



BEYOND LIMITS



**BEYOND THE LIMITATIONS  
OF CURRENT STANDARDS:**

DRAM Products and Memory Modules  
by I'M Intelligent Memory.

# Go beyond Limits with I'M Intelligent Memory

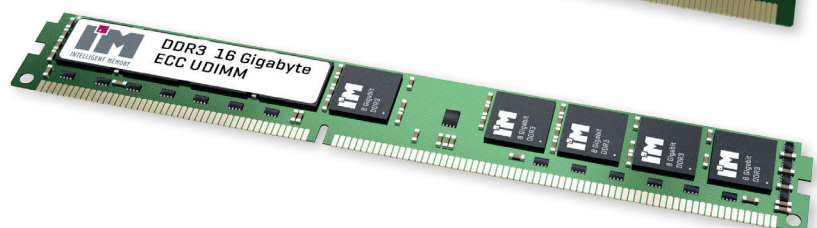
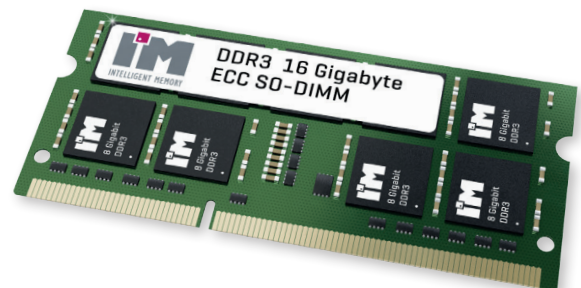
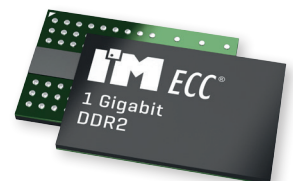
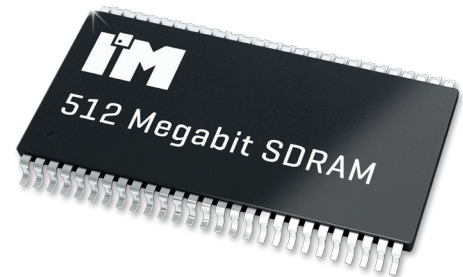
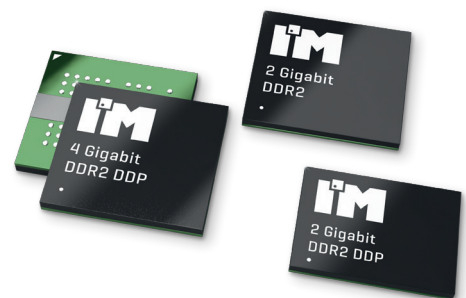
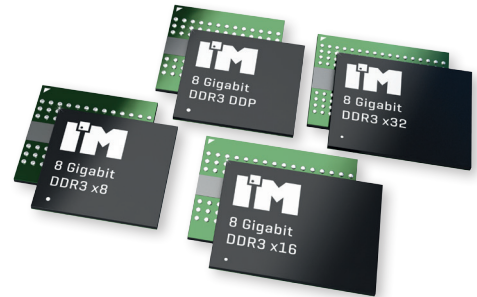


I'M Intelligent Memory is a joint-venture of industry experts and companies with one common mindset: "Making innovative and better DRAM memory products that meet the future demands of our industry with the highest capacities, quality and longevity."

There are customers who do not want to be limited by the memory standards as they exist today. So we aspired to offer a set of memory products going beyond these standards by doubling memory capacity, increasing temperature ranges, offering higher reliability and extending long-term-availability.

Go beyond limits with us and see what I'M Intelligent Memory has to offer for your design today.

- DDR3 components with 8 Gigabit density built with Single or Dual Chip Select
- DDR3 unbuffered 16 Gigabyte DIMM and SO-DIMM dual rank memory modules, optional with ECC
- DDR2 and DDR3 memory modules in specialty form-factors, including RDIMM, FBDIMM, Mini-DIMM and LRDIMM, optional Very Low Profile (VLP)
- DDR2 components in 512 Megabit, 2 Gigabit and 4 Gigabit densities
- SDRAMs with 256 Megabit and 512 Megabit in FBGA and TSOP package
- I'M ECC – revolutionary DRAM components with integrated error correcting code





## ✓ DRAM PRODUCTS

### DDR3 SDRAM

I'M Intelligent Memory offers the first 8 Gigabit memory IC with single chip select. It's the basis for our ultra-high density DDR3 modules, and works at just about any temperature you can dream up for an application.

### DDR2 SDRAM

DDR2 is the most common memory technology for industrial applications. We push DDR2 even further with our monolithic DDR2 2 Gigabit chip in x4, x8, and x16 configurations. Not enough? Try our 4 Gigabit Dual-Die DDR2 SDRAM! And for our automotive customers we provide AEC-Q100 qualified parts.

### SDRAM

SDR defined our arrival into the modern era of Synchronous DRAM, and to this day, it just will not quit. So we teamed the 'never say die' attitude of SDRAM together with I'M Intelligent Memory's mission to go Beyond Limits. The result is our new series of 256Mb and 512Mb SDR devices in both FBGA and TSOP packages, commercial or industrial temperature grades.

### I'M ECC® DRAM

I'M ECC® is our revolutionary product family of error correcting memory for high availability applications. The on-chip ECC logic protects your data from single bit errors and brings server grade robustness to any application. I'M ECC® is available in DDR1, DDR2, DDR3 and LPDDR1 technologies and is plug-and-play compatible to conventional JEDEC standard DRAM.



I'M ECC® – for maximum reliability and availability.

All I'M DDR3 and DDR2 products can be operated up to temperatures of 85°C tA and maximum 95°C tCase without doubling the refresh rate.

## ✓ DRAM MODULES

### DDR3 DIMM

When we talk about ultra-high density modules, we mean it. Based upon our 8 Gbit DDR3 Memory IC, we make the world's first 16 Gigabyte DDR3 unbuffered DIMMs and SO-DIMMs. Furthermore, I'M Intelligent Memory modules are available in the form-factors of RDIMM and LRDIMM, optionally Very-Low-Profile (VLP)

### DDR3 SO-DIMM

I'M Intelligent Memory offers the first SO-DIMM memory modules with 16 Gigabyte DDR3 on a single module, alternatively with or without ECC capability. These ultra-high density modules by I'M are based on our 8Gb DDR3 memory IC.

### DDR3 MINI-DIMM

Talking of small-form-factor memory modules, the Mini DIMM and Mini RDIMMs have gained popularity in the industry. Based upon our 8 Gigabit DDR3 Memory IC, I'M Intelligent Memory offers Mini DIMMs with as much as 16 Gigabyte DDR3 capacity utilizing only two ranks.

### DDR2 DIMM

I'M Intelligent Memory DDR2 modules bring high density options to the world of high-reliability industrial electronics, including servers, networking, embedded, automotive, robotic controls, medical and telecommunications systems. Based on our monolithic 2 Gigabit DDR2 devices, we offer long term support for FBDIMM and RDIMM form-factor modules with up to 8 Gigabyte capacity.

### DDR2 SO-DIMM

Based on our monolithic 2 Gigabit DDR2 components, we offer long term support for SO-DIMM and SO-RDIMM form-factor modules with up to 4 Gigabyte capacity.

### DDR2 MINI-DIMM

Based on our monolithic 2 Gigabit DDR2 and our 4 Gigabit DDR2 Dual-Die (DDP) components, we offer long term support for Mini-DIMM and Mini-RDIMM form-factor modules with up to 4 Gigabyte capacity, optionally available in Very-Low-Profile (VLP) versions.

All I'M DDR3 and DDR2 memory modules can be operated up to temperatures of 85°C tA and maximum 95°C tCase without doubling the refresh rate.

## ✓ DISTRIBUTION CONTACT

### China

Memphis Electronic Hong Kong Ltd.  
Shanghai Rep. Office  
Phone: +86 21 2898 6430  
Email: j.au@memphis.ag

### Hong Kong

Memphis Electronic Hong Kong Ltd.  
Phone: +852 2111 1071  
Email: hksales@memphis.ag

### Singapore

Memphis Electronic Singapore  
Pte. Ltd.  
Phone: +65 68 99 37 90  
Email: j.lee@memphis.ag

### Taiwan

Memphis Electronic Hong Kong Ltd.  
Taiwan Branch  
Phone: +886 2 2251 7648  
Email: m.chang@memphis.ag

### Japan

Memphis Electronic Japan  
Phone: +81 3 5807 6787  
Email: m.maishi@memphis.ag

### USA

Memphis Electronic Inc.  
Phone: +1 877 600 6080  
Email: ussales@memphis.ag

### Germany

Memphis Electronic AG  
Phone: +49 6172 90 35 40  
Email: sales@memphis.ag

### Russia

Memphis Electronic AG  
Phone: +7 925 855 56 91  
Email: p.krylov@memphis.ag