IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

GODO KAISHA IP BRIDGE 1, Plaintiff, v. BROADCOM LIMITED, BROADCOM CORPORATION, AVAGO TECHNOLOGIES, LTD., AVAGO TECHNOLOGIES U.S., INC., and LSI CORPORATION Defendants.	Case No. 2:16-cv-134 **DEMAND FOR JURY TRIAL**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Godo Kaisha IP Bridge 1 ("IP Bridge" or "Plaintiff") hereby brings this First Amended Complaint for Patent Infringement ("First Amended Complaint") against Broadcom Limited ("Broadcom Ltd."), Broadcom Corporation ("Broadcom Corp."), Avago Technologies, Ltd. ("Avago Tech."), Avago Technologies U.S., Inc. ("Avago U.S."), and LSI Corporation ("LSI") (collectively, "Broadcom" or "Defendants"). Plaintiff, on personal knowledge as to its own acts, and on information and belief as to all others based on investigation, alleges as follows:

NATURE OF THE ACTION

1. This is an action brought by IP Bridge against Defendants for infringement of U.S. Patent Nos. 6,538,324 ("the '324 Patent"), 6,197,696 ("the '696 Patent"), 7,126,174 ("the '174 Patent"), 8,354,726 ("the '726 Patent"), RE43,729 ("the RE'729 Patent"), and RE41,980 ("the RE'980 Patent") (collectively, "the Asserted Patents").

THE PARTIES

2. Plaintiff IP Bridge is a Japanese corporation with its principal place of business located at c/o Sakura Sogo Jimusho, 1-11 Kanda Jimbocho, Chiyoda-ku, Tokyo, 101-0051, Japan. IP Bridge owns the Asserted Patents.

3. Upon information and belief, Defendant Broadcom Ltd. is a corporation organized under the laws of the country of Singapore with principal places of business at 1320 Ridder Park Dr., San Jose, California 95131 and 1 Yishun Avenue 7, Singapore 768923.

4. Upon information and belief, Defendant Broadcom Corp. is a California corporation with a principal place of business at 5300 California Avenue, Irvine, California 92617. Upon information and belief, Broadcom Corp. is a wholly owned subsidiary of Broadcom Ltd. and an affiliate of Avago Tech. Broadcom Corp. is authorized to do business in Texas, and may be served by serving its registered agent National Registered Agents, Inc., 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3140.

5. Upon information and belief, Defendant Avago Tech. is a corporation organized under the laws of the country of Singapore with principal places of business at 1320 Ridder Park Dr., San Jose, California 95131 and 1 Yishun Avenue 7, Singapore 768923. Upon information and belief, Avago Tech. is a wholly owned subsidiary of Broadcom Ltd. and an affiliate of Broadcom Corp.

6. Upon information and belief, Defendant Avago U.S. is a Delaware corporation with a principal place of business at 1320 Ridder Park Dr., San Jose, California 95131. Upon information and belief, Avago U.S. is a wholly owned subsidiary of Broadcom Ltd. and Avago Tech., and an affiliate of Broadcom Corp.

7. Upon information and belief, Defendant LSI is a Delaware corporation with a principal place of business at 1621 Barber Ln., Milpitas, CA 95053. Upon information and

belief, LSI is a wholly owned subsidiary of Avago Tech., and an affiliate of Broadcom Corp. LSI is authorized to do business in Texas, and may be served by serving its registered agent Corporation Service Company DBA CSC – Lawyers Incorporating Service Company, 211 E. 7th Street, Ste. 620, Austin, TX 78701.

JURISDICTION AND VENUE

8. This is an action arising under the patent laws of the United States. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (action arising under an Act of Congress relating to patents).

9. This Court has general and specific personal jurisdiction over Defendants at least in part because Defendants are present in and/or transact and conduct business in and with residents of this District and the State of Texas. IP Bridge's causes of action arise, at least in part, from Defendants' contacts with and activities in the State of Texas and this District. Upon information and belief, Defendants have committed acts of infringement within this District and the State of Texas by, *inter alia*, directly and/or indirectly making, selling, offering for sale, importing, and/or using products that infringe one or more claims of the Asserted Patents. Defendants, directly and/or through intermediaries, use, sell, ship, distribute, offer for sale, and/or advertise or otherwise promote their products in the State of Texas and this District.

10. Moreover, Defendants regularly conduct and solicit business in, engage in other persistent courses of conduct in, and/or derive substantial revenue from goods and services provided to residents of, the States of Texas and this judicial District. For example, Broadcom Corp. has significant operations in Texas, including facilities in at least Dallas, Austin, and Houston. In addition, Broadcom Corp. has availed itself of the benefits and protections of the state's laws by filing suit in this District. Avago Tech. has significant operations in Texas, including operations associated with LSI, its wholly owned subsidiary, and Avago Tech.'s

acquisition of Texas-based East Texas Integrated Circuits, Inc. in 2010 as a wholly owned subsidiary. Avago Tech. also has availed itself of the benefits and protections of the state's laws by filing two patent infringement lawsuits in this District in the past year through its wholly owned subsidiary Avago Technologies General IP (Singapore) PTE LTD. Avago Tech. has reported that it distributes a substantial portion of its products through electronic components distributors, including Arrow Electronic, Inc., which maintains locations throughout the State of Texas, including in this District. Avago US employs at least 60 individuals at offices it maintains in Texas, including in Austin and Richardson, TX. LSI has significant operations in Texas and this District, including facilities in Plano, Austin, and Houston. LSI has also availed itself of the benefits and protections of the state's laws by filing a lawsuit in this District.

11. Furthermore, Defendants have purposefully and voluntarily placed one or more infringing products into the stream of commerce with the expectation that they will be purchased and/or used by residents of this District and/or incorporated into downstream products purchased by consumers in this District, including by directly or indirectly working with subsidiaries, distributors, and other entities located in Texas to ensure their products reach Texas and this judicial District. More particularly, upon information and belief, at least Broadcom Ltd. and Avago Tech. have caused one or more of their subsidiaries, including Broadcom Corp., Avago US, and/or LSI, to place accused products in the stream of commerce knowing and intending that such products will reach residents of this state and District.

12. Upon information and belief, Broadcom Ltd. has official distributors located in Plano, Texas; Richardson, Texas; Austin, Texas; Houston, Texas; and Sugarland, Texas. Broadcom Ltd. maintains sales offices in Addison, Texas; Houston, Texas; and Round Rock, Texas. Upon information and belief, Avago Tech. maintains a webpage that tells customers that

they can purchase products through Avago Technologies Authorized Distributors in their region or country. Upon information and belief, Avago Tech. has an official distributor located in Mansfield, Texas.

13. In addition, Defendants maintain highly interactive and commercial websites, accessible to residents of Texas and this judicial District, through which Defendants promote their products and services, including products that infringe the Asserted Patents.

14. Upon information and belief, Broadcom Ltd. maintains a website at www.broadcom.com that advertises products available for sale in the United States. Broadcom Ltd.'s website directs customers to its sales representatives and distributors, including those located in Texas.

15. Upon information and belief, Avago Tech. enters Direct Purchasing Agreements with customers. Avago Tech. maintains a website at http://www.avagotech.com/ that allows customers with Direct Purchasing Agreements, including customers in Texas, to order samples of products online. Avago Tech.'s website includes a link titled "How to Buy," which directs consumers in the United States to purchase Avago Tech.'s products from Broadcom Ltd.'s Americas Sales Office in San Jose, California. Avago Tech.'s website also includes a submission form that allows customers, including those in Texas, to input information in order to obtain technical support from Avago Tech.

16. Avago Tech.'s website allows customers to download White Papers and product selection guides.

17. Upon information and belief, Broadcom Ltd. published a "Broadcom Limited Company Overview" in March 2016. A copy of the Broadcom Limited Company Overview is attached hereto as Exhibit A.

18. The Broadcom Limited Company Overview is available on Broadcom's website. In the Broadcom Limited Company Overview, Broadcom Ltd. shows that it has a design site located in Austin Texas having more than 100 employees.

19. IP Bridge incorporates by reference the allegations of paragraph 22-36 of this First Amended Complaint.

20. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b) for at least the reasons set forth above.

DEFENDANTS' INFRINGING PRODUCTS AND ACTIVITIES

21. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-20 of this First Amended Complaint.

22. Defendants are global manufacturers and suppliers of semiconductor components and products for use in consumer and enterprise products, systems, and services. Defendants design, make, use, sell, offer for sale, import into the United States, and provide support for semiconductor products, such as products with the part name of number BCM4334, BCM43224, LSI SAS3108, BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791, BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334, BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM21892, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461, BCM3471, BCM3472, BCM4313, BCM43142, BCM4322, BCM43241, BCM4325, BCM4329, BCM4330, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752,

BCM47521, BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, BCM4750, PEX8696-AA50BC F, PEX8680-AA50BC F, PEX8664-AA50RBC F, PEX8649-AA50RBC F, PEX8636-AA50RBC F, PEX8625-AA50BC F, XLP® 800 Series Processors, XLP® 200 Series Processors, LSI B64002, LSI SF2281, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G, PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G, PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G,

PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G, PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, LSI 9380-8e, and other 28nm, 40nm, 65nm, and 90nm process node semiconductor products that incorporate similar circuitry, have similar structures, features, or functionalities, and/or are made by similar manufacturing processes, as the aforementioned products (collectively, "accused semiconductor products"). Defendants also design, make, use, sell, offer for sale, import into the United States, and provide support for semiconductor products that include ARM Cortex A9 CPUs, ARM Cortex A7 CPUs, ARM Cortex A15 CPUs, and/or which otherwise support the ARMv7 and/or ARM v7-A instruction sets, including BCM11xxx, BCM2xxx(x), BCM58xxx, AXE4500, and AXM5500 series products (collectively, "ARM Cortex products").

23. Defendants depend at least in part on foundry subcontractors located in Asia, such as Taiwan Semiconductor Manufacturing Corporation, to manufacture a majority of their products, including the accused semiconductor products and ARM Cortex products, according to Defendants' product and process specifications.

24. Defendants sell their products in the United States through a direct sales force, which is located in offices throughout the United States, including Texas, and also use distributors and manufacturers' representatives, as well as authorized retailers.

25. Upon information and belief, Broadcom Ltd. publishes news releases announcing new products and developments in its semiconductor products. Some of these news releases direct customers to reach out to local Broadcom sales representatives for pricing of Broadcom Ltd.'s products.

26. Upon information and belief, both Broadcom Ltd. and Avago Tech. maintain websites that advertise the accused devices, including identifying the applications for which the accused devices can be used.

27. Defendants' semiconductor products are integrated into devices made, used, sold, offered for sale, and/or imported into the United States, by original equipment manufacturers, distributors, and other third parties. Defendants' accused semiconductor products and ARM Cortex products are essential, non-trivial components of the products into which they are integrated. For example, the BCM4334 chip is a complete wireless connectivity system with ultra-low power consumption for mass-market smartphones.

28. The Broadcom Limited Company Overview discusses details of the products that Broadcom Ltd. sells. The Broadcom Limited Company Overview includes information relating to the percentage revenue by technology segment for the accused devices sold by Broadcom Ltd. The information relating to percentage revenue is identified by Broadcom Limited as "Avago Technologies Limited historical results."

29. Broadcom Ltd. has a Chief Technical Officer who is responsible for driving the company vision for engineering research and development activities. Broadcom Ltd. has a Chief Sales Officer who is responsible for global sales and marketing across all business divisions of Broadcom Ltd. Upon information and belief, the activities of the Chief Technical Officer and

the Chief Sales Officer are directly or indirectly related to Broadcom Ltd.'s making, using selling, offering to sell and/or importing into the United States Broadcom Ltd.'s semiconductor products.

30. Upon information and belief, on March 10, 2016, Broadcom Ltd. filed with the United States Securities and Exchange Commission a Form 10-Q. A copy of the Form 10-Q is attached hereto as Exhibit B.

31. Broadcom Ltd.'s Form 10-Q has a "Statement of Operations" section that identifies expenses for activities by Broadcom Ltd. that are related to their semiconductor products, including "Research and development" and "Costs of products sold." Broadcom Ltd.'s Form 10-Q states, "We sell our products primarily through our direct sales force, distributors and manufacturers' representatives." Broadcom Ltd.'s Form 10-Q also states that Broadcom Ltd. relies on third-party foundries for wafer fabrication. Upon information and belief, these disclosures of Broadcom Ltd.'s Form 10-Q, in whole or in part, relate to at least some of the accused semiconductor products and the ARM Cortex products.

32. Upon information and belief, Avago Tech. filed with the United States Securities and Exchange Commission a Form 10-K on or about December 17, 2015. A copy of Avago Tech.'s Form 10-K is attached hereto as Exhibit C.

33. Avago Tech.'s Form 10-K includes a list of major product families and major applications in its business segments, and this list includes applications for its semiconductor products accused of infringement in this First Amended Complaint. Avago Tech.'s Form 10-K has a "Statement of Operations" section that identifies expenses for activities by Avago Tech. that are related to their semiconductor products, including "Research and development" and "Costs of products sold." Avago Tech.'s Form 10-K states that Avago Tech. outsources fabrication, assembly and test facilities, but that they also have their own proprietary fabrication

and test facilities. Upon information and belief, these disclosures of Avago Tech.'s Form 10-K, in whole or in part, relate to at least some of the accused semiconductor products and the ARM Cortex products.

34. On February 1, 2016, Broadcom Corp. (and its subsidiaries) and Avago Tech. (and its subsidiaries) completed a merger transaction and became wholly owned subsidiaries of newly formed entity, Broadcom Limited. Broadcom Corp., Avago Tech., Avago USA, and LSI, are now jointly and wholly controlled by Broadcom Limited, their publicly traded parent company. None of Broadcom Corp., Avago Tech., Avago USA, or LSI are themselves publicly traded. A copy of the merger agreement for this transaction is attached hereto as Exhibit D.

35. The merger agreement identifies Avago Tech. as "a leading designer, developer and global supplier of a broad range of semiconductor devices" and says that Avago Tech. "offers thousands of products that are used in end products such as smartphones, hard disk drives, computer servers, consumer appliances, data networking and telecommunications equipment, enterprise storage and servers, and factory automation and industrial equipment."

36. Defendants jointly operate to directly and/or indirectly make, use, sell, offer for sale, import into the United States, support, and encourage the use of the products accused of infringement herein. Upon information and belief, Broadcom Ltd. has directed and controlled activities of its subsidiaries that relate to the making, using, selling, offering for sale, or importation into the U.S. of one of more of the products accused of infringement herein. Upon information and belief Avago Tech. has directed and controlled activities of its subsidiaries that relate to the making, using, selling, offering for sale, or importation into the U.S. of one of more of the products accused of infringement herein.

FIRST CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 6,197,696

37. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-36 of this First Amended Complaint.

38. On March 6, 2001, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '696 Patent, entitled "Method for Forming Interconnection Structure." A copy of the '696 Patent is attached hereto as Exhibit E.

39. IP Bridge owns by assignment the entire right, title, and interest in and to the '696 Patent, including the right to sue and recover damages, including damages for past infringement.

40. The '696 Patent is valid and enforceable under United States Patent Laws.

41. Defendants have had knowledge of the '696 Patent at least by virtue of the filing of the original Complaint in this action.

42. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claim 13 of the '696 Patent in violation of at least 35 U.S.C. § 271(a), (b), and/or (g), by making, having made, using, selling, offering for sale, and/or importing into the United States, Broadcom's BCM4334, BCM4330, LSI B64002, LSI SAS3108 semiconductor products, and each and every Broadcom product incorporating the same or equivalent interconnection structure or made using the same or equivalent process, including without limitation Broadcom's 28nm, 40nm, and 65nm process node products, which, on information and belief, include products with the product numbers or names BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791, BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334,

BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM21892, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461, BCM3471, BCM3472, BCM4313, BCM43142, BCM43224, BCM4322, BCM43241, BCM4325, BCM4329, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752, BCM47521, BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, XLP® 800 Series Processors, XLP® 200 Series Processors, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G, PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-

AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G, PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G, PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G, PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, LSI SF2281, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, and LSI 9380-8e, which products are made using the patented process of at least claim 13 of the ’696 Patent, and which products are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product (“the ’696 Accused Products”). For example, on information and belief, the ’696 Accused Products infringe at least claim 13 of the ’696 Patent because, at a minimum, they comprise an interconnection structure formed using the patented process of claim 13 that comprises the steps of, *inter alia*, forming insulating films, resist patterns, thin film, and mask pattern, dry-etching insulating films, and filling in wiring grooves and contact holes.

43. Defendants’ actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claim 13 of the ’696 Patent by actively encouraging acts of direct infringement (for example, using, selling, offering for sale, and importing into the United States the ’696 Accused Products), and Defendants know (or believe that there is a high

probability, but are taking deliberate steps to avoid knowing, including by not adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as their foundry subcontractors, to manufacture and/or import into the United States the '696 Accused Products made using IP Bridge's patented processes, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to import into the United States and/or sell or offer for sale, the '696 Accused Products and products that incorporate the '696 Accused Products. For example, Defendants' product literature for one or more of the '696 Accused Products, including Reference Integration Notes, instructs and encourages Defendants' customers and other third parties to integrate the '696 Accused Products into products sold, offered for sale, and/or imported into the United States.

44. Defendants' infringement of the '696 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

45. IP Bridge has been damaged by Defendants' infringement of the '696 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law. The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

46. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants' infringement of the '696 Patent, including without limitation not less than a reasonable royalty.

SECOND CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 6,538,324

47. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-46 of this First Amended Complaint.

48. On March 25, 2003, the USPTO duly and legally issued the ’324 Patent, entitled “Multi-Layered Wiring Layer and Method of Fabricating the Same.” A copy of the ’324 Patent is attached hereto as Exhibit F.

49. IP Bridge owns by assignment the entire right, title, and interest in and to the ’324 Patent, including the right to sue and recover damages, including damages for past infringement.

50. The ’324 Patent is valid and enforceable under United States Patent Laws.

51. Defendants have had knowledge of the ’324 Patent at least by virtue of the filing of the original Complaint in this action.

52. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 3, 5, 7 and 9 of the ’324 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Broadcom’s BCM4334, BCM43224, LSI SAS3108 semiconductor products, and each and every Broadcom product incorporating the same or equivalent accused structure or made using the same or equivalent process, including without limitation Broadcom’s 28nm, 40nm, 65nm, and 90nm process node products, which, on information and belief, include products with the product numbers or names BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791, BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334,

BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM21892, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461, BCM3471, BCM3472, BCM4313, BCM43142, BCM4322, BCM43241, BCM4325, BCM4329, BCM4330, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752, BCM47521, BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, BCM4750, PEX8696-AA50BC F, PEX8680-AA50BC F, PEX8664-AA50RBC F, PEX8649-AA50RBC F, PEX8636-AA50RBC F, PEX8625-AA50BC F, XLP® 800 Series Processors, XLP® 200 Series Processors, LSI B64002, LSI SF2281, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-

BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G, PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G, PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G, PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G, PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, LSI 9380-8e, that meet every limitation of at least the above-identified claims ("the '324 Accused Products"). For example, on information and belief the '324 Accused Products infringe at least claims 1, 3, 5, 7 and 9 of the '324 Patent because, at a minimum, they comprise a barrier film constituted of common metal atomic species that comprises, *inter alia*, a first film composed of crystalline metal containing nitrogen and a second film composed of amorphous metal nitride where the first film is formed on, and in direct contact with, the second film, and contains nitrogen in a smaller content than that of the second film, all of which are arranged in the manner recited in the above-identified claims.

53. Defendants' actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 3, 5, 7 and 9 of the '324 Patent by actively

encouraging acts of direct infringement, and Defendants know (or believe that there is a high probability that, but are taking deliberate steps to avoid knowing, including by not adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as their foundry subcontractors, to manufacture and/or import into the United States the '324 Accused Products, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to make, use, sell, offer for sale, and/or import into the United States the '324 Accused Products and products that incorporate the '324 Accused Products. For example, Defendants' product literature for the '324 Accused Products, including Reference Integration Notes, instructs and encourages Defendants' customers and other third parties to integrate the '324 Accused Products into products sold, offered for sale, and/or imported into the United States.

54. Defendants' infringement of the '324 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

55. IP Bridge has been damaged by Defendants' infringement of the '324 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law. The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

56. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants' infringement of the '324 Patent, including without limitation not less than a reasonable royalty.

THIRD CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. RE41,980

57. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-56 of this First Amended Complaint.

58. On December 7, 2010, the USPTO duly and legally issued the RE'980 Patent, entitled "Semiconductor Interconnect Formed Over an Insulation and Having Moisture Resistant Material." A copy of the RE'980 Patent is attached hereto as Exhibit G.

59. IP Bridge owns by assignment the entire right, title, and interest in and to the RE'980 Patent, including the right to sue and recover damages, including damages for past infringement.

60. The RE'980 Patent is valid and enforceable under United States Patent Laws.

61. Defendants have had knowledge of the RE'980 Patent at least by virtue of the filing of the original Complaint in this action.

62. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 18, 19, 30-36 and 47-51 of the RE'980 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Broadcom's BCM4334, BCM43224, LSI B64002, LSI SAS3108, LSI SF2281 semiconductor products, and each and every Broadcom product incorporating the same or equivalent accused structure or made using the same or equivalent process, including without limitation Broadcom's 28nm, 40nm, and 65nm process node products, which, on information and belief, include products with the product numbers or names BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791,

BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334, BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM21892, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461, BCM3471, BCM3472, BCM4313, BCM43142, BCM4322, BCM43241, BCM4325, BCM4329, BCM4330, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752, BCM47521, BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, XLP® 800 Series Processors, XLP® 200 Series Processors, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G,

PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G, PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G, PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G, PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, LSI 9380-8e, that meet every limitation of at least the above-identified claims ("the RE'980 Accused Products"). For example, on information and belief, the RE'980 Accused Products infringe at least claims 18, 19, 30-36 and 47-51 of the RE'980 Patent because, at a minimum, they comprise a semiconductor substrate, an interlayer insulating film, a metal wire layer, a surface protecting film including a first dielectric film and a second dielectric film, and a bonding pad, all of which are arranged in the manner recited in the above-identified claims.

63. Defendants' actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 18, 19, 30-36 and 47-51 of the RE'980 Patent by actively encouraging acts of direct infringement, and Defendants know (or believe that there is a high probability that, but are taking deliberate steps to avoid knowing, including by not

adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as their foundry subcontractors, to manufacture and/or import into the United States the RE'980 Accused Products, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to make, use, sell, offer for sale, and/or import into the United States the RE'980 Accused Products and products that incorporate the RE'980 Accused Products. For example, Defendants' product literature for the RE'980 Accused Products, including Reference Integration Notes, instructs and encourages Defendants' customers and other third parties to integrate the RE'980 Accused Products into products sold, offered for sale, and/or imported into the United States.

64. Defendants' infringement of the RE'980 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

65. IP Bridge has been damaged by Defendants' infringement of the RE'980 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law. The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

66. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants' infringement of the RE'980 Patent, including without limitation not less than a reasonable royalty.

FOURTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 7,126,174

67. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-66 of this First Amended Complaint.

68. On October 24, 2006, the USPTO duly and legally issued the ’174 Patent, entitled “Semiconductor Device and Method of Manufacturing the Same.” A copy of the ’174 Patent is attached hereto as Exhibit H.

69. IP Bridge owns by assignment the entire right, title, and interest in and to the ’174 Patent, including the right to sue and recover damages, including damages for past infringement.

70. The ’174 Patent is valid and enforceable under United States Patent Laws.

71. Defendants have had knowledge of the ’174 Patent at least by virtue of the filing of the original Complaint in this action.

72. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 4, 5, 8-12 and 14 of the ’174 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Broadcom’s BCM4334, BCM4330, BCM43224, LSI B64002, LSI SAS3108, LSI SF2281 semiconductor products, and each and every Broadcom product incorporating the same or equivalent accused structure or made using the same or equivalent process, including without limitation Broadcom’s 28nm, 40nm, 65nm, and 90nm process node products, which, on information and belief, include products with the product numbers or names BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791, BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334, BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM21892, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461,

BCM3471, BCM3472, BCM4313, BCM43142, BCM4322, BCM43241, BCM4325, BCM4329, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752, BCM47521, BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, BCM4750, PEX8696-AA50BC F, PEX8680-AA50BC F, PEX8664-AA50RBC F, PEX8649-AA50RBC F, PEX8636-AA50RBC F, PEX8625-AA50BC F, XLP® 800 Series Processors, XLP® 200 Series Processors, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G, PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G,

PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G, PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G, PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, LSI 9380-8e, that meet every limitation of at least the above-identified claims ("the '174 Accused Products"). For example, on information and belief, the '174 Accused Products infringe at least claims 1, 4, 5, 8-12 and 14 of the '174 Patent because, at a minimum, they comprise a trench isolation, a gate insulating film, a gate electrode, first and second L-shaped sidewalls, silicide layers, and an interconnection, all of which are arranged in the manner recited in the above-identified claims.

73. Defendants' actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 4, 5, 8-12 and 14 of the '174 Patent by actively encouraging acts of direct infringement, and Defendants know (or believe that there is a high probability that, but are taking deliberate steps to avoid knowing, including by not adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as their foundry subcontractors, to manufacture and/or import into the United States the '174

Accused Products, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to make, use, sell, offer for sale, and/or import into the United States the ’174 Accused Products and products that incorporate the ’174 Accused Products. For example, Defendants’ product literature for the ’174 Accused Products, including Reference Integration Notes, instructs and encourages Defendants’ customers and other third parties to integrate the ’174 Accused Products into products sold, offered for sale, and/or imported into the United States.

74. Defendants’ infringement of the ’174 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys’ fees.

75. IP Bridge has been damaged by Defendants’ infringement of the ’174 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law. The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

76. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants’ infringement of the ’174 Patent, including without limitation not less than a reasonable royalty.

FIFTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 8,354,726

77. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-76 of this First Amended Complaint.

78. On January 15, 2013, the USPTO duly and legally issued the ’726 Patent, entitled “Semiconductor Device and Method for Fabricating the Same.” A copy of the ’726 Patent is attached hereto as Exhibit I.

79. IP Bridge owns by assignment the entire right, title, and interest in and to the ’726 Patent, including the right to sue and recover damages, including damages for past infringement.

80. The ’726 Patent is valid and enforceable under United States Patent Laws.

81. Defendants have had knowledge of the ’726 Patent at least by virtue of the filing of the original Complaint in this action.

82. Defendants have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 4, 8-10, 17-24, 26-28, 43, 46, 49, 50, and 52-62 of the ’726 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Broadcom’s BCM4334, BCM43224, LSI B64002, LSI SAS3108 semiconductor products, and each and every Broadcom product incorporating the same or equivalent accused structure, or made using the same or equivalent process, including without limitation Broadcom’s 28nm, 40nm, and 65nm process node products, which, on information and belief, include products with the product numbers or names BCM23550, BCM11140, BCM15700, BCM2048, BCM2049, BCM2070, BCM20702, BCM20702HA, BCM20702HB, BCM20703, BCM2070B, BCM20710, BCM20730, BCM20733, BCM20733HA, BCM2074x, BCM2075, BCM2077x, BCM20791, BCM20792, BCM20793, BCM20795, BCM2085, BCM2091, BCM2091C0, BCM2093, BCM21331, BCM21334, BCM2153, BCM21551, BCM21553, BCM2157, BCM21654, BCM21664, BCM2763, BCM28145, BCM28155, BCM2930, BCM2940, BCM3123, BCM3124, BCM3127, BCM3128, BCM3325, BCM3383, BCM3461, BCM3471, BCM3472, BCM4313, BCM43142, BCM4322, BCM43241, BCM4325, BCM4329, BCM4330, BCM43340, BCM43341, BCM43342, BCM4335, BCM4551, BCM4704, BCM4707, BCM4708, BCM4708x, BCM4709, BCM4716, BCM4717, BCM4718, BCM4751, BCM47511, BCM4752, BCM47521,

BCM4760, BCM53010, BCM53115, BCM53125, BCM53134, BCM54380, BCM54382, BCM54684, BCM59001, BCM68620, BCM7023, BCM7043, BCM7229, BCM7230, BCM7231, BCM7241, BCM7242, BCM7358, BCM7364, BCM7399, BCM7405, BCM7422, BCM7424, BCM7425, BCM7428, BCM7429, BCM7435, BCM7445, BCM7542, BCM7552, BCM7574, BCM7581, BCM7582, BCM7583, BCM7584, BCM7592, BCM82004, BCM82040, BCM82328, BCM82381, BCM82790, BCM84145, BCM84146, BCM84147, BCM84148, BCM84750 series, BCM84756, BCM84833, BCM84834, BCM84848, BCM8953x, BCM92070, NLA12000 series, XLP® 800 Series Processors, XLP® 200 Series Processors, LSI SF2281, PEX9712-AA80BI G, PEX9716-AA80BC G, PEX9733-AA80BC G, PEX9749-AA80BC G, PEX9765-AA80BC G, PEX9781-AA80BI G, PEX9797-AA80BC G, PEX8712-AA80BC G, PEX8712-BA80BC G, PEX8712-CA80BC G, PEX8713-BA80BC G, PEX8713-CA80BC G, PEX8714-AA80BI G, PEX8714-BA80BI G, PEX8715-BA80BI G, PEX8716-AA80BC G, PEX8716-BA80BC G, PEX8716-CA80BC G, PEX8717-BA80BC G, PEX8717-CA80BC G, PEX8718-AA80BI G, PEX8718-BA80BI G, PEX8719-BA80BI G, PEX8724-AA80BC G, PEX8724-BA80BC G, PEX8724-CA80BC G, PEX8725-BA80BC G, PEX8725-CA80BC G, PEX8732-AA80BC G, PEX8732-BA80BC G, PEX8732-CA80BC G, PEX8733-BA80BC G, PEX8733-CA80BC G, PEX8734-AA80BI G, PEX8734-BA80BI G, PEX8735-BA80BI G, PEX8747-AA80BC G, PEX8747-AA80BFBC G, PEX8747-AA80FBC G, PEX8747-BA80BC G, PEX8747-BA80BFBC G, PEX8747-BA80FBC G, PEX8747-CA80BC G, PEX8747-CA80BFBC G, PEX8747-CA80FBC G, PEX8748-AA80BC G, PEX8748-BA80BC G, PEX8748-CA80BC G, PEX8749-AA80BC G, PEX8749-BA80BC G, PEX8749-CA80BC G, PEX8750-AA80BI G, PEX8750-BA80BI G, PEX8751-BA80BI G, PEX8764-AA80BI G, PEX8764-BA80BI G, PEX8765-BA80BI G, PEX8780-AA80BI G, PEX8780-BA80BI G, PEX8781-BA80BI G,

PEX8796-AA80BI G, PEX8796-BA80BI G, PEX8797-BA80BI G, Vortex Gearbox series including AVSP-1104, Vortex Signal Integrity series including AVSP-4412 and AVSP-8801, LSI TrueStore SoCs including RC5100, SerDes core products (25G, 30G and 32G), NAS7715-AABC F, NAS7820-AABC F, NAS7821-AABC F, NAS7825-AABC F, LSI CMUSE-B2B2-L, LSI TrueStore RC2500, LSI TrueStore RC8000, LSI TrueStore PHY8000, LSI 9361-4i, LSI 9361-8i, LSI 9380-4i4e, LSI 9380-8e, that meet every limitation of at least the above-identified claims ("the '726 Accused Products"). For example, on information and belief, the '726 Accused Products infringe at least claims 1, 4, 8-10, 17-24, 26-28, 43, 46, 49, 50 and 52-62 of the '726 Patent because, at a minimum, they comprise a first active region, a first gate electrode, a first and second side-wall, an auxiliary pattern or a second gate electrode, a stress-containing insulating film, and a first side-wall insulating film, all of which are arranged in the manner recited in the above-identified claims.

83. Defendants' actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 4, 8-10, 17-24, 26-28, 43, 46, 49, 50 and 52-62 of the '726 Patent by actively encouraging acts of direct infringement, and Defendants know (or believe that there is a high probability that, but are taking deliberate steps to avoid knowing, including by not adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as its foundry subcontractors, to manufacture and/or import into the United States the '726 Accused Products, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to make, use, sell, offer for sale, and/or import into the United States the '726 Accused Products and products that incorporate the '726 Accused Products. For example, Defendants' product literature for the '726 Accused Products,

including Reference Integration Notes, instructs and encourages Defendants' customers and other third parties to integrate the '726 Accused Products into products sold, offered for sale, and/or imported into the United States.

84. Defendants' infringement of the '726 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

85. IP Bridge has been damaged by Defendants' infringement of the '726 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law. The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

86. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants' infringement of the '726 Patent, including without limitation not less than a reasonable royalty.

SIXTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. RE43,729

87. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-86 of this First Amended Complaint.

88. On October 9, 2012, the USPTO duly and legally issued the RE'729 Patent, entitled "Processor Which Can Favorably Execute a Rounding Process Composed of Positive Conversion and Saturated Calculation Processing." A copy of the RE'729 Patent is attached hereto as Exhibit J.

89. IP Bridge owns by assignment the entire right, title, and interest in and to the RE'729 Patent, including the right to sue and recover damages, including damages for past infringement.

90. The RE'729 Patent is valid and enforceable under United States Patent Laws.

91. Defendants have had knowledge of the RE'729 Patent at least by virtue of the filing of the original Complaint in this action.

92. Defendants, individually and/or jointly, have infringed and are infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claim 21 of the RE'729 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, BCM11xxx series (including without limitation BCM11311, BCM11140); BCM2xxx and BCM2xxxx series (including without limitation BCM21553, BCM2836, BCM21654, BCM21654G, BCM21663, BCM21664T, BCM23550, BCM28145, BCM28155, BCM28150, BCM2835, BCM2836); BCM4xxx and BCM4xxxx series (including without limitation BCM4707, BCM4708, BCM4709, BCM47094, BCM47452); BCM53xxx (including without limitation BCM5301x, BCM5333x, BCM5334x, BCM5340x and BCM5341x series); BCM56xxx series (including without limitation BCM56060, BCM56160); BCM58xxx series (including without limitation BCM58300, BCM58305, BCM5830x series, BCM58525, BCM5862x series); BCM63xxx series (including without limitation BCM63138); BCM8xxxx series (including without limitation BCM88312), AXE4500 series, AXM5500 series, and Broadcom wearable system-on-a-chip (SoC), and each and every semiconductor product that comprises a Cortex A7, A9, A12, A15, or A17 processor core and/or supports the ARMv7 or ARM v7-A instruction sets with Advanced SIMD instruction set extension, that meet every limitation of at least the above-identified claim ("the RE'729 Accused Products"). For example, the RE'729 Accused Products infringe at least claim 21 of the RE'729 Patent because, at a minimum, they comprise a detecting unit for detecting whether an instruction to be decoded is a predetermined instruction and a rounding unit

for rounding, when the detecting unit is detecting that the instruction is the predetermined instruction, a signed m-bit integer stored at an operand designated by the predetermined instruction to a value expressed as an unsigned s-bit integer, all of which are arranged in the manner recited in the above-identified claim.

93. Defendants' actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claim 21 of the RE'729 Patent by actively encouraging acts of direct infringement, and Defendants know (or believe that there is a high probability that, but are taking deliberate steps to avoid knowing, including by not adequately investigating the activities of their foundry subcontractors or the intellectual property rights of IP Bridge), that they are inducing infringement by (a) contracting with and instructing others, such as their foundry subcontractors, to manufacture and/or import into the United States the RE'729 Accused Products, (b) encouraging and instructing other third parties, including OEMs, distributors, and other third parties, to make, use, sell, offer for sale, and/or import into the United States the RE'729 Accused Products and products that incorporate the RE'729 Accused Products. For example, Defendants' product literature for the RE'729 Accused Products, including Reference Integration Notes, instructs and encourages Defendants' customers and other third parties to integrate the RE'729 Accused Products into products sold, offered for sale, and/or imported into the United States.

94. Defendants' infringement of the RE'729 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

95. IP Bridge has been damaged by Defendants' infringement of the RE'729 Patent and will continue to be damaged unless Defendants are enjoined by this Court. IP Bridge has suffered and continues to suffer irreparable injury for which there is on adequate remedy at law.

The balance of the hardships favors IP Bridge, and public interest is not disserved by an injunction.

96. IP Bridge is entitled to recover from Defendants all damages IP Bridge has sustained as a result of Defendants' infringement of the RE'729 Patent, including without limitation not less than a reasonable royalty.

PRAYER FOR RELIEF

WHEREFORE, IP Bridge prays for a judgment in its favor and against Defendants and respectfully requests the following relief:

1. A judgment declaring that Defendants have infringed one or more claims of each of the Asserted Patents in this litigation pursuant to 35 U.S.C. §§ 271(a), 271(b), and/or 271(g);

2. A judgment pursuant to 35 U.S.C. §283 preliminary and permanently enjoining Defendants, their officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from continued acts of direct or indirect infringement of any claim of the Asserted Patents;

3. A judgment requiring Defendants to make an accounting of damages resulting from Defendants' infringement of the Asserted Patents;

4. A judgment awarding IP Bridge its damages resulting from Defendants' infringement of the Asserted Patents, and increasing such damages pursuant to 35 U.S.C. § 284 because of the willful and deliberate nature of Defendants' conduct;

5. A judgment requiring Defendants to pay IP Bridge costs, expenses, and pre-judgment and post-judgment interest for Defendants' infringement of each of the Asserted Patents;

6. A judgment finding that this is an exceptional case and awarding IP Bridge's attorneys' fees pursuant to 35 U.S.C. § 285;

7. Such further necessary and proper relief under 28 U.S.C. § 2202; and

8. Such other relief as the Court deems just and proper.

Dated: May 27, 2016

/s/ Melissa R. Smith

Melissa R. Smith
GILLAM & SMITH, LLP
TX State Bar No. 24001351
303 S. Washington Ave.
Marshall, Texas 75670
Telephone: (903) 934-8450
Facsimile: (903) 934-9257
melissa@gillamsmithlaw.com

Andrew N. Thomases
(CA Bar No. 177339)
(Eastern District of Texas Member)
Andrew T. Radsch
(CA Bar No. 303665)
(Eastern District of Texas Member)
ROPES & GRAY LLP
1900 University Avenue, 6th Floor
East Palo Alto, CA 94303-2284
Telephone: (650) 617-4000
Facsimile: (650) 617-4090
andrew.thomases@ropesgray.com
andrew.radsch@ropesgray.com

Hiroyuki Hagiwara
(NY Bar No. 3063690)
(Eastern District of Texas Member)
Han Xu
(NY Bar No. 5089438)
(Eastern District of Texas Member)
ROPES & GRAY LLP
JP Tower, 30th Floor
2-7-2, Marunouchi
Chiyoda-ku , Tokyo 100-7030, Japan
Telephone: +81 3 6259 3500
Facsimile: +81 3 6259 3501
hiroyuki.hagiwara@ropesgray.com
han.xu@ropesgray.com

Alexander E. Middleton
(NY Bar No. 4797114)
(Eastern District of Texas Member)
ROPES & GRAY LLP
1211 Avenue of the Americas
New York, NY 10036
(212) 596-9000
(212) 596-9090
alexander.middleton@ropesgray.com

Attorneys for Godo Kaisha IP Bridge 1

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who have consented to electronic service, on May 27, 2016.

/s/ Melissa R. Smith
Melissa R. Smith