G/8G/16G/32G	1GB/2GB/4GB
Function	Registered DIMM W/ECC		
Pin Number	288pin	240pin	240pin
Width	72Bits	72Bits	72Bits
Voltage	1.2V	1.5V/1.35V	1.8V
PCB Height	1.23 Inches/0.738 Inches	1.18 Inches/0.738 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√	√

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	DDR4 Load reduced DIMM	DDR3 Load reduced DIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s
Capacity	32GB/64GB/128GB	32GB
Function	Registered & DB	IMB
Pin Number	288pin	240pin
Width	72Bits	72Bits
Voltage	1.2V	1.5V/1.35V
PCB Height	1.23 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√

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	DDR4 LONG DIMM	DDR4 SODIMM
Data Rate	2133MT/s/2400MT/s	2133MT/s/2400MT/s
Capacity	4GB/8GB/16GB	4GB/8GB/16GB
Function	With ECC Unbuffered Memory	
Pin Number	288pin	260pin
Width	72Bits	72Bits
Voltage	1.2V	1.2V
PCB Height	1.23 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√
Value-Added Service (*Optional)	*Conformal Coating	



Series	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution
Module Type	DDR3 LONG DIMM	DDR3 SODIMM
Data Rate	1066MT/s/1333MT/s/1600MT/s	1066MT/s/1333MT/s/1600MT/s
Capacity	1GB/2GB/4GB/8GB/16GB	1GB/2GB/4GB/8GB/16GB
Function	With ECC Unbuffered 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
Golden finger 30μ"	√	√
Value-Added Service (*Optional)	*Conformal Coating	



Series	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution	Unbuffered w/ ECC Solution
Module Type	DDR2 LONG DIMM	DDR2 SODIMM	DDR LONG DIMM
Data Rate	400MT/s/533MT/s/667MT/s/800MT/s	400MT/s/533MT/s/667MT/s/800MT/s	266MT/s/333MT/s/400MT/s
Capacity	512MB/1GB/2GB	1GB/2GB	512MB/1GB
Function	With ECC Unbuffered Memory	With ECC Unbuffered Memory(PLL)	With ECC Unbuffered 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
Value-Added Service (*Optional)	*Conformal Coating		

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 -40°C or as high as 85°C.



Series	Wide Temperature	Wide Temperature	Wide Temperature	Wide Temperature
Module Type	DDR4 LONG DIMM	DDR3 LONG DIMM	DDR2 LONG DIMM	DDR LONG DIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s 667MT/s/800MT/s	266MT/s/333MT/s/400MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB/8GB/16G	1GB/2GB	256MB/512MB/1GB
Function	Non-ECC Unbuffered Memory			
Pin Number	288pin	240pin	240pin	184pin
Width	64Bits	64Bits	64Bits	64Bits
Voltage	1.2V	1.5V/1.35V	1.8V	2.6V
PCB Height	1.23 Inches	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C
Golden finger 30μ"	√	√	√	√
Value-Added Service (*Optional)	*Conformal Coating / Wide Temperature			

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 -40°C or as high as 85°C.



Series	Wide Temperature	Wide Temperature	Wide Temperature	Wide Temperature
Module Type	DDR4 SODIMM	DDR3 SODIMM	DDR2 SODIMM	DDR SODIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s 667MT/s/800MT/s	266MT/s/333MT/s/400MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB/8GB/16G	1GB/2GB	256MB/512MB/1GB
Function	Non-ECC Unbuffered Memory			
Pin Number	260pin	204pin	200pin	200pin
Width	64Bits	64Bits	64Bits	64Bits
Voltage	1.2V	1.5V/1.35V	1.8V	2.6V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C
Golden finger 30μ"	√	√	√	√
Value-Added Service (*Optional)	*Conformal Coating / Wide Temperature			

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	32 bits
Module Type	DDR4 SODIMM	DDR3 SODIMM	DDR2 SODIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB	128MB/1GB/2GB
Function	Non-ECC Unbuffered Memory		
Pin Number	260pin	204pin	200pin
Width	32Bits	32Bits	32Bits
Voltage	1.2V	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Value-Added Service (*Optional)	*Conformal Coating		

Mini DIMM

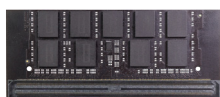
New DDR4 Mini DIMM now available! DDR4 mini DIMM target for high speed, high density, high performance telecommunication and cloud services. ULP Mini DIMM modules are designed with 17.9mm high dimensions specifically for networking applications. They are compliant with JEDEC standards and are designed to improve thermal resistance. With the ECC function, the ULP Mini DIMM also ensures that data is corrected when corrupted data bits are found during data retrieval.



Series	Mini DIMM-VLP	Mini DIMM-ULP	Mini R-DIMM-VLP	Mini DIMM
Module Type	DDR4 SODIMM	DDR3 SODIMM	DDR3 SODIMM	DDR3 SODIMM
Data Rate	2133MT/s/2400MT/s	1066MT/s/1333MT/s /1600MT/s	1066MT/s/1333MT/s /1600MT/s	1066MT/s/1333MT/s /1600MT/s
Capacity	4GB/8GB/16GB	1GB/2GB/4GB	1GB/2GB/4GB	1GB/2GB/4GB
Function	with ECC Unbuffered Memory	with ECC Unbuffered Memory	Registered Memory	Registered Memory
Pin Number	288pin	244pin	244pin	244pin
Width	72Bits	72Bits	72Bits	72Bits
Voltage	1.2V	1.35V / 1.5V	1.35V / 1.5V	1.35V / 1.5V
PCB Height	0.738 Inches	0.7 Inches	0.738 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√	√	√
Value-Added Service (*Optional)	*Conformal Coating			

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	XR DIMM (Wide Temp)	Rugged DIMM	Rugged DIMM (Wide Temp)
Module Type	DDR4 XRDIMM	DDR4 SODIMM	DDR3 SODIMM
Data Rate	2133MT/s/2400MT/s	2133MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s
Capacity	4GB/8GB/16GB	4GB/8GB/16GB	1GB/2GB/4GB/8GB/16GB
Function	Non-ECC Unbuffered Memory		
Pin Number	300 pin	260pin	244pin
Width	64Bits	64Bits	64Bits
Voltage	1.2V	1.2V	1.35V / 1.5V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C
Golden finger 30μ"	√	√	√
Value-Added Service (*Optional)	*Conformal Coating / Mounting Pad / Wide Temperature		



Series	Rugged DIMM	Rugged DIMM (Wide Temp)	Rugged DIMM
Module Type	DDR3 SODIMM	DDR2 SODIMM	DDR2 SODIMM
Data Rate	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	1GB/2GB/4GB/8GB/16GB	1GB/2GB	1GB/2GB
Function	Non-ECC Unbuffered Memory		
Pin Number	244pin	200pin	200pin
Width	64Bits	64Bits	64Bits
Voltage	1.35V / 1.5V	1.8V	1.8V
PCB Height	1.18 Inches	1.57 Inches	1.57 Inches
Operation Temperature	0 ~ 85°C	-40 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√	√
Value-Added Service (*Optional)	*Conformal Coating / Mounting Pad / Wide Temperature		

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
Data Rate	1066MT/s/1333MT/s/1600MT/s	1066MT/s/1333MT/s/1600MT/s
Capacity	1GB/2GB/4GB	1GB/2GB/4GB
Function	Non-ECC Unbuffered 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
Value-Added Service (*Optional)	*Conformal Coating	

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 stable performance.



Series	Registered SO-DIMM
Module Type	DDR3 SODIMM
Data Rate	1066MT/s/1333MT/s/1600MT/s
Capacity	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
Golden finger 30μ"	√
Value-Added Service (*Optional)	*Conformal Coating

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	Unbuffered w/ECC Solution	Unbuffered w/ECC Solution
Module Type	DDR4 SODIMM	DDR3 SODIMM	DDR2 SODIMM
Data Rate	2400MT/s/2400MT/s	1066MT/s/1333MT/s/1600MT/s	400MT/s/533MT/s/667MT/s/800MT/s
Capacity	4GB/8GB/16GB	4GB/8GB/16GB	512MB/1GB/2GB
Function	With ECC Unbuffered Memory		
Pin Number	260pin	204pin	200pin
Width	72Bits	72Bits	72Bits
Voltage	1.2V	1.5V/1.35V	1.8V
PCB Height	1.18 Inches	1.18 Inches	1.18 Inches
Operation Temperature	0 ~ 85°C	0 ~ 85°C	0 ~ 85°C
Golden finger 30μ"	√	√	√
Value-Added Service (*Optional)	*Conformal Coating		

Embedded Peripheral Modules

Embedded Peripheral Modules provide LAN, Serial Port, Storage and Display functionality to embedded systems. In order to enrich industrial customer's embedded solutions with flexibility at the best TCO (Total Cost of Ownership), we are dedicated to creating expandable, space-efficient expansion modules.

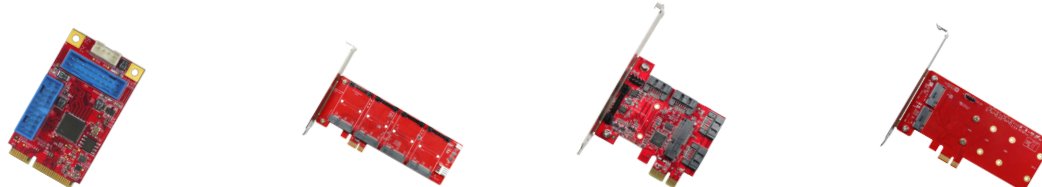
Innodisk is experienced with the most common signals, which include PCIe, USB, SATA, PATA, SD and Display and is able to provide this functionality in the wide range of space-saving form factors available today. Just like Innodisk's esteemed memory solutions, our Standard PCIe, mPCIe, 2.5" SSD, DDR3 and M.2(NGFF) modules fit perfectly into any industrial system.

Storage

Innodisk specializes in wide range of storage interface including PCIe/SATA/USB/PATA. Our modules allow system integrator to expand or convert those interfaces in embedded system.



Model Name	EMPS-3201	EMPS-3401	EGPS-3401	EMP4-1101	EMPU-3201
Module Type	mPCIe to dual SATA III module	mPCIe to four SATA III module	M.2 3042 to four SATA module	mPCIe to PATA module	mPCIe to dual USB 3.0 module
Key Features	<ol style="list-style-type: none"> 1. PCIe 2.0 to dual SATA III ports 2. Low power consumption 3. Supports AHCI, port-multiplier 4. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. PCIe 2.0 to four SATA III ports 2. Supports AHCI, port-multiplier 3. Low power consumption 4. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. PCIe 2.0 to four SATAIII ports 2. Supports AHCI, port-multiplier 3. Low power consumption 4. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. mPCIe form factor with PATA 44pin connector 2. Ultra low power consumption 3. Excellent data transfer speed 4. Golden finger 30μ for high data transfer quality 	<ol style="list-style-type: none"> 1. Compliant with PCI Express Base Specification Revision 2.0 2. Compliant with Universal Serial Bus 3.0 Specification Revision 1.0 3. Supports 2 downstream USB 3.0 ports 4. Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV 5. 30μ golden finger, 3 years warranty.
Form-Factor	mPCIe	mPCIe	M.2 3042-B-M	mPCIe	mPCIe
Input I/F	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 1.0	PCI Express 2.0
Input Connector	mPCIe	mPCIe	M.2 3042-B-M	mPCIe	mPCIe
Output I/F	SATA III	SATA III	SATA III	PATA	USB 3.0
Output Connector	SATA 7 Pin x 2	SATA 7 Pin x 4	SATA 7 Pin x 4	44pin header x 1	19 Pin box header x 1
Dimensions(W*L*H/mm)	30.0 x 50.9 x 10.7	30.0 x 50.9 x 10.9	30.0 x 42 x 10.4	30.0 x 50.9 x 9.5	30.0 x 50.9 x 8.45
Temperature	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C	STD temp : 0°~70°C	STD temp : 0°C~70°C Wide temp : -40C~85°C
Order Info.	EMPS-3201-C1 EMPS-3201-W1	EMPS-3401-C1 EMPS-3401-W1	EGPS-3401-C1	EMP4-1101-C1	EMPU-3201-C1 EMPU-3201-W1



Model Name	EMPU-3401	ESPP-2401	ESPS-3401	ESPS-3201
Module Type	mPCIe to four USB 3.0 module	PCIe to four mPCIe expansion card	PCIe to four SATA III card	PCIe to dual M.2 RAID module
Key Features	<ol style="list-style-type: none"> 1. PCI Express 2.0 to 4 x USB ports with SuperSpeed (5Gbps) data rate 2. Independent 1.5A overcurrent protection (OCP) for each port 3. Compliant with xHCI 1.0, USB 3.0 Rev 1.0 4. Supports USB battery charging specification revision 1.2 5. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. PCI Express base SPEC 2.0 x 1 (backward compatible with SPEC 1.1 & 1.0a) 2. Supports four mPCIe slots 3. Low profile PCI Express card form factor 4. On board power output 5. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. PCIe 2.0 to four SATA III ports 2. Supports AHCI, port-multiplier 3. Low power consumption 4. 30μ golden finger, 3 years warranty 	<ol style="list-style-type: none"> 1. PCIe to dual M.2 ports. 2. Supports M.2 Key-B 2242/2260/2280/22110 3. Low power consumption 4. Supports AHCI, port-multiplier 5. Supports native command queuing 6. 30μ golden finger, 3 years warranty
Form-Factor	mPCIe	Standard PCIe	Standard PCIe	Standard PCIe
Input I/F	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0
Input Connector	mPCIe	PCIe x 1	PCIe x 1	PCIe x 1
Output I/F	USB 3.0 x 4	PCI Express 2.0	SATA III	SATA III
Output Connector	19 Pin box header x 2	mPCIe x 4	SATA 7 Pin x 4, mSATA x 1	M.2 Key-B x 2
Dimensions(W*L*H/mm)	30.0 x 50.9 x 8.45	163.65 x 68.9 x 10.25	72.1 x 69.8 x 8.3	130.35 x 68.9 x 12
Temperature	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C	STD temp : 0°~70°C	STD temp : 0°~70°C Wide temp : -40°~85°C
Order Info.	EMPU-3401-C1 EMPU-3401-W1	ESPP-2401-C1	ESPS-3401-C1	ESPS-3201-C1 ESPS-3201-W1

Disk Array

Innodisk provides RAID (Redundant Array of Independent Disks) modules to combine multiple types of embedded flash for the purposes of data redundancy or capacity aggregation.



Model Name	EMSS-32R1	EMPS-32R1	EGSS-32R1	E2SS-32R1	E2SS-32R2	ESPS-32R1
Module Type	mPCIe to dual SATA III RAID module	mPCIe to dual SATA III RAID module	M.2 2242 to SATA RAID module	2.5" SSD to dual mSATA RAID module	2.5" SSD to dual M.2 RAID module	PCIe to dual M.2 RAID module
Key Features	<ol style="list-style-type: none"> 1. Supports SATA to dual SATA III Port Multiplier. 2. Supports H/W RAID 0/1 over SATA. 3. 30μ golden finger, 3 years warranty. 	<ol style="list-style-type: none"> 1. PCIe to dual SATA III ports 2. Supports AHCI, port-multiplier 3. Supports hardware RAID 0, RAID1 	<ol style="list-style-type: none"> 1. Supports SATA to dual SATA III port multiplier 2. Supports H/W RAID 0/1 over SATA 	<ol style="list-style-type: none"> 1. 2.5" SSD to dual mSATA slots 2. Supports SATA III to SATA III port multiplier 3. Supports H/W RAID 0/1 over SATA 4. Excellent data transfer speed 	<ol style="list-style-type: none"> 1. 2.5" SSD to dual M.2 2280 slots 2. Supports SATA III to SATA III port multiplier 3. Supports H/W RAID 0/1 over SATA 4. Excellent data transfer speed 	<ol style="list-style-type: none"> 1. PCIe to dual M.2 ports 2. Supports M.2 Key-B 2242/2260/2280 3. Supports AHCI, port-multiplier 4. Supports native command queuing 5. Supports hardware RAID 0, RAID1
Form-Factor	mSATA	mPCIe	M.2 2242-B-M	2.5" SSD	2.5" SSD	Standard PCIe
Input I/F	SATA III	PCI Express 2.0	SATA III	SATA III	SATA III	PCI Express 2.0
Input Connector	mPCIe	mPCIe	M.2 2242-B-M	SATA 7+15 Pin	SATA 7+15 Pin	PCIe x 1
Output I/F	SATA III	SATA III	SATA III	SATA III	SATA III	SATA III
Output connector	SATA 7 Pin x 2	SATA 7 Pin x 2	SATA 7 Pin x 2	mSATA x 2	M.2 2242/2260/2280 x 2	M.2 Key-B x 2
Dimensions(W*L*H/mm)	29.8 x 50.8 x 11.5	30.0 x 50.9 x 10.7	22.0 x 42 x 10.8	69.85 x 100.1 x 11	69.85 x 100.1 x 11	130.35 x 68.9 x 12
Temperature	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C	STD temp : 0°~70°C	STD temp : 0°~70°C Wide temp : -40°~85°C
Order Info.	EMSS-32R1-C1 EMSS-32R1-W1	EMPS-32R1-C1 EMPS-32R1-W1	EGSS-32R1-C1 EGSS-32R1-W1	E2SS-32R1-C1	E2SS-32R2-C1	ESPS-32R1-C1 ESPS-32R1-W1

Display card

Innodisk's embedded graphic card features a 2D graphic engine and supports resolutions up to 1920 x 1080. With fanless design, our mPCIe graphic cards can operate at -40°C to 85°C environment. Windows and Linux drivers are supported to fit into different industrial platforms.



Model Name	EMPV-1201	EMPV-1202
Module Type	mPCIe to dual VGA & HDMI(DVI) module	mPCIe to VGA & 18/24 bit LVDS module
Key Features	<ol style="list-style-type: none"> 1. mPCIe to dual VGA & HDMI graphic card 2. VGA output: 1920x1080, up to 75Hz vertical rate 3. HDMI/DVI up to 1080p, ultra low power consumption 4. Optional VGA/HDMI/DVI cable 5. 90°, 180°, and 270° rotation of on-screen images 	<ol style="list-style-type: none"> 1. VGA output up to 1920x1080, up to 75Hz vertical rate 2. LVDS resolution supports up to 1600 x 1200 3. EMPV-1202-C1 supports 18/24 bit JEIDA LVDS 4. EMPV-1202-C2 supports 24 bit VESA LVDS 5. Allow for 90°, 180°, and 270° rotation of on-screen images
Form-Factor	mPCIe	mPCIe
Input I/F	PCI Express 1.0	PCI Express 1.0
Input Connector	mPCIe	mPCIe
Output I/F	VGA x 2, HDMI x 1(Optional DVI x 1)	VGA, 18/24 bit LVDS
Output Connector	40pin 1.25mm x 2 (40DP-1.25)	40pin 1.25mm x 1 (40DP-1.25)
Dimensions(W*L*H/mm)	31.5 x 50.9 x 8.2	30.0 x 50.9 x 8.2
Temperature	STD temp : 0°~70°C Wide temp : -40°~85°C	STD temp : 0°~70°C Wide temp : -40°~85°C
Order Info.	EMPV-1201-C1 EMPV-1201-W1	EMPV-1202-C1, EMPV-1202-W1 EMPV-1202-C2, EMPV-1202-W2

Communication

The series aim to provide flexible connectivity and bandwidth to industrial systems. With our mPCIe GbE, CANBus and serial communication modules, users can expand the existing system to meet dynamic connectivity under IoT.



Model Name	EMUC-B201	EMU2-X2S1	EMU2-X1S1
Module Type	USB to dual isolated CANbus 2.0B module	USB to dual isolated RS-232 module	USB to Single isolated RS-232 module
Key Features	<ol style="list-style-type: none"> mPCIe form factor. Two channels CANbus 2.0B (DB-9 x 2) backward compatible with 2.0A Complies with EN61000-4-5 2.5kV Surge protection Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2.5kV HiPOT protection Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV Supports -40 to +85 degrees Supports 3rd mounting hole and USB Pin header for out-of-minicard installation Supports baud rate 50/125/250/500/1000K Termination resistor enabled/disabled by jumper 	<ol style="list-style-type: none"> USB specification Rev. 2.0 compliant Up to 1 Mbps serial data rate. 512-byte FIFOs Full RS232 functions with DB9 connector Supports port-to-port and port-to-computer isolation, complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2.5kV HiPOT protection Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV Supports 3rd mounting hole and USB Pin header for out-of-minicard installation Industrial temperature(-40 °C to 85 °C) operation 	<ol style="list-style-type: none"> USB specification Rev. 2.0 compliant Up to 1 Mbps serial data rate. 512-byte FIFOs Full RS232 functions with DB9 connector Supports port-to-port and port-to-computer isolation, complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2.5kV HiPOT protection Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV Supports 3rd mounting hole and USB Pin header for out-of-minicard installation Industrial temperature(-40 °C to 85 °C) operation
Form-Factor	mPCIe	mPCIe	mPCIe
Input I/F	USB 2.0	USB 2.0	USB 2.0
Input Connector	mPCIe or 5Pin Header	mPCIe or 5Pin Header	mPCIe or 5Pin Header
Output I/F	CANbus 2.0B x 2	RS-232 x 2	RS-232 x 1
Output Connector	DB-9 x 2	DB-9 x 2	DB-9 x 1
Dimensions(W*L*H/mm)	30.0 x 50.9 x 6.1	30.0 x 50.9 x 6.1	30.0 x 50.9 x 6.1
Temperature	Wide temp : -40°-85°C	Wide temp : -40°-85°C	Wide temp : -40°-85°C
Order Info.	EMUC-B201-W1	EMU2-X2S1-W1	EMU2-X1S1-W1



Model Name	EMP2-X203	EMP2-X403	EMP2-X404	EMPL-G101	EMPL-G201
Module Type	mPCIe to two RS-232 module	mPCIe to four RS-232 module	mPCIe to four RS-232/422/485 module	mPCIe to single GbE LAN module	mPCIe to dual GbE LAN module
Key Features	<ol style="list-style-type: none"> PCI-Express specification Rev. 2.0 compliant Up to 1 Mbps serial data rate. 16550 compatible 256-byte FIFOs Industrial temperature (-40 °C to 85 °C) operation Flexible design with DB-9 connectors and cable ESD up to 15KV(Electrostatic Discharge) protection circuit to prevent system damage Supports CTS/RTS hardware flow control 	<ol style="list-style-type: none"> PCI-Express specification Rev. 2.0 compliant Up to 1 Mbps serial data rate. 16550 compatible 256-byte FIFOs Industrial temperature (-40 °C to 85 °C) operation Flexible design with DB-9 connectors and cable ESD up to 15KV(Electrostatic Discharge) protection circuit to prevent system damage Supports CTS/RTS hardware flow control 	<ol style="list-style-type: none"> PCIe 2.0 compliant. RS-232/422/485 mode configurable by software Up to 25 Mbps serial data rate. 16C550 compatible. 256-byte FIFOs Industrial temperature (-40 °C to 85 °C) operation Full DB9 connector without daughter board, can avoid possible mechanical intervention Termination resistor enabled/disabled by DIP switch R/15V/12V output switched by jumper ESD(Electrostatic Discharge) protection circuit to prevent system damage 	<ol style="list-style-type: none"> Single isolated GbE LAN ports Complies with EN61000-4-5 2kV surge protection Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV Flexible daughter board with cable to fit into different system Supports mounting terminal or bracket for daughter board Optional industrial temperature(-40°C to +85°C) support 	<ol style="list-style-type: none"> Dual isolated GbE LAN ports Complies with EN61000-4-5 2kV surge protection Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV Flexible daughter board with cable to fit into different system Supports mounting terminal or bracket for daughter board Optional industrial temperature (-40°C to +85°C) support
Form-Factor	mPCIe	mPCIe	mPCIe	mPCIe	mPCIe
Input I/F	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.1	PCI Express 2.1
Input Connector	mPCIe	mPCIe	mPCIe	mPCIe	mPCIe
Output I/F	RS-232 x 2	RS-232 x 4	RS-232/422/485 x 4	GbE LAN x 1	GbE LAN x 2
Output Connector	DB-9 x 2	DB-9 x 4	DB-9 x 4	RJ45 x 1	RJ45 x 2
Dimensions(W*L*H/mm)	30.0 x 50.9 x 6.7	30.0 x 50.9 x 6.7	30.0 x 50.9 x 6.1	30.0 x 50.9 x 6.1	30.0 x 50.9 x 6.1
Temperature	Wide temp : -40°-85°C	Wide temp : -40°-85°C	Wide temp : -40°-85°C	STD temp : 0°-70°C Wide temp : -40°-85°C	STD temp : 0°-70°C Wide temp : -40°-85°C
Order Info.	EMP2-X203-W1	EMP2-X403-W1	EMP2-X404-W1	EMPL-G101-C1 EMPL-G101-W1 EMPL-G101-C2(with bracket) EMPL-G101-W2 (with bracket)	EMPL-G201-C1 EMPL-G201-W1 EMPL-G201-C2(with bracket) EMPL-G201-W2 (with bracket)



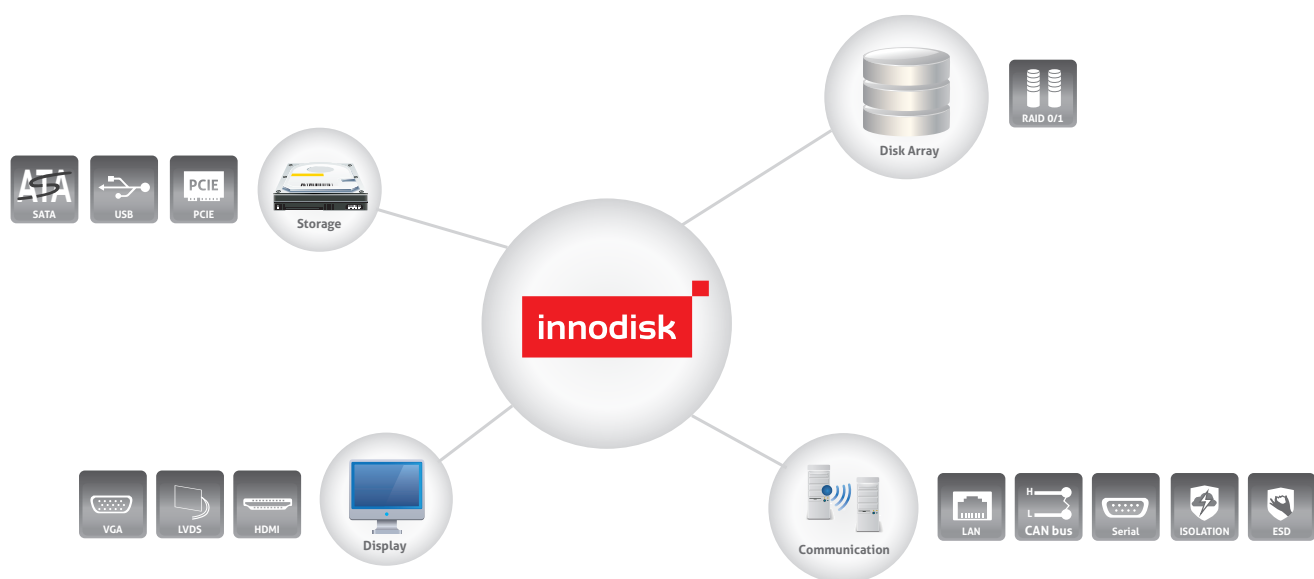
Model Name	EMP2-X401	EMP2-X801	EMP2-X202	EMP2-X402
Module Type	mPCIe to four RS-232/422/485 module	mPCIe to eight RS-232/422/485 module	mPCIe to two RS-422/485 module	mPCIe to four RS-422/485 module
Key Features	<ol style="list-style-type: none"> 1. PCIe 2.0 compliant. RS-232/422/485 mode configurable by software 2. Up to 25 Mbps serial data rate 16C550 compatible. 256-byte FIFOs 3. Industrial temperature (-40 °C to 85 °C) operation 4. Flexible design with cable (GPIO cable, serial cable) and GPIO board x 1, daughter board x 4 (with DB-9 connectors) 5. Termination resistor and 5V/12V output by jumper setting on daughter board 6. ESD(Electrostatic Discharge) protection circuit to prevent system damage 	<ol style="list-style-type: none"> 1. PCIe 2.0 compliant. RS-232/422/485 mode configurable by software 2. Up to 25 Mbps serial data rate 16C550 compatible. 256-byte FIFOs 3. Industrial temperature (-40 °C to 85 °C) operation 4. Flexible design with cable and daughter board x 8 (with DB-9 connectors) 5. Termination resistor and 5V/12V output by jumper setting on daughter board 6. ESD(Electrostatic Discharge) protection circuit to prevent system damage 	<ol style="list-style-type: none"> 1. PCIe 2.0 compliant. RS-422/485 mode configurable by switch. Supports 485HD(Half Duplex) and 485FD(Full Duplex) 2. Up to 25 Mbps serial data rate. 16C550 compatible. 256-byte FIFOs 3. Industrial temperature (-40 °C to 85 °C) operation 4. Flexible design with DB-9 connectors and cable 5. Termination Resistor by jumper setting 6. ESD up to 15KV(Electrostatic Discharge) protection circuit to prevent system damage 	<ol style="list-style-type: none"> 1. PCIe 2.0 compliant. RS-422/485 mode configurable by switch. Supports 485HD(Half Duplex) and 485FD(Full Duplex) 2. Up to 25 Mbps serial data rate. 16C550 compatible. 256-byte FIFOs 3. Industrial temperature (-40 °C to 85 °C) operation 4. Flexible design with DB-9 connectors and cable 5. Termination resistor by jumper setting 6. ESD up to 15KV(Electrostatic Discharge) protection circuit to prevent system damage
Form-Factor	mPCIe	mPCIe	mPCIe	mPCIe
Input I/F	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0	PCI Express 2.0
Input Connector	mPCIe	mPCIe	mPCIe	mPCIe
Output I/F	RS-232/422/485 x 4	RS-232/422/485 x 8	RS-422/485 x 2	RS-422/485 x 4
Output Connector	DB-9 x 4	DB-9 x 8	DB-9 x 2	DB-9 x 4
Dimensions(W*L*H/mm)	30.0 x 50.9 x 6.1	30.0 x 50.9 x 6.1	30.0 x 50.9 x 8.2	30.0 x 50.9 x 8.2
Temperature	Wide temp : -40°-85°C	Wide temp : -40°-85°C	Wide temp : -40°-85°C	Wide temp : -40°-85°C
Order Info.	EMP2-X401-W1	EMP2-X801-W1	EMP2-X202-W1	EMP2-X402-W1



Model Name	EGPL-G101	EGPL-G201	EGUL-G101	EGUL-G201
Module Type	M.2 2280 to single isolated GbE LAN module	M.2 2280 to dual isolated GbE LAN module	M.2 2260 to single isolated GbE LAN module	M.2 2260 to dual isolated GbE LAN module
Key Features	<ol style="list-style-type: none"> 1. Single isolated GbE LAN port 2. Complies with EN61000-4-5 2kV Surge protection 3. Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection 4. Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV 5. Flexible daughter board with cable to fit into different system 6. Optional terminal mounting hole or bracket for daughter board 	<ol style="list-style-type: none"> 1. Dual isolated GbE LAN ports 2. Complies with EN61000-4-5 2kV Surge protection 3. Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection 4. Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV 5. Flexible daughter board with cable to fit into different system 6. Optional terminal mounting hole or bracket for daughter board 	<ol style="list-style-type: none"> 1. Single isolated GbE LAN port 2. Complies with EN61000-4-5 2kV surge protection 3. Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection 4. Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV 5. Supports mounting terminal or bracket for daughter board 6. Supports native CDC-ECM driver in Linux, driver auto-install mode in Windows 	<ol style="list-style-type: none"> 1. Dual isolated GbE LAN port 2. Complies with EN61000-4-5 2kV surge protection 3. Complies with IEC 60950-1:2005 + A1: 2009 + A2:2013 2kV HiPOT protection 4. Complies with EN61000-4-2 (ESD) Air-15kV, Contact-8kV 5. Supports mounting terminal or bracket for daughter board 6. Supports native CDC-ECM driver in Linux, driver auto-install mode in Windows
Form-Factor	M.2 2280	M.2 2280	M.2 2260	M.2 2260
Input I/F	PCI Express 2.1	PCI Express 2.1	USB 3.0	USB 3.0
Input Connector	M.2 B-M	M.2 B-M	M.2 B-Key	M.2 B-Key
Output I/F	GbE LAN x 1	GbE LAN x 2	GbE LAN x 1	GbE LAN x 2
Output Connector	RJ45 x 1	RJ45 x 2	RJ45 x 1	RJ45 x 2
Dimensions(W*L*H/mm)	30 x 50.9 x 7.05	30 x 50.9 x 7.1	22.0 x 60.0 x 6.1	22.0 x 60.0 x 6.1
Temperature	STD temp : 0°-70°C Wide temp : -40°-85°C	STD temp : 0°-70°C Wide temp : -40°-85°C	STD temp : 0°-70°C Wide temp : -40°-85°C	STD temp : 0°-70°C Wide temp : -40°-85°C
Order Info.	EGPL-G101-C1 EGPL-G101-W1 EGPL-G101-C2 (with bracket) EGPL-G101-W2 (with bracket)	EGPL-G201-C1 EGPL-G201-W1 EGPL-G201-C2 (with bracket) EGPL-G201-W2 (with bracket)	EGUL-G101-C1 EGUL-G101-W1 EGUL-G101-C2 (with bracket) EGUL-G101-W2 (with bracket)	EGUL-G201-C1 EGUL-G201-W1 EGUL-G201-C2 (with bracket) EGUL-G201-W2 (with bracket)

Innodisk Embedded Peripheral

Storage and memory solution is not the only thing that innodisk creates. Starting from 2014, we also provide a lot of embedded modules with industrial-grade standard to help solution providers and system integrators. Innodisk EP extends the I/O functionality with easy-to-use interface and standard form factors. You can find the best suited module for each project by below matrix.



F/F			Output								
			PCIe	SATA	PATA	USB	POE	VGA Display	LAN	CAN BUS	Serial 232/422..
mPCIe (mSATA)	Input	PCIe	EMPP-0201	EMPS-3401 EMPS-2201 EMPS-3201 EMPS-32R1	EMP4-1101	EMPU-3401 EMPU-3201		EMPV-1201 EMPV-1202	EMPL-G101 EMPL-G201		EMP2-X401 EMP2-X801 EMP2-X402 EMP2-X403 EMP2-X404
		SATA		EMSS-32R1							
		USB								EMUC-B201	EMU2-X1S1 EMU2-X1S2
PCIe Standard	Input	PCIe	ESXS-2301 ESPP-2401	ESXS-2301 ESPS-3401 ESPS-3201 ESPS-32R1			ESPL-G4P1				
		SATA		ESXS-2301							
		USB				ESXS-2301					
M.2 (NGFF)	Input	PCIe		EGPS-3401					EGPL-G101 EGPL-G201		
		SATA		EGSS-32R1							
		USB						EGUV-1101	EGUL-G101 EGUL-G201		
2.5"	Input	SATA		E2SS-32R1 E2SS-32R2							
		PATA		E24S-2101							
DDR3	Input	SATA		E3SS-32R1							

Absolute Service

Service is not just what we do. It's who we are.

Absolute Service is our pledge and our guide. It infuses everything we do at Innodisk.

Absolute Service is our promise to deliver the most comprehensive service in every situation. It's the philosophy that guides us in all interactions with our customers and business partners. It's the spirit of friendliness and enthusiasm that fills each member of the Innodisk team.

Absolute Service is our absolute commitment to our customers.

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