



## AMD EXPO™ Technology Memory Profile Self-Certification Report

| <b>[General Module Information]</b> |  |
|-------------------------------------|--|
| <b>Module Manufacturer:</b>         | Kingston   |
| <b>Module Part Number:</b>          | KF556C40BB2K2-64 (Kit of 2)<br>KF556C40BB2-32 (x2)<br>KF556C40BB2AK2-64 (Kit of 2)<br>KF556C40BB2A-32 (x2) |
| <b>Serial Number:</b>               | N/A  |
| <b>Module Revision:</b>             | 1  |
| <b>Module Size:</b>                 | 32GB   |
| <b>Ranks per channel:</b>           | 1  |
| <b>JEDEC Memory Speed:</b>          | 4800   |
| <b>Module Type:</b>                 | Unbuffered DIMM (UDIMM)  |
| <b>RDIMM RCD Vendor:</b>            | N/A  |
| <b>SDRAM Manufacturer:</b>          | Samsung  |
| <b>SPD Byte 552:</b>                | 80   |
| <b>SPD Byte 553:</b>                | CE   |
| <b>DRAM Stepping:</b>               | M  |
| <b>SPD Byte 554:</b>                | 4D   |
| <b>SPD Byte 530:</b>                | 33   |
| <b>PMIC Vendor:</b>                 | RichTek  |
| <b>Error Check/Correction:</b>      | None   |

| <b>[AMD EXPO Profile Support]</b>       |     |
|---|-----|
| <b>AMD EXPO Version</b>                 | 1   |
| <b>Profile 0 Enabled</b>                | Yes |
| <b>Profile 0 DIMMs per Channel</b>      | 1   |
| <b>Profile 1 Enhanced Block Enabled</b> | No  |
| <b>Profile 1 Enabled</b>                | Yes |
| <b>Profile 1 DIMMs per Channel</b>      | 1   |
| <b>Profile 1 Enhanced Block Enabled</b> | No  |



| <b>[EXPO Profile 0 Voltage]</b> |       |
|---------------------------------|-------|
| SDRAM VDD (V)                   | 1.25V |
| SDRAM VDDQ (V)                  | 1.25V |
| SDRAM VPP (V)                   | 1.8V  |

| <b>[EXPO Profile 0 Timing]</b> |            |         |
|--------------------------------|------------|---------|
| DDR Data Rate MT/S             | 5600(MT/s) |         |
| tCK (ps / nCK)                 | 357 ps     |         |
| tCAS (ps / nCK)                | 14285 ps   | 40 nCK  |
| tRCD (ps / nCK)                | 14285 ps   | 40 nCK  |
| tRP (ps / nCK)                 | 14285 ps   | 40 nCK  |
| tRAS (ps / nCK)                | 28571 ps   | 80 nCK  |
| tRC (ps / nCK)                 | 42857 ps   | 120 nCK |
| tRW (ps / nCK)                 | 30000 ps   | 84 nCK  |
| tRFC1 (ns)                     | 410 ns     |         |
| tRFC2 (ns)                     | 220 ns     |         |
| tRFCsb (ns)                    | 190 ns     |         |

| <b>[EXPO Profile 0 Enhanced Timing]</b> |     |  |
|---|-----|--|
| tRRD_L (ps / nCK)                       | N/A |  |
| tCCD_L (ps / nCK)                       | N/A |  |
| tCCD_L_WR (ps / nCK)                    | N/A |  |
| tCCD_L_WR2 (ps / nCK)                   | N/A |  |
| tFAW (ps / nCK)                         | N/A |  |
| tWTR_L (ps / nCK)                       | N/A |  |
| tWTR_S (ps / nCK)                       | N/A |  |
| tRTP (ps / nCK)                         | N/A |  |

| <b>[EXPO Profile 1 Voltage]</b> |       |
|---------------------------------|-------|
| SDRAM VDD (V)                   | 1.25V |
| SDRAM VDDQ (V)                  | 1.25V |
| SDRAM VPP (V)                   | 1.8V  |



| <b>[EXPO Profile 1 Timing]</b> |            |         |
|--------------------------------|------------|---------|
| DDR Data Rate MT/S             | 5200(MT/s) |         |
| tCK (ps / nCK)                 | 384 ps     |         |
| tCAS (ps / nCK)                | 14285 ps   | 40 nCK  |
| tRCD (ps / nCK)                | 14285 ps   | 40 nCK  |
| tRP (ps / nCK)                 | 14285 ps   | 40 nCK  |
| tRAS (ps / nCK)                | 28571 ps   | 80 nCK  |
| tRC (ps / nCK)                 | 42857 ps   | 120 nCK |
| tRW (ps / nCK)                 | 30000 ps   | 78 nCK  |
| tRFC1 (ns)                     | 410 ns     |         |
| tRFC2 (ns)                     | 220 ns     |         |
| tRFCsb (ns)                    | 190 ns     |         |

| <b>[EXPO Profile 1 Enhanced Timing]</b> |     |  |
|---|-----|--|
| tRRD_L (ps / nCK)                       | N/A |  |
| tCCD_L (ps / nCK)                       | N/A |  |
| tCCD_L_WR (ps / nCK)                    | N/A |  |
| tCCD_L_WR2 (ps / nCK)                   | N/A |  |
| tFAW (ps / nCK)                         | N/A |  |
| tWTR_L (ps / nCK)                       | N/A |  |
| tWTR_S (ps / nCK)                       | N/A |  |
| tRTP (ps / nCK)                         | N/A |  |

| <b>[EXPO Tested Platforms]</b>      | <b>[BIOS Version]</b> | <b>[Processor]</b> | <b>[ProcODT2]</b> | <b>[RTT2]</b> | <b>[DrvStr2]</b> |
|-------------------------------------|-----------------------|--------------------|-------------------|---------------|------------------|
| ASUS ROG<br>CROSSHAIR<br>X870E HERO | 1203                  | Ryzen 9<br>9900X   | AUTO              | AUTO          | AUTO             |

*Notes:*

- 1. The list of tested platforms (which includes the Motherboard, BIOS, and Processor configurations) is not an exhaustive list of supported configurations. It is solely a set of tested configurations to demonstrate AMD EXPO™ profile viability on actual hardware.*
- 2. ProcODT, RTT, and DrvStr values per configuration, Auto, or selected value.*
- 3. Diagnostics used:*



*MemTest86 (6.2 or later) for a minimum of 12 hours or 100 loops;*

*Prime 95(30.8 build 17 or later) Large FFT torture test for a minimum of 12 hours;*

*3DMark(2.16.7117 or later) Firestrike stress test for a minimum of 12 hours or 5000 loops;*

*Reboot test for a minimum of 50 cycles to ensure ACPI state transition stability.*

*AMD uses MemTestPro and 3DMark Firestrike and recommends MemTestPro version 6.2 or later and 3DMark Dandia version 2.16.7117 or later.*

*In addition, a reboot test (for example, one with 50 reboot cycles) should be performed to ensure ACPI state transition stability.*