

Hardware Diagnostic Report

Customer-facing diagnostic summary with technician evidence retained in the report bundle.

HARDWARE FAULT DETECTED

One or more independent diagnostics reported a failure. Review the failed tests and recommended next steps.

Run	Comprehensive Hardware Diagnostics	Mode	Profile
Generated	2026-08-14 18:05:41	Customer	Not provided
System	Apple Inc. iMac19,1	Serial / service tag	C02D5185JV40

Hardware Tested and Skipped

System / Firmware

FAIL

Hardware fault detected

Stress Test

FAIL

Hardware fault detected

CPU

FAIL

Hardware fault detected

Memory

FAIL

Hardware fault detected

Server ECC

NOT AVAILABLE

Capability not available

Storage

SAFETY LOCKED

Safety condition not met

HDD

SAFETY LOCKED

Safety condition not met

SATA SSD

SKIPPED

No SATA SSD installed

NVMe

SKIPPED

No NVMe drive installed

Block I/O

NOT AVAILABLE

Capability not available

Display

SKIPPED

Skipped by technician

Interactive

SKIPPED

Skipped by technician

TPM / Security

NOT AVAILABLE

Capability not available

Assessment

A recorded failure should be corrected and retested before the system is returned to service.

System and Firmware

Computer	Apple Inc. iMac19,1	System serial	C02D5185JV40
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Motherboard	Apple Inc. Mac-AA95B1DDAB278B95	Board serial	C020306009EN11F2F
BIOS	Apple Inc. 2094.80.5.0.0	Secure Boot	Not reported
Processor	Intel(R) Core(TM) i5-9600K CPU @ 3.00GHz	Logical processors	6
Installed memory	65536 MiB	DIMM slots	4 total / 4 populated

Memory Devices

DIMM 1 | ChannelA-DIMM0 | 16384 MiB DDR4

2667 MT/s configured | 0000 | Part Not reported | Serial 20421015

DIMM 2 | ChannelA-DIMM1 | 16384 MiB DDR4

2667 MT/s configured | 0000 | Part Not reported | Serial 20421020

DIMM 3 | ChannelB-DIMM0 | 16384 MiB DDR4

2667 MT/s configured | 0000 | Part Not reported | Serial 20420177

DIMM 4 | ChannelB-DIMM1 | 16384 MiB DDR4

2667 MT/s configured | 0000 | Part Not reported | Serial 20421017

Storage Devices

Drive D01 | SCSI/SAS physical device 1 | 1908408 MiB

Internal Drive | SCSI/SAS Block I/O | Serial Not reported | Firmware Not reported

Drive D02 | Removable physical device 2 | 15000 MiB

Removable Drive | USB Block I/O | Serial Not reported | Firmware Not reported | Removable

Diagnostic Results

Results are grouped by hardware category. Derived composite results remain visible but do not add another independent hardware pass, warning, or failure.

System Info

4 report items

[PASS] System Overview

191 ms | Current run

No problem was detected by this test.

PASS

[PASS] PCI Information

768 ms | Current run

No problem was detected by this test.

PASS

[PASS] SMBIOS Information

0 ms | Current run

No problem was detected by this test.

PASS

[PASS] System Variables (NVRAM)

2.489 sec | Current run

No problem was detected by this test.

PASS

Processor

8 report items

[PASS] Processor Identification

0 ms | Current run

No problem was detected by this test.

PASS

[PASS] Integer Execution Integrity

1.767 sec | Current run

No problem was detected by this test.

PASS

[PASS] Floating-Point Arithmetic Integrity

12.657 sec | Current run

No problem was detected by this test.

PASS

[FAIL] Vector Instruction Integrity

6 ms | Current run

FAIL

The processor produced an incorrect result or could not complete the workload reliably. Possible causes include overheating, unstable BIOS settings, power-delivery problems, a motherboard fault, or a failing processor.

[PASS] Processor Cache Data Integrity

1.581 sec | Current run

PASS

No problem was detected by this test.

[PASS] Multicore Execution

20.416 sec | Current run

PASS

No problem was detected by this test.

[PASS] Timestamp Counter

7.291 sec | Current run

PASS

No problem was detected by this test.

[PASS] Hardware Entropy Integrity

2 ms | Current run

PASS

No problem was detected by this test.

Memory

15 report items

[PASS] Firmware Memory Map Integrity

0 ms | Current run

PASS

No problem was detected by this test.

[SKIPPED] Dynamic Memory Integrity

1 min 30 sec | Current run

SKIPPED

Skipped by the technician.

[FAIL] Address Path Isolation

2 min 2 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C21E17278.

[FAIL] Page-Sampled Contact Integrity

56.152 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7A612FB8.

[FAIL] Hierarchical Inversion Integrity

5 min 42 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7E1600B8.

[FAIL] Locality Coupling Integrity

3 min 49 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C21E17978.

[FAIL] Seeded Data Pattern Integrity

5 min 44 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7E1600F8.

[FAIL] Permuted Address Integrity

4 min 17 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C202503F8.

[FAIL] Moving Inversions

2 min 35 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7E1603B8.

[FAIL] Multi-Frequency Bit Integrity

2 min 35 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7E1600F8.

[NOT SUPPORTED] ECC Memory Validation

0 ms | Current run

NOT SUPPORTED

The hardware or firmware does not provide the capability required for this test.

[SKIPPED] Full Memory Test - Core

0 ms | Intentionally omitted

SKIPPED

This test was skipped.

[SKIPPED] Full Memory Test - Standard

0 ms | Intentionally omitted

SKIPPED

This test was skipped.

[SKIPPED] Full Memory Test - Extended

0 ms | Intentionally omitted

SKIPPED

This test was skipped.

[FAIL] Memory Subsystem Composite Verification (derived composite)

6 ms | Current run - derived

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C21E17278.

Motherboard

4 report items

[PASS] PCI Fabric Integrity

769 ms | Current run

No problem was detected by this test.

PASS

[PASS] Storage Controller Fabric Integrity

761 ms | Current run

No problem was detected by this test.

PASS

[PASS] Firmware Variable Store Integrity

2.502 sec | Current run

No problem was detected by this test.

PASS

[PASS] Firmware Clock Consistency

6.708 sec | Current run

No problem was detected by this test.

PASS

Hard Drives

16 report items

[NOT SUPPORTED] ATA Health Status

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] ATA Short Diagnostic

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] ATA Transport Diagnostic

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] ATA Extended Diagnostic

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[PASS] Alternating Range Seek

3 min 29 sec | Current run

No problem was detected by this test.

PASS**[PASS] Distributed Random Read Integrity**

6 min 58 sec | Current run

No problem was detected by this test.

PASS**[PASS] Small-Block Latency Survey**

27 min 52 sec | Current run

No problem was detected by this test.

PASS**[PASS] Zoned Sequential Read Integrity**

40.659 sec | Current run

No problem was detected by this test.

PASS**[NOT SUPPORTED] ATA Power-State Transition**

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED**[SAFETY LOCKED] Non-destructive Write**

0 ms | Current run

The test was not run because a required safety condition or technician confirmation was not met.

SAFETY LOCKED**[PASS] Device Cache Consistency**

13.888 sec | Current run

No problem was detected by this test.

PASS**[PASS] Adaptive Distributed Media Scan**

3 min 31 sec | Current run

No problem was detected by this test.

PASS

[PASS] Distributed Surface Scan

14 min 3 sec | Current run

No problem was detected by this test.

PASS

[PASS] Complete Media Read Integrity

2 min 4 sec | Current run

No problem was detected by this test.

PASS

[PASS] Distributed Throughput

5.783 sec | Current run

No problem was detected by this test.

PASS

[PASS] Sustained Throughput

3.533 sec | Current run

No problem was detected by this test.

PASS

SATA SSD

1 report item

No SATA SSD installed to test.

NVMe

1 report item

No NVMe drive installed to test.

Block Devices

6 report items

[NOT SUPPORTED] Zoned Sequential Read Integrity

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] Distributed Random Read Integrity

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] Small-Block Latency Survey

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] Adaptive Distributed Media Scan

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] Distributed Throughput

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

[NOT SUPPORTED] Sustained Throughput

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

Graphics

1 report item

[PASS] Framebuffer Pattern Integrity

3.581 sec | Current run

No problem was detected by this test.

PASS

Monitor

2 report items

[SKIPPED] Display Panel Visual Inspection

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

[SKIPPED] Display Identification Integrity

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

Interactive Tests

5 report items

[SKIPPED] Keyboard Input Coverage

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

[SKIPPED] Keyboard Indicator Inspection

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

[SKIPPED] Mouse Input Coverage

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

[SKIPPED] Touchpad Input Coverage

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

[SKIPPED] Touchscreen Coordinate Coverage

0 ms | Intentionally omitted

This test was skipped.

SKIPPED

TPM

1 report item

[NOT SUPPORTED] TPM Capability Integrity

0 ms | Current run

The hardware or firmware does not provide the capability required for this test.

NOT SUPPORTED

System

4 report items

[FAIL] Sustained Compute and Memory Stability

34.854 sec | Current run

FAIL

System memory returned different data than was written. This confirms a memory-integrity problem, commonly caused by a failing or unstable RAM module, memory slot, memory channel, BIOS memory setting, or CPU memory controller. Most likely location: Physical 0x0000000C7E5202B8.

[PASS] Five-Minute System Integrity Run

5 min 0 sec | Current run

PASS

No problem was detected by this test.

[PASS] Boot Configuration Integrity

187 ms | Current run

PASS

No problem was detected by this test.

[SKIPPED] Legacy Speaker / Beep

0 ms | Intentionally omitted

SKIPPED

This test was skipped.

Recommended Next Steps

The following actions are based on the failed or warning results in this report. Protect customer data before replacing hardware or performing additional stress testing.

1. Power off the system, reseal the RAM, and return memory settings to safe defaults by disabling XMP, EXPO, or manual memory overclocking. Test one module at a time. Replace the module that repeats the error. If the error follows a slot or channel, inspect the motherboard, CPU socket, and CPU memory controller.
2. Check CPU cooling, heatsink contact, fan operation, system temperatures, BIOS defaults, and power delivery. Remove CPU overclocking or undervolting and repeat the test. Persistent calculation errors may require motherboard or processor replacement.
3. Load safe BIOS defaults, verify the BIOS is current, inspect motherboard power connections and cooling, and disconnect nonessential hardware before repeating the failed platform test. A repeating failure may require motherboard, power-supply, or connected-device isolation.
4. After repairs, rerun the same failed test and then a broader diagnostic profile. Do not certify or return the system as fully tested until the fault no longer repeats.

Report Notes

This PDF is designed for customer records and printing. Customer-facing details are intentionally simplified. FullReport.txt, TestResults.csv, and TestResults.json retain the complete technical evidence for technician review. Summary.html provides the same customer-friendly result wording.

A PASS applies only to tests that actually ran and to capabilities exposed by the platform firmware. NOT SUPPORTED, SAFETY LOCKED, and SKIPPED results are not equivalent to a hardware pass. Tests not included in the run are omitted from this customer report.

Prepared by Blackwire Hardware Diagnostics