K3M Mobile DiskOnChip G3

mDiskOnChipT G3 (mDOC G3), M-Systems' Multi-Level Cell (MLC) NAND-based flash disk for embedded systems, delivers high-capacity, non-volatile memory in the smallest die size. mDiskOnChip G3 is optimized with M-Systems' TrueFFS® flash management to surpass the reliability of standard NAND-based solutions, while ensuring high performance with innovative technology. It reduces power consumption with multiple operating modes and voltage levels.



A standard NOR-like interface enables support for every major CPU and operating system to make mDiskOnChip G3 easy to integrate in products such as handheld terminals, Digital TVs (DTVs), Digital Still Cameras (DSCs) and telecom equipment.

mDiskOnChip G3 optimizes Toshiba's cost-effective MLC NAND with unrivalled data reliability and high performance. This no-tradeoff combination enables embedded designers to provide a memory solution that meets BOM requirements *and* user expectations.

LESS SILICON, MORE CAPACITY
Leveraging MLC NAND for the best cost structure, mDiskOnChip G3 stores twice the amount of data percell compared with standard NAND technologies.

UNMATCHED RELIABILITY
Based on a patented combination of BCH and Hamming code and M-Systems' customized TrueFFS, mDiskOnChip G3 overcomes MLC NAND high-density challenges for exceptional data reliability.

ENHANCED PERFORMANCE
Multi-plane access, on-the-fly error detection and Burst support keep performance high. DMA mode enables high-speed boot capability.

BOOT CAPABILITY
Unique eXecute In Place (XIP) functionality during system initialization and boot eliminates the need for a separate boot device and reduces overall system costs.

LOW POWER CONSUMPTION
With a Deep Power-Down mode that consumes only 10 µ A and multiple voltage options, mDiskOnChip G3 keeps power consumption low.

RELIABILITY
EDC: 5 random bits/512 Bytes
ECC: 4 random bits/512 Bytes
Error Probability: 1x 10 -20 bits

PERFORMANCE
Read: Burst 80MB/sec, Sustained 5MB/sec
Write: 1.1MB/sec
Access: Normal 55nsec, Turbo 33nsec, Burst 25nsec
Max DMA Block: 64KB
Erase: 30MB/sec (2msec/block)

PROTECTION & SECURITY-ENABLING
16-Byte Unique ID
6KB One-Time Programmable (OTP) area
2 Read/Write-protected partitions
Hardware data and code protection

OS & CPU SUPPORT
OSs : Microsoft Windows CE.NET, Linux, WindRiver VxWorks, QNX Neutrino, ATI Nucleus and others
CPUs: Intel XScale, TI OMAP, Power PC, MIPS and x86

FORM FACTOR & CAPACITY
FBGA: 7x10x1.2mm (64MB)
9x12x1.4mm(128MB)
TSOP-I: 48-pin (64MB)
Device-Cascading: up to 256MB

ELECTRICAL
Read: 4.2mA, Program/Erase: 7.2mA
Deep Power-Down: 10 µ A
Voltage: I/O (auto-detect) 1.8V, 3.3V; Core 3.3V

ENVIRONMENTAL
Commercial Temperature: 0 ° C to + 70 ° C
Extended Temperature: -40 ° C to +85 ° C

ORDERING INFORMATION
FBGA (64MB): MD4832-d512

FBGA (128MB): MD4331-d1G
TSOP-I (64MB): MD4811-d512

Please contact us for stock availability, sales prices and fixed repair prices.

Contact UK