HARMEET K. DHILLON (SBN: 207873)
harmeet@dhillonlaw.com
NITOJ P. SINGH (SBN: 265005)
nsingh@dhillonlaw.com
DHILLON LAW GROUP INC.
177 Post Street, Suite 700
San Francisco, California 94108
Telephone: (415) 433-1700
Facsimile: (415) 520-6593

Attorneys for Plaintiff Konda Technologies, Inc.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

KONDA TECHNOLOGIES, INC., a California corporation,

Plaintiff,

v.

FLEX LOGIX TECHNOLOGIES, INC.,

Defendant.

CASE NO. 5:18-CV-7581

COMPLAINT FOR:

1. **Unfair Business Practices**
2. **Infringement of U.S. Patent No. 8,269,523**
3. **Infringement of U.S. Patent No. 8,898,611**
4. **Infringement of U.S. Patent No. 9,529,958**
5. **Infringement of U.S. Patent No. 10,003,553**
6. **Infringement of U.S. Patent No. 10,050,904**

JURY TRIAL DEMANDED

Plaintiff Konda Technologies, Inc. ("Konda Tech"), by and through its undersigned counsel, hereby asserts as follows against Defendant Flex Logix Technologies, Inc. ("Flex Logix"). Upon information and belief, Konda Tech alleges as follows:

NATURE OF THE ACTION

1. This is a civil action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

2. As set forth in more detail below, Flex Logix has been infringing United States Patent Nos. 8,269,523 (the "'523 patent"); 8,898,611 (the "'611 patent"); 9,529,958 (the "'958 patent"); 10,003,553 (the "'553 patent") and 10,050,904 (the "'904 patent") (collectively, the "patents-in-suit"), and continue to do so through the present date.

PARTIES

3. Konda Tech is a California corporation with its principle place of business in San Jose, California.

4. Upon information and belief, Flex Logix is a Delaware corporation registered to do business in California, and with its principle place of business in Mountain View, California

JURISDICTION AND VENUE

5. This Court has subject matter jurisdiction over patent infringement Claims II–VI pursuant to 28 U.S.C. §§ 1331 and 1338(a), and the Court has supplemental jurisdiction over state law Claim I pursuant to 28 U.S.C. § 1367.

6. This Court has personal jurisdiction over Flex Logix because (a) it has committed the acts of patent infringement complained of herein in this State and this District, and/or (b) it has directed its acts of infringement and other unlawful acts complained of herein at this State and this District.

7. This Court has personal jurisdiction over Flex Logix for the additional reason that it has engaged in systematic and continuous contacts with this State and this District by, *inter alia*, regularly conducting and soliciting business in this State and this District, and deriving

substantial revenue from products and/or services provided to persons in this State and this District.

8. Venue is proper in this District under 28 U.S.C. § 1391(b) because a substantial part of the acts complained of herein occurred in this District, Flex Logix transacts business in this District, Flex Logix resides in this District, and/or the property that is the subject of this action is situated in this District.

9. Venue is proper in this District under 28 U.S.C. §§ 1391(c)–(d) and 1400(b) because (i) Flex Logix resides in this District; and (ii) Flex Logix has committed acts of infringement and has a regular and established place of business in this District.

INTRADISTRICT ASSIGNMENT

10. Pursuant to Local Rule 3-5(b), Konda Tech alleges that assignment to the San Jose Division is proper under Local Rule 3-2(e) because Plaintiff and Defendant have their principal places of business and/or reside in the San Jose Division, as alleged *supra* at paragraphs 3–4.

FACTUAL BACKGROUND

11. Konda Tech was founded by Dr. Venkat Konda ("Dr. Konda") in 2007. Dr. Konda is a pioneer in field-programmable gate array ("FPGA") routing fabric and interconnection networks technology. Konda Tech is based on Dr. Konda's work, and provides chip and system level interconnect technology solutions. Konda Tech has licensed FPGA interconnect architecture patent rights to two FPGA chip vendors, the first of which has made and sold three generations of chips. Dr. Konda has a Ph.D. in Computer Science and Engineering from the University of Louisville, and has been granted eleven patents in the space.

12. In or around January 2009, Dr. Konda was introduced to Dr. Dejan Markovic ("Dr. Markovic") by Dr. Flavio Bonomi ("Dr. Bonomi"), a VP Head of Advanced Architecture and Research at Cisco Systems, Inc. ("Cisco"). Konda Tech was one of six startups that received an oral offer for funding from Cisco that was later rescinded. Dr. Markovic knew of Cisco's

rescinded offer, and that Konda Tech was still looking for funding, and Dr. Markovic claimed that Konda Tech could receive funding through UCLA's Institute of Technology Advancement ("ITA"). Dr. Markovic was a UCLA professor focused on circuits and embedded systems (which overlaps and compliments with Konda Tech intellectual property), and involved with the ITA. Dr. Markovic was not focused on FPGA work until he met Dr. Konda.

13. Dr. Markovic was interested in Konda Tech's intellectual property ("Konda Tech IP") and suggested that Dr. Konda present before the ITA. Dr. Konda did make such a presentation on October 12, 2009. The presentation was fruitless as the ITA does not provide funding to non-UCLA related entities—a fact that should have been known to Dr. Markovic.

14. Dr. Markovic, enamored with Konda Tech IP, also asked Dr. Konda to give a seminar on the technology to Dr. Markovic's students. Among those in attendance at the October 12, 2009 seminar was Dr. Cheng C. Wang ("Dr. Wang"), a graduate student at the time. Dr. Wang grew similarly interested in Konda Tech IP.

15. In June and July 2010, Dr. Markovic called Dr. Konda, and told him that he wanted to use Konda Tech IP in two different applications for DARPA funding. Dr. Konda advised that he did not then have the time to work with Dr. Markovic. However, both times, Dr. Markovic assured Dr. Konda that he would not have to spend any time on the application, and that he would incorporate the Konda Tech IP into the application from the then published Konda Tech WIPO patents. Dr. Markovic assured Dr. Konda that he would take a license from Konda Tech should the DARPA grant be approved.

16. Attached hereto as Exhibits 1 and 2 are the June 23, 2010 and August 6, 2010 DARPA funding proposals (the "DARPA Proposals") that followed those conversations.

17. Both of the DARPA Proposals make clear that Konda Tech IP was at the heart of what Drs. Markovic and Wang were hoping to accomplish:

> Konda Technologies inventions with regular VLSI layouts for Benes/BFT based hierarchical networks are seminal and subsumes all the other known network topologies such as Clos networks, hypercube networks, cube-connected cycles and pyramid networks, which makes these networks implementable in a FPGA devices

> with regular structures both interconnect distribution-wise and layout-wise which is the key to exploit improved area, power, and performance of FPGA devices. The regularity of Konda hierarchical layout is also the key for its commercializability in System-on-Chip interconnect devices, FPIC devices as well.

Indeed, the proposals state that they "will make use of hierarchically routed and proprietary Konda interconnect architecture." The first DARPA Proposal further estimates that Dr. Konda and Konda Tech would complete 620 task hours of the estimate 1020 task hours for key personnel.

18. Those DARPA Proposals, replete with references to Konda Tech IP, had been rejected. However, Dr. Markovic and Dr. Wang were not dissuaded from continuing to work with Konda Tech IP.

19. In 2010, Dr. Markovic told Dr. Konda over the phone that his students, including Dr. Wang, were implementing Konda Tech IP, specifically the 2D layout, on an FPGA chip. In June 2011, Drs. Markovic and Wang presented a paper at the 2011 VLSI Circuits Symposium titled "A 1.1 GOPS/mQ FPGA Chip with Hierarchical Interconnect Fabric"—based on Konda Tech IP.

20. Dr. Markovic invited Dr. Konda by email in the fall of 2013 to meet him at Stanford University while he was a Visiting Associate Professor. When they met, Dr. Konda inquired whether Dr. Markovic and his students had stopped implementing Konda Tech IP. Dr. Markovic replied yes. During the conversation Dr. Konda also shared the names of customers he was working with to license Konda Tech IP.

21. Between 2011 and 2014, Drs. Markovic and Konda had occasional phone calls, where they spoke about the progress of their respective work, but Dr. Markovic never disclosed that Konda Tech IP was the subject of Dr. Wang's June 2013 Ph.D. dissertation titled, "Building Efficient, Reconfigurable Hardware using Hierarchical Interconnects."

22. Dr. Konda met with Drs. Markovic and Wang at the home of Dr. Bonomi in January 2014. Dr. Bonomi had invited them to his home because he was in the process of forming his own startup, and needed to license Konda Tech IP. Dr. Bonomi was looking for implementation help from Drs. Markovic and Wang. Over the course of their discussions, Drs.

Markovic and Wang stated that they were looking for funding for their separate startup, but when queried, refused to disclose the technological focus of their startup. Cryptically, Dr. Markovic later stated that he *may* need to license Konda Tech IP for their separate startup as well.

23. A couple weeks later, Drs. Markovic and Wang published a paper titled "A Multi-Granularity FPGA with Hierarchical Interconnects for Efficient and Flexible Mobile Computing"—again, based on Konda Tech IP—at the 2014 International Solid State Circuits Conference (the "ISSCC paper"). Though publishing at secondary conferences and journals, Drs. Markovic and Wang never attended or published any papers at the International Symposium on FPGAs held annually in Monterey, California. This is the primary FPGA conference, and one they know Dr. Konda attends every year.

24. The ISSCC paper is attached hereto as Exhibit 3.

25. The ISSCC paper describes and demonstrates technologies that were invented by Dr. Konda, monetized by Konda Tech, and the subject of the patents-in-suit.

26. Drs. Markovic and Wang's conduct make clear that they employed subterfuge and deceit to gain access to Konda Tech IP, develop their fraudulent credibility in the technology through publications based on Konda Tech IP, and then used Konda Tech IP to launch their own company—Flex Logix.

27. Drs. Markovic and Wang ultimately co-founded Flex Logix in February 2014.

28. Dr. Konda only learned of Drs. Markovic and Wang's above-referenced publications, dissertation, and the formation of Flex Logix in December 2015, when advised of the same by Dr. Vaughn Betz, a University of Toronto professor, when he asked if Flex Logix was using Konda Tech IP.

29. Flex Logix touts the ISSCC paper on its website as describing Flex Logix's "new, patented interconnect, XFLX™." http://www.flex-logix.com/fpga-tutorial/.

FIRST CAUSE OF ACTION

Unfair Business Practices

30. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

31. Flex Logix's patent infringement, and other tortious behavior, as described above and below in the causes of action listed in this Complaint, all constitute unfair and unlawful business practices pursuant to California Business & Professions Code Section 17200 *et seq.*

32. The unlawful conduct described herein resulted in economic harm to Konda Tech.

33. As a direct and proximate result of their acts mentioned herein, Flex Logix has received and continues to receive ill-gotten gains belonging to Konda Tech.

34. Konda Tech is entitled to restitution for its losses in an amount to be determined.

35. Because the conduct alleged herein is ongoing, and there is no indication that Flex Logix will cease its unlawful conduct described herein, Konda Tech requests that this Court enjoin Flex Logix from further violations of California's laws.

SECOND CAUSE OF ACTION

Infringement of Patent No. 8,269,523

36. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

37. The '523 patent, entitled "VLSI Layouts of Fully Connected Generalized Networks," was duly and lawfully issued on September 18, 2012. A true and correct copy of the '523 patent is attached to this Complaint as Exhibit 4.

38. Konda Tech is the owner of all rights, title, and interest in the '523 patent, including the right to bring this suit for injunctive relief and damages.

39. Konda Tech has the exclusive right to make, use, sell, and offer to sell any product embodying the '523 patent throughout the United States, and to import any product embodying the '523 patent into the United States.

40. Konda Tech has commercially exploited the ’523 patent by licensing the underlying technology to companies who, like Flex Logix, wish to make use of Dr. Konda’s inventions disclosed in the ’523 patent.

41. The ’523 patent is valid and enforceable.

42. Upon information and belief, Flex Logix has had knowledge of Konda, the Konda Tech IP, the ’523 patent, and Konda Tech’s commercial exploitation of the ’523 patent at least as early as the issuance of the ’523 patent.

43. Flex Logix has been aware of the ’523 patent since at least as early as the filing of this Complaint.

44. Flex Logix has infringed, and continues to infringe, literally and/or through the doctrine of equivalents, one or more claims of the ’523 patent, including but not limited to claim 1, pursuant to 35 U.S.C. § 271(a), by making, using, selling, offering to sell, and/or importing within the United States, without authority, certain FPGA devices (“Accused FPGA Devices”).

45. On information and belief, the Accused FPGA Devices, such as an integrated circuit device comprising a plurality of sub-integrated circuit blocks and a routing network. Flex Logix infringed and continues to infringe at least claim 1 of the ’523 patent for at least the following reasons:

46. Flex Logix’s Accused FPGA Devices are integrated circuit devices.

47. On information and belief, Flex Logix’s Accused FPGA Devices have a plurality of sub-integrated circuit blocks and a routing network, and said each plurality of sub-integrated circuit blocks comprising a plurality of inlet links and a plurality of outlet links.

48. On information and belief, Flex Logix’s Accused FPGA Devices with said routing network comprising of a plurality of stages y, in each said sub-integrated circuit block, starting from the lowest stage of 1 to the highest stage of y, where y.gtoreq.1.

49. On information and belief, Flex Logix's Accused FPGA Devices with said routing network comprising a plurality of switches of size d.times.d, where d.gtoreq.2, in each said stage and each said switch of size d.times.d having d inlet links and d outlet links.

50. On information and belief, Flex Logix's Accused FPGA Devices with said plurality of outlet links of said each sub-integrated circuit block are directly connected to said inlet links of said switches of its corresponding said lowest stage of 1, and said plurality of inlet links of said each sub-integrated circuit block are directly connected from said outlet links of said switches of its corresponding said lowest stage of 1.

51. On information and belief, Flex Logix's Accused FPGA Devices with said each sub- integrated circuit block comprising a plurality of forward connecting links connecting from switches in a lower stage to switches in its immediate succeeding higher stage, and also comprising a plurality of backward connecting links connecting from switches in a higher stage to switches in its immediate preceding lower stage.

52. On information and belief, Flex Logix's Accused FPGA Devices with said each sub- integrated circuit block comprising a plurality straight links in said forward connecting links from switches in said each lower stage to switches in its immediate succeeding higher stage and a plurality cross links in said forward connecting links from switches in said each lower stage to switches in its immediate succeeding higher stage, and further comprising a plurality of straight links in said backward connecting links from switches in said each higher stage to switches in its immediate preceding lower stage and a plurality of cross links in said backward connecting links from switches in said each higher stage to switches in its immediate preceding lower stage.

53. On information and belief, Flex Logix's Accused FPGA Devices with said plurality of sub-integrated circuit blocks arranged in a two-dimensional grid of rows and columns.

54. On information and belief, Flex Logix's Accused FPGA Devices with said all straight links are connecting from switches in each said sub-integrated circuit block are

connecting to switches in the same said sub-integrated circuit block; and said all cross links are connecting as either vertical or horizontal links between switches in two different said sub-integrated circuit blocks which are either placed vertically above or below, or placed horizontally to the left or to the right.

55. On information and belief, Flex Logix's Accused FPGA Devices with each said plurality of sub-integrated circuit blocks comprising same number of said stages and said switches in each said stage, regardless of the size of said two-dimensional grid so that each said plurality of sub- integrated circuit block with its corresponding said stages and said switches in each stage is replicable in both vertical direction or horizontal direction of said two-dimensional grid.

56. To the extent Flex Logix's Accused FPGA Devices, without more, do not directly infringe at least claim 1 of the '523 patent, Flex Logix contributes to infringement of the same under 35 U.S.C. § 271(c) inasmuch as the Infringing Products offered for sale and sold by Flex Logix are each a component of a patented machine or an apparatus used in practicing a patented process, constituting a material part of Konda's invention, knowing the same to be especially made or especially adapted for use in infringement of the '523 patent.

57. Flex Logix actively encourages its customers to use the Accused FPGA Devices in an infringing manner. For example, Flex Logix's website is replete with written directions instructing users on how to use the Accused FPGA Devices in an infringing manner. Flex Logix's website also touts the identities of customers who use the Accused FPGA Devices, including without limitation The Boeing Company, each of whom is a direct infringing inasmuch as they use the Accused FPGA Devices in the infringing manner as instructed by Flex Logix.

58. Upon information and belief, and particularly by way of the detailed documentation instructing users on how to use the Accused FPGA Devices in an infringing manner, Flex Logix has encouraged this infringement with knowledge of the '523 patent and with a specific intent to cause their users to infringe.

59. Flex Logix's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

60. Flex Logix will, on information and belief, continue to infringe, induce infringement of, and contribute to the infringement of, the '523 patent unless enjoined.

61. Flex Logix's infringement has irreparably harmed Konda Tech.

62. Flex Logix will, on information and belief, continue to irreparably harm Konda Tech unless enjoined.

63. Pursuant to 35 U.S.C. § 284, Konda Tech is entitled to damages adequate to compensate for the infringement buy in no event less than a reasonable royalty.

64. Flex Logix's infringement of the '523 patent has been willful and deliberate and, pursuant to 35 U.S.C. § 284, Konda Tech is entitled to treble damages.

65. This case is "exceptional" within the meaning of 35 U.S.C. § 285, and Konda Tech is entitled to an award of attorneys' fees.

THIRD CAUSE OF ACTION

Infringement of Patent No. 8,898,611

66. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

67. The '611 patent, entitled "VLSI Layouts of Fully Connected Generalized and Pyramid Networks with Locality Exploitation," was duly and lawfully issued on November 25, 2014. A true and correct copy of the '611 patent is attached to this Complaint as Exhibit 5.

68. Konda Tech is the owner of all rights, title, and interest in the '611 patent, including the right to bring this suit for injunctive relief and damages.

69. Konda Tech has the exclusive right to make, use, sell, and offer to sell any product embodying the '611 patent throughout the United States, and to import any product embodying the '611 patent into the United States.

70. Konda Tech has commercially exploited the ’611 patent by licensing the underlying technology to companies who, like Flex Logix, wish to make use of Dr. Konda’s inventions disclosed in the ’611 patent.

71. The ’611 patent is valid and enforceable.

72. Upon information and belief, Flex Logix has had knowledge of Konda, the Konda Tech IP, the ’611 patent, and Konda Tech’s commercial exploitation of the ’611 patent at least as early as the issuance of the ’611 patent.

73. Flex Logix has been aware of the ’611 patent since at least as early as the filing of this Complaint.

74. Flex Logix has infringed, and continue to infringe, literally and/or through the doctrine of equivalents, one or more claims of the ’611 patent, including but not limited to claim 1, pursuant to 35 U.S.C. § 271(a), by making, using, selling, offering to sell, and/or importing within the United States, without authority, the Accused FPGA devices.

75. On information and belief, Flex Logix’s Accused FPGA Devices have an electrical network on an electrical substrate. Flex Logix infringes at least claim 1 of the ’611 patent for at least the following reasons:

76. On information and belief, Flex Logix’s Accused FPGA Devices have an electrical network on an electrical substrate comprising a plurality of sub-networks corresponding to blocks arranged in a two dimensional layout for a total of $a \times b$ said sub-networks with one side of said layout having the size of a sub-networks and the other side of said layout having the size of b sub-networks where $a \geq 1$ and $b \geq 1$.

77. On information and belief, Flex Logix’s Accused FPGA Devices have said electrical network on an electrical substrate comprising at most N_1 inlet links and at most N_2 outlet links where $N_1 > 1$ and $N_2 > 1$ wherein either $N_2 = N_1 \times p_2$, $N_1 = (a \times b) \times p$, and said each sub-network comprising at most p inlet links and at most $p \times p_2$ outlet links; or

$N_1 = N_2 \times p_1$, $N_2 = (a \times b) \times p$, and said each sub-network comprising at most p outlet links and at most $p \times p_1$ inlet links.

78. On information and belief, Flex Logix's Accused FPGA Devices have said each sub-network comprising at most y stages, starting from the lowest stage of 1 to the highest stage of y, where $y \geq 1$.

79. On information and belief, Flex Logix's Accused FPGA Devices have said each stage comprising at least one switch of size $d \times d$, where $d \geq 2$ and each said switch of size $d \times d$ having d incoming links and d outgoing links.

80. On information and belief, Flex Logix's Accused FPGA Devices have said each sub-network may not be comprising the same number of said inlet links and may not be comprising the same number of said outlet links; said each sub-network may not be comprising the same number of said stages; said each stage may not be comprising the same number of switches; and said each switch in said each stage may not be of the same size d.

81. On information and belief, Flex Logix's Accused FPGA Devices have said incoming links and said outgoing links in each said switch in said each stage of said each sub-network comprising a plurality of forward connecting links connecting from switches in lower stage to said switches one of succeeding higher stages, and also comprising a plurality of backward connecting links connecting from said switches in higher stage to said switches one of preceding lower stage.

82. On information and belief, Flex Logix's Accused FPGA Devices have said forward connecting links comprising a plurality of straight links connecting from a said switch in a said stage in a said sub-network to a said switch in another stage in the same said sub-network and also comprising a plurality of cross links connecting from a said switch in a said stage in a sub-network to a said switch in another said stage in a different said sub-network.

83. On information and belief, Flex Logix's Accused FPGA Devices have said backward connecting links comprising a plurality of straight links connecting from a said switch

in a said stage in a said sub-network to a said switch in another said stage in the same said sub-network and also comprising a plurality of cross links connecting from a said switch in a said stage in a said sub-network to a said switch in another said stage in a different said sub-network.

84. On information and belief, Flex Logix's Accused FPGA Devices have said all cross links are connecting as either vertical or horizontal links between said switches between each two different said sub-networks, which are either placed vertically above or below, or placed horizontally to the left or to the right.

85. To the extent Flex Logix's Accused FPGA Devices, without more, do not directly infringe at least claim 1 of the '611 patent, Flex Logix contributes to infringement of the same under 35 U.S.C. § 271(c) inasmuch as the Infringing Products offered for sale and sold by Flex Logix are each a component of a patented machine or an apparatus used in practicing a patented process, constituting a material part of Konda's invention, knowing the same to be especially made or especially adapted for use in infringement of the '611 patent.

86. Flex Logix actively encourages its customers to use the Accused FPGA Devices in an infringing manner. For example, Flex Logix's website is replete with written directions instructing users on how to use the Accused FPGA Devices in an infringing manner. Flex Logix's website also touts the identities of customers who use the Accused FPGA Devices, including without limitation The Boeing Company, each of whom is a direct infringing inasmuch as they use the Accused FPGA Devices in the infringing manner as instructed by Flex Logix.

87. Upon information and belief, and particularly by way of the detailed documentation instructing users on how to use the Accused FPGA Devices in an infringing manner, Flex Logix has encouraged this infringement with knowledge of the '611 patent and with a specific intent to cause their users to infringe.

88. Flex Logix's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

89. Flex Logix will, on information and belief, continue to infringe, induce infringement of, and contribute to the infringement of, the ’611 patent unless enjoined.

90. Flex Logix’s infringement has irreparably harmed Konda Tech.

91. Flex Logix will, on information and belief, continue to irreparably harm Konda Tech unless enjoined.

92. Pursuant to 35 U.S.C. § 284, Konda Tech is entitled to damages adequate to compensate for the infringement buy in no event less than a reasonable royalty.

93. Flex Logix’s infringement of the ’611 patent has been willful and deliberate and, pursuant to 35 U.S.C. § 284, Konda Tech is entitled to treble damages.

94. This case is “exceptional” within the meaning of 35 U.S.C. § 285, and Konda Tech is entitled to an award of attorneys’ fees.

FOURTH CAUSE OF ACTION

Infringement of Patent No. 9,529,958

95. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

96. Konda Tech incorporates all of the above paragraphs as though fully set forth herein.

97. The ’958 patent, entitled “VLSI Layouts of Fully Connected Generalized and Pyramid Networks with Locality Exploitation,” was duly and lawfully issued on December 27, 2016. A true and correct copy of the ’958 patent is attached to this Complaint as Exhibit 6.

98. Konda Tech is the owner of all rights, title, and interest in the ’958 patent, including the right to bring this suit for injunctive relief and damages.

99. Konda Tech has the exclusive right to make, use, sell, and offer to sell any product embodying the ’958 patent throughout the United States, and to import any product embodying the ’958 patent into the United States.

100. Konda Tech has commercially exploited the ’958 patent by licensing the underlying technology to companies who, like Flex Logix, wish to make use of Dr. Konda’s inventions disclosed in the ’958 patent.

101. The ’958 patent is valid and enforceable.

102. Upon information and belief, Flex Logix has had knowledge of Konda, the Konda Tech IP, the ’958 patent, and Konda Tech’s commercial exploitation of the ’958 patent at least as early as the issuance of the ’958 patent.

103. Flex Logix has been aware of the ’958 patent since at least as early as the filing of this Complaint.

104. Flex Logix has infringed, and continue to infringe, literally and/or through the doctrine of equivalents, one or more claims of the ’958 patent, including but not limited to claim 1, pursuant to 35 U.S.C. § 271(a), by making, using, selling, offering to sell, and/or importing within the United States, without authority, the Accused FPGA devices.

105. On information and belief, Flex Logix’s Accused FPGA Devices, have a two-dimensional layout of hierarchical routing network implemented in a non-transitory medium. Flex Logix infringe at least claim 1 of the ’958 patent for at least the following reasons:

106. On information and belief, Flex Logix’s Accused FPGA Devices have a total of $a \times b$ blocks with one side of said layout having the size of “a” blocks and the other side of said layout having the size of “b” blocks where $a \geq 1$and $b \geq 1$.

107. On information and belief, Flex Logix’s Accused FPGA Devices have said routing network comprising a total of N_1 inlet links and a total of N_2 outlet links and y hierarchical stages where $y \geq 1$, $N_1 > 1$ and $N_2 > 1$ wherein either $N_2 = N_1 \times p_2$, $N_1 = (a \times b) \times p$, and said each block comprising at most p inlet links and at most $p \times p_2$ outlet links; or $N_1 = N_2 \times p_1$, $N_2 = (a \times b) \times p$, and said each block comprising at most p outlet links and at most $p \times p_1$ inlet links, where $p \geq 1$, $p_1 \geq 1$ and $p_2 \geq 1$.

108. On information and belief, Flex Logix's Accused FPGA Devices have said each stage comprising at least one switch of size $d \times d$, where $d \geq 2$ and each said switch of size $d \times d$ having d incoming links and d outgoing links.

109. On information and belief, Flex Logix's Accused FPGA Devices have said each block may not be comprising the same number of said inlet links and may not be comprising the same number of said out links; said each block may not be comprising the same number of said stages; said each stage may not be comprising the same number of switches; and said each switch in said each stage may not be of the same size d, Said inlet links directly connected to one or more said incoming links, and said outgoing links directly connected to one or more said outlet links.

110. On information and belief, Flex Logix's Accused FPGA Devices have said incoming links and outgoing links in each switch in said each stage of said each block comprising a plurality of forward connecting links connected from switches in lower stage to switches in the immediate succeeding higher stage, and also comprising a plurality of backward connecting links connected from switches in higher stage to switches in the immediate preceding lower stage.

111. On information and belief, Flex Logix's Accused FPGA Devices have said forward connecting links comprising a plurality of straight links connected from a switch in a stage in a block to a switch in another stage in the same block and also comprising a plurality of cross links connected from a switch in a stage in a block to a switch in another stage in a different block.

112. On information and belief, Flex Logix's Accused FPGA Devices have said backward connecting links comprising a plurality of straight links connected from a switch in a stage in a block to a switch in another stage in the same block and also comprising a plurality of cross links connected from a switch in a stage in a block to a switch in another stage in a different block.

113. On information and belief, Flex Logix's Accused FPGA Devices have said all cross links are connected as either vertical or horizontal links between switches in two different said blocks.

114. To the extent Flex Logix's Accused FPGA Devices, without more, do not directly infringe at least claim 1 of the '958 patent, Flex Logix contributes to infringement of the same under 35 U.S.C. § 271(c) inasmuch as the Infringing Products offered for sale and sold by Flex Logix are each a component of a patented machine or an apparatus used in practicing a patented process, constituting a material part of Konda's invention, knowing the same to be especially made or especially adapted for use in infringement of the '958 patent.

115. Flex Logix actively encourages its customers to use the Accused FPGA Devices in an infringing manner. For example, Flex Logix's website is replete with written directions instructing users on how to use the Accused FPGA Devices in an infringing manner. Flex Logix's website also touts the identities of customers who use the Accused FPGA Devices, including without limitation The Boeing Company, each of whom is a direct infringing inasmuch as they use the Accused FPGA Devices in the infringing manner as instructed by Flex Logix.

116. Upon information and belief, and particularly by way of the detailed documentation instructing users on how to use the Accused FPGA Devices in an infringing manner, Flex Logix has encouraged this infringement with knowledge of the '958 patent and with a specific intent to cause their users to infringe.

117. Flex Logix's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

118. Flex Logix will, on information and belief, continue to infringe, induce infringement of, and contribute to the infringement of, the '958 patent unless enjoined.

119. Flex Logix's infringement has irreparably harmed Konda Tech.

120. Flex Logix will, on information and belief, continue to irreparably harm Konda Tech unless enjoined.

121. Pursuant to 35 U.S.C. § 284, Konda Tech is entitled to damages adequate to compensate for the infringement buy in no event less than a reasonable royalty.

122. Flex Logix's infringement of the '958 patent has been willful and deliberate and, pursuant to 35 U.S.C. § 284, Konda Tech is entitled to treble damages.

123. This case is "exceptional" within the meaning of 35 U.S.C. § 285, and Konda Tech is entitled to an award of attorneys' fees.

FIFTH CAUSE OF ACTION

Infringement of Patent No. 10,003,553

124. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

125. The '553 patent, entitled "Optimization of Multi-stage Hierarchical Networks for Practical Routing Applications," was duly and lawfully issued on June 19, 2018. A true and correct copy of the '553 patent is attached to this Complaint as Exhibit 7.

126. Konda Technologies is the owner of all rights, title, and interest in the '553 patent, including the right to bring this suit for injunctive relief and damages.

127. Konda Tech has the exclusive right to make, use, sell, and offer to sell any product embodying the '553 patent throughout the United States, and to import any product embodying the '553 patent into the United States.

128. Konda Tech has commercially exploited the '553 patent by licensing the underlying technology to companies who, like Flex Logix, wish to make use of Dr. Konda's inventions disclosed in the '553 patent.

129. The '553 patent is valid and enforceable.

130. Upon information and belief, Flex Logix has had knowledge of Konda, the Konda Tech IP, the '553 patent, and Konda Tech's commercial exploitation of the '553 patent at least as early as the issuance of the '553 patent.

131. Flex Logix has been aware of the ’553 patent since at least as early as the filing of this Complaint.

132. Flex Logix has infringed, and continues to infringe, literally and/or through the doctrine of equivalents, one or more claims of the ’553 patent, including but not limited to claim 1, pursuant to 35 U.S.C. § 271(a), by making, using, selling, offering to sell, and/or importing within the United States, without authority, the Accused FPGA Devices.

133. On information and belief, Flex Logix’s Accused FPGA Devices have a network implemented in a non-transitory medium comprising a plurality of subnetworks and a plurality of inlet links and a plurality of outlet links. Flex Logix infringe at least claim 1 of the ’553 patent for at least the following reasons:

134. On information and belief, Flex Logix’s Accused FPGA Devices have a network implemented in a non-transitory medium comprising a plurality of subnetworks and a plurality of inlet links and a plurality of outlet links, said plurality of subnetworks arranged in a two-dimensional grid of rows and columns.

135. On information and belief, Flex Logix’s Accused FPGA Devices have each subnetwork comprising y stages, where y.gtoreq.1; and each stage comprising a switch of size d.sub.i.times.d.sub.0, where d.sub.i.gtoreq.2 and d.sub.0.gtoreq.2 and each switch of size d.sub.i.times.d.sub.0 having d.sub.i incoming links and d.sub.0 outgoing links.

136. On information and belief, Flex Logix’s Accused FPGA Devices have said inlet links are connected to one or more of said incoming links of a said switch of a said stage of a said subnetwork, and said outlet links are connected to one of said outgoing links of a said switch of a said stage of a said subnetwork.

137. On information and belief, Flex Logix’s Accused FPGA Devices have each subnetwork of the plurality of subnetworks may or may not be comprising the same number of said inlet links and may or may not be comprising the same number of said outlet links; each subnetwork of the plurality of subnetworks may or may not be comprising the same number of

said stages; each stage may or may not be comprising the same number of switches; and each switch in each stage may or may not be of the same size, each multiplexer in each stage may or may not be of the same size and Said incoming links and outgoing links in each switch in each stage of each subnetwork comprising a plurality of forward connecting links connected from switches in a stage to switches in another stage in same said subnetwork or another said subnetwork, and also comprising a plurality of backward connecting links connected from switches in a stage to switches in another stage in same subnetwork or another said subnetwork.

138. On information and belief, Flex Logix's Accused FPGA Devices have said forward connecting links comprising zero or more straight links connected from a switch in a stage in a subnetwork to a switch in another stage in the same subnetwork and also comprising zero or more cross links connected from a switch in a stage in a subnetwork to a switch in the same numbered stage in one or more other subnetworks.

139. On information and belief, Flex Logix's Accused FPGA Devices have said backward connecting links comprising zero or more straight links connected from a switch in a stage in a subnetwork to a switch in another stage in the same subnetwork; and also comprising zero or more cross links connected from a switch in a stage in a subnetwork to a switch in the same numbered stage in one or more other subnetworks.

140. To the extent Flex Logix's Accused FPGA Devices, without more, do not directly infringe at least claim 1 of the '553 patent, Flex Logix contributes to infringement of the same under 35 U.S.C. § 271(c) inasmuch as the Infringing Products offered for sale and sold by Flex Logix are each a component of a patented machine or an apparatus used in practicing a patented process, constituting a material part of Konda's invention, knowing the same to be especially made or especially adapted for use in infringement of the '553 patent.

141. Flex Logix actively encourages its customers to use the Accused FPGA Devices in an infringing manner. For example, Flex Logix's website is replete with written directions instructing users on how to use the Accused FPGA Devices in an infringing manner. Flex

Logix's website also touts the identities of customers who use the Accused FPGA Devices, including without limitation The Boeing Company, each of whom is a direct infringing inasmuch as they use the Accused FPGA Devices in the infringing manner as instructed by Flex Logix.

142. Upon information and belief, and particularly by way of the detailed documentation instructing users on how to use the Accused FPGA Devices in an infringing manner, Flex Logix has encouraged this infringement with knowledge of the '553 patent and with a specific intent to cause their users to infringe.

143. Flex Logix's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

144. Flex Logix will, on information and belief, continue to infringe, induce infringement of, and contribute to the infringement of, the '553 patent unless enjoined.

145. Flex Logix's infringement has irreparably harmed Konda Tech.

146. Flex Logix will, on information and belief, continue to irreparably harm Konda Tech unless enjoined.

147. Pursuant to 35 U.S.C. § 284, Konda Tech is entitled to damages adequate to compensate for the infringement buy in no event less than a reasonable royalty.

148. Flex Logix's infringement of the '553 patent has been willful and deliberate and, pursuant to 35 U.S.C. § 284, Konda Tech is entitled to treble damages.

149. This case is "exceptional" within the meaning of 35 U.S.C. § 285, and Konda Tech is entitled to an award of attorneys' fees.

SIXTH CAUSE OF ACTION

Infringement of Patent No. 10,050,904

150. Konda Tech incorporates by reference every allegation contained in each and every one of the above paragraphs, as though set forth fully herein.

151. The ’904 patent, entitled “VLSI Layouts of Fully Connected Generalized and Pyramid Networks with Locality Exploitation,” was duly and lawfully issued on August 14, 2018. A true and correct copy of the ’904 patent is attached to this Complaint as Exhibit 8.

152. Konda Technologies is the owner of all rights, title, and interest in the ’904 patent, including the right to bring this suit for injunctive relief and damages.

153. Konda Tech has the exclusive right to make, use, sell, and offer to sell any product embodying the ’904 patent throughout the United States, and to import any product embodying the ’904 patent into the United States.

154. Konda Tech has commercially exploited the ’904 patent by licensing the underlying technology to companies who, like Flex Logix, wish to make use of Dr. Konda’s inventions disclosed in the ’904 patent.

155. The ’904 patent is valid and enforceable.

156. Upon information and belief, Flex Logix has had knowledge of Konda, the Konda Tech IP, the ’904 patent, and Konda Tech’s commercial exploitation of the ’904 patent at least as early as the issuance of the ’904 patent.

157. Flex Logix has been aware of the ’904 patent since at least as early as the filing of this Complaint.

158. Flex Logix have infringed, and continue to infringe, literally and/or through the doctrine of equivalents, one or more claims of the ’904 patent, including but not limited to claim 1, pursuant to 35 U.S.C. § 271(a), by making, using, selling, offering to sell, and/or importing within the United States, without authority, the Accused FPGA devices.

159. On information and belief, Flex Logix’s Accused FPGA Devices have a programmable integrated circuit device comprising a plurality of programmable logic blocks and a network, and said plurality of programmable logic blocks comprising a plurality of inlet links and a plurality of outlet links; and said network further comprising a plurality of subnetworks and with each subnetwork coupled with at least one of said plurality of

programmable logic blocks; and, said plurality of subnetworks coupled with said plurality of programmable logic blocks arranged in a two-dimensional grid of rows and columns. Flex Logix infringe at least claim 1 of the '904 patent for at least the following reasons:

160. On information and belief, Flex Logix's Accused FPGA Devices have each subnetwork comprising *y* stages, where *y* > 1: and each stage comprising a switch of size $d_i \times d_0$, where $d_i \geq 2$ and $d_o \geq 2$ and each switch of size $d_i \times d_0$ having d_i incoming links and d_0 outgoing links.

161. On information and belief, Flex Logix's Accused FPGA Devices have said inlet links are connected to one or more of said incoming links of a said switch of a said stage of a said subnetwork, and said outlet links are connected to one of said outgoing links of a said switch of a said stage of a said subnetwork.

162. On information and belief, Flex Logix's Accused FPGA Devices have each subnetwork of the plurality of subnetworks comprising the same or different number of said inlet links and comprising the same or different number of said outlet links; each subnetwork of the plurality of subnetworks comprising the same or different number of said stages; each stage comprising the same or different number of switches; and each switch in each stage is of the same size or of different size, each multiplexer in each stage is of the same size or of different size.

163. On information and belief, Flex Logix's Accused FPGA Devices have said incoming links and outgoing links in each switch in each stage of each subnetwork comprising a plurality of forward connecting links connected from switches in a stage to switches in another stage in same said subnetwork or another said subnetwork, and also comprising a plurality of backward connecting links connected from switches in a stage to switches in another stage in same subnetwork or another said subnetwork.

164. On information and belief, Flex Logix's Accused FPGA Devices have said forward connecting links comprising zero or more straight links connected from a switch in a

stage in a subnetwork to a switch in another stage in the same subnetwork and also comprising zero or more cross links connected from a switch in a stage in a subnetwork to a switch in the same numbered stage or same level stage in another subnetwork.

165. On information and belief, Flex Logix's Accused FPGA Devices have said backward connecting links comprising zero or more straight links connected from a switch in a stage in a subnetwork to a switch in another stage in the same subnetwork; and also comprising zero or more cross links connected from a switch in a stage in a subnetwork to a switch in the same numbered stage or same level stage in another subnetwork.

166. To the extent Flex Logix's Accused FPGA Devices, without more, do not directly infringe at least claim 1 of the '904 patent, Flex Logix contributes to infringement of the same under 35 U.S.C. § 271(c) inasmuch as the Infringing Products offered for sale and sold by Flex Logix are each a component of a patented machine or an apparatus used in practicing a patented process, constituting a material part of Konda's invention, knowing the same to be especially made or especially adapted for use in infringement of the '904 patent.

167. Flex Logix actively encourages its customers to use the Accused FPGA Devices in an infringing manner. For example, Flex Logix's website is replete with written directions instructing users on how to use the Accused FPGA Devices in an infringing manner. Flex Logix's website also touts the identities of customers who use the Accused FPGA Devices, including without limitation The Boeing Company, each of whom is a direct infringing inasmuch as they use the Accused FPGA Devices in the infringing manner as instructed by Flex Logix.

168. Upon information and belief, and particularly by way of the detailed documentation instructing users on how to use the Accused FPGA Devices in an infringing manner, Flex Logix has encouraged this infringement with knowledge of the '904 patent and with a specific intent to cause their users to infringe.

169. Flex Logix's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

170. Flex Logix will, on information and belief, continue to infringe, induce infringement of, and contribute to the infringement of, the '904 patent unless enjoined.

171. Flex Logix's infringement has irreparably harmed Konda Tech.

172. Flex Logix will, on information and belief, continue to irreparably harm Konda Tech unless enjoined.

173. Pursuant to 35 U.S.C. § 284, Konda Tech is entitled to damages adequate to compensate for the infringement buy in no event less than a reasonable royalty.

174. Flex Logix's infringement of the '904 patent has been willful and deliberate and, pursuant to 35 U.S.C. § 284, Konda Tech is entitled to treble damages.

175. This case is "exceptional" within the meaning of 35 U.S.C. § 285, and Konda Tech is entitled to an award of attorneys' fees.

DEMAND FOR JURY TRIAL

Konda Tech hereby demands a trial by jury of all issues so triable under Federal Rule of Civil Procedure 38(b).

PRAYER FOR RELIEF

WHEREFORE, Konda Tech respectfully requests that this Court:

A. Enter judgment for Konda Tech and against Flex Logix on each of the above claims;

B. Find that United States Patent No. 8,269,523 is valid and enforceable against Flex Logix;

C. Find that Flex Logix has infringed and is infringing United States Patent No. 8,269,523;

D. Permanently enjoin Flex Logix, its officers, agents, servants, employees, and those persons acting in active concert or in participation therewith from infringing United States Patent No. 8,269,523;

E. Award Konda Tech damages sufficient to compensate it for Flex Logix's past and future infringement of United States Patent No. 8,269,523, together with costs and prejudgment interest, pursuant to 35 U.S.C. § 284;

F. Find that United States Patent No. 8,898,611 is valid and enforceable against Flex Logix;

G. Find that Flex Logix has infringed and is infringing United States Patent No. 8,898,611;

H. Permanently enjoin Flex Logix, its officers, agents, servants, employees, and those persons acting in active concert or in participation therewith from infringing United States Patent No. 8,898,611;

I. Award Konda Tech damages sufficient to compensate it for Flex Logix's past and future infringement of United States Patent No. 8,898,611, together with costs and prejudgment interest, pursuant to 35 U.S.C. § 284;

J. Find that United States Patent No. 9,529,958 is valid and enforceable against Flex Logix;

K. Find that Flex Logix has infringed and is infringing United States Patent No. 9,529,958;

L. Permanently enjoin Flex Logix, its officers, agents, servants, employees, and those persons acting in active concert or in participation therewith from infringing United States Patent No. 9,529,958;

M. Award Konda Tech damages sufficient to compensate it for Flex Logix's past and future infringement of United States Patent No. 9,529,958, together with costs and prejudgment interest, pursuant to 35 U.S.C. § 284;

N. Find that United States Patent No. 10,003,553 is valid and enforceable against Flex Logix;

O. Find that Flex Logix has infringed and is infringing United States Patent No. 10,003,553;

P. Permanently enjoin Flex Logix, its officers, agents, servants, employees, and those persons acting in active concert or in participation therewith from infringing United States Patent No. 10,003,553;

Q. Award Konda Tech damages sufficient to compensate it for Flex Logix's past and future infringement of United States Patent No. 10,003,553, together with costs and prejudgment interest, pursuant to 35 U.S.C. § 284;

R. Find that United States Patent No. 10,050,904 is valid and enforceable against Flex Logix;

S. Find that Flex Logix has infringed and is infringing United States Patent No. 10,050,904;

T. Permanently enjoin Flex Logix, its officers, agents, servants, employees, and those persons acting in active concert or in participation therewith from infringing United States Patent No. 10,050,904;

U. Award Konda Tech damages sufficient to compensate it for Flex Logix's past and future infringement of United States Patent No. 10,050,904, together with costs and prejudgment interest, pursuant to 35 U.S.C. § 284;

V. Order an accounting of damages from Flex Logix's infringement;

W. Award Konda Tech enhanced damages, up to and including trebling Konda Tech's damages, pursuant to 35 U.S.C. § 284, for Flex Logix's willful infringement of the patents-in-suit;

X. Award Konda Tech its reasonable attorneys' fees and costs of suit pursuant to 35 U.S.C. § 285 due to the exceptional nature of this case, or as otherwise permitted by law;

Y. Award Konda Tech for all damages legally and/or proximately caused to Konda Tech by Flex Logix as set forth above, including costs and prejudgment interest; and

Z. Award Konda Tech such other or additional relief as the Court deems just and proper.

Date: December 17, 2018

Respectfully submitted,

DHILLON LAW GROUP INC.

By: */s/ Nitoj P. Singh*

Nitoj P. Singh
Attorneys for Konda Technologies, Inc.