**Serial RAM**

- **Densities**: 8Mb, 16Mb, 32Mb, 64Mb
- **Packages**: 8-Pin SOIC, 8-Pin USON, 8-Pin WSON
- **Temperature**: -40 to 85°C; -40 to 105°C
- **On-Chip ECC**: Not Supported
- **Speed**: 104MHz \(VDD = 1.7V - 1.95V\) and \(VDD = 2.7V - 3.6V\)

**Octal RAM**

- **Densities**: 64Mb, 128Mb, 256Mb
- **Packages**: 24-ball BGA
- **Temperature**: -40 to 85°C; -40 to 105°C; -40 to 125°C (64Mb, 128Mb)
- **On-Chip ECC**: On Chip ECC (2-bit detection, 1-bit correction) with optional ERR signal (64Mb, 128Mb)
- **Speed**: 200MHz \(VDD = 1.7V - 1.95V\); 166MHz \(VDD = 2.7V - 3.6V\)

**HyperRAM™**

- **Densities**: 64Mb, 128Mb, 256Mb
- **Packages**: 24-ball BGA
- **Temperature**: -40 to 85°C; -40 to 105°C; -40 to 125°C (64Mb, 128Mb)
- **On-Chip ECC**: On Chip ECC (2-bit detection, 1-bit correction) with optional ERR signal (64Mb, 128Mb)
- **Speed**: 200MHz \(VDD = 1.7V - 1.95V\); 166MHz \(VDD = 2.7V - 3.6V\)

**Serial RAM Overview**

- SPI (Serial Peripheral Interface) Compatible Bus: SPI\(x1\) / SDI\(x2\) / SQI\(x4\) mode
- Very Low Bus Signal Count: 6 pins for x4 IO ; CS#, SCK, S100 - S103 or 4 pins for x1/x2 IO : CS#, SCK, S1(S100), S0(S101)
- Very Simple Commands [7 commands]: Read/Write Memory, Read/Write Register, Enter SDI \(x2\)/SQI mode\(x4\), and Return to SPI mode \(x1\)

**Octal RAM Overview**

- DRAM technology based solution with Hidden Refresh and OPI (Octal Peripheral Interface) Protocol
- Very Low Signal Count: 11(12) pins for Functions and 8 I/O. (Optional ERR# pin for 64Mb and 128Mb ECC products)
- Variable Latency or Fixed Latency, Burst Read/Write Operation and features Read Data Training (16-bit Pattern for Training Purpose)

**HyperRAM™ Overview**

- HyperRAM™ memory is DRAM based memory with HyperBus™ Interface
- Very Low Signal count (Address, Command, and Data through 8 DQ pins)
- Hidden Refresh operation
Low Pin Count RAM Solution
Targeting IoT, Automotive, Industrial & Other Applications

QUAD RAM

- Densities: 8Mb, 16Mb, 32Mb, 64Mb
- Packages: 24-ball BGA
- Temperature: -40 to 85°C, -40 to 105°C, -40 to 125°C (8Mb, 16Mb)
- On-Chip ECC: (2-bit detection, 1-bit correction) with optional ERR signal in (8Mb, 16Mb)
- Speed: 200MHz (VDD = 1.7V - 1.95V), 133MHz (VDD = 2.7V - 3.6V)

Serial SRAM

- Densities: 512Kb, 1Mb, 2Mb, 4Mb
- Packages: 8-Pin SOIC
- Temperature: -40 to 85°C, -40 to 105°C
- On-Chip ECC: Not Supported
- Speed: 30MHz (VDD = 1.65V - 2.2V), 45MHz (VDD = 2.2V - 3.6V)

Low Pin Count RAM Solutions

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<th>1Mb</th>
<th>2Mb</th>
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<th>16Mb</th>
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<th>64Mb</th>
<th>128Mb</th>
<th>256Mb</th>
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Industrial & Automotive Temperature Grade, Long Term Support, Leaded or RoHS & Halogen-free Compliance TSCA Compliance

STATUS
- ✓ Production
- ✓ Sampling
- ✓ In Development
- ✓ Under Consideration

ECC: On-chip Error Correcting Code is an available option