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Attorneys for Plaintiff

8 *Si-Flash Drives, LLC*

9
10 **UNITED STATES DISTRICT COURT**

11 **CENTRAL DISTRICT OF CALIFORNIA**

12 Si-Flash Drives, LLC, a California)

13 Limited Liability Company)

14 Plaintiff,)

15 v.)

16 Adata Technology (U.S.A.) Co., Ltd., a)
17 California Corporation,)

18 Defendant.)
19)
20)
21)

Case No. 8:16-cv-02005

**FIRST AMENDED COMPLAINT
FOR PATENT INFRINGEMENT**

DEMAND FOR JURY TRIAL

1 Plaintiff Si-Flash Drives, LLC, (“Si-Flash” or “Plaintiff”), by and through its
2 undersigned counsel, for its First Amended Complaint against Defendant Adata
3 Technology (U.S.A.) Co., Ltd. (“Adata” or “Defendant”) makes the following
4 allegations. These allegations are made upon information and belief.

5 **NATURE OF THE ACTION**

6 1. This is an action against Defendant for infringement of one or more
7 claims of United States Patent Nos. 8,194,452 (“the 452 Patent”) and U.S. Patent No.
8 7,855,916 (“the ‘916 Patent”).

9 **THE PARTIES**

10 2. Si-Flash Drives, LLC is a limited liability company organized under the
11 laws of the State of California and has an office and principal place of business at 35
12 Hugus Alley, Suite 210, Pasadena, California 91103.

13 3. Defendant Adata Technology Company, Inc. is a corporation
14 incorporated under the laws of the State of Delaware. Defendant Adata Technology
15 (U.S.A.) Co., Ltd. has an office and principal place of business at 880 Columbia
16 Street, Brea, California 92821.

17 **JURISDICTION AND VENUE**

18 4. This patent infringement action arises under the patent laws of the United
19 States including 35 U.S.C. §§ 271, et seq.

20 5. This Court has subject-matter jurisdiction over this action pursuant to 28
21 U.S.C. §§ 1331 and 1338(a) because it arises under United States Patent law.

22 6. This Court has personal jurisdiction over the Defendant because they
23 (either directly or through their subsidiaries, divisions, groups or divisions) have
24 sufficient minimum contacts with the forum as a result of business conducted within
25 the State of California and this district; and/or specifically over the Defendant (either
26 directly or through their subsidiaries, divisions, groups or distributors) because of
27 their infringing conduct within or directed at the State of California and this district.

28 7. Venue is proper in this district pursuant to 28 U.S.C. §1391(b) and
1400(b).

1 **FACTS**

2 8. Plaintiff is the owner, by assignment, of U.S. Patent No. 8,194,452 (“the
3 ‘452 Patent”), entitled “Nonvolatile memory systems with embedded fast read and write
4 memories,” which was duly and legally issued on June 5, 2012 by the United States
5 Patent and Trademark Office (“USPTO”). A copy of the ‘452 Patent is attached to this
6 Complaint as **Exhibit A**.

7 9. Plaintiff is the owner, by assignment, of U.S. Patent No. 7,855,916 (“the
8 ‘916 Patent”), entitled “Nonvolatile memory systems with embedded fast read and write
9 memories,” which was duly and legally issued on December 21, 2010 by the United
10 States Patent and Trademark Office (“USPTO”). A copy of the ‘916 Patent is attached
11 to this Complaint as **Exhibit B**.

12 10. Plaintiff is owner of all rights, titles and interests in and to the ‘452 Patent,
13 and the ‘916 Patent (collectively, “Patents-In-Suit”) including the right to assert all
14 causes of action arising from the infringement of the Patents-in-Suit and the right to all
15 damages, past and present, for any infringement of the Patents-in-Suit.

16 11. The claims of the Patents-In-Suit are valid and enforceable.

17 **COUNT I**

18 **CLAIM FOR PATENT INFRINGEMENT**

19 **UNDER 35 U.S.C. § 271(a) (‘452 PATENT)**

20 **(AGAINST DEFENDANT)**

21 12. Plaintiff hereby incorporates by reference the allegations of paragraphs 1
22 through 11 of this Complaint as if fully set forth herein.

23 13. Defendant makes, has made, sells, offer for sale, uses and/or imports into
24 the United States, storage devices, including without limitation the SX300, SX910,
25 SX900, SX1000L, SP900, SP800, S511, S510, and SP900 M.2 (“Accused Product(s)”).

26 14. The Specification page of each of the Accused Product(s), attached to this
27 Complaint as **Exhibits C-K**, indicates that each product contains NAND flash memory.
28 Each NAND flash memory is arranged as a plurality of blocks with each block
comprising a plurality of pages.

1 15. Each of the Accused Product(s) includes the SandForce Client Controller,
2 i.e. SF-2000 series (i.e. LSI SF-2281). See Exhibits C-K. The SF-2281 Controller
3 implements a pool of volatile memory indicated as “Buffer” in the system block
4 diagram obtained from Seagate. See **Exhibit L**.

5 16. The SandForce Client Controller includes a Central Processing Unit (CPU)
6 coupled to the pool of NAND flash, through the “NAND Interface” and to the Buffer,
7 i.e. pool of volatile memory. Thus, the controller is coupled to the pool of NAND flash
8 and the Buffer (i.e. volatile memory).

9 17. Each of the Accused Product(s) includes a SATA interface as indicated in
10 Exhibits C-K. And as indicated in Exhibit L, the SATA interface is coupled to the
11 controller.

12 18. Upon information and belief, each block of NAND with a page size, e.g.
13 of 2112 bytes, is coupled to an input/output register (“Buffer”) that has the same page
14 size (i.e. 2112 bytes), thus in the accused product, “each page of NAND flash has a
15 corresponding page of volatile memory.”

16 19. As illustrated in Exhibit L, the SandForce Controller in each of the
17 Accused Product(s) implements “DuraClass™ Technology”. DuraClass™ includes
18 DuraWrite™ which, according to Seagate, uses data deduplication: “One simple
19 method for extending endurance of the flash is to not write to it in the first place. This
20 might sound crazy, like making a gallon of fuel last longer by not burning it, but there
21 are many techniques in use today for storage applications including data deduplication,
22 compression, and data differencing that reduce the amount of data that must be written
23 to the drive. This technique, which SandForce implements with its DuraWrite
24 technology is a very complex process and requires a significant investment in the
25 controller.” Key Challenges in SSD Controller Development,
26 www.electronicdesign.com, Jan. 17, 2011, by Kent Smith, SandForce Sr. Director of
27 Corporate Marketing. “All solid state drives (SSDs) using NAND flash feature a basic
28 mapping table, typically called the flash translation layer (FTL)”. *Id.* Thus, since each
accused product uses the SandForce Controller with a mapping table that is dynamically

1 updated on the fly, the accused products perform the function: “each page of a block of
2 the pool of NAND flash is adapted to be substituted on the fly for any other page of a
3 different block of the pool of NAND flash through address mapping,” as required by
4 Claim 1 of the ‘452 patent.

5 20. Each one of the functionalities itemized in paragraphs 14-19 above, is an
6 element in Claim 1 of the ‘452 patent.

7 21. Thus, each of the Accused Products infringes at least Claim 1 of the ‘452
8 patent.

9 22. As a direct and proximate result of Defendant's infringement of the ‘452
10 Patent, Plaintiff has been and will continue to be damaged in an amount yet to be
11 determined, including but not limited to Plaintiff's lost profits and/or a reasonable
12 royalty.

13 **COUNT II**

14 **CLAIM FOR PATENT INFRINGEMENT**

15 **UNDER 35 U.S.C. § 271(a) ('916 PATENT)**

16 **(AGAINST DEFENDANT)**

17 23. Plaintiff hereby incorporates by reference the allegations of paragraphs 1-
18 11 of this Complaint as if fully set forth herein.

19 24. Defendant makes, has made, sells, offer for sale, uses and/or imports into
20 the United States, storage devices, including without limitation the SX300, SX910,
21 SX900, SX1000L, SP900, SP800, S511, S510, and SP900 M.2 ("Accused Product(s)").

22 25. The Specification page of each of the Accused Product(s), attached to this
23 Complaint as Exhibits C-K, indicates that each product contains NAND flash memory,
24 i.e. non-volatile memory. Each NAND flash memory is arranged as a plurality of blocks
25 for access, with each block comprising one or more of pages.

26 26. Each of the Accused Product(s) includes the SandForce Client Controller,
27 i.e. SF-2000 series (i.e. LSI SF-2281). See Exhibits C-K. The SF-2281 Controller
28 implements a pool of volatile memory indicated as “Buffer” in the system block
diagram obtained from Seagate. See Exhibit L.

1 27. As indicated in Exhibit L, the SandForce Client Controller includes a
2 Central Processing Unit (CPU) coupled to the pool of NAND flash, through the “NAND
3 Interface” and to the Buffer, i.e. pool of volatile memory.

4 28. Each of the Accused Product(s) includes a SATA interface as indicated in
5 Exhibits C-K. And as indicated in Exhibit L, the SATA interface is coupled to the
6 controller.

7 29. As illustrated in Exhibit L, the SandForce SF-2200 block diagram shows
8 the NAND memory is accessible through the “Buffer”. Because each block of the
9 NAND flash memory comprises one or more pages, each block of the NAND flash
10 memory has one or more pages of stored data accessible through the Buffer.

11 30. As illustrated in Exhibit D, the SandForce Controller in each of the
12 Accused Product(s) implements “DuraClass™ Technology”. DuraClass™ includes
13 DuraWrite™ which, according to Seagate, uses data deduplication: “One simple
14 method for extending endurance of the flash is to not write to it in the first place. This
15 might sound crazy, like making a gallon of fuel last longer by not burning it, but there
16 are many techniques in use today for storage applications including data deduplication,
17 compression, and data differencing that reduce the amount of data that must be written
18 to the drive. This technique, which SandForce implements with its DuraWrite
19 technology is a very complex process and requires a significant investment in the
20 controller.” Key Challenges in SSD Controller Development,
21 www.electronicdesign.com, Jan. 17, 2011, by Kent Smith, SandForce Sr. Director of
22 Corporate Marketing. “All solid state drives (SSDs) using NAND flash feature a basic
23 mapping table, typically called the flash translation layer (FTL)”. *Id.* Thus, since each
24 accused product uses the SandForce Controller with a mapping table that is dynamically
25 updated on the fly, the accused products perform the function: “each page of a block of
26 the pool of NAND flash is adapted to be substituted on the fly for any other page of a
27 different block of the pool of NAND flash through address mapping,” as required by
28 Claim 1 of the ‘916 patent.

1 31. Each one of the functionalities itemized in paragraphs 25-30 above, is an
2 element in Claim 1 of the ‘916 patent.

3 32. Thus, each of the Accused Products infringes at least Claim 1 of the ‘916
4 patent.

5 33. As a direct and proximate result of Defendant's infringement of the ‘916
6 Patent, Plaintiff has been and will continue to be damaged in an amount yet to be
7 determined, including but not limited to Plaintiff's lost profits and/or a reasonable
8 royalty.

9 **PRAYER FOR RELIEF**

10 WHEREFORE, Plaintiff prays for relief against Defendant as follows:

11 A. In favor of Plaintiff that Defendant has infringed one or more claims of the
12 ‘452 Patent, either literally or under the doctrine of equivalents;

13 B. In favor of Plaintiff that Defendant has infringed one or more claims of the
14 ‘916 Patent, either literally or under the doctrine of equivalents;

15 C. Requiring Defendant to pay Plaintiff its damages, costs, expenses, and
16 prejudgment and post-judgment interest for Defendant’s infringement of the ‘452 Patent
17 and the ‘916 patent as provided under 35 U.S.C. § 284, but not less than a reasonable
18 royalty; and

19 D. For such other and further relief as may be just and equitable.

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DEMAND FOR TRIAL BY JURY

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff hereby demands a jury trial on all issues and causes of action triable to a jury.

Respectfully submitted,

DATED: February 6, 2017

COTMAN IP LAW GROUP, PLC

s/Rasheed M. McWilliams

By: _____

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CERTIFICATE OF SERVICE

I am employed in the County of Los Angeles, State of California. I am over the age of 18 and not a party to the within action. My business address is 35 Hugus Alley, Suite 210, Pasadena, California 91103. On February 6, 2017, I hereby certify that I served the document(s) entitled **FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT** to attorneys for all parties by using the CM/ECF system, which will send a notice of electronic filing of the document to all parties, including:

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**Attorneys for Defendant
Adata Technology (U.S.A.)
Co., Ltd.**

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed February 6, 2017 at Pasadena, California

s/Elaine Cruz

ELAINE CRUZ