



AMD EXPO™ Technology Memory Profile Self-Certification Report

[General Module Information]	
Module Manufacturer:	Kingston
Module Part Number:	KF560C36BBE2K2-64 (Kit of 2) KF560C36BBE2-32 (x2) KF560C36BBE2AK2-64 (Kit of 2) KF560C36BBE2A-32 (x2)
Serial Number:	N/A
Module Revision:	1
Module Size:	32GB
Ranks per channel:	1
JEDEC Memory Speed:	4800
Module Type:	Unbuffered DIMM (UDIMM)
RDIMM RCD Vendor:	N/A
SDRAM Manufacturer:	Samsung
SPD Byte 552:	80
SPD Byte 553:	CE
DRAM Stepping:	M
SPD Byte 554:	4D
SPD Byte 530:	33
PMIC Vendor:	RichTek
Error Check/Correction:	None

[AMD EXPO Profile Support]	
AMD EXPO Version	1
Profile 0 Enabled	Yes
Profile 0 DIMMs per Channel	1
Profile 1 Enhanced Block Enabled	No
Profile 1 Enabled	Yes
Profile 1 DIMMs per Channel	1
Profile 1 Enhanced Block Enabled	No



[EXPO Profile 0 Voltage]	
SDRAM VDD (V)	1.35V
SDRAM VDDQ (V)	1.35V
SDRAM VPP (V)	1.8V

[EXPO Profile 0 Timing]		
DDR Data Rate MT/S	6000(MT/s)	
tCK (ps / nCK)	333 ps	
tCAS (ps / nCK)	12000 ps	36 nCK
tRCD (ps / nCK)	14666 ps	44 nCK
tRP (ps / nCK)	14666 ps	44 nCK
tRAS (ps / nCK)	30000 ps	90 nCK
tRC (ps / nCK)	44666 ps	134 nCK
tRW (ps / nCK)	30000 ps	90 nCK
tRFC1 (ns)	410 ns	
tRFC2 (ns)	220 ns	
tRFCsb (ns)	190 ns	

[EXPO Profile 0 Enhanced Timing]		
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	

[EXPO Profile 1 Voltage]	
SDRAM VDD (V)	1.25V
SDRAM VDDQ (V)	1.25V
SDRAM VPP (V)	1.8V



[EXPO Profile 1 Timing]		
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	

[EXPO Profile 1 Enhanced Timing]		
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	

[EXPO Tested Platforms]	[BIOS Version]	[Processor]	[ProcODT2]	[RTT2]	[DrvStr2]
MSI PRO X870-P WIFI	1.A40	Ryzen 5 9600X	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.*