

# Samsung V-NAND SSD

## 87 EVO

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! !1 Da"a S#ee"

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Revision 1.1





TECHINICAL SPECIFICATIONS

Sa ( sun) SSD 456 EVO

Usa)!	C&! nt PCs						
A &"cat"on	SATA 7 G-2s Int! r#ac! , co( at"-&! *"\$ SATA 8 G-2s 3 9.: "nt! r#ac! s						
Hard* ar! In#or( at"on	Ca ac"t' 9;	<: 6G=	: 66G=	9T=	<T=	>T=	
	Contro&&! r	Sa ( sun) M?@ Contro&&! r					
	NAND F&as\$ M! ( or'	Sa ( sun) VANAND 8-"t MLC					
	DRAM Cac\$! M! ( or'	: 9<M= LPDDR>	9G= LPDDR>	<G= LPDDR>	>G= LPDDR>		
	D"( ! ns"ons	966/ 7B.4: / 7.4( ( ( ;					
	For( Factor	<.: "nc\$					
P! r#or( anc! CU to.;<:	S! Ou! nt"a&R! ad	: 76 M=2s					
	S! Ou! nt"a&Wr"t! 8:	: 86 M=2s					
	>?= Ran. R! ad(DD9;	98,666 IOPS					
	>?= Ran. Wr"t! (DD9;	87,666 IOPS					
	>?= Ran. R! ad(DD8<;	84,666 IOPS					
	>?= Ran. Wr"t! (DD8<;	44,666 IOPS					
Po* ! r Consu( t"on>:	Id&!	DIPM on	86 ( W	86 ( W	86 ( W	8: ( W	8: ( W
	Act"#! CA%);	R! ad2Wr"t!	<.6W2<.<W	<.6W2<.<W	<.6W2<.: W	<.<W2<.: W	<.<W2<.: W
	D! %s&		<.: ( W	<.: ( W	8.6 ( W	>.: ( W	7.: ( W
R! &"a-"&t' >:	T! ( .	O ! rat"n)	6EC to 56EC				
		NonA O ! rat"n)	A>6EC to 4: EC				
	Hu( "d"t'		: F to B: F nonAcond! ns"n)				
	S\$oc.	NonA O ! rat"n)	9,: 66G, durat"on& 6.: ( s, 8 a"/s				
	V"-rat"on	NonA O ! rat"n)	<6H<,666H1, <6G				
	MT=F		9.: ( "on \$ours				
Warrant'	T=W:~	9: 6T=	866T=	766T=	9,<66T=	<,>66T=	
	P! r"od		: ' ! ar&"( "t! d				
Su ort"n) F! atur! s	TRIM (R! Ou"r! d OS su ort; , Gar-a) ! Co&&! ct"on, S.M.A.R.T						
Data S! cur"t'	AES <: 7A-"t Fu&&D"s. Encr' t"on, TCG20 a&V<.6, Encr' t! d Dr"#! CIEEE9775;						

9; G=6 9G= I 9,666,666,666 -' t!s. A cl rta"n ort"on o# ca ac"t' ( a' -! us! d #or s'st! ( #&! and ( a"nt! nanc! us! , t\$us t\$! actua& a#a"ta-! ca ac"t' ( a' d"##! r #ro( t\$! &a-!&! d tota&ca ac"t'.

<; S! Ou! nt"a& ! r#or( anc! ( ! asur! ( ! nts ar! -as! d on Cr' sta&D"s. Mar. %.: .6.<. Rando( ! r#or( anc! ( ! asur! ( ! nts ar! -as! d on IO( ! ! r9.9.6. P! r#or( anc! ( a' %ar' -as! d on SSDs #r( \* ar! %! rs"on, s'st! ( \$ard\* ar! 3 con#) urat"on. T! st s'st! ( con#) urat"on& Int! &K Cor! "5A<56? CPU L>.66 GH1, DDR8 9766MH1 4G=, OSAW"ndo\*s 96 Pro 7>-"t, C\$" s! tAASUS MB5 PRO

8; S! Ou! nt"a& Wr"t! ! r#or( anc! ( ! asur! ( ! nts ar! -as! d on Int! &&) ! nt Tur-oWr"t! t! c\$no&o)'. T\$! s! Ou! nt"a& ! r#or( anc! ( ! asur! ( ! nts a#t! r Int! &&) ! nt Tur-oWr"t! r!) "on ar! 866M=2s ( <: 62: 66G=, ; or : 86M=2s (9T=2<T=2>T=,.

>; Po\* ! r consu( t"on s ( ! asur! d \*"\$ IO( ! ! r9.9.6 %! rs"on \*"\$ Int! & Cor! "5A5566? L >>.GH1, SAMSUNG DDR> 97G=, G") a-' t! GAAM<56@, OS N W"ndo\*s 96 PRO ? /7>

:: A&& docu( ! nt! d ! nduranc! t! st r! su! ts ar! o-ta"n! d "n co( &anc! \*"\$ 0ESD<94 Standards. P&! as! %"s"t \* \* \* .P! d! c.or) #or d! ta&! d "n#or( at"on on 0ESD<94 Standards

7; T=W ( ! ans Tota& = ' t! s Wr"tt! n.

5; P&! as! r! #! r to t\$! d! ta&! d \*arrant' stat! ( ! nt \$! r! at \$tt t22sa ( sun) .co( 2sa ( sun) sssd.

4; Warrant' ro% d! s co% ! ra) ! #or t\$! stat! d t" ( ! ! r"od or t\$! T=W, \* "\$c\$! %! r co( ! s #rst.



PRODUCT LINEUP

Designator	Model Name	Capacity / Contents	Model Code
<: 6G=Q	MMA55E<: 6	Sa ( sun) SSD 456 EVO <: 6G= Warrant' Stat! ( !nt	MMA55E<: 6=W MMA55E<: 6=2AM MMA55E<: 6=2EU MMA55E<: 6=2CN MMA55E<: 6=2?R
: 66G=Q	MMA55E: 66	Sa ( sun) SSD 456 EVO : 66G= Warrant' Stat! ( !nt	MMA55E: 66=W MMA55E: 66=2AM MMA55E: 66=2EU MMA55E: 66=2CN MMA55E: 66=2?R
9T= C9,666G=Q;	MMA55E9T6	Sa ( sun) SSD 456 EVO 9T= Warrant' Stat! ( !nt	MMA55E9T6=W MMA55E9T6=2AM MMA55E9T6=2EU MMA55E9T6=2CN
<T= C<,666G=Q;	MMA55E<T6	Sa ( sun) SSD 456 EVO <T= Warrant' Stat! ( !nt	MMA55E<T6=W MMA55E<T6=2AM MMA55E<T6=2EU MMA55E<T6=2CN
>T= C>,666G=Q;	MMA55E>T6	Sa ( sun) SSD 456 EVO >T= Warrant' Stat! ( !nt	MMA55E>T6=W MMA55E>T6=2AM MMA55E>T6=2EU MMA55E>T6=2CN

\* G=6 9G= 1 9,666,666,666 -'t's -' IDEMA. T\$! actual& usa-!&! ca ac"t' ( a' -! &!ss t\$an t\$! &a-!&!d ca ac"t'. For ( or! "n#or(at'on, "nc&ud"n) -ut not &"( "t!d to t\$! \*arrant' ro%"d!d #or t\$'s roduct, &!as! %"s"t \* \* \*.sa( sun).co( 2ssd and \* \* \*.sa( sun)ssd.co( .

# Revision History

Revision Number	Description	Revision Date
9.6	Initial Release	November 2016
9.9	Added TurboWrite! for (Android) T= c\$(an)! C: 66 → : 86 M=2s;	January 2019