

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

FLASH-CONTROL, LLC,

Plaintiff

v.

INTEL CORPORATION,

Defendant.

Civil Action No.: 6:19-cv-404

JURY TRIAL DEMANDED

PATENT CASE

**PLAINTIFF'S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Flash-Control, LLC ("Flash-Control" or "Plaintiff"), files this Complaint against Intel Corporation ("Intel" or "Defendant") seeking damages and other relief for patent infringement, and alleges with knowledge to its own acts, and on information and belief as to other matters, as follows:

**PARTIES**

1. Plaintiff is a limited liability company organized and existing under the laws of the State of Delaware, and its registered agent for service of process in Delaware is Rita Carnavale, 717 North Union Street, Wilmington, Delaware, 19805.

2. Intel Corporation is a corporation organized and existing under the laws of Delaware with a place of business at 2200 Mission College Blvd., Santa Clara, California 95054, and with offices at 1999 Bryan St., Ste. 900, Dallas, Texas, 78501 and at 1300 S Mopac Expressway, Austin Texas 78746.

3. This Court has personal jurisdiction over Intel Corporation at least because Intel Corporation conducts business, including infringing acts described herein, in this District.

4. Defendant does business in Texas, directly or through intermediaries, and offers products or services, including those accused herein of infringement, to customers, and potential customers located in Texas, including in the Western District of Texas.

### **JURISDICTION AND VENUE**

5. This action arises under the patent laws of the United States, 35 U.S.C. §101, et seq. This Court has subject matter jurisdiction under 28 U.S.C. §§1331 and 1338(a).

6. As to Intel Corporation America, Inc., venue is proper in this judicial district pursuant to 28 U.S.C. §1400(b). Intel Corporation maintains an established place of business in the state of Texas and the Western District of Texas, specifically, 1300 S Mopac Expressway, Austin Texas 78746.

7. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process or the Texas Long Arm Statute, because Defendant does substantial business in this forum, including: (i) making, using, selling, and/or importing products including at least a portion of a solid-state drive that incorporates a memory controller and flash memory, including but not limited to the Intel 760P Solid State Drive (SSD)) ("Accused Devices"); or (ii) regularly conducting or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to citizens and residents in Texas and in this District.

### **THE PATENTS-IN-SUIT**

8. The United States Patent and Trademark Office ("USPTO") duly and legally issued United States Patent No. 8,531,880 (the '880 Patent) entitled "NONVOLATILE MEMORY

SYSTEMS WITH EMBEDDED FAST READ AND WRITE MEMORIES” to G. R. Mohan Rao on September 10, 2013.

9. Flash-Control is the owner of the ’880 Patent and has the full and exclusive right to bring actions and recover past, present, and future damages for the Defendant’s infringement of the ’880 Patent.

10. The ’880 Patent is valid and enforceable. A true and correct copy of the ’880 Patent is attached hereto as Exhibit A.

11. The United States Patent and Trademark Office (“USPTO”) duly and legally issued United States Patent No. 8,817,537 (the ’537 Patent) entitled “NONVOLATILE MEMORY SYSTEMS WITH EMBEDDED FAST READ AND WRITE MEMORIES” to G. R. Mohan Rao on August 26, 2014.

12. Flash-Control is the owner of the ’537 Patent and has the full and exclusive right to bring actions and recover past, present, and future damages for the Defendant’s infringement of the ’537 Patent.

13. The ’537 Patent is valid and enforceable. A true and correct copy of the ’537 Patent is attached hereto as Exhibit B.

14. The ’880 and ’537 Patents are collectively referred to herein as the “Patents” or “Patents-in-Suit.”

15. Flash-Control has not practiced any claimed invention of the Patents-in-Suit.

16. Defendant infringes the Patents at least by making, using, selling, and/or importing the Accused Devices.

**COUNT I: INFRINGEMENT OF THE '880 PATENT**

17. Flash-Control repeats and re-alleges the allegations of the above paragraphs as if fully set forth herein.

18. The '880 Patent includes 17 claims. '880 Patent, Ex. A at 4:61–6:64.

19. Systems and methods as described in the '880 Patent couple nonvolatile storage memory with random access volatile memory to enhance the read and write performance of a memory system. As the '880 Patent describes, traditional memory systems do not lend themselves “to true, fast, read and write memory access for SSD (solid state disk) and similar commercial applications in PCs and servers for data computation, storage and multimedia execution.” '880 Patent, Ex. A at 1:43–62.

20. In order to improve the read and write performance of a memory system, the '880 Patent describes systems and methods that provide an improved structure and computing environment for memory systems. For example, the '880 Patent describes the use of a memory system that includes both volatile and nonvolatile memory, a first buffer to store a memory page, and a second buffer to receive write requests to less than an entirety of a memory page of the nonvolatile memory. *E.g.*, '880 Patent, Ex. A. at FIG. 6, 3:10–4:60.

21. The '880 Patent describes the use of the memory system to locate a page associated with the write request, selectively write the page to the first buffer, locate portions of the page in the first buffer, and selectively write portions to the volatile memory without writing the entirety of the page in the first buffer to the volatile memory. *Id.*

22. The '880 Patent further describes the use of the memory system to write changes from the second buffer to the volatile memory, thereby updating portions from the volatile memory

to the first buffer, and updating the page stored therein to include the changes associated with the write request. *Id.*

23. The '880 Patent further describes the use of the memory system to write the updated page from the first buffer to an erased page in the nonvolatile memory. *Id.*

24. Fig. 6 of the '880 Patent, reproduced below, illustrates the improved structure and computing environment for resource request management disclosed by the '880 Patent.

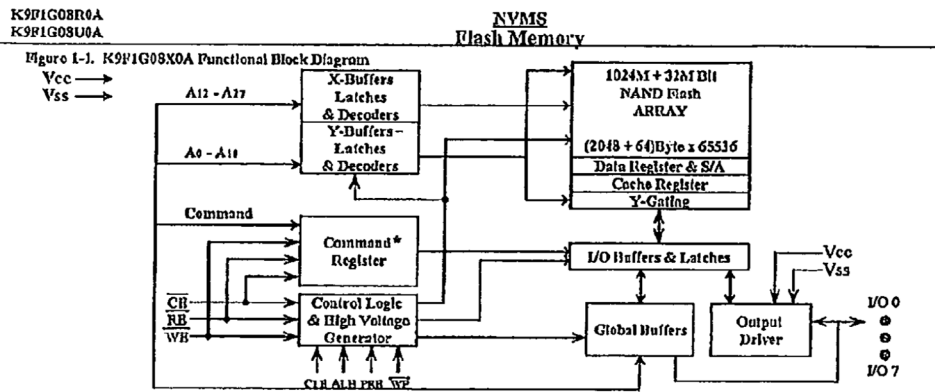
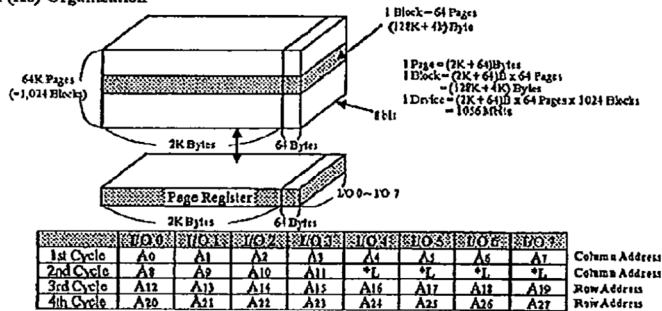


Figure 2-1. K9F1G08X0A (X8) Organization



NOTE : Column Address : Starting Address of the Register.  
 \*L must be set to "Low".  
 \*The device ignores any additional input of address cycles than required.

Fig. 6

25. Defendant directly infringes one or more claims of the '880 Patent without authority by making, using (including without limitation testing), selling, and/or importing products and systems, including by way of example, the Accused Devices. *See* Claim Chart for the '880 Patent, attached hereto as Exhibit C.

26. Defendant has been and is directly infringing, either literally or under the doctrine of equivalents, at least Claim 1 of the '880 Patent by making, using (including without limitation

testing), selling, and/or importing the Accused Devices. *See* Claim Chart for the '880 Patent, attached hereto as Exhibit C. As demonstrated by the attached claim chart, each and every element of Claim 1 of the '880 Patent is found in the Accused Devices.

27. Defendant has had actual knowledge of the '880 Patent at least as early as the date of service of this Complaint.

28. Defendant's acts of infringement have occurred within this District and elsewhere throughout the United States.

### **COUNT II: INFRINGEMENT OF THE '537 PATENT**

29. Flash-Control repeats and re-alleges the allegations of the above paragraphs as if fully set forth herein.

30. The '537 Patent includes 27 claims. '537 Patent, Ex. B at 4:64–7:3.

31. Systems and methods as described in the '537 Patent couple nonvolatile storage memory with random access volatile memory to enhance the read and write performance of a memory system. As the '537 Patent describes, traditional memory systems do not lend themselves “to true, fast, read and write memory access for SSD (solid state disk) and similar commercial applications in PCs and servers for data computation, storage and multimedia execution.” '537 Patent, Ex. B at 1:48–67.

32. In order to improve the read and write performance of a memory system, the '537 Patent describes systems and methods that provide an improved structure and computing environment for memory systems. For example, the '537 Patent describes the use of a memory system that includes both volatile and nonvolatile memory, a first buffer to temporarily store a memory page, and a second buffer to receive write requests to less than an entirety of a memory page of the nonvolatile memory. *E.g.*, '537 Patent, Ex. B. at FIG. 6, and 3:13–4:63.

33. The '537 Patent describes the use of the memory system to locate a page associated with the write request, selectively write the page to the first buffer, locate portions of the page in the nonvolatile memory, and selectively write portions to the first buffer. *Id.*

34. The '537 Patent describes the use of the memory system to locate the portions of the memory page and to selectively write the portions to the volatile memory without writing the entirety of the page in the first buffer to the volatile memory.

35. The '537 Patent further describes the use of the memory system to write changes from the volatile memory to the first buffer, thereby updating the memory page stored in the first buffer with one or more changes associated with the write request. *Id.*

36. Fig. 1 of the '537 Patent, reproduced below, illustrates the improved structure and computing environment for resource request management disclosed by the '537 Patent.

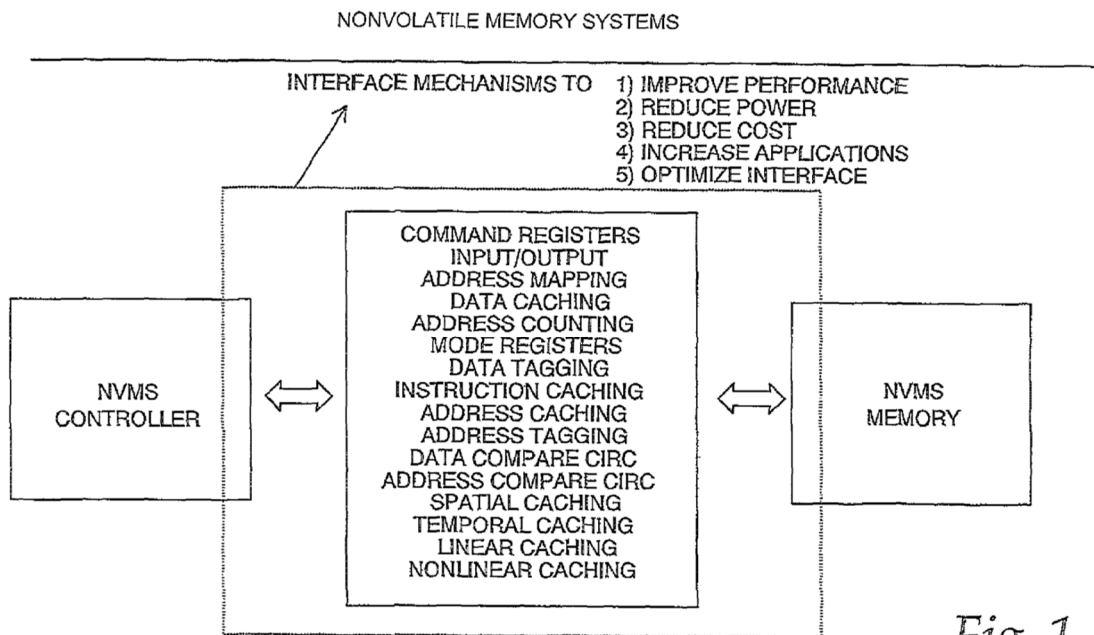


Fig. 1

37. Defendant directly infringes one or more claims of the '537 Patent without authority by making, using (including without limitation testing), selling, and/or importing

products and systems, including by way of example, the Accused Devices. *See* Claim Chart for the '537 Patent, attached hereto as Exhibit D.

38. Defendant has been and is directly infringing, either literally or under the doctrine of equivalents, at least Claim 1 of the '537 Patent by making, using (including without limitation testing), selling, and/or importing the Accused Devices. *See* Claim Chart for the '537 Patent, attached hereto as Exhibit D. As demonstrated by the attached claim chart, each and every element of Claim 1 of the '537 Patent is found in the Accused Devices.

39. Defendant has had actual knowledge of the '537 Patent at least as early as the date of service of this Complaint.

40. Defendant's acts of infringement have occurred within this District and elsewhere throughout the United States.

### **RELIEF REQUESTED**

WHEREFORE, Plaintiff respectfully requests that the Court:

- A. Declare that Defendant has infringed the Patents;
- B. Award damages in an amount to be proven at trial, but in no event less than a reasonable royalty for Defendant's infringement including pre-judgment and post-judgment interest at the maximum rate permitted by law; and an accounting of all infringements and damages not presented at trial;
- C. Order an award of reasonable attorneys' fees against Defendant to Flash-Control as provided by 35 U.S.C. § 285;
- D. Order an award of enhanced damages as provided by 35 U.S.C. § 284 and the Court;



- E. Award expenses, costs, and disbursements in this action against Defendant, including prejudgment interest; and
- F. Provide all other relief necessary or appropriate.

**JURY DEMAND**

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: July 3, 2019

Respectfully submitted,

By: /s/  
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