

## CRASH HARDENED MEMORY MODULE (CHMM)

- IEEE and FRA compliant CRASH HARDENED MEMORY MODULES designed for easy integration into new and existing systems
- LDVR, ATP, ATS, PTS event recording
- Use with our IEEE/FRA compliant event recorder platform or integrated with any third-party or OEM system.



### SPECIFICATIONS FOR KEYSTONE - SD-CHMM

**Density:** 1GB, 2GB, 4GB, 8GB or 16GB [formatted capacity slightly less].

**Sector Size:** 512 bytes

**Interface:** USB 2.0 [Ethernet Optional]

**Operational Range:** -40 C to +85 C

**Operating System:** Any OS with compatible USB Driver

**Wear Leveling:** Static and Dynamic.

**Error Management:** SD-CHM incorporates advanced technology for defect and error management. It uses various combinations of hardware-based correction algorithms and firmware-based wear-leveling algorithms.

Over the life of the drive, uncorrectable errors may occur. An uncorrectable error is defined as data that is reported as successfully programmed to the drive, but when it is read out of the drive, the data differs from what was programmed.

**Device Compliance:** EN55022 2006 Class B  
EN55024 1998 + A1:2001 + A2:2003 Class B  
IEC 60950-1:2005 2nd Edition

**High Reliability [MTBF]:** >1,000,000 hours

**Dimensions:** 6" x 6" x 5" [152mm x 152mm x 127mm]

# GATEKEEPER

## SPECIFICATIONS FOR KEYSTONE - HD-CHMM

<b>Density:</b>	32GB, 64GB, 128GB, 256GB [formatted capacity slightly less] 512GB and 1TB Optional
<b>Interface:</b>	Ethernet [custom interfacing available]
<b>Operational Range:</b>	-40 C to +85 C
<b>File System:</b>	FAT32, NTFS [flexible- most custom file system compatibility is available].
<b>Operating System:</b>	Any OS compatible with Ethernet Driver
<b>Wear Leveling:</b>	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.
<b>Error Management:</b>	HD-CHMM implements a hardware ECC scheme, based on the BCH algorithm. It can detect and correct up to 40 bits error in 1K bytes. Up to
<b>Data Rate:</b>	100Mbps [higher speeds optional].
<b>Vbatt:</b>	16V - 150V
<b>Power Requirements:</b>	10W [max]
<b>High Reliability [MTBF]:</b>	>1,000,000 hours
<b>Device Compliance:</b>	EN50155 IEEE 1482.1 2013 FRA 48 CFR Part 229
<b>Dimensions:</b>	6" x 6" x 5" [152mm x 152mm x 127mm]