ASUS KGPE-D16 Technical Updates

This is an information update for the user guide that comes with your motherboard package.

DDR3 memory support *(page 1-5)*

The KGPE-D16 supports UDIMM and RDIMM DDR3 memory that features data transfer rates of 1333/1066/800 MHZ to meet the higher bandwidth requirements of server and workstation applications. The 4-channel DDR3 architecture boosts system performance, eliminating bottlenecks with peak bandwidth of up to 42.7GB/s. Furthermore, the supply voltage for the memory is reduced from 1.8 V for DDR2 to just 1.5V for DDR3. This voltage reduction limits the power consumption and heat generation of DDR3 which makes it an ideal memory solution.

2.4.2 Memory Configurations *(page 2-17)*

You may install 1GB/2GB/4GB/8GB/16GB Registerd or 1GB/2GB/4GB Unbuffered with ECC/Non-ECC DDR3 DIMMs into the DIMM sockets using the memory configurations in this section.

- Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor.
- For CPU1 configuraton, install DIMMs from the orange slots and in the order as follows: DIMM_A2 -> DIMM_C2 -> DIMM_B2 -> DIMM_D2.
  For CPU1 + CPU2 configuraton, install DIMMs from the orange slots and in the order as follows: DIMM_A2 -> DIMM_E2 -> DIMM_C2 -> DIMM_G2.
- **For Quad Ranks DIMMs, when installing less than or equal to four DIMMs:**
  For CPU1 configuration, install DIMMs to the orange slots and in the order as follows: DIMM_A2 -> DIMM_C2 -> DIMM_B2 -> DIMM_D2.
  For CPU1 + CPU2 configuration, install DIMMs to the orange slots and in the order as follows: DIMM_A2 -> DIMM_E2 -> DIMM_C2 -> DIMM_G2.
- **For Quad Ranks DIMMs, when installing more than four DIMMs:**
  For CPU1 configuration, install DIMMs in the order as follows: DIMM_A2 -> DIMM_C2 -> DIMM_B2 -> DIMM_D2 -> DIMM_A1 -> DIMM_C1 -> DIMM_B1 -> DIMM_D1.
  For CPU1 + CPU2 configuration, install DIMMs in the order as follows: DIMM_A2 -> DIMM_E2 -> DIMM_C2 -> DIMM_G2 -> DIMM_B2 -> DIMM_F2 -> DIMM_D2 -> DIMM_H2 --> DIMM_A1 -> DIMM_E1 -> DIMM_C1 -> DIMM_G1 -> DIMM_B1 -> DIMM_F1 -> DIMM_D1 -> DIMM_H1.

(continued on the next page)

Memory population table *(page 2-17)*

For UDIMM (Single Rank, Dual Ranks)

CPU1 Configuration																
	A2	A1	B2	B1	C2	C1	D2	D1	-	-	-	-	-	-	-	-
2 DIMMs	V				V											
4 DIMMs	V		V		V		V									
6 DIMMs	V	V	V		V	V	V									
8 DIMMs	V	V	V	V	V	V	V	V								

CPU1 + CPU2 Configuration																
	A2	A1	B2	B1	C2	C1	D2	D1	E2	E1	F2	F1	G2	G1	H2	H1
2 DIMMs	V								V							
4 DIMMs	V				V				V				V			
6 DIMMs	V		V		V				V		V		V			
8 DIMMs	V		V		V		V		V		V		V		V	
10 DIMMs	V	V	V		V		V		V	V	V		V		V	
12 DIMMs	V	V	V		V	V	V		V	V	V		V	V	V	
14 DIMMs	V	V	V	V	V	V	V		V	V	V	V	V	V	V	
16 DIMMs	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V

For RDIMM (Single Rank, Dual Ranks & Quad Ranks)

CPU1 Configuration																
	A2	A1	B2	B1	C2	C1	D2	D1	-	-	-	-	-	-	-	-
2 DIMMs	V				V											
4 DIMMs	V		V		V		V									
6 DIMMs	V	V	V		V	V	V									
8 DIMMs	V	V	V	V	V	V	V	V								

CPU1 + CPU2 Configuration																
	A2	A1	B2	B1	C2	C1	D2	D1	E2	E1	F2	F1	G2	G1	H2	H1
2 DIMMs	V								V							
4 DIMMs	V				V				V				V			
6 DIMMs	V		V		V				V		V		V			
8 DIMMs	V		V		V		V		V		V		V		V	
10 DIMMs	V	V	V		V		V		V	V	V		V		V	
12 DIMMs	V	V	V		V	V	V		V	V	V		V	V	V	
14 DIMMs	V	V	V	V	V	V	V		V	V	V	V	V	V	V	
16 DIMMs	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V