



## Crucial® m4 SSD 2.5" Technical Specifications

Continuing the tradition of our award-winning solid-state drives, the Crucial m4 offers mobile and desktop users scorching-fast read and write speeds. Low power, lightweight, and durable, it empowers high-speed synchronous MLC NAND, advanced controller technology, optimized NAND management, and the SATA 6Gb/s interface. Together, that technology dramatically improves data transfers for bandwidth-demanding applications.

Our products are built on decades of design and manufacturing expertise. It is our expertise in NAND technology that enables us to optimize the performance and endurance necessary to build quality solid-state storage devices.

	Crucial m4 SSD 2.5"	CT064M4SSD2	CT128M4SSD2	CT256M4SSD2	CT512M4SSD2
<b>Features</b>	Capacity* (Unformatted)	64GB*	128GB*	256GB*	512GB*
	NAND	Micron® MLC	Micron® MLC	Micron® MLC	Micron® MLC
	Controller	Integrated 8-channel single chip	Integrated 8-channel single chip	Integrated 8-channel single chip	Integrated 8-channel single chip
	Firmware	Field Upgradeable	Field Upgradeable	Field Upgradeable	Field Upgradeable
	RAID Support	Yes	Yes	Yes	Yes
	Interface	SATA	SATA	SATA	SATA
	Transfer Rate	6Gb/sec (compatible 3Gb/sec)	6Gb/sec (compatible 3Gb/sec)	6Gb/sec (compatible 3Gb/sec)	6Gb/sec (compatible 3Gb/sec)
	2.5-inch SSD Power Supply	5 V	5 V	5 V	5 V
	Certifications	FCC, CE, RoHS, UL	FCC, CE, RoHS, UL	FCC, CE, RoHS, UL	FCC, CE, RoHS, UL
	Command Set	ATA-8 ACS2 command set compliant	ATA-8 ACS2 command set compliant	ATA-8 ACS2 command set compliant	ATA-8 ACS2 command set compliant
	Monitoring	Self-monitoring, analysis, and reporting technology (SMART) command set	Self-monitoring, analysis, and reporting technology (SMART) command set	Self-monitoring, analysis, and reporting technology (SMART) command set	Self-monitoring, analysis, and reporting technology (SMART) command set
<b>Performance<sup>1</sup></b>	Average Access Time	< .1 ms	< .1 ms	< .1 ms	< .1 ms
	Sequential Read (up to)	415 MB/sec (SATA 6Gb/s)	415 MB/sec (SATA 6Gb/s)	415 MB/sec (SATA 6Gb/s)	415 MB/sec (SATA 6Gb/s)
	Sequential Write (up to)	95 MB/sec (SATA 6Gb/s)	175 MB/sec (SATA 6Gb/s)	260 MB/sec (SATA 6Gb/s)	260 MB/sec (SATA 6Gb/s)
	Random 4k READ	40,000 IOPS	40,000 IOPS	40,000 IOPS	40,000 IOPS
	Random 4k WRITE	20,000 IOPS	35,000 IOPS	50,000 IOPS	50,000 IOPS
	PCMark® Vantage	55K HDD test score	55K HDD test score	65K HDD test score	65K HDD test score
<b>Physical</b>	2.5-inch SSD dimensions (L x W x H)	100.5 x 69.85 x 9.50 mm	100.5 x 69.85 x 9.50 mm	100.5 x 69.85 x 9.50 mm	100.5 x 69.85 x 9.50 mm
	2.5-inch SSD weight	75g	75g	75g	75g
<b>Environmental</b>	Active Average Power	150 mW	150 mW	160 mW	280 mW
	Idle Average Power	<65 mW	<85 mW	<85 mW	<100 mW
	Operating Temperature	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C
	Non-Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
	Shock Resistance	1500G / 1.0ms	1500G / 1.0ms	1500G / 1.0ms	1500G / 1.0ms
	Vibration Resistance	2-500Hz at 3.1G	2-500Hz at 3.1G	2-500Hz at 3.1G	2-500Hz at 3.1G
<b>Reliability</b>	MTBF <sup>2</sup>	1.2 Million Hours	1.2 Million Hours	1.2 Million Hours	1.2 Million Hours
	Data Reliability	Built-in EDC/ECC	Built-in EDC/ECC	Built-in EDC/ECC	Built-in EDC/ECC
	Drive Endurance	36TB=20GB per day for 5 years	72TB=40GB per day for 5 years	72TB=40GB per day for 5 years	72TB=40GB per day for 5 years
	Warranty	Limited 3 Year Warranty	Limited 3 Year Warranty	Limited 3 Year Warranty	Limited 3 Year Warranty

\*Some of the listed storage capacity is used for formatting and other purposes and is not available for data storage. 1GB equals 1 billion bytes.

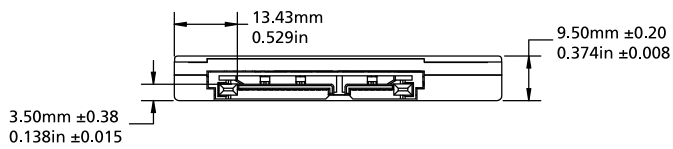
<sup>1</sup>Typical I/O performance numbers as measured using Iometer with a queue depth of 32 and write cache enabled. Iometer measurements are performed on a 8GB span. 4k transfers used for Read/Write latency values. System variations may affect measured results.

<sup>2</sup>Sequential READ/WRITE speeds are Iometer HDD test suite scores.



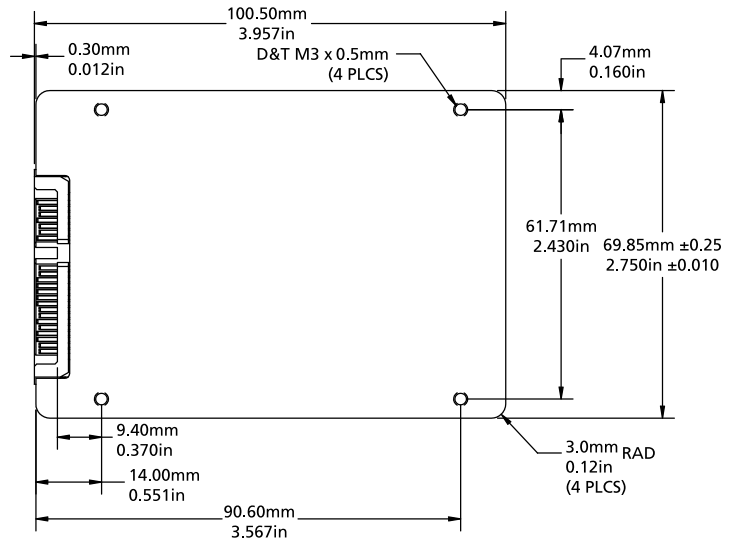
# Crucial m4 SSD 2.5-inch Mechanical Drawings

## Pin Configurations



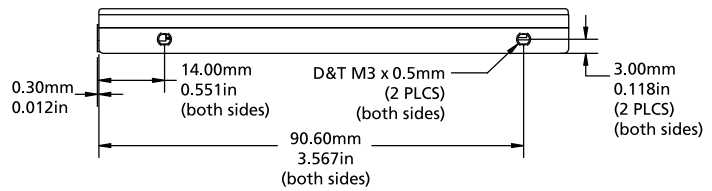
## Signal Segment Pin Assignments

SIGNAL NAME	TYPE	DESCRIPTION
S1	GND	Ground
S2	A	Differential signal pair A and A#
S3	A#	
S4	GND	Ground
S5	B#	Differential signal pair B and B#
S6	B	
S7	GND	Ground



## Power Segment Pin Assignments

SIGNAL NAME	TYPE	DESCRIPTION
P1	V33	No connect
P2	V33	No connect
P3	V33	No connect
P4	GND	Ground
P5	GND	Ground
P6	GND	Ground
P7	V5	5V power, pre-charge
P8	V5	5V power
P9	V5	5V power
P10	GND	Ground
P11	DAS	Device activity signal
P12	GND	Ground
P13	V12	No connect
P14	V12	No connect
P15	V12	No connect



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