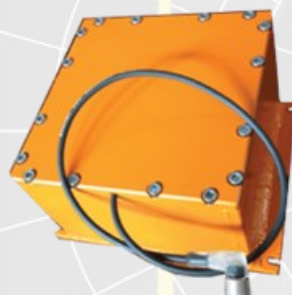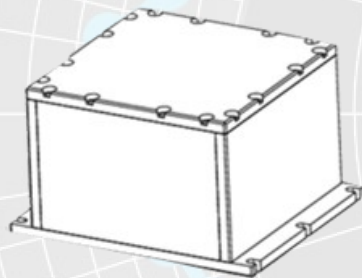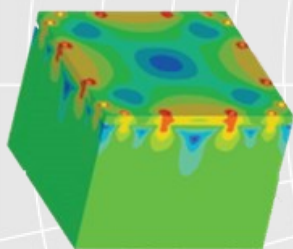## HIGH DENSITY CRASH HARDENED MEMORY MODULES WITH DATA AND EVENT RECORDING CAPABILITIES

Type:	High Density Crash Hardened Memory Module	EDR - Event Data Recorder	ODDRS - On Board Driving Data Recording System
Standard Compliance:	EN55022, EN55024	49 CFR Part 563	EN 62625-1
Event Recording Capability:	LDVR, ATP, ATS, PTS event recording		
Common Feature Set			
Security:	Tamper-proof		
Density (GB):	128, 256, 512, 1,024, [Smaller sizes available through request]		
Interface:	USB2.0 / USB3.0		
Operational Temperature:	-40°C to +85°C		
File System:	FAT32, NTFS (flexible - most custom file system compatibility available)		
Operating Systems:	Any OS with compatible w/USB2.0/3.0 mass-storage driver		
Max. Performance (Seq. W/R):	1.2Gbps (Benchmark via CrystalDiskMark)		
Peak SSD R/W Burst Rating:	536 MB/s / 212 MB/s		
Advanced Bad Block Management:	Bad blocks are automatically detected and flagged. Once flagged, the block will no longer be used, and error correction will be used to transfer the existing data on the block to a spare block.		
Flash Memory Endurance:	3,000 cycles		
Wear Leveling:	Global wear leveling is implemented so the wearing-down of all blocks can almost be evenly distributed. The CHM has a powerful ECC engine; block management and power failure management mechanisms to maximize reliability		
Error Management:	The SIL4 HD-CHM implements a hardware low-density parity-check ECC scheme, based on the BCH algorithm. It can detect and correct up to 40 bits error in 1K bytes.		
Comprehensive Power Outage Protection:	Also implemented is a unique set of comprehensive data protection mechanisms that function before and after a sudden power outage to the CHM. Low-power detection terminates data writing before an abnormal power-off, while table-remapping after power-on deletes corrupt data and maintains data integrity. SIL4 provides effective power cycling management, preventing data stored in flash from degrading with use.		
TRIM Support:	TRIM technology is utilized to maintain data consistency and perform continual data cleansing on the SSD. It runs as a background process, freeing up valuable controller resources while sorting good data into available blocks, and deleting bad blocks. Also significantly reduces write operations to the drive, thereby increasing the SSD's speed and lifespan.		
Vdd:	4.7V - 5.5 VDC		
Power Requirements:	2.2W (max)		
High Reliability (MTBF):	> 3,000,000 hours (Telcordia SR-332 GB; 25oC)		
Dimensions:	4" x 4" 4.75" (102mm x 102mm x 120mm)		
Weight:	4 lbs		