

Harman Multiple Partition V2 User Manual

General Description and Name

This BBM is for the system that has several partitions. Please note the *padding blocks* (which don't need to be programmed) in each partition or not belong to any partitions should be stuffed with all 0xFF in data file. Only the partition table specified blocks of each partition will be programmed (which means all other blocks will not be programmed).

This BBM also needs to be calculated ECC. For block 0 to block 3, use Hamming ECC. For block 4 to the end, use BCH4 ECC.

For partition 4 to the end, this BBM will write page sequence numbers into spare area.

Relevant User Options

The following special features on the special features tab apply to this scheme. The default values might work in some cases but please make sure to set the right value according to your system.

Please note only the below special feature items are related to this scheme and ignore any others. If any of below items doesn't exist, please check whether the right version has been installed or contact Data I/O for support by submitting Device Support Request through this address:

<http://www.dataio.com/support/dsr.asp>

Bad Block Handling Type = "Harman Multiple Partition V2"

PartitionTable File : Point to a .mbn file which describes the partition information.

Spare area : ***Must set as "ECC" for this BBM.***
Please refer to "Description of common NAND special features.pdf".

Page sequence numbers : only for partition 4 (based on 0) to the last partition. Partition 0 to Partition 3 is not allowed.

Format of PartitionTable.mbn:

For example:

For partition 0 to partition 3, each partition only programs 1 block.

Partition 4 starts from block 4, ends at block 259 and programs 48 blocks.

Partition 5 starts from block 260, ends at block 515 and programs 48 blocks.

Partition 6 starts from block 516, ends at block 771 and programs 48 blocks.

Partition 7 starts from block 772, ends at the last block, and programs 48 blocks.

If just skip bad block and program the data to the next good block, Set PartitionTable.mbn as follow:

Partition Table used by Data I/O

| 0 1 2 3 | | | |
|--|------------|--------------------|------------|
| NAND Flash Block | | | Attribute |
| Start Adr | End Adr | Actual Data Length | |
| 0x0 | 0x0 | 0x1 | 0xFFFFFFFF |
| 0x1 | 0x1 | 0x1 | 0xFFFFFFFF |
| 0x2 | 0x2 | 0x1 | 0xFFFFFFFF |
| 0x3 | 0x3 | 0x1 | 0xFFFFFFFF |
| 0x4 | 0x03010000 | 0x30000000 | 0xFFFFFFFF |
| 0x04010000 | 0x03020000 | 0x30000000 | 0xFFFFFFFF |
| 0x04020000 | 0x03030000 | 0x30000000 | 0xFFFFFFFF |
| 0x04030000 | 0xFF070000 | 0x30000000 | 0xFFFFFFFF |
| 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF |
| 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF |
| 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF |
| 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF | 0xFFFFFFFF |

For block 0 to block 3, if only one block should be programmed, Actual Data Length in partition 1 – partition 3 can be set as 0. So that only block 0 will be programmed (Block 0 is guaranteed as good by Semi vendor).

Notice: In partition 4 (based on 0) to the end partition, the last programmed block should not be all blank.

For example:

Partition 4 starts from block 4, ends at block 259 and programs 48 blocks.

The 47th (based on 0) programmed block in this partition should not be all blank.

If it is all blank, actual data length can be set to 47, not 48.

Revision History

V1.0 Feb 18th ,2011

Create this spec.

Appendix

You can get the file "Description of common NAND special features.pdf" from <http://ftp.dataio.com/FCNotes/BBM/>