

Tokyo

MO-297 SATA 6Gb/s

KEY FEATURES

General

- Slim SATA MO-297 Form Factor
- Capacities: 16GB, 32GB, 64GB
- MLC NAND Flash Supported
- Automatic AES-256 and AES-128 hardware double encryption
- TCG Opal 2.0 and eDrive security (optional add-on)
- Seagate® SandForce SF2241 processor supports TRIM and SMART
- Highly intelligent block management and wear leveling optimizes SSD longevity

Bandwidth Performance Specifications

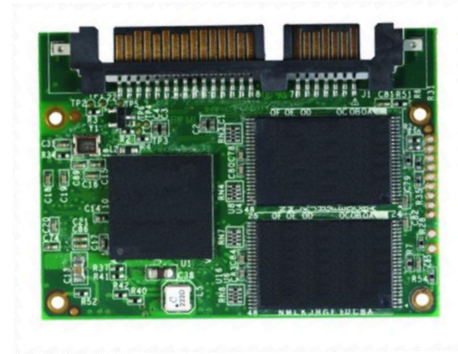
- Maximum Sequential Read/Write:
Up to 500MB/s (@ 128KB blocks)
- Random Read/Write IOPS:
Up to 60,000 (@ 4KB blocks)

Power Specifications

- Active (typical): 1.8W
- Idle (typical): .4W

Reliability

- Mean Time Between Failures (MTBF):
>1,000,000 Hours
- Up to 55 bits correctable per 512-byte sector (BCH)



PRODUCT SUMMARY

The Unigen Slim SATA are case-less solid state drives that provide low power and high performance in an ultra small form factor ideal for highly portable or embedded systems. The Unigen Slim SATA SSD's are featured with power management schemes to reduce power consumption down to below 2 Watts in full idle mode. It's dimensions result in an effective volume that is 20x less than an enclosed 2.5" solid state drive, and 10x less than a 1.8" solid state drive. With SATA 6Gbps performance, the Unigen Slim SATA SSD's provide the maximum bandwidth to deliver sustained and effective sequential read/write performance up to 500MB/s, and random read/write IOPS up to 60,000, enabling mobile, embedded and small form factor systems to break through the bandwidth limitations imposed by 3Gb/s SATA and other often used solutions like USB or CompactFlash™ cards.

ORDERING INFORMATION

Part Number	Capacity
UBA1S0316H0CNS1-CTC-UGN	16GB
UBA1S0332H0CNS1-DTC-UGN	32GB
UBA1S0364H0CNS1-ETC-UGN	64GB

COMPLIANCE AND CERTIFICATIONS

Certifications & Compliance	Description
RoHS Compliant ¹	Restriction of hazardous substance directive
FCC Compliant A, CE	DDC Class devices are those that are for use in a commercial, industrial or business environment, CE stands for European conformity
SAAT IO	SATA Compliant

PRODUCT SPECIFICATIONS

Capacity

Capacity	Total User Addressable Sectors in LBA Mode
16GB	31,277,232
32GB	61,859,832
64GB	123,725,816

Performance

(Numbers listed are Maximum achievable and will vary based on die count and NAND used)

Maximum Sequential Read, Write (MB/s) – 128K

Metric	16B SLC	32GB SLC	64GB SLC
Max Read	TBD	274MB/s	500MB/s
Max Write	TBD	46MB/s	92MB/s

Maximum 4K Random IO/second (IOPS) – QD = 32

Metric	16B SLC	32GB SLC	64GB SLC
4K Random Read	TBD	66,000	66,000
4K Random Write	TBD	58,000	58,000

Note : Based on CDM

Power

(Numbers listed are Maximum achievable and will vary based on die count and NAND used)

Power Metric	16B SLC	32GB SLC	64GB SLC
Max Active	4W	4W	4W
Active Average (typ)	3W	3W	3W
Idle (typ)	300mW	300mW	300mW
Slumber (typ)	30mW	30mW	30mW
Devslp	2.4mW	2.4mW	2.4mW

ELECTRICAL SPECIFICATIONS

The drive interface complies with the following standards: •SATA Rev. 3.1 specification (SATA I / II /III)

Supply Voltage

Description	Min	Max	Unit
Operating voltage for 5V (+/-%)	4.75	5.25	V

Absolute Maximum Ratings

Parameters	Symbol	Min	Max	Unit
Input Voltage	Vcc	4.75	5.25	V
Current	I		1	A

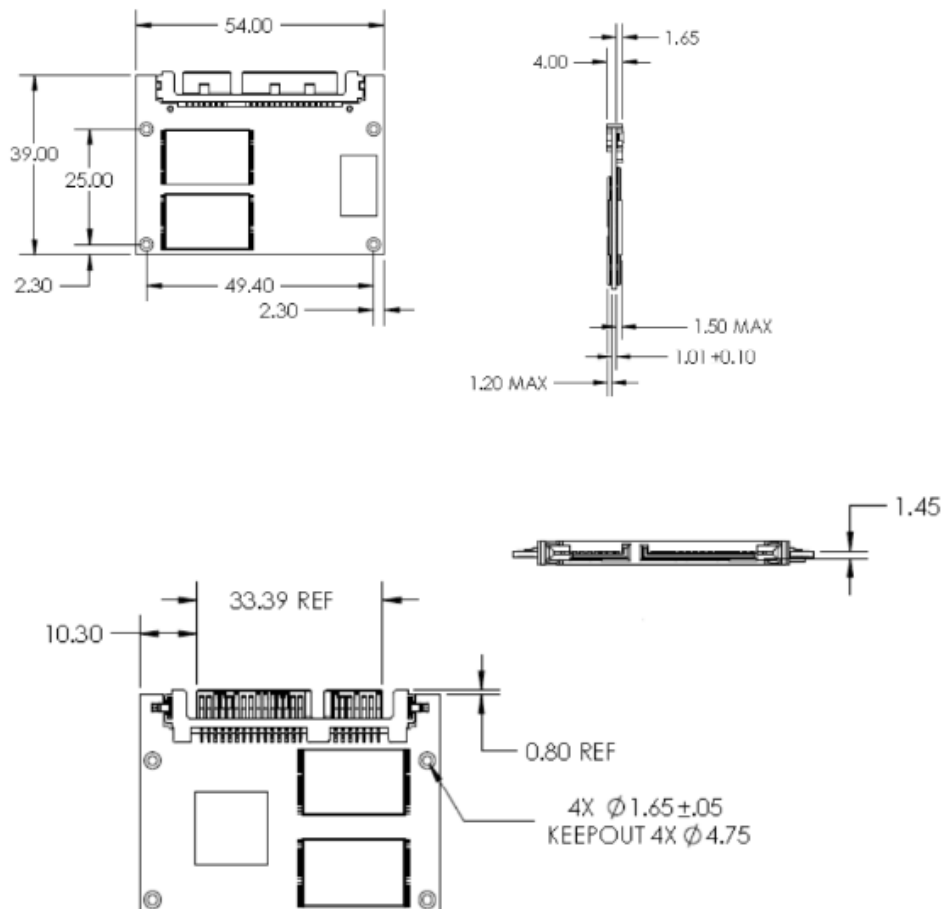
NOTE: Stress above those listed under Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Electrical Characteristics

Parameters	Symbol	Min	Typical	Unit
Supply Voltage	Vcc	4.75	5	V
Operating Current	Iact	463	600	mA
Idle Current	I _{lidl}	430	450	mA
TX Differential Output Voltage	V _{diffTx}		500	mVppd
TX AC Common Mode Voltage	V _{cm.acTx}			mVp-p
RX Differential Input Voltage	V _{diffRx}		400	mVppd
RX AC Common Mode Voltage	V _{cm.acTx}			mVp-p

MECHANICAL SPECIFICATIONS

Parameter	Value
Length	54.00 +/- 0.25 mm
Width	39.00 +/- 0.25 mm
Height	4.0 +/- 0.10 mm



All dimensions are in millimeters