

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

LSI CORPORATION and
AGERE SYSTEMS INC.,

Plaintiffs,

vs.

UNITED MICROELECTRONICS
CORPORATION, INTEGRATED DEVICE
TECHNOLOGY, INC., AMIC
TECHNOLOGY CORPORATION, CYPRESS
SEMICONDUCTOR CORPORATION,
DONGBU HITEK SEMICONDUCTOR
BUSINESS, ELPIDA MEMORY INC.,
FREESCALE SEMICONDUCTOR INC.,
GRACE SEMICONDUCTOR
MANUFACTURING CORPORATION, JAZZ
SEMICONDUCTOR, MAGNACHIP
SEMICONDUCTOR, MICROCHIP
TECHNOLOGY INC., MICRONAS
SEMICONDUCTOR HOLDING AG, NANYA
TECHNOLOGY CORPORATION,
NATIONAL SEMICONDUCTOR
CORPORATION, ON SEMICONDUCTOR
CORPORATION, POWERCHIP
SEMICONDUCTOR CORPORATION,
PROMOS TECHNOLOGIES, INC.,
QIMONDA AG, SPANSION, INC.,
STMICROELECTRONICS NV, TOWER
SEMICONDUCTOR, LTD., and VANGUARD
INTERNATIONAL SEMICONDUCTOR
CORPORATION,

Defendants.

Civil Action No. 2:08-cv-00165-TJW

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT

Pursuant to Federal Rule of Civil Procedure 15(a), Plaintiffs LSI Corporation ("LSI") and its wholly owned subsidiary, Agere Systems Inc. ("Agere") (collectively "Plaintiffs"), file this First Amended Complaint and allege the following:

JURISDICTION AND VENUE

1. This is a civil action for patent infringement arising 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. Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

PARTIES

2. Plaintiff LSI is and was at all times relevant herein a Delaware corporation with its principal place of business at 1621 Barber Lane, Milpitas, California.

3. Plaintiff Agere is and was at all times relevant herein a Delaware corporation with its principal place of business at 1110 American Parkway NE, Allentown, Pennsylvania.

4. On information and belief, United Microelectronics Corporation ("UMC") is a corporation organized under the laws of Taiwan with its principal place of business at No. 3 Li-Hsin 2nd Road, Hsinchu Science Park, Hsinchu, Taiwan. On information and belief, UMC is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, UMC resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

5. On information and belief, Integrated Device Technology, Inc. ("IDT") is a corporation organized under the laws of the State of Delaware with its principal place of business located at 6024 Silver Creek Valley Road, San Jose, CA. On information and belief, IDT is a

manufacturer and importer of semiconductor devices. On information and belief, IDT resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

6. On information and belief, AMIC Technology Corporation ("AMIC") is a corporation organized under the laws of Taiwan with its principal place of business at No. 2 Li-Hsin Road 6, Science Based Industrial Park, Hsinchu, Taiwan. On information and belief, AMIC is a manufacturer and importer of semiconductor devices. On information and belief, AMIC resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

7. On information and belief, Cypress Semiconductor Corporation ("Cypress") is a corporation organized under the laws of the State of Delaware with its principal place of business at 198 Champion Court, San Jose, CA. On information and belief, Cypress is a manufacturer and importer of semiconductor devices. On information and belief, Cypress resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

8. On information and belief, Dongbu HiTek Semiconductor Business ("Dongbu") is a corporation organized under the laws of Korea, with its principal place of business at Dongbu Financial Center Bldg, 32nd Floor 891-10, Daech-Dong, Kangnam-Ku, Seoul, Korea. On information and belief, Dongbu is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, Dongbu resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

9. On information and belief, Elpida Memory, Inc. ("Elpida") is a corporation organized under the laws of Japan with its principal place of business at Sumitomo Seimei Yaesu Building, 3rd Floor, 2-1 Yaesu 2-chome Chuo-ku, Tokyo, Japan. On information and belief, Elpida is a manufacturer and importer of semiconductor devices. On information and belief, Elpida resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

10. On information and belief, Freescale Semiconductor, Inc. ("Freescale") is a corporation organized under the laws of the State of Delaware with its principal place of business at 6501 William Cannon Drive West, Austin, TX. On information and belief, Freescale is a manufacturer and importer of semiconductor devices. Upon information and belief, Freescale resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

11. On information and belief, Grace Semiconductor Manufacturing Corporation ("Grace") is a corporation organized under the laws of China with its principal place of business at 1399 Zu Chong Zhi Road, Zhangjiang Hi-Tech Park, Shanghai, China. On information and belief, Grace is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, Grace resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

12. On information and belief, Jazz Semiconductor ("Jazz") is a corporation organized under the laws of Delaware with its principal place of business at 4321 Jamboree Road, Newport Beach, CA 92660. On information and belief, Jazz is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, Jazz resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

13. On information and belief, Magnachip Semiconductor ("Magnachip") is a corporation organized under the laws of Korea, with its principal place of business at 1, Hyangjeong-dong, Hungduk-gu, Cheongju-si Chungbuk, Korea. On information and belief, Magnachip is a manufacturer and importer of semiconductor devices. On information and belief, Magnachip resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

14. On information and belief, Microchip Technology, Inc. ("Microchip") is a corporation organized under the laws of the State of Delaware with its principal place of business located at 2355 West Chandler Boulevard, Chandler, AZ. On information and belief, Microchip is a manufacturer and importer of semiconductor devices. On information and belief, Microchip resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

15. On information and belief, Micronas Semiconductor Holding, AG ("Micronas") is a corporation organized under the laws of Switzerland with its principal place of business located at Technopark Technopartstrasse 1, Zurich, Switzerland. On information and belief, Micronas is a manufacturer and importer of semiconductor devices. On information and belief, Micronas resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

16. On information and belief, Nanya Technology Corporation ("Nanya") is a corporation organized under the laws of Taiwan with its principal place of business located at HWA YA Technology Park, 669 Fu Hsing 3rd Road, Kueishan Taoyuan, Taiwan. On information and belief, Nanya is a manufacturer and importer of semiconductor devices. On information and belief, Nanya resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

17. On information and belief, National Semiconductor Corporation ("National") is a corporation organized under the laws of the State of Delaware with a principal place of business located at 2900 Semiconductor Dr., Santa Clara, CA. On information and belief, National is a manufacturer and importer of semiconductor devices. On information and belief, National resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

18. On information and belief, ON Semiconductor Corporation ("ON Semi") is a corporation organized under the laws of the State of Delaware with a principal place of business

located at 5005 East McDowell Road, Phoenix, AZ. On information and belief, ON Semi is a manufacturer and importer of semiconductor devices. On information and belief, ON Semi resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

19. On information and belief, Powerchip Semiconductor Corporation ("Powerchip") is a corporation organized under the laws of Taiwan with its principal place of business at No. 12 Li-Hsin Road, 1 Science-Based Industrial Park, Hsinchu, Taiwan. On information and belief, Powerchip is a manufacturer and importer of semiconductor devices. On information and belief, Powerchip resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

20. On information and belief, ProMOS Technologies, Inc. ("ProMOS") is a corporation organized under the laws of Taiwan with its principal place of business located at 19 Li-Hsin Road Hsinchu Science Park, Hsinchu, Taiwan. On information and belief, ProMOS is a manufacturer and importer of memory devices. On information and belief, ProMos resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

21. On information and belief, Qimonda AG ("Qimonda") is a corporation organized under the laws of Germany with its principal place of business at Gustav-Heinemann-Ring 212, Munich, Germany. On information and belief, Qimonda is a manufacturer and exporter of semiconductor devices. On information and belief, Qimonda resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

22. On information and belief, Spansion, Inc. ("Spansion") is a corporation organized under the laws of the State of Delaware with its principal place of business at 915 Deguigne Drive, Sunnyvale, CA. On information and belief, Spansion is a manufacturer and importer of semiconductor devices. On information and belief, Spansion resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

23. On information and belief, STMicroelectronics NV ("STMicro") is a corporation organized under the laws of the Netherlands with its principal place of business located at 39 Chemin du Champ des Filles Plan-Les-Ouates C P 21, Geneva, Switzerland. On information and belief, STMicro is a manufacturer and importer of semiconductor devices. On information and belief, STMicro resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

24. On information and belief, Tower Semiconductor, Ltd. ("Tower") is a corporation organized under the laws of Israel with its principal place of business located at Ramat Gavriel Industrial Area, Migdal Haemek, Israel 23105. On information and belief, Tower is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, Tower resides in this judicial district within the meaning of 28 U.S.C. § 1400(b).

25. On information and belief, Vanguard International Semiconductor Corporation ("Vanguard") is a corporation organized under the laws of Taiwan with its principal place of business at 129 Park Avenue-3rd, Hsinchu Science Park, Hsinchu, Taiwan. On information and belief, Vanguard is a manufacturer and importer of semiconductor devices that are sold under the brand names of other companies. On information and belief, Vanguard resides in this judicial district within the meaning of 28 U.S.C. 1400(b).

THE PATENT

On July 13, 1993, United States Patent No. 5,227,335 B1 (the "'335 patent") entitled "Tungsten Metallization" was duly and legally issued to Lowell H. Holschwandner, *et al.* The patent is valid and subsisting. A true and correct copy of the '335 patent is attached hereto and incorporated herein by reference as Exhibit A. The patent has been assigned to Agere.

COUNT ONE

(Infringement of U.S. Patent No. 5,227,335 B1)

26. Plaintiffs reallege paragraphs 1-25 of this Complaint.

UMC

27. On information and belief, UMC directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a MIPS 64 CPU (UMC part no. SR71010A) and a Virtex-E Extended Memory FPGA ("Field Programmable Gate Array") (UMC part no. XCV405E). UMC is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

28. Plaintiffs are informed and believe, and thereon allege, UMC's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

29. UMC's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. UMC's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

IDT

30. On information and belief, IDT directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe

the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a synchronous SRAM (static random access memory) (IDT part no. 71V546S100PF) and a 32 bit microprocessor system-on-chip (IDT part no. 79RC32T355). IDT is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

31. Plaintiffs are informed and believe, and thereon allege, IDT's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

32. IDT's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. IDT's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

AMIC

33. On information and belief, AMIC directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, an AMIC 2 Mbit Low Power SRAM (LP62S2048X-70LLT). AMIC is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

34. Plaintiffs are informed and believe, and thereon allege, AMIC's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

35. AMIC's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. AMIC's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Cypress

36. On information and belief, Cypress directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a flash programmable clock generator (Cypress part no. CY22381FC) and a programmable system on chip (Cypress part no. CY8C21434). Cypress is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

37. Plaintiffs are informed and believe, and thereon allege, Cypress's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

38. Cypress's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Cypress's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Dongbu

39. On information and belief, Dongbu directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a Foveon X3 Image Sensor (Foveon part no. FX17-78-F130-10). Dongbu is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

40. Plaintiffs are informed and believe, and thereon allege, Dongbu's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

41. Dongbu's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Dongbu's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Elpida

42. On information and belief, Elpida directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 512 Mbit DDR2 SDRAMs (Elpida part nos. EDE5116AJBG-6E-E and EDD5108AFTA). Elpida is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

43. Plaintiffs are informed and believe, and thereon allege, Elpida's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

44. Elpida's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Elpida's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Freescale

45. On information and belief, Freescale directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 32 bit Communication Processor (Freescale part no. MPC857DSLVCVR66B) and a 32 bit 4k SRAM (Freescale part no. MCF5407AI162). Freescale is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

46. Plaintiffs are informed and believe, and thereon allege, Freescale's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

47. Freescale's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Freescale's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Grace

48. On information and belief, Grace directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 16 Mbit (x8/x16) Concurrent SuperFlash Memory (part no. SST36VF1601E). Grace is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

49. Plaintiffs are informed and believe, and thereon allege, Grace's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

50. Grace's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Grace's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Jazz

51. On information and belief, Jazz directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, an Xceive Single-Chip Hybrid Analog and Digital Television Timer (part no. XC3028). Jazz is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

52. Plaintiffs are informed and believe, and thereon allege, Jazz's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

53. Jazz's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Jazz's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Magnachip

54. On information and belief, Magnachip directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, an Image Sensor (Magnachip part no. MC501CB). Magnachip is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

55. Plaintiffs are informed and believe, and thereon allege, Magnachip's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

56. Magnachip's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Magnachip's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Microchip

57. On information and belief, Microchip directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, an enhanced FLASH microcontroller with 10 bit A/D (Microchip part no. PIC18F452-E/PT). Microchip is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

58. Plaintiffs are informed and believe, and thereon allege, Microchip's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

59. Microchip's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Microchip's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Micronas

60. On information and belief, Micronas directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a MPEG 1/2 Layer 2/3 Audio Decoder (Micronas part no. MAS3507DG10). Micronas is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

61. Plaintiffs are informed and believe, and thereon allege, Micronas' infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

62. Micronas' infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Micronas' infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Nanya

63. On information and belief, Nanya directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include a 256 Mb DDR SDRAM (Nanya part no. NT5DS16M16CT-6K) and a 512 Mb DDR2 SDRAM (Nanya part no. NT5TU64M8AE-37B). Nanya is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

64. Plaintiffs are informed and believe, and thereon allege, Nanya's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

65. Nanya's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Nanya's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

National

66. On information and belief, National directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 12 bit, 66 MSPS, 350 MH Bandwidth A/D Converter with Internal Sample-and-Hold (National part no. ADC12L066CIVY). National is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

67. Plaintiffs are informed and believe, and thereon allege, National's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

68. National's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. National's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

ON Semi

69. On information and belief, ON Semi directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 3.3V LVTTTL/LVCMOS to Differential LVPECL Translator MC100EPT (ON Semi part no. MC100EPT 23 DTG) and a

2.5V/3.3V 12 Gb/s Differential Clock/Data SmartGate with CML Output and Internal Termination (ON Semi part no. NB7L86MMNG). ON Semi is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

70. Plaintiffs are informed and believe, and thereon allege, ON Semi's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

71. ON Semi's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. ON Semi's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Powerchip

72. On information and belief, Powerchip directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, memory devices such as Powerchip part no. P2V64540BTP-7A. Powerchip is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

73. Plaintiffs are informed and believe, and thereon allege, Powerchip's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

74. Powerchip's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Powerchip's infringement of Plaintiffs'

rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

ProMOS

75. On information and belief, ProMOS directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 256 MB DRAM (ProMOS part no. V58C2256164SAT6). ProMOS is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

76. Plaintiffs are informed and believe, and thereon allege, ProMOS's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

77. ProMOS's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. ProMOS's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Qimonda

78. On information and belief, Qimonda directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 256 Mbit Double-Data-

Rate SDRAM (part no. HYB25DC256160CE) and a 516 Mbit Double-Data-Rate-Two SDRAM (Qimonda part no. HYB18T512160BF). Qimonda is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

79. Plaintiffs are informed and believe, and thereon allege, Qimonda's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

80. Qimonda's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Qimonda's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Spansion

81. On information and belief, Spansion directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a 64 Mb CMOS 3.0 Volt-only Simultaneous Read/Write Flash Memory (Spansion part no. S29JL064H70TA100) and a 1 G Mirro Bit NOR Flash (Spansion part no. S29GL01GP12TFI02). Spansion is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

82. Plaintiffs are informed and believe, and thereon allege, Spansion's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

83. Spansion's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Spansion's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

STMicro

84. On information and belief, STMicro directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a TDMI 16/32-Bit MCY with Flash, USD, CAN 5 Times, ADC 10 Communications Interface (STMicro part no. STR710FZ2T6 MCU ARM 7). STMicro is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

85. Plaintiffs are informed and believe, and thereon allege, STMicro's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

86. STMicro's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. STMicro's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Tower

87. On information and belief, Tower directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe

the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, an Alien H2 EPC Class 1 Gen 2 RFID Tag IC (part no. ALN-9554-WR-SAM). Tower is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

88. Plaintiffs are informed and believe, and thereon allege, Tower's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

89. Tower's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Tower's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

Vanguard

90. On information and belief, Vanguard directly, indirectly, contributorily, and/or by inducement, literally or under the doctrine of equivalents, has infringed and continues to infringe the '335 patent by its manufacture, use, sale, offer for sale and/or importation of products, within this judicial district and elsewhere in the United States, that infringe one or more claims of the '335 patent. Such infringing products include, but are not limited to, a CMPS Dynamic RAM (Vanguard part no. VG2617400DJ-6). Vanguard is liable for its infringement of the '335 patent pursuant to 35 U.S.C. § 271.

91. Plaintiffs are informed and believe, and thereon allege, Vanguard's infringement of the '335 patent has been and continues to be willful, deliberate and in conscious disregard of Plaintiffs' rights, making this an exceptional case within the meaning of 35 U.S.C. § 285.

92. Vanguard's infringement of the '335 patent has caused and continues to cause damage to Plaintiffs in an amount to be proven at trial. Vanguard's infringement of Plaintiffs' rights under the patent-in-suit will continue to damage Plaintiffs, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that judgment be entered in its favor and against UMC, IDT, AMIC, Cypress, Dongbu, Elpida, Freescale, Grace, Jazz, Magnachip, Microchip, Micronas, National, Nanya, ON Semi, Powerchip, ProMOS, Qimonda, Spansion, STMicro, Tower, and Vanguard as follows:

1. Declaring that United States Patent No. 5,227,335 B1 is valid;
2. Declaring that UMC has infringed United States Patent No. 5,227,335 B1;
3. Declaring that IDT has infringed United States Patent No. 5,227,335 B1;
4. Declaring that AMIC has infringed United States Patent No. 5,227,335 B1;
5. Declaring that Cypress has infringed United States Patent No. 5,227,335 B1;
6. Declaring that Dongbu has infringed United States Patent No. 5,227,335 B1;
7. Declaring that Elpida has infringed United States Patent No. 5,227,335 B1;
8. Declaring that Freescale has infringed United States Patent No. 5,227,335 B1;
9. Declaring that Grace has infringed United States Patent No. 5,227,335 B1;
10. Declaring that Jazz has infringed United States Patent No. 5,227,335 B1;
11. Declaring that Magnachip has infringed United States Patent No. 5,227,335 B1;
12. Declaring that Microchip has infringed United States Patent No. 5,227,335 B1;
13. Declaring that Micronas has infringed United States Patent No. 5,227,335 B1;
14. Declaring that National has infringed United States Patent No. 5,227,335 B1;

15. Declaring that Nanya has infringed United States Patent No. 5,227,335 B1;
16. Declaring that ON Semi has infringed United States Patent No. 5,227,335 B1;
17. Declaring that Powerchip has infringed United States Patent No. 5,227,335 B1;
18. Declaring that ProMOS has infringed United States Patent No. 5,227,335 B1;
19. Declaring that Qimonda has infringed United States Patent No. 5,227,335 B1;
20. Declaring that Spansion has infringed United States Patent No. 5,227,335 B1;
21. Declaring that STMicro has infringed United States Patent No. 5,227,335 B1;
22. Declaring that Tower has infringed United States Patent No. 5,227,335 B1;
23. Declaring that Vanguard has infringed United States Patent No. 5,227,335 B1;
24. Permanently enjoining UMC, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;
25. Permanently enjoining IDT, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;
26. Permanently enjoining AMIC, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;
27. Permanently enjoining Cypress, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

28. Permanently enjoining Dongbu, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

29. Permanently enjoining Elpida, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

30. Permanently enjoining Freescale, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

31. Permanently enjoining Grace, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

32. Permanently enjoining Jazz, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

33. Permanently enjoining Magnachip, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

34. Permanently enjoining Microchip, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

35. Permanently enjoining Micronas, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

36. Permanently enjoining National, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

37. Permanently enjoining Nanya, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

38. Permanently enjoining ON Semi, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

39. Permanently enjoining Powerchip, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

40. Permanently enjoining ProMOS, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

41. Permanently enjoining Qimonda, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

42. Permanently enjoining Spansion, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

43. Permanently enjoining STMicroelectronics, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

44. Permanently enjoining Tower, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

45. Permanently enjoining Vanguard, its officers, agents, employees, and those acting in privity with them, from further infringement, contributory infringement and/or inducing infringement of United States Patent No. 5,227,335 B1;

46. Awarding a reasonable royalty and other damages arising from UMC's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

47. Awarding a reasonable royalty and other damages arising from IDT's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

48. Awarding a reasonable royalty and other damages arising from AMIC's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

49. Awarding a reasonable royalty and other damages arising from Cypress's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

50. Awarding a reasonable royalty and other damages arising from Dongbu's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

51. Awarding a reasonable royalty and other damages arising from Elpida's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

52. Awarding a reasonable royalty and other damages arising from Freescale's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

53. Awarding a reasonable royalty and other damages arising from Grace's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

54. Awarding a reasonable royalty and other damages arising from Jazz's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

55. Awarding a reasonable royalty and other damages arising from Magnachip's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

56. Awarding a reasonable royalty and other damages arising from Microchip's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

57. Awarding a reasonable royalty and other damages arising from Micronas's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

58. Awarding a reasonable royalty and other damages arising from National's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

59. Awarding a reasonable royalty and other damages arising from Nanya's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

60. Awarding a reasonable royalty and other damages arising from ON Semi's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

61. Awarding a reasonable royalty and other damages arising from Powerchip's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

62. Awarding a reasonable royalty and other damages arising from ProMOS's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

63. Awarding a reasonable royalty and other damages arising from Qimonda's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

64. Awarding a reasonable royalty and other damages arising from Spansion's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

65. Awarding a reasonable royalty and other damages arising from STMicro's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

66. Awarding a reasonable royalty and other damages arising from Tower's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

67. Awarding a reasonable royalty and other damages arising from Vanguard's infringement of United States Patent No. 5,227,335 B1, including treble damages, to Plaintiffs, together with prejudgment and post-judgment interest, in an amount according to proof;

68. Declaring this to be an "exceptional case" within the meaning of 35 U.S.C. § 285 and awarding treble damages and reasonable attorneys' fees to Plaintiffs; and

69. Awarding Plaintiffs such other costs and such further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiffs demand a trial by jury on all issues triable of right by a jury.

DATED: June 2, 2008

Respectfully submitted,

By: /s/ Elizabeth L. DeRieux
S. Calvin Capshaw, III
State Bar No. 03783900
Elizabeth L. DeRieux
State Bar No. 05770585
Capshaw DeRieux, LLP
1127 Judson Road, Suite 220
Longview, Texas 75601
(903) 236-9800 Telephone
(903) 236-8787 Facsimile
E-mail: ccapshaw@capshawlaw.com
E-mail: ederieux@capshawlaw.com

OF COUNSEL

David E. Sipiora
Colorado State Bar No.: 29759
desipiora@townsend.com
TOWNSEND AND TOWNSEND AND CREW, LLP
1200 17th Street, Suite 2700
Denver, CO 80212
303-571-4000

Iris Sockel Mitrakos
Colorado State Bar No.: 190162
ismitrakos@townsend.com
TOWNSEND AND TOWNSEND AND CREW, LLP
12730 High Bluff Drive
Suite 400
San Diego, CA 92130
858- 350-6100