

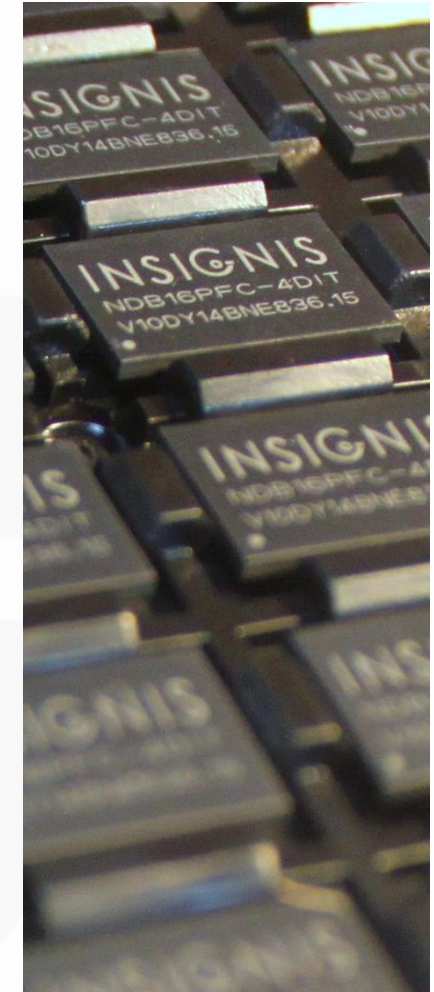
# Part Number Decoders

December 3, 2024

# DRAM Family

| INSIGNIS TECHNOLOGY PART NUMBER DECODER |           |              |   |   |   |        |                 |     |                         |
|---|-----------|--------------|---|---|---|--------|-----------------|-----|-------------------------|
| INSIGNIS TECHNOLOGY CORPORATION         |           |              |   |   |   |        |                 |     |                         |
| Description                             | Field Cod | Field DePos. | N | P | . | Positi | Definitio       | Cod | Description             |
| INSIGNIS TECHNOLOGY, INC.               | N         | Sup. Mar     | 1 |   |   | 13     | Process         | A   | 63nm                    |
|   |           |              |   |   |   |        | Mode            | B   | 45nm                    |
|   |           |              |   |   |   |        | Option 5        | C   | 38nm                    |
|   |           |              |   |   |   |        |                 | D   | 25nm                    |
|   |           |              |   |   |   |        |                 | E   | 30nm                    |
|   |           |              |   |   |   |        |                 | F   | 19nm                    |
| DRAM                                    | D         | Family       | 2 |   |   | 11,12  | Temp            | ET  | Extended Test Coverage  |
| LPDRAM                                  | L         |              |   |   |   |        | In'site         | IT  | Industrial Temp         |
|   |           |              |   |   |   |        | Option 4        | HT  | High Temp (no AEC-Q100) |
|   |           |              |   |   |   |        |                 | AT  | Automotive Temp         |
| SDR                                     | S         | Function     | 3 |   |   | 9, 10  | Speed & Latency | 16  | PC166                   |
| DDR                                     | D         |              |   |   |   |        | In'site         | 20  | PC200                   |
| DDR2                                    | B         |              |   |   |   |        | Option 3        | 2A  | DDR400                  |
| DDR3                                    | T         |              |   |   |   |        |                 | 25  | DDR500                  |
| DDR3L                                   | L         |              |   |   |   |        |                 | 4D  | 800-5-5-5               |
| DDR4                                    | Q         |              |   |   |   |        |                 | 5E  | 1066-6-6-6              |
| DDR4X                                   | X         |              |   |   |   |        |                 | 8K  | 1600-11-11-11           |
|   |           |              |   |   |   |        |                 | 9M  | 1866-13-13-13           |
|   |           |              |   |   |   |        |                 | 5G  | 2133-14-14-14           |
|   |           |              |   |   |   |        |                 | 8N  | 2400-16-16-16           |
|   |           |              |   |   |   |        |                 | 8X  | 2400-17-17-17           |
|   |           |              |   |   |   |        |                 | 7N  | 2666-19-19-19           |
|   |           |              |   |   |   |        |                 | 6N  | 3200-22-22-22           |
|   |           |              |   |   |   |        |                 | 3N  | 3733                    |
|   |           |              |   |   |   |        |                 | 4N  | 4266                    |
| 16Mb                                    | 9         | Density      | 4 |   |   | 7, 8   | Package         | T5  | 54I TSOPII              |
| 64Mb                                    | 6         |              |   |   |   |        | In'site         | T6  | 66I TSOPII              |
| 128Mb                                   | 7         |              |   |   |   |        | Option 2        | T9  | 86I TSOPII              |
| 256Mb                                   | 3         |              |   |   |   |        |                 | BA  | 54b FBGA (8x8x1.2)      |
| 512Mb                                   | 5         |              |   |   |   |        |                 | BE  | 90b FBGA (8x13x1.2)     |
| 1Gb                                     | 1         |              |   |   |   |        |                 | FB  | 60b FBGA (8x10x1.2)     |
| 2Gb                                     | 2         |              |   |   |   |        |                 | FC  | 84b FBGA (8x12.5x1.2)   |
| 4Gb                                     | 4         |              |   |   |   |        |                 | FD  | 60b FBGA (8x13x1.2)     |
| 8Gb                                     | 8         |              |   |   |   |        |                 | FE  | 96b FBGA (9x13.5x1.2)   |
| x4                                      | 4         | IO Width     | 5 |   |   |        |                 | FG  | 96b FBGA (9x13)         |
| x8                                      | 8         | In'site      |   |   |   |        |                 | FH  | 78b FBGA (8x10.5)       |
| x16                                     | 6         | Option 1     |   |   |   |        |                 | FI  | 96b FBGA (7.5x13)       |
| x32                                     | 3         |              |   |   |   |        |                 | FJ  | 96b FBGA (8x13x1.0)     |
|   |           |              |   |   |   |        |                 | FK  | 78b FBGA (7.5x12x1.2)   |
|   |           |              |   |   |   |        |                 | FL  | 134b FBGA (10x11.5x1.0) |
|   |           |              |   |   |   |        |                 | FM  | 144b LFBGA (12x12x1.4)  |
|   |           |              |   |   |   |        |                 | FN  | 168b LFBGA (12x12x0.9)  |
|   |           |              |   |   |   |        |                 | FO  | 78b FBGA (9x10.6x1.2)   |
|   |           |              |   |   |   |        |                 | FP  | 96b FBGA (7.5x13.5x1.2) |
|   |           |              |   |   |   |        |                 | FQ  | 78b FBGA (7.5x10.6x1.2) |
|   |           |              |   |   |   |        |                 | FR  | 78b FBGA (7.5x10.5x1.0) |
|   |           |              |   |   |   |        |                 | FS  | 200b FBGA (10x14.5)     |
|   | P         | Die Rev.     | 6 |   |   |        |                 |     |                         |

updated 12/31/2024



# Storage Product Family

| INSIGNIS TECHNOLOGY PART NUMBER DECODER |      |                 |      |   |   |   |   |   |   |   |   |   |   | INSIGNIS<br>TECHNOLOGY CORPORATION |                  |      |                    |          |                        |     |                               |
|---|------|-----------------|------|---|---|---|---|---|---|---|---|---|---|------------------------------------|------------------|------|--------------------|----------|------------------------|-----|-------------------------------|
| Description                             | Code | Field Def.      | Pos. |   |   |   |   |   |   |   |   |   |   | Position                           | Field Definition | Code | Detail Description |          |                        |     |                               |
|   |      |                 |      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |                                    |                  |      |                    | -        | 1                      | 2   | 3                             |
| INSIGNIS TECHNOLOGY, INC.               | N    | Sup. Name       | 1    |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    | 13       | Option <i>Option 5</i> | J   | pSLC                          |
| Solid State Drive                       | S    | Family          | 2    |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    | 11,12    | Option                 | ET  | Extended Test Coverage        |
| eMMC                                    | EC   | Form Factor     | 3, 4 |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Website</i>         | IT  | Industrial Temp               |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Option 4</i>        | AT  | Automotive Temp               |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | EP  | ET with Power Loss Protection |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | IP  | IT with Power Loss Protection |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | AP  | AT with Power Loss Protection |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    | 8, 9, 10 | Capacity               | 04  | 4GB                           |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Website</i>         | 08  | 8GB                           |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Option 2</i>        | 016 | 16GB                          |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 032 | 32GB                          |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 064 | 64GB                          |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 096 | 96GB                          |
| eMMC 153b BGA                           | 53   | <i>Website</i>  | 5, 6 |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 128 | 128GB                         |
| eMMC 100b BGA                           | 00   | <i>Option 1</i> |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 256 | 256GB                         |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 512 | 512GB                         |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 1T0 | 1TB                           |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | 2T0 | 2TB                           |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    | 7        | NAND Technology        | K   | 15nm MLC                      |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Website</i>         | L   | TLC                           |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          | <i>Option 3</i>        | U   | 19nm MLC                      |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | T   | 3D TLC                        |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | M   | 3D MLC                        |
|   |      |                 |      |   |   |   |   |   |   |   |   |   |   |                                    |                  |      |                    |          |                        | N   | 3D QLC                        |

Updated 6/2/2022

