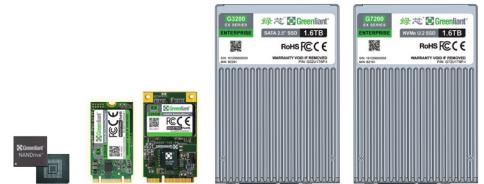# EnduroSLC™ Technology

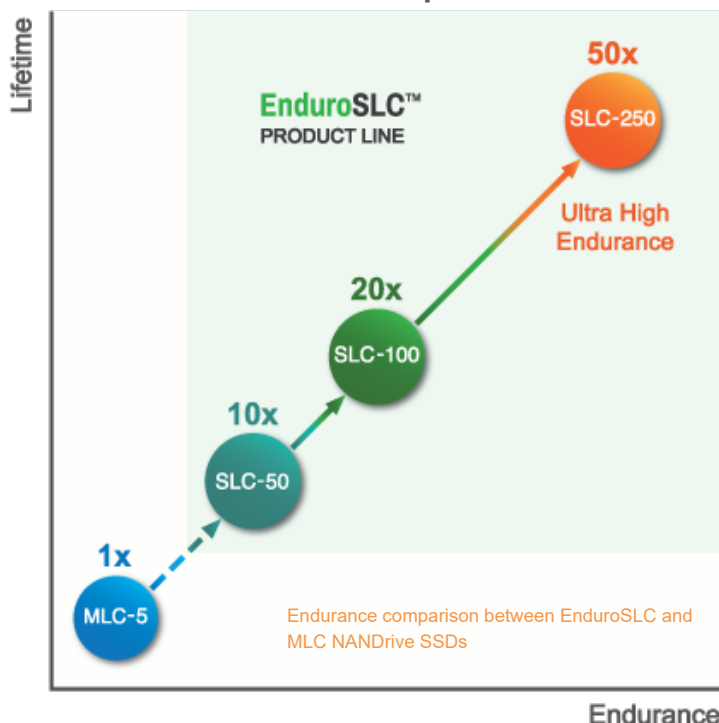## Superior Data Retention and Endurance

EnduroSLC™ is a proprietary 3D NAND management technology developed by Greenliant for high reliability applications requiring superior data retention and endurance in extreme temperature, high stress environments. With advanced hardware ECC capabilities and NAND flash management algorithms, EnduroSLC Technology significantly extends the write endurance of 1-bit-per-cell (SLC) SSDs reaching industry leading 300K program-erase (P/E) cycles. EnduroSLC enabled products meet robust data retention requirements under complex temperature conditions and support high cross-temperature ranges between data programming and reading. Due to its substantially lower bit error rate, an EnduroSLC SSD provides better consistency in read/write performance throughout product lifetime.

EnduroSLC™ Advantage

EnduroSLC SSDs offer a high reliability flash storage solution with ultra-robust data retention and ultra-high write endurance that exceeds capabilities of legacy, planar SLC NAND based products. Available in industry standard mSATA, M.2, 2.5", U.2 and BGA form factors, Greenliant's EX Series ArmourDrive™, NANDrive™ and Industrial Enterprise SSDs with EnduroSLC Technology are ideal for systems operating in severe conditions and requiring high reliability data storage at a lower cost per GByte.

In contrast to pseudo-SLC (pSLC) products that typically do not exceed 30K P/E cycles, EnduroSLC ArmourDrive SSDs offer 60K, 120K and unparalleled endurance of 300K P/E cycles. EnduroSLC NANDrive SSDs offer a minimum endurance of 50K followed by 100K and 250K+ endurance options. Greenliant's BGA SSDs with EnduroSLC Technology can withstand multiple passes of SMT high temperature process without losing data. System designers can take advantage of the wide range of popular form factors supported by EnduroSLC SSDs that will meet and exceed the needs of their mission critical applications.
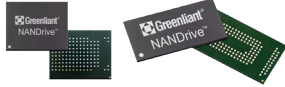
Endurance Comparison

Endurance comparison between EnduroSLC and MLC NANDrive SSDs

Applications

— *Industrial automation*
— *Industrial control*
— *Single-board computer*
— *Telematics / Navigation*
— *Test and measurement*
— *Data acquisition*
— *Industrial gaming*
— *Transportation equipment*
— *Point-of-Sale terminal*
— *Wireless base station*
— *Router / Switch / Gateway*
— *Aerospace system*
— *Medical equipment*
— *Security system*
— *Robotics*

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Greenliant SSDs with EnduroSLC Technology

EX
EnduroSLC™

NANDrive™ — Small Form Factor BGA SSDs
Ideal for Write Intensive Applications and Space Constrained Designs

NANDrive	eMMC	SATA
Part Number	GLS85VM1xxxG/Q/E	GLS85LS1xxxG/Q/E
Interface / Endurance	eMMC 5.1 / 50 / 100 / 250K+*	SATA 6Gb/s / 50 / 100 / 250K+*
Capacity	2GB, 4GB (100-ball) 2GB, 4GB, 8GB, 16GB, 32GB, 64GB (153-ball)	2GB, 4GB, 8GB, 16GB, 32GB, 64GB, 128GB
Package Type / Dimensions (mm)	100-ball LBGA / 14 x 18 x 1.40 153-ball LFBGA / 11.5 x 13 x 1.35	145-ball BGA / 14 x 24 x 1.50

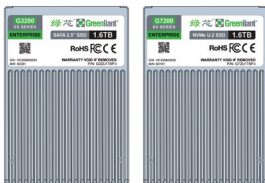*Program-erase cycles: 250K, or higher, offered up to 16GB for eMMC and 64GB for SATA NANDrive*

ArmourDrive™ — High Reliability Removable SSDs
Industrial SSDs Optimized for Ultra High Write Endurance

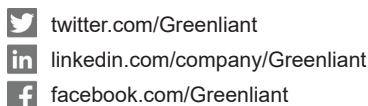| ArmourDrive	mSATA	SATA M.2 2242
Part Number	GLS86FCxxxGx	GLS87CAxxxGx
Interface / Endurance	SATA 6Gb/s 60 / 120 / 300K**	
Capacity	10GB, 20GB, 40GB, 80GB, 160GB, 320GB	
Form Factor / Dimensions (mm)	JEDEC MO-300 / 29.85 x 50.80 x 4.85	M.2 2242 SS / 22 x 42 x 2.38

**Program-erase cycles: 300K offered up to 160GB*

Industrial Enterprise — High Capacity SSDs
Designed for High Performance, High Reliability Computing Systems

Industrial Enterprise	SATA 2.5"	NVMe U.2
Part Number	G32UxxxP	G72UxxxP
Interface / Endurance	SATA 6Gb/s Unrestricted DWPD for 5 years***	PCIe Gen3x4 / 30 DWPD for 5 years***
Capacity	800GB, 960GB, 1.6TB, 1.92TB	
Form Factor / Dimensions (mm)	2.5-inch / 100.5 x 68.5 x 9.5	

***Drive Writes Per Day (DWPD)*

Greenliant®