



Densities: 256Mb and 128Mb

Availability: **Sampling Now**

Applications: Automotive, IoT, Industrial/Medical

DRAM technology based solution with Hidden Refresh and OPI[Octal Peripheral Interface] Protocol

Very Low Signal Count: 11[12] pins for Functions [CS#, SCLK..] and 8 IOs. [Optional ERR# for 128Mb]

Up to 200MHz DDR Operation: 400MB/s @ 1.70~1.95V & Up to 133MHz DDR Operation: 266MB/s @ 2.70~3.6V,

Variable Latency or Fixed Latency, Burst Read/Write Operation & features Read Data Training [16-bit Pattern for Training Purpose].

Automotive Temperature: Up to A2= -40°C to 105°C for 256Mb & Up to A3 = -40°C to 125°C for 128Mb

Optional On Chip ECC for 128Mb: 1-bit Correction, 2-bit detection

Small Foot Print: 6mm x 8mm 24-ball TFBGA [5x5 ball array]

Features

Industry Standard Octal Serial Interface

- Double Transfer Rate [DTR] Operation
- Source Synchronous Output signal during Read Operation [DQSM]
- Data Mask during Write Operation [DQSM]
- Configurable Drive Strength
- Supports Deep Power Down mode

Burst Operation

- Configurable Wrapped Burst Length: 16, 32, 64, and 128
- Word Order Burst Sequence
- Continuous Burst Operation:
 - Continues Read operation until the end of array address
 - Continues Write operation even after the end of array address

Low Power Consumption

- Single 1.7V to 1.95V Voltage Supply
- Single 2.7V to 3.6V Voltage Supply
- 70 mA Active Read Current
- 1200 µA Standby Current [105°C]
- 10 µA Deep Power Down [1.8V, 105°C]

Hardware Features

- **SCLK Input:** Serial clock input
- **SIO0 - SIO7:** Serial Data Input or Serial Data Output
- **DQSM:**
 - Output during command, address transactions as Refresh Collision Indicator
 - Output during read data transactions as Read Data Strobe
 - Input during write data transactions as Write Data Mask
 - RESET#: Hardware Reset pin

Temperature Grades

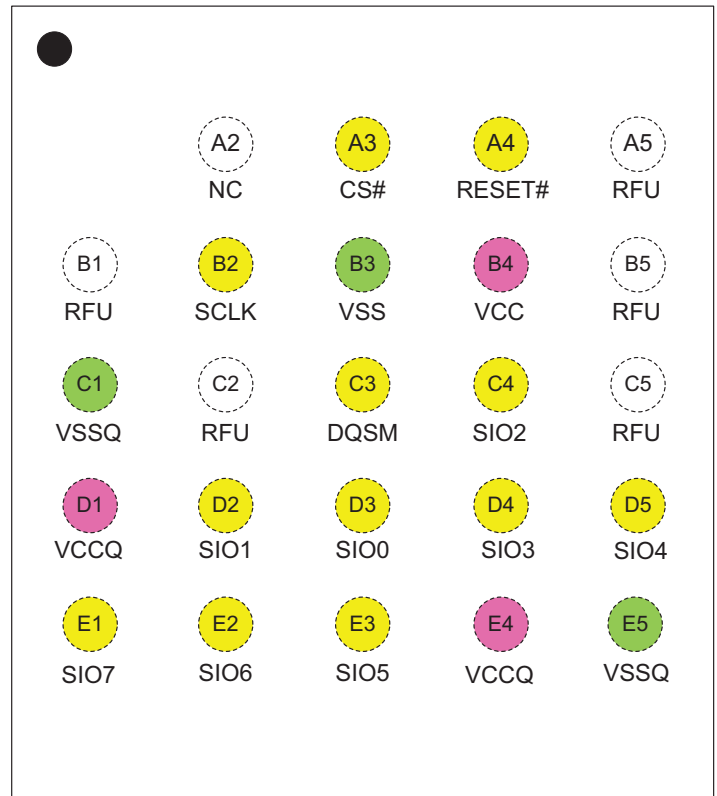
- Industrial: -40°C to +85°C
- Auto [A1] Grade: -40°C to +85°C
- Auto [A2] Grade: -40°C to +105°C
- Auto [A3] Grade: -40°C to +125°C for 128Mb

Industry Standard PACKAGE

- 24 - Ball BGA
- KGD [Call Factory]

PIN CONFIGURATION

24-ball TFBGA [5x5 ball array]



Top View, Balls Facing Down