IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS

EXEGY INCORPORATED and   )
IP RESERVOIR, LLC,   )
)
       Plaintiffs,   )
)
v.   )   Case No:
)
)
ACTIV FINANCIAL SYSTEMS, INC.,   )
)
       Defendant.   )

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs, Exegy Incorporated and IP Reservoir, LLC (collectively, "EXEGY" or "Plaintiffs"), by and through their counsel, hereby file this Complaint against Activ Financial Systems, Inc. ("ACTIV" or "Defendant"), and allege as follows:

THE PARTIES

1.   Exegy Incorporated is a Delaware corporation having its principal place of business at 349 Marshal Ave., Suite 100, St. Louis, MO 63119.

2.   IP Reservoir, LLC is a Delaware limited liability company having its principal place of business at 10425 Old Olive Street Road, Suite 201, Creve Coeur, MO 63141.

3.   On information and belief, ACTIV is an Illinois corporation with a principal place of business at 120 East Liberty Drive, Suite 200, Wheaton, IL 60187.

JURISDICTION AND VENUE

4.   This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

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5.   This Court has personal jurisdiction over Defendant because Defendant has regularly transacted business in this District, has engaged in acts of infringement in this District, and is incorporated in this District.

6.   Venue is proper in this District under 28 U.S.C. § 1400(b) because Defendant has regularly transacted business in this District, has engaged in acts of infringement in this District, and is incorporated in this District.

FACTUAL BACKGROUND

A.   IP Reservoir, LLC

7.   IP Reservoir, LLC ("IPR") is a patent holding company that is the owner of the seventeen patents at issue in this litigation, set forth in Paragraphs 14-47, below ("the EXEGY Patents").

B.   Exegy Incorporated

8.   Exegy Incorporated is a leading provider of technology for high speed processing of financial information. Specifically, Exegy Incorporated markets hardware-accelerated computing appliances for real-time market data processing, using field programmable gate array ("FPGA") devices. These FPGA devices allow Exegy Incorporated's products to operate over ten times faster and more efficiently than commodity servers running software.

9.   Exegy Incorporated is the exclusive licensee of all the EXEGY Patents, in the field of processing financial market data, and maintains the right to sue infringers of the EXEGY patents who make, use, offer for sale, sell, or import products and/or services that process real-time financial market data feeds that are created by or destined for financial market data exchanges.

C.   **ACTIV Financial Systems, Inc.**

10.   ACTIV is a provider of real-time, multi-asset financial market data and solutions. To that end, ACTIV designs, manufacturers, offers for sale and sells FPGA processors that are used in systems that enable high-speed processing of financial information.

11.   ACTIV's website touts the benefits of its FPGA processors, as follows: "The performance benefits of FPGA processors are clear and now you can leverage those benefits in the delivery of market data. Unlike analytic processing which requires very fast processors, the massively parallel processing used in FPGA development are well suited for market data messages. ACTIV has spent many years of R&D perfecting this technology. ACTIV's architectural design lends itself to FPGA acceleration perfectly, from our feed handlers to core databasing. ACTIV's hardware initiatives are tackling the most intensive message feeds around the world while adding speed to the core normalized database and model that ACTIV provides via its interfaces. As a client, you can leverage the few microseconds it takes now to build a full state and value add database of direct and away feeds." http://www.activfinancial.com/low-latency/hardware-acceleration-fpga. See Exhibit 35.

12.   Exhibit 35 to this Complaint sets forth a series of screen captures from ACTIV's website that sets forth the details relating to ACTIV's products and/or services that process real-time financial market data feeds that are created by or destined for financial market data exchanges using FPGAs.

13.   ACTIV has derived and continues to derive substantial value through, among other things, sales of its FPGA processors.

   D.   EXEGY's Asserted Patents

   14.   On March 26, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,407,122 ("the '122 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '122 Patent, including all rights of recovery. A true and accurate copy of the '122 Patent is attached as Exhibit 1.

   15.   The '122 Patent is valid and enforceable.

   16.   On April 5, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,921,046 ("the '046 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '046 Patent, including all rights of recovery. A true and accurate copy of the '046 Patent is attached as Exhibit 2.

   17.   The '046 Patent is valid and enforceable.

   18.   On February 18, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,655,764 ("the '764 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '764 Patent, including all rights of recovery. A true and accurate copy of the '764 Patent is attached as Exhibit 3.

   19.   The '764 Patent is valid and enforceable.

   20.   On June 4, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,458,081 ("the '081 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and

interest in and to the '081 Patent, including all rights of recovery. A true and accurate copy of the '081 Patent is attached as Exhibit 4.

21.   The '081 Patent is valid and enforceable.

22.   On November 26, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,595,104 ("the '104 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '104 Patent, including all rights of recovery. A true and accurate copy of the '104 Patent is attached as Exhibit 5.

23.   The '104 Patent is valid and enforceable.

24.   On January 7, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,626,624 ("the '624 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '624 Patent, including all rights of recovery. A true and accurate copy of the '624 Patent is attached as Exhibit 6.

25.   The '624 Patent is valid and enforceable.

26.   On February 28, 2017, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,582,831 ("the '831 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '831 Patent, including all rights of recovery. A true and accurate copy of the '831 Patent is attached as Exhibit 7.

27.   The '831 Patent is valid and enforceable.

28.   On July 2, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,478,680 ("the '680 Patent"), entitled "High Speed Processing of

Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '680 Patent, including all rights of recovery. A true and accurate copy of the '680 Patent is attached as Exhibit 8.

29.   The '680 Patent is valid and enforceable.

30.   On December 3, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,600,856 ("the '856 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '856 Patent, including all rights of recovery. A true and accurate copy of the '856 Patent is attached as Exhibit 9.

31.   The '856 Patent is valid and enforceable.

32.   On June 6, 2017, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,672,565 ("the '565 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '565 Patent, including all rights of recovery. A true and accurate copy of the '565 Patent is attached as Exhibit 10.

33.   The '565 Patent is valid and enforceable.

34.   On January 1, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,169,814 ("the '814 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '814 Patent, including all rights of recovery. A true and accurate copy of the '814 Patent is attached as Exhibit 11.

35.   The '814 Patent is valid and enforceable.

36.   On March 13, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,916,622 ("the '622 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." EXEGY owns, by assignment, all right, title and interest in and to the '622 Patent, including all rights of recovery. A true and accurate copy of the '622 Patent is attached as Exhibit 12.

37.   The '622 Patent is valid and enforceable.

38.   On August 28, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,062,115 ("the '115 Patent"), entitled "Method and Apparatus for High-Speed Processing of Financial Market Depth Data." EXEGY owns, by assignment, all right, title and interest in and to the '115 Patent, including all rights of recovery. A true and accurate copy of the '115 Patent is attached as Exhibit 13.

39.   The '115 Patent is valid and enforceable.

40.   On July 1, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,768,805 ("the '805 Patent"), entitled "Method and Apparatus for High-Speed Processing of Financial Market Depth Data." EXEGY owns, by assignment, all right, title and interest in and to the '805 Patent, including all rights of recovery. A true and accurate copy of the '805 Patent is attached as Exhibit 14.

41.   The '805 Patent is valid and enforceable.

42.   On June 24, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,762,249 ("the '249 Patent"), entitled "Method and Apparatus for High-Speed Processing of Financial Market Depth Data." EXEGY owns, by assignment, all right, title and interest in and to the '249 Patent, including all rights of recovery. A true and accurate copy of the '249 Patent is attached as Exhibit 15.

43.   The '249 Patent is valid and enforceable.

44.   On June 2, 2015, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,047,243 ("the '243 Patent"), entitled "Method and Apparatus for Low Latency Data Distribution." EXEGY owns, by assignment, all right, title and interest in and to the '243 Patent, including all rights of recovery. A true and accurate copy of the '243 Patent is attached as Exhibit 16.

45.   The '243 Patent is valid and enforceable.

46.   On November 6, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,121,196 ("the '196 Patent"), entitled "Offload Processing of Data Packets Containing Financial Market Data." EXEGY owns, by assignment, all right, title and interest in and to the '196 Patent, including all rights of recovery. A true and accurate copy of the '196 Patent is attached as Exhibit 17.

47.   The '196 Patent is valid and enforceable.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 8,407,122

48.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

49.   The '122 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '122 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

50.   A specific embodiment of the invention described and claimed in the '122 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient

software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

51.   Defendant has directly infringed one or more claims of the '122 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

52.   Defendant has directly infringed at least claim 1 of the '122 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

53.   The ACTIV Accused Products satisfy each and every limitation recited in claim 1 of the '122 Patent. See Exhibit 18.

54.   As a direct and proximate result of Defendant's infringement of the '122 Patent, EXEGY has been damaged in an amount yet to be determined.

55.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 7,921,046

56.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

57.   The '046 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '046 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

58.   A specific embodiment of the invention described and claimed in the '046 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

59.   Defendant has directly infringed one or more claims of the '046 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

60.   Defendant has directly infringed at least claims 1 of the '046 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

61.   The ACTIV Accused Products satisfy each and every limitation recited in claim 1 of the '046 Patent. See Exhibit 19.

62.   As a direct and proximate result of Defendant's infringement of the '046 Patent, EXEGY has been damaged in an amount yet to be determined.

63.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. 8,655,764

64.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

65.   The '764 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '764 Patent teaches a variety of data processing pipelines

implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

66.   A specific embodiment of the invention described and claimed in the '764 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

67.   Defendant has directly infringed one or more claims of the '764 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

68.   Defendant has directly infringed at least claim 5 of the '764 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

69.   The ACTIV Accused Products satisfy each and every limitation recited in claim 5 of the '746 Patent. See Exhibit 20.

70.   As a direct and proximate result of Defendant's infringement of the '764 Patent, EXEGY has been damaged in an amount yet to be determined.

71.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

<u>COUNT IV</u>
<u>INFRINGEMENT OF U.S. PATENT NO. 8,458,081</u>

72.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

73.   The '081 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '081 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

74.   A specific embodiment of the invention described and claimed in the '081 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

75.   Defendant has directly infringed one or more claims of the '081 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

76.   Defendant has directly infringed at least claim 3 of the '081 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

77.   The ACTIV Accused Products satisfy each and every limitation recited in claim 3 of the '081 Patent. See Exhibit 21.

78.   As a direct and proximate result of Defendant's infringement of the '081 Patent, EXEGY has been damaged in an amount yet to be determined.

79.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT V
INFRINGEMENT OF U.S. PATENT NO. 8,595,104

80.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

81.   The '104 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '104 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

82.   A specific embodiment of the invention described and claimed in the '104 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

83.   Defendant has directly infringed one or more claims of the '104 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

84.   Defendant has directly infringed at least claim 1 of the '104 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

85.   The ACTIV Accused Products satisfy each and every limitation recited in claim 1 of the '104 Patent. See Exhibit 22.

86.   As a direct and proximate result of Defendant's infringement of the '104 Patent, EXEGY has been damaged in an amount yet to be determined.

87.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT VI
INFRINGEMENT OF U.S. PATENT NO. 8,626,624

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88.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

89.   The '624 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '624 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

90.   A specific embodiment of the invention described and claimed in the '624 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

91.   Defendant has directly infringed one or more claims of the '624 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

92.   Defendant has directly infringed at least claims 1 and 9 of the '624 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

93.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 9 of the '624 Patent. See Exhibit 23.

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94.   As a direct and proximate result of Defendant's infringement of the '624 Patent, EXEGY has been damaged in an amount yet to be determined.

95.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT VII
INFRINGEMENT OF U.S. PATENT NO. 9,582,831

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96.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

97.   The '831 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '831 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

98.   A specific embodiment of the invention described and claimed in the '831 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

99.   Defendant has directly infringed one or more claims of the '831 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

100.   Defendant has directly infringed at least claim 14 of the '831 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

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101.   The ACTIV Accused Products satisfy each and every limitation recited in claim 14 of the '831 Patent. See Exhibit 24.

102.   As a direct and proximate result of Defendant's infringement of the '831 Patent, EXEGY has been damaged in an amount yet to be determined.

103.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT VIII
INFRINGEMENT OF U.S. PATENT NO. 8,478,680

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104.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

105.   The '680 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '680 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

106.   A specific embodiment of the invention described and claimed in the '680 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

107.   Defendant has directly infringed one or more claims of the '680 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

108.   Defendant has directly infringed at least claims 1 and 25 of the '680 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

109.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 25 of the '680 Patent. See Exhibit 25.

110.   As a direct and proximate result of Defendant's infringement of the '680 Patent, EXEGY has been damaged in an amount yet to be determined.

111.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT IX
INFRINGEMENT OF U.S. PATENT NO. 8,600,856

112.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

113.   The '856 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '856 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

114.   A specific embodiment of the invention described and claimed in the '856 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

115.   Defendant has directly infringed one or more claims of the '856 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include

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hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products").

http://www.activfinancial.com/low-latency. See Exhibit 35.

116.   Defendant has directly infringed at least claims 1 and 12 of the '856 Patent, in that

it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

117.   The ACTIV Accused Products satisfy each and every limitation recited in claims

1 and 12 of the '856 Patent. See Exhibit 26.

118.   As a direct and proximate result of Defendant's infringement of the '856 Patent,

EXEGY has been damaged in an amount yet to be determined.

119.   This is an exceptional case such that EXEGY should be entitled to its reasonable

attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT X
INFRINGEMENT OF U.S. PATENT NO. 9,672,565

120.   EXEGY repeats and realleges each and every allegation contained in paragraphs

1-47 as though fully stated herein.

121.   The '565 Patent relates generally to the field of data processing platforms for

financial market data. Specifically, the '565 Patent teaches a variety of data processing pipelines

implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data

can be processed through the logic at hardware speeds.

122.   A specific embodiment of the invention described and claimed in the '565 Patent

is a ticker plant configured to process financial market data with a combination of software logic

and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient

software control and management over data flows to and from the firmware logic, the ticker

plant is capable of greatly accelerating the speed with which financial market data is processed.

123. Defendant has directly infringed one or more claims of the '565 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

124. Defendant has directly infringed at least claims 1 and 21 of the '565 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

125. The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 21 of the '565 Patent. See Exhibit 27.

126. As a direct and proximate result of Defendant's infringement of the '565 Patent, EXEGY has been damaged in an amount yet to be determined.

127. This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT XI
INFRINGEMENT OF U.S. PATENT NO. 10,169,814

128. EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

129. The '814 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '814 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

130. A specific embodiment of the invention described and claimed in the '814 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient

software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

131.   Defendant has directly infringed one or more claims of the '814 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

132.   Defendant has directly infringed at least claims 1 and 3 of the '814 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

133.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 3 of the '814 Patent. See Exhibit 28.

134.   As a direct and proximate result of Defendant's infringement of the '814 Patent, EXEGY has been damaged in an amount yet to be determined.

135.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT XII
INFRINGEMENT OF U.S. PATENT NO. 9,916,622

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136.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

137.   The '622 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '622 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

138. A specific embodiment of the invention described and claimed in the '622 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

139. Defendant has directly infringed one or more claims of the '622 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

140. Defendant has directly infringed at least claim 1 of the '622 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

141. The ACTIV Accused Products satisfy each and every limitation recited in claim 1 of the '622 Patent. See Exhibit 29.

142. As a direct and proximate result of Defendant's infringement of the '622 Patent, EXEGY has been damaged in an amount yet to be determined.

143. This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT XIII
INFRINGEMENT OF U.S. PATENT NO. 10,062,115

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144. EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

145. The '115 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '115 Patent teaches a variety of data processing pipelines

implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

146.   A specific embodiment of the invention described and claimed in the '115 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

147.   Defendant has directly infringed one or more claims of the '115 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

148.   Defendant has directly infringed at least claims 1 and 48 of the '115 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

149.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 48 of the '115 Patent. See Exhibit 30.

150.   As a direct and proximate result of Defendant's infringement of the '115 Patent, EXEGY has been damaged in an amount yet to be determined.

151.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT XIV
INFRINGEMENT OF U.S. PATENT NO. 8,768,805

152.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

153.   The '805 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '805 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

154.   A specific embodiment of the invention described and claimed in the '805 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

155.   Defendant has directly infringed one or more claims of the '805 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

156.   Defendant has directly infringed at least claims 1 and 41 of the '805 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

157.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 41 of the '805 Patent. See Exhibit 31.

158.   As a direct and proximate result of Defendant's infringement of the '805 Patent, EXEGY has been damaged in an amount yet to be determined.

159.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT XV
INFRINGEMENT OF U.S. PATENT NO. 8,762,249

160.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

161.   The '249 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '249 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

162.   A specific embodiment of the invention described and claimed in the '249 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

163.   Defendant has directly infringed one or more claims of the '249 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

164.   Defendant has directly infringed at least claims 1 and 8 of the '249 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

165.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1 and 8 of the '249 Patent. See Exhibit 32.

166.   As a direct and proximate result of Defendant's infringement of the '249 Patent, EXEGY has been damaged in an amount yet to be determined.

167.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT XVI
INFRINGEMENT OF U.S. PATENT NO. 9,047,243

168.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

169.   The '243 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '243 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

170.   A specific embodiment of the invention described and claimed in the '243 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

171.   Defendant has directly infringed one or more claims of the '243 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. See Exhibit 35.

172.   Defendant has directly infringed at least claims 1, 43, and 63 of the '243 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

173.   The ACTIV Accused Products satisfy each and every limitation recited in claims 1, 43, and 63 of the '243 Patent. See Exhibit 33.

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174.   As a direct and proximate result of Defendant's infringement of the '243 Patent, EXEGY has been damaged in an amount yet to be determined.

175.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

<u>COUNT XVII</u>
<u>INFRINGEMENT OF U.S. PATENT NO. 10,121,196</u>

176.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-47 as though fully stated herein.

177.   The '196 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '196 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

178.   A specific embodiment of the invention described and claimed in the '196 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

179.   Defendant has directly infringed one or more claims of the '196 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States its "Low Latency" suite of products that include hardware acceleration in the form of FPGA processors ("the ACTIV Accused Products"). http://www.activfinancial.com/low-latency. <u>See</u> Exhibit 35.

180.   Defendant has directly infringed at least claim 39 of the '196 Patent, in that it made, used, offered for sale, sold, and/or imported the ACTIV Accused Products.

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181.   The ACTIV Accused Products satisfy each and every limitation recited in claim 39 of the '196 Patent. See Exhibit 34.

182.   As a direct and proximate result of Defendant's infringement of the '196 Patent, EXEGY has been damaged in an amount yet to be determined.

183.   This is an exceptional case such that EXEGY should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

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COUNT XVIII
INDIREDCT INFRINGEMENT OF THE EXEGY PATENTS

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184.   EXEGY repeats and realleges each and every allegation contained in paragraphs 1-183 as though fully stated herein.

185.   Defendant is also inducing infringement under 35 U.S.C. § 271(b) and/or committing contributory infringement under 35 U.S.C. § 271(c).

186.   Defendant has in the past and is currently inducing infringement by others, including, but not limited to, actual and prospective customers, by making, using, importing, selling, and/or offering the accused products and/or services for sale in the United States.

187.   Defendant's customers directly infringe the asserted claims of the EXEGY Patents by using the ACTIV Accused Products.

188.   Defendant markets and promotes its ACTIV Accused Products to customers for use in hardware acceleration in the form of FPGA processors, as evidenced by Defendant's website. Exhibit 35.

189.   Defendant has done so despite actual knowledge of the EXEGY Patents.

190.   Defendant has known, or has been willfully blind to the fact, that its actions have resulted and continue to result in direct infringement of the EXEGY Patents by its third-party customers.

191. Since knowing of the existence of the EXEGY Patents, and further since receiving direct notice of its infringement from EXEGY, Defendant has not taken any actions to re-design the ACTIV Accused Products to avoid infringement of the EXEGY Patents.

192. Since knowing the EXEGY Patents, and further since receiving direct notice of its infringement from EXEGY, Defendant has not taken any actions to refrain from inducing direct infringement of the EXEGY Patents by its third-party customers.

193. There was and is an objectively high likelihood that Defendant's encouragement of customers to use the ACTIV Accused Products in the United States induced (and continues to induce) direct infringement of the EXEGY Patents by its customers.

194. The ACTIV Accused Products constitute a material part of the claimed inventions of the EXEGY Patents, which Defendant knows is especially made or especially adapted for use in an infringement of the EXEGY Patents, and are not a staple article or commodity of commerce suitable for substantial noninfringing use.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38(b), EXEGY hereby demands a trial by jury for each and every issue so permitted by law and statute.

PRAYER FOR RELIEF

WHEREFORE, EXEGY prays for relief against Defendant as follows:

(a) A judgment that Defendant has directly infringed the '122, '046, '764, '081, '104, '624, '831, '680, '856, '565, '814, '622, '115, '805, '249, '243, and '196 Patents;

(b) A judgment and order requiring Defendant to pay EXEGY damages under 35 U.S.C. § 284, together with pre-judgment and post-judgment interest;

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(c)   Entry of a preliminary and permanent injunction under 35 U.S.C. § 283 and Rule 65 of the Fed. R. Civ. P., enjoining Defendant and its officers, agents, attorneys, and employees, and those acting in privity or concert with them, from any further acts of infringement until the expiration of the injunction;

(d)   Entry of an Order requiring Defendant to file with this Court and to serve upon EXEGY's counsel, within thirty (30) days after the entry and service of any injunction issued, a report in writing and under oath setting forth in detail the manner and form in which it has complied with the injunction;

(e)   Entry of an Order requiring Defendant to post an appropriate bond and Order any other appropriate relief to assure compliance with any injunctive provision or other provision Ordered by the Court;

(f)   Entry of an Order directing Defendant and its agents, servants, employees, partners, attorneys, successors and assigns, and all those acting in concert with them, to deliver to this Court or to EXEGY for destruction, or show proof of said destruction, of all infringing products;

(g)   A judgment declaring that this case is exceptional and awarding EXEGY its expenses, costs, and attorneys' fees incurred prosecuting this action pursuant to 35 U.S.C. § 285; and

(h)   Such other and further relief as the Court deems just and equitable.

Dated: April 29, 2019   Respectfully submitted,

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