
BBM MTK NAND FDM 4.5 User Manual

General Description and Name

MTK NAND FDM 4.5. This scheme Implements the skip block method for bad block handling but allows the user to create up to 16 partitions in the device, using a file with a .mbn extension.

The whole partitions of the customer's image are divided into 2 kinds: Code image and FS image(File system image). Here, the code image is also divided into several partition and the FS image has only one partition.

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 = "MTK NAND FDM 4.5"

Spare area : Please refer to "Description of common NAND special features.pdf". *Always set as "Enabled" for this BBM.*[Default 'Disabled']

PartitionTable File: The path of the mbn file on the PC.

Special Notes

The FS image in the customer's image file is the File system.

.mbn file format:

- a. Binary file fixed length 260 bytes.
- b. Organization:16 rows x 4 columns + 4Bytes. Each table item is 32-bits, little endian byte ordering.
- c. Each row of the table describes configuration for one partition. Up to 16 partitions can be used.
- d. Partition configuration:
 - i. **Start Adr**: address of start of partition in flash blocks. The programmer will set the file read pointer and the programmer write pointer to Start Adr. If Start Adr=0xFFFFFFFF, skip to the next partition.

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- ii. **Logical block number:** The logical numbers of blocks which will be programmed in the intermediate file.
 - iii. **Code image flag:** 2 bytes. If it is 0x0001, it shows this partition is code image. If it is 0x0000, it shows this partition is FS image.
 - iv. **M flag:** 1 byte. It is only valid when the partition is code image. If it is 0x01, the Mapping table will be programmed into the partition.
 - v. **Max Blocks:** It is only valid when the image is Format-2 in the code image. It indicates the Max physical blocks for this partition.

There is a transfer tool named “MTK_FileTrans.exe”. It is applied to transfer the intermediate file into the PC file for the Tasklink.

The Spec defined by MTK named “090305_MTK_SpecForNANDWriter_V202.ppt” can be got from MTK company.

In addition, there's a verify tool which can be applied to verify if the readback file corresponds to the MTK spec. It can be got from MTK company named “Verifyapp.exe”.

Revision History

V1.0 June 11, 2009
Create this spec.

Appendix

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