

## stosfr (SRAM to SFR)

| Type | 31            | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |  |  |  |   |
|------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|--|--|--|---|
| R    | opcode = 0x05 |    |    |    |    |    |    | R0 |    |    |    |    |    |    | R1 |    |    |    |    |    |    | -  |   |   |   |   |   |   | - |   |   |   |  |  |  | - |

### - [R0] decoding table

|         |                  |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |                   |    |   |   |   |   |   |   |   |   |   |   |
|---------|------------------|----|----|----|----|----|----|----|----|----|------------|----|----|----|----|----|----|----|----|----|-------------------|----|---|---|---|---|---|---|---|---|---|---|
|         | 31               | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21         | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11                | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| [63:32] | sfr_address      |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    | -  |    |    |    | fetch_limit[18:8] |    |   |   |   |   |   |   |   |   |   |   |
| [31:0]  | fetch_limit[7:0] |    |    |    |    |    |    |    | -  |    | fetch_base |    |    |    |    |    |    |    |    |    |                   |    |   |   |   |   |   |   |   |   |   |   |

### - [R1] decoding table

|         | 31               | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23            | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15             | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7           | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---------|------------------|----|----|----|----|----|----|----|---------------|----|----|----|----|----|----|----|----------------|----|----|----|----|----|---|---|-------------|---|---|---|---|---|---|---|
| [63:32] | words_per_packet |    |    |    |    |    |    |    | size          |    |    |    |    |    |    |    |                |    |    |    |    |    |   |   | data_offset |   |   |   |   |   |   |   |
| [31:0]  | dim1_log_size    |    |    |    |    |    |    |    | dim0_log_size |    |    |    |    |    |    |    | slice_log_size |    |    |    |    |    |   |   | topology    |   |   |   |   |   |   |   |

### Field Spec:

- **fetch\_base:**
  - unit = byte, alignment = 8
- **fetch\_limit:**
  - unit = byte, alignment = 8
- **sfr\_address:**
  - unit = byte, alignment = 1
- **topology:**
  - {direct = 0, dim0br = 1, dim1br = 2, tr\_dim1br = 9}
- **slice\_log\_size:**
  - {6, 7, 8}
- **dim0\_log\_size:**
  - {0, 1, 2, 3, 4, 5, 6, 7, 8}
- **dim1\_log\_size:**
  - {0, 1, 2, 3, 4, 5, 6, 7, 8}
- **data\_offset:**
  - {0, 1, 2, 3, 4, 5, 6, 7, 8n}, unit = byte
- **size:**
  - {1, 2, 4, 8n}, unit = byte
- **words\_per\_packet:**
  - {1, 2, 4n}

### Requirement:

```
Python
fetch_limit % (words_per_packet*8) == 0

# if size < 8
(sfr_address // 8) == {(sfr_address + size) // 8} and (data_offset < 8) and (sfr_address % 8 >=
data_offset)
```