



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

<b>[General Module Information]</b>	
<b>Module Manufacturer:</b>	Kingston
<b>Module Part Number:</b>	KF576RH40RBK4-128 (Kit of 4) KF576RH40RB-32 (x4)
<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>	6400
<b>Module Type:</b>	RDIMM
<b>RDIMM RCD Vendor:</b>	IDT(Renesas)
<b>SDRAM Manufacturer:</b>	SK Hynix
<b>SPD Byte 552:</b>	80
<b>SPD Byte 553:</b>	AD
<b>DRAM Stepping:</b>	4.D
<b>SPD Byte 554:</b>	4D
<b>SPD Byte 530:</b>	33
<b>PMIC Vendor:</b>	IDT(Renesas)
<b>Error Check/Correction:</b>	Yes

<b>[AMD EXPO Profile Support]</b>	
<b>AMD EXPO Version</b>	1.1
<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>	
<b>SDRAM VDD (V)</b>	1.4V
<b>SDRAM VDDQ (V)</b>	1.4V
<b>SDRAM VPP (V)</b>	1.8V



<b>[EXPO Profile 0 Timing]</b>		
DDR Data Rate MT/S	7600(MT/s)	
tCK (ps / nCK)	263 ps	
tCAS (ps / nCK)	10526 ps	40 nCK
tRCD (ps / nCK)	13684 ps	52 nCK
tRP (ps / nCK)	13684 ps	52 nCK
tRAS (ps / nCK)	32105 ps	122 nCK
tRC (ps / nCK)	45789 ps	174 nCK
tRW (ps / nCK)	30000 ps	114 nCK
tRFC1 (ns)	410 ns	
tRFC2 (ns)	220 ns	
tRFCsb (ns)	190 ns	

<b>[EXPO Profile 0 Enhanced Timing]</b>		
tRRD_L (ps / nCK)	4211 ps	16 nCK
tCCD_L (ps / nCK)	5000 ps	19 nCK
tCCD_L_WR (ps / nCK)	20000 ps	76 nCK
tCCD_L_WR2 (ps / nCK)	10000 ps	38 nCK
tFAW (ps / nCK)	8421 ps	32 nCK
tWTR_L (ps / nCK)	10000 ps	38 nCK
tWTR_S (ps / nCK)	2105 ps	8 nCK
tRTP (ps / nCK)	7632 ps	29 nCK

<b>[EXPO Profile 1 Voltage]</b>	
SDRAM VDD (V)	1.4V
SDRAM VDDQ (V)	1.4V
SDRAM VPP (V)	1.8V

<b>[EXPO Profile 1 Timing]</b>		
DDR Data Rate MT/S	7200(MT/s)	
tCK (ps / nCK)	277 ps	
tCAS (ps / nCK)	10556 ps	38 nCK
tRCD (ps / nCK)	13889 ps	50 nCK
tRP (ps / nCK)	13889 ps	50 nCK
tRAS (ps / nCK)	32222 ps	116 nCK
tRC (ps / nCK)	46111 ps	166 nCK



tRW (ps / nCK)	30000 ps	108 nCK
tRFC1 (ns)	410 ns	
tRFC2 (ns)	220 ns	
tRFCsb (ns)	190 ns	

[EXPO Profile 1 Enhanced Timing]		
tRRD_L (ps / nCK)	5000 ps	18 nCK
tCCD_L (ps / nCK)	5000 ps	18 nCK
tCCD_L_WR (ps / nCK)	20000 ps	72 nCK
tCCD_L_WR2 (ps / nCK)	10000 ps	36 nCK
tFAW (ps / nCK)	8889 ps	32 nCK
tWTR_L (ps / nCK)	10000 ps	36 nCK
tWTR_S (ps / nCK)	2222 ps	8 nCK
tRTP (ps / nCK)	7500 ps	27 nCK

[EXPO Tested Platforms]	[BIOS Version]	[Processor]	[ProcODT2]	[RTT2]	[DrvStr2]
ASUS Pro WS TRX50-SAGE WIFI	1203	Ryzen Threadripper 9960X	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.