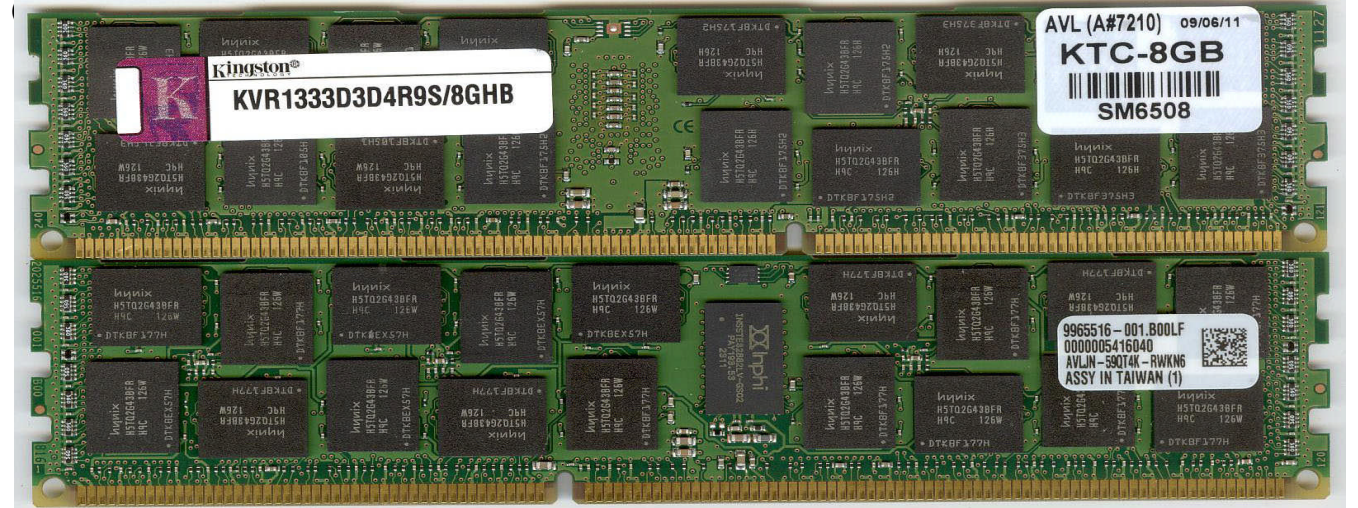



|   |  |              |             |
|---|--|--------------|-------------|
|  | <b>AVL Supermicro server platform Memory Module Qualification Test</b> |              |             |
|   | AMD Optron 6128 x1, AMD SR5690 CIMx 1.0.1.0                            | Test Results | <b>Pass</b> |
|   | PN: KVR1333D3D4R9S/8GHB (8GB / RDIMM / ECC ) On: H8SGL-F Rev.1.00      |              |             |

| RP77D3x-106-KI-SQ-SMC-V1                               |                             | Module Information |           | Rev 01/07/2011 |
|--|-----------------------------|--------------------|-----------|----------------|
| AVL WorkOrder #  | WC1706                      | AVL A#             | 7210      |                |
| Start Date   | 9/15/2011                   | End Date           | 9/23/2011 |                |
| Tested By  | Andy C.                     |                    |           |                |
| Module Manufacturer                                    | Kingston                    |                    |           |                |
| Module Part Number                                     | KVR1333D3D4R9S/8GHB         |                    |           |                |
| Module BOM Number                                      | 9965516-001.B00LF           |                    |           |                |
| Module Capacity / Memory Type / ECC                    | 8GB / RDIMM / ECC           |                    |           |                |
| Module Configuration (Width, # of devices, # of Ranks) | 1Gx72 /36 Devices / 2 Ranks |                    |           |                |
| Speed Tested (Data rate of Mbps, CL-tRP-tRCD)          | DDR3-1333 /9-9-9            |                    |           |                |
| DRAM Device Vendor                                     | Hynix                       |                    |           |                |
| DRAM Device Part Number / Date code                    | H5TQ2G43BFR-H9C             | 1126               |           |                |
| DRAM Die Revision / Process Technology ( nm )          | B                           |                    |           |                |
| DRAM Device Config (Density / Width)                   | 2Gbit / x4 / 512Mx4bit      |                    |           |                |
| Thermal Sensor Device Vendor / Part Number / Revision  |                             |                    |           |                |
| Register Device Vendor / Part Number / Revision        | Inphi                       | INSSTE32882        | LV-GS02   |                |



| Platform System Information                                |                         |           |           |        |
|--|-------------------------|-----------|-----------|--------|
| Motherboard Info (Model# & MB Revision & MB S/N & AVL S/N) | H8SGL-F                 | 1.00      | OM12S7013 | SL2697 |
| BISO Revision / BIOS Date / MRC Rev.                       | 1.0c                    | 3/23/2011 | N/A       |        |
| CPU / Speed  | AMD Optron 6128 x1      |           | 2.0GHz    |        |
| Chipset info (Stepping)                                    | AMD SR5690 CIMx 1.0.1.0 |           |           |        |

|   |  |
|---|--|
|  | <b>AVL Supermicro server platform Memory Module Qualification Test</b> |
|   | AMD Opteron 6128 x1, AMD SR5690 CIMx 1.0.1.0                           |
|   | PN: KVR1333D3D4R9S/8GHB (8GB / RDIMM / ECC ) On: H8SGL-F Rev.1.00      |

|                      |             |
|----------------------|-------------|
| <b>Test Results:</b> | <b>PASS</b> |
| <i>Comments:</i>     |             |

### 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     | Per test platform, DIMM & config spec | <b>Done</b> | Record memory size & speed at each test only                                       |
| <b>2. SPD Check</b>                               | Memory module SPD content check for JEDEC compliance                 | JEDEC                                 | <b>Pass</b> | Use proprietary tools  |
| <b>3. Sisoftware Sandra Benchmark</b>             | Run Windows based diags & utility software @55°C - DIMM max loading. | 1 loop per config                     | <b>Done</b> | Full load per spec   |
| <b>4. Passmark Burn-In</b>                        |  | 12 Hour per config                    | <b>Pass</b> | Full load per spec   |
| <b>5a. Stress Application Test</b>                | Run Linux based diags & utility software @55°C - DIMM max loading.   | 12 Hour per config                    | <b>Pass</b> | Full load per spec   |
| <b>5b. Stream Benchmark Test</b>                  |  | 5 loop per config                     | <b>Done</b> | Full load per spec   |
| <b>5c. Reset Cycle</b>                            |  | 500 loop per config                   | <b>Pass</b> | Full load per spec   |
| <b>6a. Functional Stress Test (Corner 1a)</b>     | Run RST Premium @55°C - DIMM max loading.                            | 8 Hour or 2+ Loops per config         | <b>Pass</b> | Full load per spec   |
| <b>6b. Functional Stress Test (Corner 1b)*</b>    | Run RST Premium @55°C - DIMM loading depends on @speed configuration | 8 Hour or 2+ Loops per config         | <b>N/A</b>  | Per platform memory speed configuration table if different (run @Max module speed) |
| <b>7. Functional Stress Test (Corner 2)</b>       | Run RST Premium @0°C DIMM max loading                                | 8 Hour or 2+ Loops per config         | <b>Pass</b> | Full load per spec   |

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

\* Corner 1b test is not required if Corner 1A already covers max module speed.