Multiple Partition Spear680 Bad Blocking Scheme

General Description and Name

Multiple Partition Spear680. 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 format for the .mbn file and each partition is specified below.

Spare Area
The spare area setting can be set to enabled/disabled based on whether data file contains spare area data.

Fixed Block Locations
The start block of each partition will be fixed to a particular physical block. If that block is bad, it is rejected.

Relevant User Options

The following special features on the special features tab apply to this scheme.

Bad Block Handling Type = "**Multiple Partition Spear680**"

Spare Area = "**Enabled**" or "**Disabled**". If data file do not contains spare area data, the programmer will fill in 0xFF to spare area.

Partition Table File = "**C:\PartitionTable.mbn**"
The format of the partition table is listed further below within this user guide.

Error bits allowed in one page = "**?**"
How many error bits are allowed during preprogramming. Default value is 0 indicating that no error bits are permitted.

Format of PartitionTable.mbn:

a. Binary file fixed length 256 bytes.
b. Organization:16 rows x 4 columns. 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.
    ii. **End Adr**: last valid block in the current partition. The last data block programmed must be equal to or less than End Adr, 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

This Document's versions

V1.0: 11/04/2026 - Original version

Appendix

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