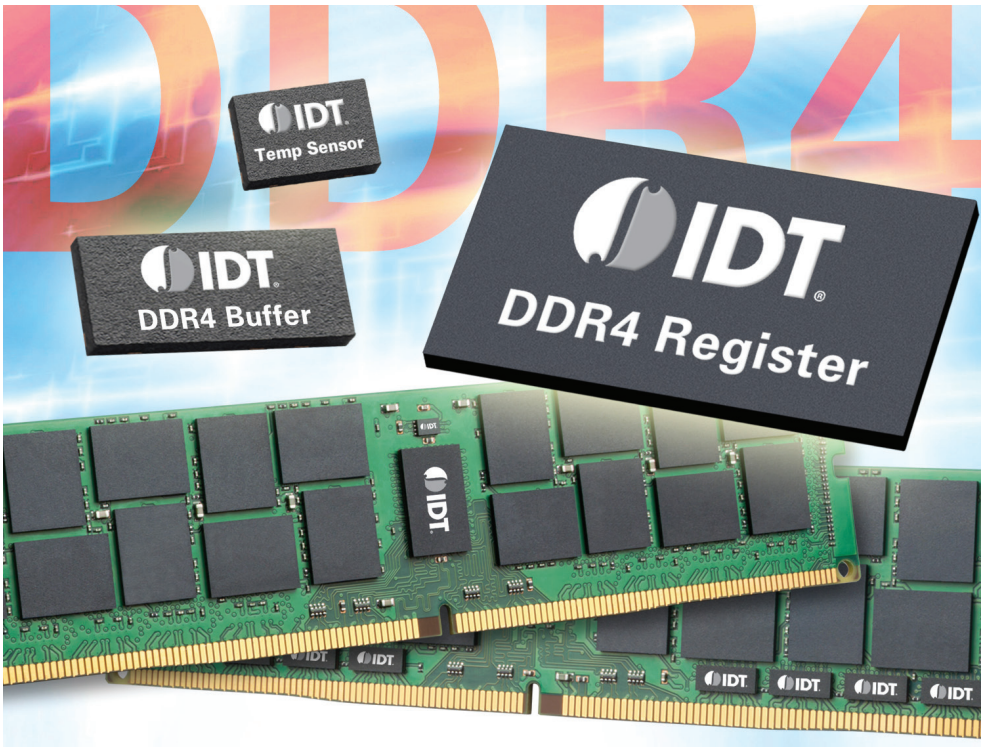
The Leader In Server Memory Interface Chipsets

DDR4 PRODUCTS

- Register (4RCD0124)
  - Used in both RDIMM and LRDIMM
  - Paired with 4DB0124 for LRDIMM
  - 32-bit 1:2 command/address register
  - 1.2 V Vdd operation
  - Supports up to 4 packages ranks and 8 logical ranks with native 3DS support
  - Advanced I/O enable control
  - Support at-speed BCOM bus for data buffer control
  - Automatic impedance calibration
  - New DDR4 power saving protocols
  - Command/ Address Parity Checking
  - Control register RCW readback
  - 1MHz I^2C bus
- Data Buffer (4DB0124)
  - Paired with 4RCD0124 for LRDIMM
  - Dual 4-bit bidirectional data registers with differential data strobes
  - 1.2 V Vdd operation
  - Automatic impedance calibration
  - BCOM Parity Checking
  - Control register BCW readback
- Temp Sensor + EEPROM (TSE2004)
  - Used in UDIMM, RDIMM, LRDIMM
  - Temperature accuracy up to ±0.5°C
  - 512 byte EEPROM for vendor info
  - 1MHz I^2C bus

BENEFITS

- All devices are JEDEC® compliant and meet stringent requirements for reliability and application compliance
- Up to 35% DDR4 power savings compared to DDR3
- Enables Terabyte DIMM memories
- Parity and CRC for improved data error recovery
- Improved debug and system margining



With the industry's largest product portfolio, IDT is the only company that can provide complete DDR4 and DDR3 chipset solutions for Enterprise Server memory modules.

IDT's DDR4 Registered Clock Driver, Data Buffer and Temp Sensor make up the industry's first complete chipset for DDR4 registered dual inline memory modules (RDIMMs) and load reduced dual inline memory modules (LRDIMMs). With DDR4 data rates climbing to 3.2 Gb/s and higher, the clear advantages afforded by RDIMM and LRDIMM as a speed-scalable memory technology are expected to drive adoption across a broad array of memory-intensive computing and storage applications.

Through flexible I/O control, timing and voltage calibration, and control register programmability, the IDT DDR4 Registered Clock Driver (4RCD0124) and Data Buffer (4DB0124) enable faster data rates at higher densities on all JEDEC® defined DDR4 LRDIMM and RDIMM topologies. DIMM topology configuration and DRAM information is stored in IDT's Temperature Sensor EEPROM (TSE2004).

With a deep knowledge of memory interface chipsets based on successful chipset introductions for all DDR generations, IDT's devices will provide reliable performance for your application.

Applications

Applications requiring deeper memory at higher data rates and lowest power including enterprise servers, data centers, workstations, storage devices, and communications.

DDR3 PRODUCTS

- Register (SSTE32882KB1)
  - Used in RDIMM
  - 28-bit 1:2 command/address register
  - 1.5V,1.35V & 1.25V Vdd operation
  - 800 to 2133 MT/s transfer rate supporting all intermediate frequencies
  - Lowest IDT register power saving option
  - 1,2,4 rank module access
  - PLL bypass option
  - Parity disable
  - RCW readback
  - 400KHz I²C bus
- Register (SSTE32882KA1)
  - Used in RDIMM
  - 28-bit 1:2 command/address register
  - 1.5V, 1.35V & 1.25V Vdd operation
  - 800 to 2133 MT/s transfer rate supporting all intermediate frequencies
  - 1,2,4 rank module access
  - PLL bypass option
  - Parity disable
  - 400 KHz I²C bus
- Memory Buffer (MB3518)
  - Used in LRDIMM
  - 28-bit 1:2 command/address register
  - 72 bit data path
  - 1.5 V & 1.35 V Vdd operation
  - 800 to 1866 MT/s transfer rate
  - Industry's lowest power DDR3 MB
  - 1,2,4,8 rank module access
- Temp Sensor + EEPROM (TSE2002)
  - Used in UDIMM, RDIMM, LRDIMM
  - Temperature accuracy up to ±0.5°C
  - 256 byte EEPROM for vendor info
  - 400KHz I²C bus

Ordering Guide

DDR3 Registering Clock Driver with Parity Test			
Part Number	Voltage	Speed	Package
SSTE32882KB1AKG8	1.5V 1.35V 1.25V	DDR3 800-2133 DDR3L 800-2133 DDR3U 800-1867	Low Profile BGA, 0.65mm ball pitch, 11x20 grid, 8.0mm x 13.5mm
SSTE32882KA1AKG8	1.5V 1.35V 1.25V	DDR3 800-2133 DDR3L 800-2133 DDR3U 800-1600	Low Profile BGA, 0.65mm ball pitch, 11x20 grid, 8.0mm x 13.5mm
SSTE32882HLBAKG8	1.5V 1.35V	DDR3 800-1600 DDR3L 800-1600	Low Profile BGA, 0.65mm ball pitch, 11x20 grid, 8.0mm x 13.5mm
DDR3 Memory Buffer			
Part Number	Voltage	Speed	Package
MB3518LA2MBG8	1.5V 1.35V	DDR3 800-1866 DDR3L 800-1866	FBGA, 0.65mm ball pitch, 20x38 grid, 13.50mm x 25.20mm
MB3518LA2MBL8	1.5V 1.35V	DDR3 800-1866 DDR3L 800-1866	FBGA with Lid, 0.65mm ball pitch, 20x38 grid, 13.50mm x 25.20mm
MB3516LA2MBG8	1.5V 1.35V	DDR3 800-1600 DDR3L 800-1600	FBGA, 0.65mm ball pitch, 20x38 grid, 13.50mm x 25.20mm
MB3516LA2MBL8	1.5V 1.35V	DDR3 800-1600 DDR3L 800-1600	FBGA with Lid, 0.65mm ball pitch, 20x38 grid, 13.50mm x 25.20mm
Temperature Sensor with EEPROM			
Part Number	Voltage	Market	Package
TSE2004GB2B0NCG8	2.2V to 3.6V	DDR4	VFQFN, 0.5mm ball pitch, 8 pin, 2.00 x 3.00mm
TSE2002GB2A1NCG8	2.3V to 3.6V	DDR3	VFQFN, 0.5mm ball pitch, 8 pin, 2.00 x 3.00mm
TSE2002GB2A1NRG8	2.3V to 3.6V	DDR3	VFQFN, 0.5mm ball pitch, 8 pin alternate land pattern, 2.00 x 3.00mm
Temperature Sensor			
Part Number	Voltage	Market	Package
TS3000GB0A0NCG8	1.7V to 1.9V	SSD Drives	VFQFN, 0.5mm ball pitch, 8 pin, 2.00 x 3.00mm

Visit us for more information at

www.idt.com/go/DDR4
www.idt.com/go/DDR3
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