

**UP YOUR DESIGNS**

# MEMPHIS MEMORY COMPETENCE CENTER



## Enabling Industrial, Embedded and Specialty Markets for over 30 Years

Tap into our memory competence and benefit from the broadest portfolio in the industry. From legacy to latest components and modules, from standard to exotic memories – if it's a memory, we can help.

## WHY MEMPHIS

- For more than 30 years we have specialized in semiconductor memory only. This makes us a unique expert in memory technologies ranging from legacy to the latest technologies, from best-selling products to exotic emerging memories.
- We know the products of almost every memory vendor in the world, even if they are not in our line card, and can recommend the memory components and modules that best fit your application.
- Focus on your application – let us handle your memory needs. We provide tailored advice, product samples, data sheets, and ongoing assistance throughout your project and help you avoid bottlenecks.
- With 17 offices and 3 warehouses worldwide, we can support you from design-in to your manufacturing site – regardless of where those locations are – and deliver the products you need, when you need them.

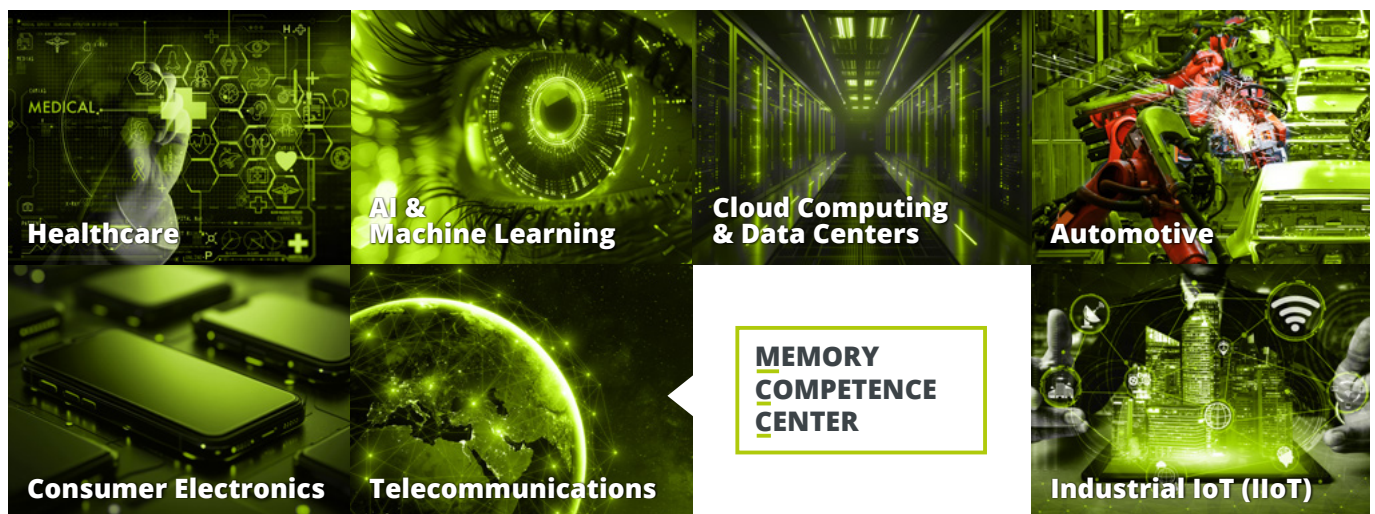
## MEMORY COMPETENCY

- Memory products are standard, but each application has a different focus, and every memory has strengths and weaknesses. Thanks to our broad portfolio, we can find the best match for you, no matter the vendor.
- We know all the nuances of the memory products in our line card and can help you with our technical expertise during design-in, the qualification of multiple sources for components as well as with finding alternatives to end-of-life products.
- Due to our focus on memory, we keep our fingers on the pulse of the entire memory ecosystem and can give insights into manufacturer roadmaps, long-term product availability, and cross-reference information.
- What's more, with our help end-of-life is not a disaster, because we help you prepare with alternatives and our obsolescence management services.

## 100% APPLICATION FOCUS

Completely lead-free or leaded? Conformal coating or controlled BOM?

You can get all this from us and more. Thanks to our 100% focus on industrial and embedded applications we know the requirements of the different industry segments and can serve your needs.



## LINE CARD



# OUR MEMORY COMPONENTS

## MEMORY COMPETENCE CENTER

### VOLATILE MEMORY

#### SDRAM

- DDR5 • DDR4
- DDR3 • DDR2
- DDR • SDRAM



#### SRAM

- Low Power SRAM
- Fast SRAM
- Synchronous SRAM
- Pseudo SRAM



#### DRAM (integrated ECC)

- DDR3, DDR2, DDR
- LPDDR4, LPDDR
- Robust & extra robust



#### Graphic DRAM

- GDDR6
- GDDR5



#### Mobile DRAM

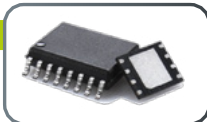
- LPDDR5 • LPDDR4 & 4x
- LPDDR3 • LPDDR2
- LPDDR • LPSDRAM



### NON-VOLATILE MEMORY

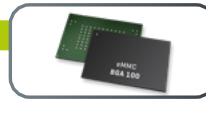
#### NOR Flash

- Parallel & Serial



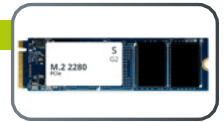
#### Managed Flash

- eMMC & UFS
- BGA SSD (SATA, PCIe)



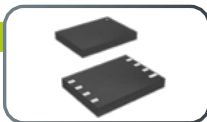
#### SSD Drives

- M.2 2242, M.2 2280, mSATA, 2.5", Half Slim, PCIe, E1.S



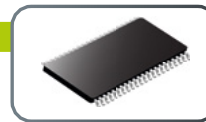
#### NAND Flash

- SLC, MLC & TLC
- Parallel & Serial (SPI)



#### MRAM

- Op Volt: 1.5V-3.3V
- Dens: 128Kbit to 16Mbit
- SPI: 50-104 MHz



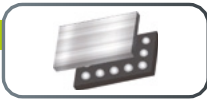
#### FeRAM

- Op Volt: 1.7V-3.6V
- Dens: 16Kbit to 8Mbit (SPI/I2C/parallel)



#### ReRAM

- Op Volt: 1.6V-3.6V
- Dens: 8Mbit, 12Mbit (SPI)



### MCP & eMCP PRODUCTS



# OUR DRAM MODULES

#### Standards

- JEDEC and special customer designs
- Fixed BOM
- Buffered & unbuffered
- Registered & unregistered
- ECC & non-ECC

#### Temperature

- Commercial, Industrial, Automotive

#### Technology

- DDR5, DDR4, DDR3, DDR2, DDR, SDRAM, SRAM
- Component based versions (integrated ECC)

#### Configuration

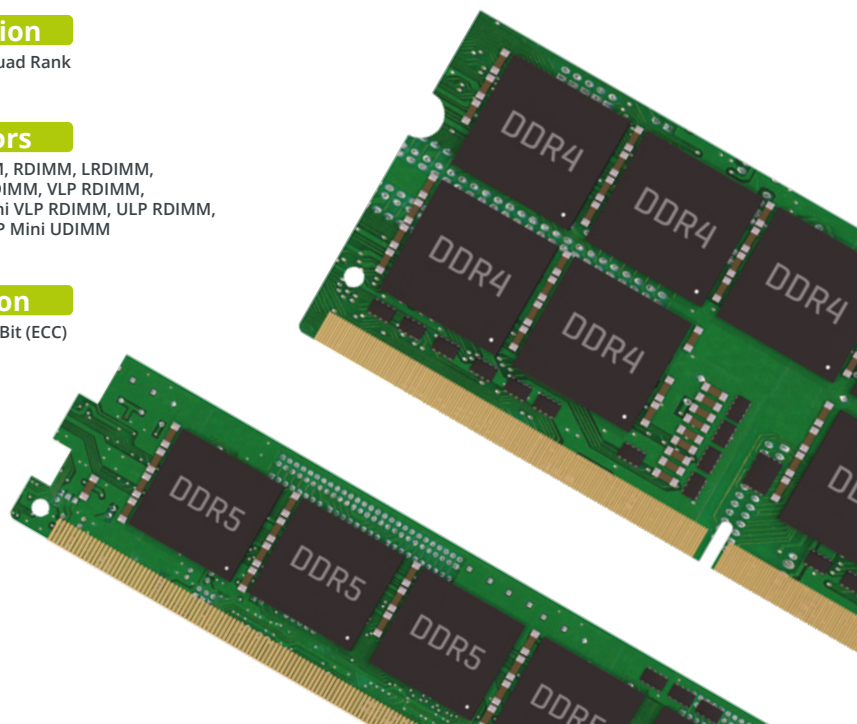
- Single, Dual & Quad Rank

#### Form Factors

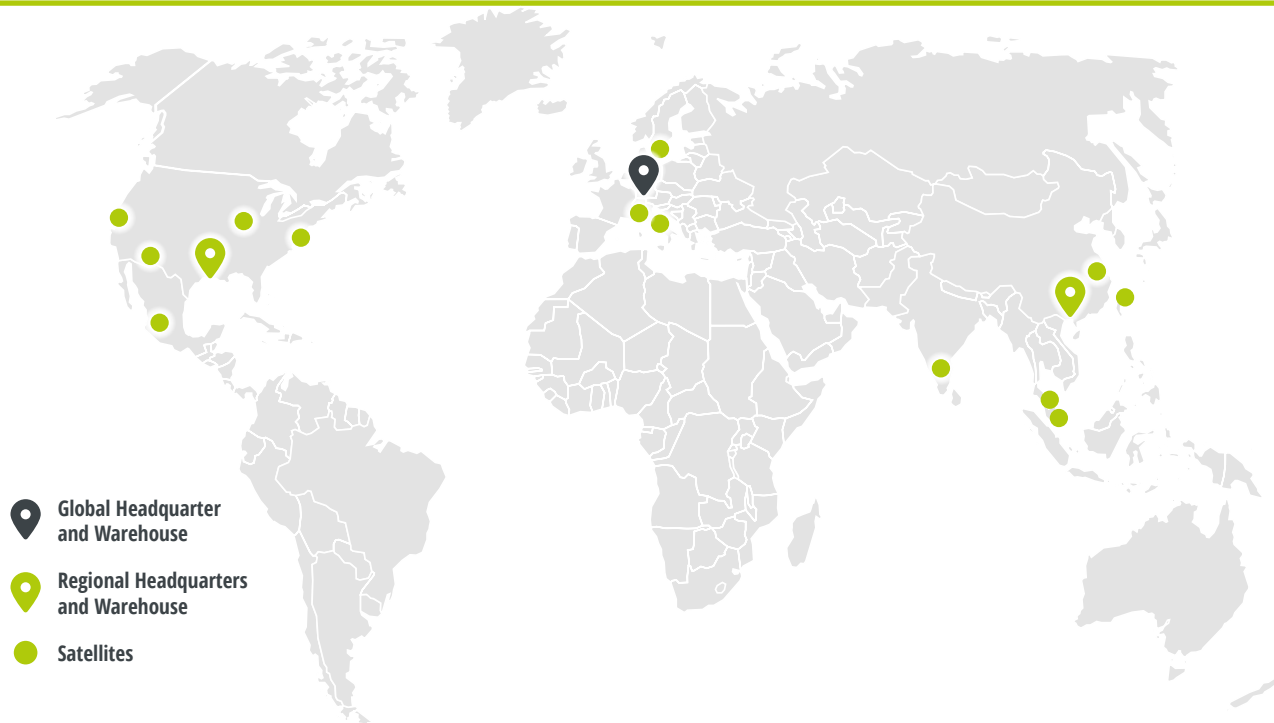
- UDIMM, FB DIMM, RDIMM, LRDIMM, SO-DIMM, SO-RDIMM, VLP RDIMM, Mini RDIMM, Mini VLP RDIMM, ULP RDIMM, Mini UDIMM, VLP Mini UDIMM

#### Organization

- 32 Bit, 64 Bit, 72 Bit (ECC)



## LOCATIONS



-  Global Headquarter and Warehouse
-  Regional Headquarters and Warehouse
-  Satellites

### EMEA

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MEMPHIS complies with all major ISO and environmental regulations and follows ESG principles:



**ISO 14001**  
Certified Environmental  
Management System



**ISO 9001**  
Certified Quality  
Management System

