Skip DBBT MPF BCH4 iMX6 ETFS User Manual

This is a Multiple Partition format scheme. Any bad blocks within the first two partitions (FCB & DBBT) are dropped (up to "iMX FW Starting Block #"). The rest of partitions use "Skip bad block" method within each partition. Any bad block found within any of the partitions (3...16) will not cause relocation to the starting block of the follow up partitions. The last partition is ETFS 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 = "Skip DBBT MPF BCH4 iMX6 ETFS"

Spare Area = "Disabled "

PartitionTable File = "C: \PartitionTable.mbn "

Error bits allowed in one page: How many error bits allowed within one page while verify, this depends on the ECC method. [Normally required, default is 0].

iMX FCB Copies = "4 ", Default is "4 "
The data at page 0 of the binary image starting at offset 0x00 will be duplicated in the blocks 0 thru 3 of the NAND device.

iMX DBBT Create? = "Enabled ", Default is "Enabled"
When this option is enabled, Discovered Bad Block Tables (DBBT) is added.

iMX DBBT Copies (if enabled) = "4 ", Default is "4 "
Four copies of DBBT table (including CRC and ECC) will be generated and programmed into the NAND device.

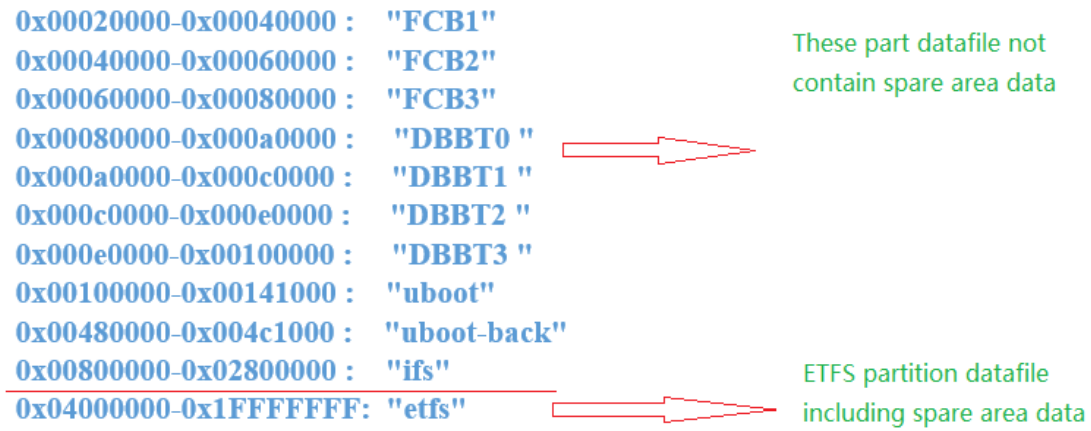
iMX FW Starting Block # = "8 ", Default is "8 "
This FW starting block # has to be greater or equal to FCB & DBBT values.

iMX DBBT last partition included in DBBT = "4 ", Default is "4 "
Value 4 means DBBT only cover partition2&3, as partition0&1bad block corresponding data are dropped. Partition over or equals 4 is not covered in DBBT.

Image Preparation:

FCB Table: The FCB table (one copy) should be included in the binary image file at address offset of 0x00. TLWin will duplicate this FCB table four times into blocks 0 to 3. The FCB table is read from the mater device directly.
DBBT: Customer image file contains four blocks of 0xFF data (Blk4-7). The DBBT will be created during programming.

Datafile organization:



Partition Table Format:

- A binary file with fixed length of 256 bytes.
- Organization: 16 rows x 4 columns. Each table item is 32-bits, little endian byte ordering.
- Each row of the table describes configuration for one partition. Up to 16 partitions can be used.
- Partition configuration:
  i. **Start Addr**: address of start of partition in flash blocks. The programmer will set the file read pointer and the programmer write pointer to Start Addr. If Start Addr is 0xFFFFFFFF, skip to the next partition.
  ii. **End Addr**: last valid block in the current partition. The last data block programmed must be equal to or less than End Addr, otherwise the programmer will reject the flash device.
  iii. **Actual Data Length**: number of blocks of data to read from the input file and write to the flash in the current partition.
  iv. **Note**: For optimal option, the following example should be used and the 3rd to the last partitions should be adjusted as needed.

PartitionTable.mbn

Revision History

V1.0 09/15/2020

Appendix

You can get the file “Description of common NAND Special Features.pdf” from http://ftp.dataio.com/FCNotes/BBM/