

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

LONGHORN HD LLC.,	)	
	)	Case No.
	)	
Plaintiff,	)	<b><u>JURY TRIAL DEMANDED</u></b>
	)	
v.	)	
	)	
NEC CORPORATION,	)	
	)	
Defendant.	)	
	)	

**PLAINTIFF’S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Longhorn HD LLC. (“LHD” or “Plaintiff”), for its Complaint against Defendant NEC Corporation (“NEC” or “Defendant”), alleges as follows:

**THE PARTIES**

1. LHD is a limited liability company organized and existing under the laws of the State of Texas, with its principal place of business located at 203 East Travis Street, Marshall, Texas 75670.

2. Upon information and belief, Defendant NEC is a corporation organized and existing under the laws of Taiwan, with its principal place of business located at 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001, Japan, and may be served pursuant to the provisions of the Hague Convention. NEC is a leading manufacturer and seller of computers and server equipment in the world and in the United States. Upon information and belief, NEC does business in Texas and in this Judicial District, directly or through intermediaries.

**JURISDICTION**

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant. Defendant regularly conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this Judicial District and/or has contributed to patent infringement by others in this Judicial District, the State of Texas, and elsewhere in the United States.

5. Venue is proper in this Judicial District as to Defendant NEC pursuant to 28 U.S.C. § 1391 because, among other things, NEC is not a resident in the United States, and thus may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

6. Defendant is subject to this Court's jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to its substantial business in this State and Judicial District, including (a) at least part of its past infringing activities, (b) regularly doing or soliciting business in Texas, and/or (c) engaging in persistent conduct and/or deriving substantial revenue from goods and services provided to customers in Texas.

**PATENTS-IN-SUIT**

7. On May 22, 2001, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,237,112 (the "'112 Patent") entitled "SCSI Device Available for Breakdown Prediction and Self-Examination and a Method Thereof." A true and correct copy of the '112 Patent is available at: <http://pdfpiw.uspto.gov/.piw?PageNum=0&docid=06237112>.

8. On May 11, 2004, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,734,597 (the “’597 Patent”) entitled “Thermomechanical In-Plane Microactuator.” A true and correct copy of the ’597 Patent is available at: <http://pdfpiw.uspto.gov/.piw?Docid=06734597>.

9. On April 15, 2003, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,549,400 (the “’400 Patent”) entitled “Method and System for Quickly Connecting a 1U Personal Computer.” A true and correct copy of the ’400 Patent is available at: <http://pdfpiw.uspto.gov/.piw?Docid=06549400>.

10. On March 23, 2004, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,711,012 (the “’012 Patent”) entitled “Method and System for Quickly Connecting a 1U Personal Computer.” A true and correct copy of the ’012 Patent is available at: <http://pdfpiw.uspto.gov/.piw?Docid=06711012>.

11. On August 30, 2005, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,938,104 (the “’104 Patent”) entitled “Removable Hard Drive Assembly, Computer with a Removable Hard Disk Drive, Method of Initializing and Operating a Removable Hard Drive.” A true and correct copy of the ’104 Patent is available at: <http://pdfpiw.uspto.gov/.piw?Docid=06938104>.

12. On September 6, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,015,444 (the “’444 Patent”) entitled “Protection of Non-Volatile Memory Component Against Data Corruption Due to Physical Shock.” A true and correct copy of the ’444 Patent is available at: <http://pdfpiw.uspto.gov/.piw?Docid=08015444>.

13. LHD is the sole and exclusive owner of all right, title, and interest in the ‘112 Patent, the ’597 Patent, the ’400 Patent, the ’012 Patent, the ’104 Patent, and the ‘444 Patent

(collectively, the “Patents-in-Suit”), and holds the exclusive right to take all actions necessary to enforce its rights to the Patents-in-Suit, including the filing of this patent infringement lawsuit. LHD also has the right to recover all damages for past, present, and future infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

14. LHD has at all times complied with the marking provisions of 35 U.S.C. § 287 with respect to the Patents-in-Suit. On information and belief, prior assignees and licensees have also complied with the marking provisions of 35 U.S.C. § 287.

### **FACTUAL ALLEGATIONS**

15. The Patents-in-Suit generally cover systems and methods for use in computer and server storage and structure.

16. The '112 Patent generally relates to technology for breakdown prediction and self-examination of computer peripherals, such as computer and server disk drives. The technology described by the '112 Patent was developed by inventors Seung-Wha Yoo, In-Ho Lee, Hyung-Sun Kim, Moon-Young Lee, and Chan-soo Kim at Samsung in Korea. For example, this technology is implemented today in Self-Monitoring Analysis and Report Technology (SMART) functionality included in hard disk drives. Infringing SMART enabled hard disk drives include the ability to monitor status including temperature, motor, and power status, among other features.

17. The '597 Patent generally relates to technology for utilizing miniature piezoelectric elements to move shuttles in a direction perpendicular to the piezoelectric element. The technology described in the '597 Patent was developed by inventors Larry L. Howell and Scott Lyon at Brigham Young University. For example, this technology is implemented at least in hard disk drives as technology referred to as “micro-actuators” and/or “dual-stage actuators.”

18. Third-parties Western Digital (“WD”) and Hitachi Global Storage Technologies (“HGST”) supply Hard Disk Drives (“HDDs”) that implement the infringing micro-actuator technologies. These hard drives include WD Blue, Black, Red, Purple, and Gold drives, as well as HGST Ultrastar, Travelstar, Deskstar, Endurastar, and Cinemastar drives. Upon information and belief, NEC makes, uses, sells, and/or imports computers, such as desktops, laptops, tablets, and servers, such as the NEC 100 Series, 110GD, 120Eh, 120Li, 120Rg-1, 120Ri-2, 140Hf, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, B120, AD106, and M-Series SANs, and HYDRASTOR (HS) Series servers, that include one or more WD and/or HGST HDDs.

19. The ’400 and ’012 Patents generally relate to novel structures for connecting 1U computers. The technology described in the ’400 and ’012 Patents was developed by David T. Medin, Scott Kayser, Robert D. Hinds, and Curtis R. Nelson at Crystal Group Inc. Upon information and belief, Crystal Group Inc. made ruggedized servers for military and maritime use. For example, the technology is implemented by infringing servers that utilize blind mateable configurations. Upon information and belief, NEC makes, uses, sells, and/or imports infringing servers, such as the NEC EXPRESS 5800, Blade Enclosure M, Blade Enclosure H, 320Fb-M, and 320Fb-L chassis and accompanying blade servers and the NEC NEAX2400IPX, 320Fb-LR, B120f, B120g-h, AD106b and AD106c blade servers. Upon information and belief, these infringing NEC server products further include management modules that provide remote management capabilities.

20. The ’104 Patent generally relates to hot-swappable ATA hard disk drives. The technology described in the ’104 Patent was developed by Itzik Levy at Arco Computer Products, Inc. For example, the technology is implemented by infringing servers that utilize hot-swappable hard disk drives and solid state drives. Upon information and belief, NEC makes,

uses, sells, and/or imports infringing servers, such as the NEC 100 Series, 120Rg-1, 120Ri-2, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, and M-Series SANs, NEC NEAX2400IPX, 320Fb-LR, B120, AD106, and HYDRASTOR (HS) Series servers. Upon information and belief, these infringing NEC server products further include hot-swappable hard drive modules that are configured with Redundant Array of Multiple Disks (“RAID”).

21. The ’444, Patent generally relates to novel systems and methods for protecting non-volatile memory from errors caused by falls. The technology described in the ’444 Patent was developed by Jakke Makela and Marko Ahvenainen at Spyder Navigations L.L.C. Upon information and belief, NEC makes, uses, sells, and/or imports infringing computers, such as the NEC LaVie laptops and notebooks. Upon information and belief, these infringing NEC laptop products include fall sensors that detect falling conditions and cease write operations to prevent damage or data loss.

22. NEC has infringed and is continuing to infringe one or more of the Patents-in-Suit by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or import, products including desktop computers, laptop computers, and servers that utilize hard disk drives (“HDDs”), solid state drives (“SSDs”), and associated software that infringes the Patents-in-Suit. NEC has also infringed and is continuing to infringe one or more of the Patents-in-Suit by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or import, products including servers that utilize 1U mateable servers and/or hot-swappable drive technology and associated software that infringes the Patents-in-Suit.

**COUNT I**  
**(Infringement of the ’112 Patent)**

23. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

24. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '112 Patent.

25. Defendant has and continues to directly infringe the '112 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '112 Patent. Such products include computer devices, such as laptops, desktops and servers that utilize SMART enabled hard drives. On information and belief, such NEC products include at least the NEC 100 Series, 110GD, 120Eh, 120Li, 120Rg-1, 120Ri-2, 140Hf, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, B120, AD106, and M-Series SANs, and HYDRASTOR (HS) Series servers that include one or more WD and/or HGST HDDs.

26. For example, Defendant has and continues to directly infringe at least claim 1 of the '112 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include SMART enabled hard drives, such as the WD WD10SPZX.

27. The WD10SPZX included in one or more NEC computers and/or servers is a small computer system interface (SCSI) device or the equivalent thereof. The WD10SPZX includes a temperature and motor driving sensor which monitors an inside temperature of the SCSI device and the driving status of a motor of the SCSI device. The WD10SPZX further includes an I2C processor, such as a microcontroller or processor within the WD10SPZX or associated I2C interface. The WD10SPZX further includes a power sensor which monitors SCSI device power and receives a command from the master I2C processor through a I2C processor and monitors a power on/off switch to switch on/off the SCSI device power. The WD10SPZX further includes a self-monitoring analysis and report technology (SMART) sensor which

monitors a SCSI device status. The WD10SPZX further includes device control logic which reports all previous status reports, error reports, and SMART functions to a master I2C processor through a SCSI controller or the equivalent thereof. The WD10SPZX further includes an I2C processor which reports a fault to the master I2C processor through a SCSI channel or an I2C channel, when it is determined, by analyzing all information detected by said temperature and motor driving sensor, said power sensor, said power on/off switch and said SMART sensor, that said I2C processor cannot correct said fault.

28. Defendant has and continues to indirectly infringe one or more claims of the '112 Patent by knowingly and intentionally inducing others, including NEC customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as laptops, desktops, and servers, that utilize SMART enabled hard drives.

29. Defendant, with knowledge that these products, or the use thereof, infringe the '112 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '112 Patent by providing these products to end users for use in an infringing manner.

30. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '112 Patent, but while remaining willfully blind to the infringement.

31. LHD has suffered damages as a result of Defendant's direct and indirect infringement of the '112 Patent in an amount to be proved at trial.

32. LHD has suffered, and will continue to suffer, irreparable harm as a result of



Defendant's infringement of the '112 Patent, for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**COUNT II**  
**(Infringement of the '597 Patent)**

33. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

34. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '597 Patent.

35. Defendant has and continues to directly infringe the '597 Patent, either literally or under the doctrine of equivalents, without authority, and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '597 Patent. Such products include computer devices, such as laptops, desktops and servers, that utilize HDDs that include microactuators, such as dual stage actuators (DSA). On information and belief, such NEC products include at least NEC 100 Series, 110GD, 120Eh, 120Li, 120Rg-1, 120Ri-2, 140Hf, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, B120, AD106, and M-Series SANs, and HYDRASTOR (HS) Series servers and/or other NEC products that include one or more HGST and/or WD hard drives.

36. For example, Defendant has and continues to directly and/or indirectly infringe at least Claim 44 of the '597 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include hard disk drives that include microactuators, such as HGST Ultrastar drives, which include Dual-Stage Actuators.

37. HGST Ultrastar drives which, upon information and belief, are included in one or more of Defendant's computers and/or servers, include one or more Dual-Stage Actuators that, when utilized, employ a method for actuating a micromechanism, the micromechanism

comprises an expansion member having a first end coupled to a base member and a second end coupled to a drivable shuttle. For example, The Dual Stage Actuator includes a substantially straight expansion member comprising a first and a second end. The Dual Stage Actuator further includes a base member attached to the first end of the substantially straight expansion member. When utilized, the Dual Stage Actuator elongates the expansion member in the elongation direction. The Dual Stage Actuator further elastically buckles the expansion member against the shuttle. The Dual Stage Actuator further applies a biasing force resulting from buckling of the expansion member to the shuttle, a portion of the biasing force urging the shuttle in a direction substantially different from the elongation direction.<sup>1</sup>

38. Defendant has and continues to indirectly infringe one or more claims of the '597 Patent by knowingly and intentionally inducing others, including Defendant's customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as laptops, desktops, and servers, that utilize hard drives that include microactuators.

39. Defendant, with knowledge that these products, or the use thereof, infringe the '597 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '597 Patent by providing these products to end users for use in an infringing manner.

40. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high

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<sup>1</sup> See, e.g., [https://documents.westerndigital.com/content/dam/doc-library/en\\_us/assets/public/western-digital/collateral/tech-brief/tech-brief-western-digital-micro-actuator.pdf](https://documents.westerndigital.com/content/dam/doc-library/en_us/assets/public/western-digital/collateral/tech-brief/tech-brief-western-digital-micro-actuator.pdf).

probability that others, including end users, infringe the '597 Patent, but while remaining willfully blind to the infringement.

41. LHD has suffered damages as a result of Defendant's direct and indirect infringement of the '597 Patent in an amount to be proved at trial.

42. LHD has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '597 Patent for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**COUNT III**  
**(Infringement of the '400 Patent)**

43. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

44. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '400 Patent.

45. Defendant has and continues to directly infringe the '400 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '400 Patent. Such products include servers, such as "blade" servers and other industrial personal computers that have, among other things, a blind mateable PC connector which mates to a blind mateable connector assembly coupled to a rack. On information and belief, infringing products include at least the NEC EXPRESS 5800, Blade Enclosure M, Blade Enclosure H, 320Fb-M, and 320Fb-L chassis and accompanying blade servers and the NEC NEAX2400IPX, 320Fb-LR, B120f, B120g-h, AD106b and AD106c blade servers.

46. For example, Defendant has and continues to directly infringe at least Claim 1 of the '400 Patent by making, using, offering to sell, selling, and/or importing into the United States

products that include a system of 1U industrial computers. The infringing systems include one or more 1U industrial personal computers such as, for example, compute nodes and/or switch nodes. Further, the nodes are 1U industrial personal computers having a blind mateable PC connector thereon which mates to a blind mateable connector assembly coupled to the rack, i.e. the NEC EXPRESS 5800, Blade Enclosure M, Blade Enclosure H, 320Fb-M, and 320Fb-L chassis. Furthermore, the nodes, are remotely monitored industrial PCs because NEC provides hardware and software for remotely monitoring NEC servers.

47. Defendant has and continues to indirectly infringe one or more claims of the '400 Patent by knowingly and intentionally inducing others, including NEC customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as blind mateable blade servers and enclosures.

48. Defendant has knowledge that these products, or the use thereof, infringe the '400 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '400 Patent by providing these products to end users for use in an infringing manner.

49. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '400 Patent, but while remaining willfully blind to the infringement.

50. LHD has suffered damages as a result of Defendant's direct and indirect infringement of the '400 Patent in an amount to be proved at trial.

51. LHD has suffered, and will continue to suffer, irreparable harm as a result of

Defendant's infringement of the '400 Patent for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**COUNT IV**  
**(Infringement of the '012 Patent)**

52. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

53. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '012 Patent.

54. Defendant has and continues to directly infringe the '012 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '012 Patent. Such products include servers, such as "blade" servers and other industrial personal computers. On information and belief, infringing products include at least the NEC EXPRESS 5800, Blade Enclosure M, Blade Enclosure H, 320Fb-M, and 320Fb-L chassis and accompanying blade servers and the NEC NEAX2400IPX, 320Fb-LR, B120f, B120g-h, AD106b and AD106c blade servers.

55. For example, Defendant has and continues to directly infringe at least Claim 1 of the '012 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include a system of 1U industrial computers. The infringing systems include one or more 1U industrial personal computers such as, for example, the compute nodes and/or switch nodes. Further, the nodes are 1U industrial personal computers having a blind mateable PC connector thereon which mates to a blind mateable connector assembly coupled to the rack, i.e. the NEC EXPRESS 5800, Blade Enclosure M, Blade Enclosure H, 320Fb-M, and 320Fb-L chassis. Furthermore, the nodes are industrial personal computers disposed in one of the plurality of slots.

56. Defendant has and continues to indirectly infringe one or more claims of the '012 Patent by knowingly and intentionally inducing others, including NEC customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as blind mateable blade servers and enclosures.

57. Defendant, with knowledge that these products, or the use thereof, infringe the '012 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '012 Patent by providing these products to end users for use in an infringing manner

58. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '012 Patent, but while remaining willfully blind to the infringement.

59. LHD has suffered damages as a result of Defendant's direct and indirect infringement of the '012 Patent in an amount to be proved at trial.

60. LHD has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '012 Patent for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**COUNT V**  
**(Infringement of the '104 Patent)**

61. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

62. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '104 Patent.

63. Defendant has and continues to directly infringe the '104 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '104 Patent. Such products include servers that include hot-swappable ATA hard drive assemblies. On information and belief, infringing products include at least the NEC 100 Series, 120Rg-1, 120Ri-2, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, and M-Series SANs, NEC NEAX2400IPX, 320Fb-LR, B120, AD106, and HYDRASTOR (HS) Series servers.

64. For example, Defendant has and continues to directly infringe at least Claim 9 of the '104 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include servers with hot-swappable hard drive assemblies. The infringing systems, such as the NEC 100 Series, 120Rg-1, 120Ri-2, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, and M-Series SANs, NEC NEAX2400IPX, 320Fb-LR, B120, AD106, and HYDRASTOR (HS) Series servers, are computer devices that include computer systems formed with at least one standard drive bay and including a power supply and a drive controller conforming to the ATA standard, such as, for example, a serial ATA ("SATA") controller. The infringing servers also include a drive assembly fixedly mounted in said drive bay and connected to said power supply and to said drive controller, with said drive assembly having an opening formed therein. The infringing systems further include at least one removable cartridge having a hard drive device and being dimensioned for insertion into said opening formed in said drive assembly. For example, upon information and belief, the NEC 100 Series, 120Rg-1, 120Ri-2, 140Re-4, 180 RF-3, FT Series, 2000 Series, 5800 Series, and M-Series SANs, NEC NEAX2400IPX, 320Fb-LR, B120, AD106, and HYDRASTOR (HS) Series servers blades

include hot swap bays and support the SATA standard (e.g. SAS). The infringing systems further include a printed circuit board electronically connected between said hard drive device and said drive controller of the system host, said printed circuit board being programmed to modify an identification of the hard drive device and to said system host that said hard drive is a removable drive. For example, the infringing servers, such as the 5800 Series/R120g-2M Servers, include a printed circuit board that includes a “PCIE slot for a dedicated RAID controller.”<sup>2</sup>

65. Defendant has and continues to indirectly infringe one or more claims of the ’104 Patent by knowingly and intentionally inducing others, including NEC customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology such as servers with hot-swappable hard drives.

66. Defendant, with knowledge that these products, or the use thereof, infringe the ’104 Patent at least as the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the ’104 Patent by providing these products to end users for use in an infringing manner.

67. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the ’104 Patent, but while remaining willfully blind to the infringement.

68. LHD has suffered damages as a result of Defendant’s direct and indirect infringement of the ’104 Patent in an amount to be proved at trial.

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<sup>2</sup> <https://www.necam.com/docs/?id=ca8f1414-cc75-4f2e-a64a-4ceffdac4266> (Pg. 1)



69. LHD has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '104 Patent for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**COUNT VI**  
**(Infringement of the '444 Patent)**

70. Paragraphs 1 through 22 are incorporated by reference as if fully set forth herein.

71. LHD has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '444 Patent.

72. Defendant has and continues to directly infringe the '444 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '444 Patent. Such products include computer devices, such as laptops, desktops and servers that utilize disk drives in connection with a fall sensor, such as the NEC fall sensor. On information and belief, such NEC products include at least the NEC LaVie laptops that include SSD drives.

73. For example, Defendant has and continues to directly infringe at least claim 14 of the '444 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include SSDs, fall sensors, and associated software.

74. On information and belief, NEC laptop computers are electronic devices that includes a processor, a fall sensor, and one or more SSD. On information and belief, Asus laptops include software in the form of a computer-readable storage medium including computer readable instructions stored therein that, upon execution by the processor, perform operations comprising initiating a write operation of data to an SSD. On information and belief, during the initiated write operation, the software monitors the sensor to determine if the electronic device is

accelerating. On information and belief, the monitoring occurs at a sampling rate selected based on at least one of a type of the solid-state memory device, an amount of time to execute a solid-state memory device shutdown procedure, or a threshold distance over which the electronic device can move. On information and belief, the software further determines if the Asus laptops are accelerating and interrupts the initiated write operation and executes the solid-state memory device shutdown procedure.

75. Defendant has and continues to indirectly infringe one or more claims of the '444 Patent by knowingly and intentionally inducing others, including Asus customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology such as laptops that include fall sensors.

76. Defendant, with knowledge that these products, or the use thereof, infringe the '444 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '444 Patent by providing these products to end users for use in an infringing manner.

77. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '444 Patent, but while remaining willfully blind to the infringement.

78. LHD has suffered damages as a result of Defendant's direct and indirect infringement of the '444 Patent in an amount to be proved at trial.

79. LHD has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '444 Patent, for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**DEMAND FOR JURY TRIAL**

Plaintiff hereby demands a jury for all issues so triable.

**PRAYER FOR RELIEF**

WHEREFORE, LHD prays for relief against Defendant as follows:

- a. Entry of judgment declaring that Defendant has directly and/or indirectly infringed one or more claims of each of the Patents-in-Suit;
- b. An order pursuant to 35 U.S.C. § 283 permanently enjoining Defendant, its officers, agents, servants, employees, attorneys, and those persons in active concert or participation with it, from further acts of infringement one or more of the asserted patents;
- c. An order awarding damages sufficient to compensate LHD for Defendant's infringement of the Patents-in-Suit, but in no event less than a reasonable royalty, together with interest and costs;
- d. Entry of judgment declaring that this case is exceptional and awarding LHD its costs and reasonable attorney fees under 35 U.S.C. § 285; and
- e. Such other and further relief as the Court deems just and proper.

Dated: May 19, 2020

Respectfully submitted,

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