

## **Multiple Partition Int. ECC User Manual**

This scheme is a Generic Multiple Partition format supporting Internal ECC for selected blocks. It uses skip method for bad blocks handling within each partition. Bad blocks within any partition do not affect the starting location of the other partitions.

### **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 = “Multiple Partition Int. ECC”

Spare Area = “Enabled”

This data file should include data for Spare area. The selected blocks using Internal ECC will over-write the ECC area within spare area. The unused areas within the spare area will preserved the original data.

Partition Table File = “C:\PartitionTableName.mbn”

Hardware ECC = “Disabled”

Setting this to “enabled” will add Internal ECC to all the blocks.

Internal ECC Starting Block # = “4”

The algorithm will enable Internal ECC starting with this block #.

Error bits allowed in one page = “1, Default = None”.

### **Image Preparation**

Create a binary file that is the size of the device (plus the spare area) and contains data (or FF) within each block's spare area.

**Note** – The device will program ECC into the spare area for the selected blocks.

### **Partition Table Format Partition.mbn**

1. Create a binary file (YourFileName.MBN) with exact fixed length of 256 bytes.
2. This partition table file is organized as 16 rows by 4 columns. Each table item is 32-bits long and using little endian byte ordering.
3. Each row of the table describes configuration for one partition. Up to 16 partitions can be used..
4. Partition configuration:

- i. **Partition Start Block #**
- ii. **Partition End Block #** last valid block in the current partition.
- iii. **Actual Image Data Length in Blocks:** This size has to fit within the Partition Start and Partition End block numbers or the device will be rejected during programming.
- iv. **ECC Type:** Can be left as “FF” but in the future can support other ECC types if necessary.

00000000h:	01 00 00 00	05 00 00 00	01 00 00 00	10 00 00 00
00000010h:	06 00 00 00	FF 00 00 00	02 00 00 00	10 00 00 00
00000020h:	00 01 00 00	7F 01 00 00	6A 00 00 00	11 00 00 00
00000030h:	80 01 00 00	FF 01 00 00	6A 00 00 00	11 00 00 00
00000040h:	00 02 00 00	FF 03 00 00	5D 01 00 00	11 00 00 00
00000050h:	00 04 00 00	FF 05 00 00	5D 01 00 00	11 00 00 00
00000060h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
00000070h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
00000080h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
00000090h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000a0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000b0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000c0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000d0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000e0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF
000000f0h:	FF FF FF FF	FF FF FF FF	FF FF FF FF	FF FF FF FF

Start

End

Length

ECC Type

## Revision History

V1.0 Date 10/15/2012

## Appendix

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