

Deneva 2 Series Storage Solutions



Deneva 2 mSATA Solid State Drives

mSATA Series at a Glance

- Leading-edge small form factor (SFF) flash storage/caching solution designed for embedded applications including enterprise, client, industrial, automotive, medical, and military
- Cost-effective MLC-based design with best-in-class endurance & reliability
- Rugged and lightweight solution that consumes less power

Lightweight Small Form Factor for Greater Flexibility

- mSATA form factor saves space in data management appliances and server environments
- Smaller and lighter solution enables superior device portability
- Weighs over 10x less than a standard SSD and 15x less than conventional 2.5" hard drive

Small in Size, but not Performance

- Increases application responsiveness with cutting-edge performance
 - Over 280MB/s of potential throughput
 - Up to 32,000 4K random write IOPS

Reliable, Longer-Lasting, & Secure

- Data fail recovery ensures superior reliability
- Maximized product lifespan with write amplification as low as 0.2
- Intelligent block management & wear-leveling for increased endurance
- Advanced security with 128-bit AES encryption support
- Strong error correction for enhanced data integrity

Commercial & Industrial Grade Design

- Designed to operate efficiently in high temperatures (up to 70°C)

KEY DIFFERENTIATORS:

- Highest performing SSD in its class
- Offer one of the highest capacity mSATA solutions (120GB) on the market
- Support for latest flash technology
- Ultra-high endurance for enterprise applications (increases drive life by up to five times the rated P/E cycles of the NAND flash)
- Optional software available for HDD caching applications
- Robust feature-set including enterprise-class ECC, data reliability, and data path parity protection

OCZ Deneva 2 mSATA solid state drives are designed for a wide range of embedded applications including slim servers, tablets, dual drive notebooks, network security devices, and embedded applications, delivering superior performance while meeting the stringent reliability, security, and cost-saving needs of enterprise and industrial storage environments. With their small form factor, these drives offer embedded system architects unprecedented portability or a minimized operating footprint. In addition, Deneva 2 mSATA solutions offer lower power consumption increasing battery life for mobile devices.

enterprise



PHYSICAL	SATA 2.0 Edition	SATA 3.0 Edition
Usable Capacities (IDEMA)	30GB, 60GB, 120GB	30GB, 60GB, 120GB
NAND Components	2Xnm Multi-Level Cell (MLC)	2Xnm Multi-Level Cell (MLC)
Interface	Serial ATA (SATA) 3Gb/s	Serial ATA (SATA) 6Gb/s
Form Factor	mSATA	mSATA
NAND Controller	SandForce® 2141/2181	SandForce® 2281
Dimensions (L x W x H)	29.85 x 50.9 x 4.75mm	29.85 x 50.9 x 4.75mm
Weight	6g	6g

PERFORMANCE	
Max Read	up to 280 MB/s
Max Write	up to 260 MB/s
Random Read Operations (4kB)	11,500 IOPS
Random Write Operations (4kB)	32,000 IOPS

ENVIRONMENTAL	
Power Consumption	Idle: 0.3 Watts Active: 1.5 Watts
Ambient Temperature	0°C ~ 55°C
Operating Temperature	0°C ~ 70°C
Storage Temperature	-45°C ~ 85°C
Certifications	RoHS, CE, FCC

RELIABILITY/SECURITY	
MTBF	2 million hours
Data Fail Recovery	Recovers data from up to one NAND flash block (available on 120GB version only)
Data Path Protection	ECC: Up to 55 bits correctable per 512-byte sector (BCH)
Data Reliability	Read Unrecoverable Bit Error Rate (UBER) 10e-16
Data Encryption	128-bit AES-compliant
Product Health Monitoring	Self-Monitoring, Analysis and Reporting Technology (SMART) Support

COMPATIBILITY	
Serial ATA	Fully compliant with Serial ATA International Organization: Serial ATA Revision 2.6/3.0. Fully compliant with Native Command Queuing (NCQ)
Operating Systems	Windows XP 32-bit / 64-bit; Windows Vista 32-bit / 64-bit; Windows 7 32-bit / 64-bit
Power Requirements	3.3V mSATA supply rail

ADDITIONAL FEATURES	
Performance Optimization	TRIM (requires OS support)
Service & Support	3-Year Warranty; Dedicated FAE/FSE support (includes PM/engineer support through validation cycle)

SATA 2.0	CAPACITY	PART NUMBER	UPC
	32GB/30GB	D2CSTEMS1A10-0030	842024028901
	64GB/60GB	D2CSTEMS1A10-0060	842024028918
	128GB/120GB	D2CSTEMS1A10-0120	842024028741

SATA 3.0	CAPACITY	PART NUMBER	UPC
	32GB/30GB	D2CSTKMS1A10-0030	842024028758
	64GB/60GB	D2CSTKMS1A10-0060	842024028765
	128GB/120GB	D2CSTKMS1A10-0120	842024028772