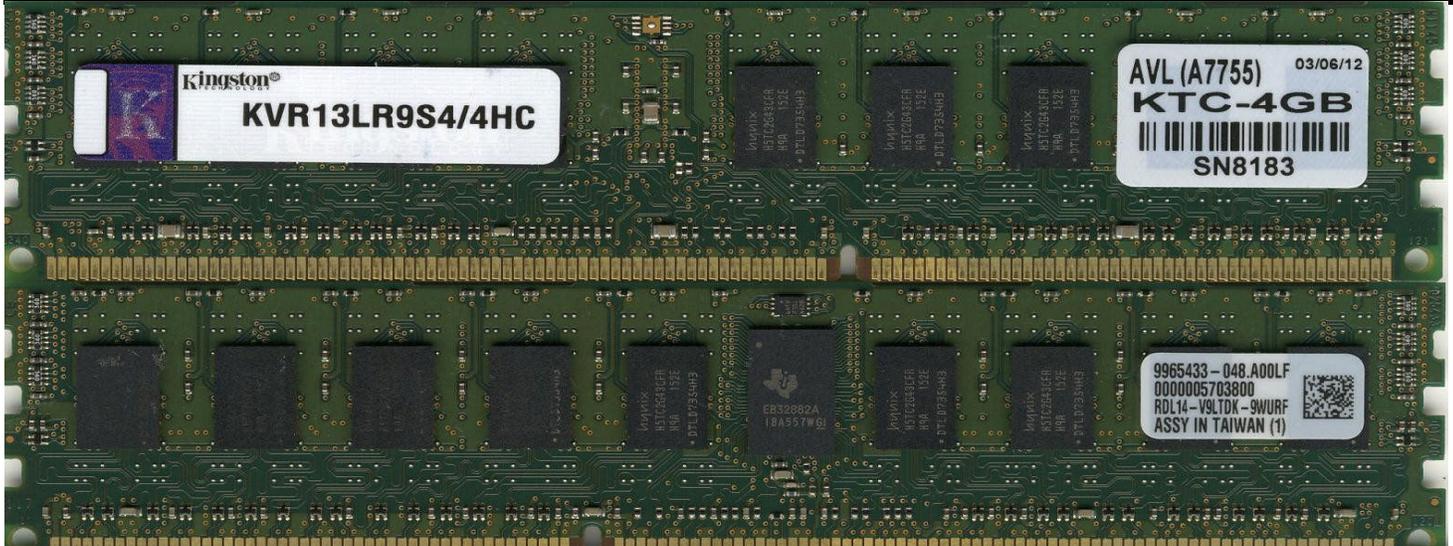


	<b>AVL Supermicro server platform Memory Module Qualification Test</b>		
	Intel E5-2650(SNB-EP) x 2, Intel C602	Test Results	<b>Pass</b>
	PN: KVR13LR9S4/4HC (4GB / RDIMM / ECC ) On: X9DR3-LN4F+ Rev.1.1		

RP77D3x-106-KI-SQ-SMC-V2		Module Information		Rev 05/30/2012
AVL WorkOrder #	WC4139	AVL A#	7755	
Start Date	7/2/2012	End Date	7/5/2012	
Tested By	Van N.			
Module Manufacturer	Kingston			
Module Part Number	KVR13LR9S4/4HC			
Module BOM Number	9965433-048.A00LF			
Module Capacity / Memory Type / ECC	4GB / RDIMM / ECC			
Module Configuration (Width, # of devices, # of Ranks)	512Mx72 /18 Devices / 1 Rank			
Speed Tested (Data rate of Mbps, CL-tRP-tRCD)	DDR3-1333 /9-9-9			
DRAM Device Vendor	Hynix			
DRAM Device Part Number / Date code	H5TC2G4CFR-H9A			1152
DRAM Die Revision / Process Technology ( nm )	C			
DRAM Device Config (Density / Width)	512Mbit / x4 / 512Mx4bit			
Thermal Sensor Device Vendor / Part Number / Revision	STMicro			
Register Device Vendor / Part Number / Revision	TI	EB32882A	3.3	



Platform System Information				
Motherboard Info (Model# & MB Revision & MB S/N & AVL S/N)	X9DR3-LN4F+	1.1	0M23S40378	SN9374
BIOS Revision / BIOS Date	1.0b		2/1/2012	
CPU / Speed	Intel E5-2650(SNB-EP) x 2		2.0GHz	
Chipset info (Stepping)	Intel C602			



## AVL Supermicro server platform Memory Module Qualification Test

Intel E5-2650(SNB-EP) x 2, Intel C602

PN: KVR13LR9S4/4HC (4GB / RDIMM / ECC ) On: X9DR3-LN4F+ Rev.1.1

**Test Results:**

PASS

*Comments:*

### AVL Memory Module Qual Test Results Summary

Test # and name	Test Description	Specs	Test	Comments
			Results	
<b>1. Latest BIOS Upgrade &amp; Configuration</b>	Download / Upgrade latest BIOS & record size and speed detection		Done	
<b>2. SPD Check</b>	Memory module SPD content check for JEDEC compliance	JEDEC	Pass	Use proprietary tools
<b>3. Reset Cycle</b>	Run Linux based diags & utility software @ 50°C	50 loops	Pass	1 DIMM Per Channel when applicable
<b>4a. Stress Application Test</b>	Run Linux based diags & utility software @50°C	8 Hour per config	Pass	DIMM Loading per spec
<b>4b. Stream Benchmark Test</b>		5 loop per config	Pass	DIMM Loading per spec
<b>4b. Reset Cycle</b>		200 loop per config	Pass	DIMM Loading per spec
<b>5. Functional Stress Test</b>	Memory Stress Test @50°C -	12hrs	Pass	DIMM Loading per spec
<b>6. Stress Application Test</b>	Run Linux based diags & utility software @50°C	6hrs	Pass	3 DIMM Per Channel when applicable

Note: All test under IMC Vdd=Nom, Vref=Vddnom/2