UNLIMITED INGENUITY

INTELLIGENT MEMORY

LPDDR4/4X DRAM COMPONENTS

Intelligent Memory's Low Power Double Data Rate DRAMs offer an advantage over traditional DDR for achieving low power in applications where it makes a critical difference, including tablets, SSD cards, mobile devices, and automotive systems.

The 'x' stands for 'extra' or 'extended'. IM's LPDDR4x is available in densities from 4Gb - 64Gb and in a 200-ball FBGA package. The LPDDR4x boasts improved features, such as its maximum data rate performance increasing from 2133 Mbps (DDR3) up to 4266 Mbps by adding termination and calibration options, while its biggest change is its operating I/O (VDDQ) voltage which has been reduced by 60%, going from 1.5V (DDR3) down to 0.6V.

IM's LPDDR4 ECC components are available in densities from 4Gb - 8Gb, both are in a 200-ball FBGA package with maximum data rate up to 3200Mbps. Fully JEDEC compliant, IM's LPDDR4 integrates ECC error-correction capabilities that consume less energy than its predecessors and operates over Industrial and High temperature ranges.

KEY FEATURES

- Low voltage power supply
  - LPDDR4 at 1.1V
  - LPDDR4x at 0.6V
- Available in densities from 4Gb to 64Gb
- Fast data rates up to 4266Mbps
- Commercial, Industrial, & Automotive temperature grades
- Mobile features for lower power
- Fully synchronous operation
- ZQ calibration
- Integrated ECC Error Correction for embedded version (4Gb x32 and 8Gb x32)
- Long-term availability and support

APPLICATIONS

- **Aerospace & Defense:** Avionics systems, satellite communication systems, and military-grade computing platforms
- **Automotive Systems:** Infotainment systems, advanced driver-assistance systems (ADAS), and in-vehicle networking
- **Embedded Systems:** Industrial IoT devices, smart sensors, and control systems
- **Industrial Automation:** Programmable logic controllers (PLCs), robotics, and machine vision systems
- **Medical Devices:** Patient monitors, diagnostic equipment, and imaging systems
- **Networking Infrastructure:** Routers, switches, and gateways
- **Portable Electronics:** Tablets, laptops, POS
- **Test & Measurement Instruments:** Oscilloscopes, spectrum analysers, and data loggers

LPDDR4/4x						
Density	64Gb	32Gb	24Gb	16Gb	8Gb	4Gb
x32, 2 Channels	✓	✓	✓	✓	✓	
x16, 1 Channel				✓	✓	✓

For more information, please contact us at **sales@intelligentmemory.com**.