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10 Attorneys for Plaintiff
11 PULSE ELECTRONICS, INC.

12 UNITED STATES DISTRICT COURT
13 SOUTHERN DISTRICT OF CALIFORNIA

14 PULSE ELECTRONICS, INC., a
15 Delaware corporation.

16 Plaintiff,

17 v.

18 U.D. Electronic Corp., a Taiwan
19 corporation,

20 Defendants.

CASE NO. 3:18-CV-00373-BEN (DEB)

**SECOND AMENDED COMPLAINT
FOR PATENT INFRINGEMENT**

JURY TRIAL DEMANDED

1 This is an action for patent infringement in which Plaintiff Pulse Electronics,
2 Inc. (“Pulse” or “Plaintiff”) makes the following allegations against Defendant U.D.
3 Electronic Corp. (“UDE” or “Defendant”) as follows:

4 **THE PARTIES**

5 1. Pulse is a corporation organized and existing under the laws of the
6 state of Pennsylvania and maintains its principal place of business at 15255
7 Innovation Drive, Suite #100, San Diego, California, 92128.

8 2. On information and belief, UDE is a corporation organized and
9 existing under the laws of Taiwan and maintains its principal place of business at
10 No. 13, Ln. 68, Neixi Rd., Luzhu Dist. Taoyuan City 33852, Taiwan.

11 3. On information and belief, UDE maintains an office at 2430 Camino
12 Ramon, Suite 355 San Ramon, CA 94583-4212.

13 4. On information and belief, UDE does not have any affiliates or
14 subsidiary companies within the United States.

15 **JURISDICTION AND VENUE**

16 5. This action arises under the patent laws of the United States, 35 U.S.C.
17 §§ 1, *et seq.*, including §§ 271 and 281.

18 6. This Court has original and exclusive subject matter jurisdiction over
19 the matters pleaded herein pursuant to 28 U.S.C. §§1331 and 1338(a).

20 7. On information and belief, this Court has personal jurisdiction over
21 Defendant because Defendant has purposely directed contacts with and within
22 California and this judicial district, purposely avails itself of the privilege of
23 conducting activities within California and this judicial district, has continuous and
24 systematic contacts with and within California and this judicial district, transacts
25 substantial business, including generally and specifically in relation to the causes of
26 action and acts of infringement alleged herein, either directly or through agents, on
27 an ongoing basis in California and this judicial district.

28 8. On information and belief, Defendant sells its products directly into

1 the United States and this judicial district directly and/or through one or more
2 distributors.

3 9. Venue is prior in this judicial district pursuant to 28 U.S.C. §§ 1400(b)
4 and 1391.

5 **BACKGROUND**

6 10. Founded in 1947, and present within San Diego County for at least 50
7 years, Pulse is a worldwide leader in electronic component design and
8 manufacturing, including in the design and manufacture of RJ-45 Integrated
9 Connector Modules (“ICM”). Pulse’s engineering design centers and manufacturing
10 facilities supply products to a broad international customer base.

11 11. An RJ-45 ICM is an electrical connector commonly used for Ethernet
12 networking. It looks generally similar to a telephone jack, and may be embodied as
13 either a single port (receptacle) or multi-port device. For example:



23 12. As a testament to Pulse’s innovation, it has been issued more than 100
24 United States and international patents dealing generally with RJ-45 ICM
25 technology. Four of those (U.S.) patents are asserted in this litigation.

26 13. Upon information and belief, Defendant (founded in 2005) is a
27 manufacturer and supplier data communications equipment, including RJ-45 ICMs.
28

THE PATENTS-IN-SUIT

14. Pulse owns all right, title, and interest in U.S. Patent No. 7,959,473 (the “’473 Patent”), U.S. Patent No. 9,178,318 (the “’318 Patent”), and U.S. Patent No. 6,593,840 (the “’840 Patent”) (collectively, the “Patents-in-Suit”).

15. Each of the Patents-in-Suit is valid and enforceable.

16. Pulse is in compliance with the marking requirements under 35 U.S.C. § 287 for each of the Patents-in-Suit.

17. The ’473 Patent, entitled “Universal Connector Assembly and Method of Manufacturing” was duly and legally issued by the United States Patent and Trademark Office on June 14, 2011 after a full and fair examination. A copy of the ’473 Patent is attached hereto as Exhibit B.

18. The ’318 Patent, entitled “Shielded Integrated Connector Modules and Assemblies and Methods of Manufacturing the Same” was duly and legally issued by the United States Patent and Trademark Office on November 3, 2015 after a full and fair examination. A copy of the ’318 Patent is attached hereto as Exhibit C.

19. The ’840 Patent, entitled “Electronic Packaging Device with Insertable Leads and Method of Manufacturing” was duly and legally issued by the United States Patent and Trademark Office on July 15, 2003 after a full and fair examination. A copy of the ’840 Patent is attached hereto as Exhibit D.

UDE’S INFRINGING ACTIVITY

20. On information and belief, Defendant makes, uses, offers to sell, sells and/or imports into the United States products that infringe the Patents-in-Suit, including, but not limited to, the following: (i) 1G multi-port ICM products, including, but not limited to, M1, M4, M6, MC, N1, N6, N8, RM, and RN series 1G devices; (ii) “Multi-Gigabyte” (e.g., 2.5G/5G) single-port and multi-port ICM products, including, but not limited to, GM2, GM-4, and GM6 series 2.5 or 5G devices; and (iii) 10G single-port and multi-port ICM products, including, but not limited to, GB-6, GM1, GM-4, and GM6 series 10G devices (collectively, the

1 “Accused Products”).

2 21. In addition to Defendant’s making, using, offering to sell, selling,
3 and/or importing into the United States the Accused Products, upon information
4 and belief, the Accused Products underwent an extensive sales cycle that involved
5 Defendant’s substantial U.S.-based use of the Accused Devices, including (a)
6 providing samples and/or prototypes of the Accused Products to potential
7 customers for evaluation, (b) securing “design wins” with potential customers
8 resulting in orders of large volumes of sales of the Accused Products (and
9 associated revenue and profit), and (c) negotiating and entering into sales contracts
10 involving the Accused Products. But for this U.S.-based infringing activity by
11 Defendant, such design wins would not have been achieved and Defendant would
12 not have benefited from the resulting sales and associated revenue and profit.

13 22. On February 19, 2016, the Global Marketing Director of UDE, Greg
14 Loudermilk, sent an email to Pulse stating UDE “hired Sunky [Shang] away from
15 Pulse” and that “Sunky is extremely instrumental in the activities within the
16 factory.” A copy of this email is attached hereto as Exhibit L.

17 23. On February 24, 2016, the Global Marketing Director of UDE, Greg
18 Loudermilk, sent an email to Pulse stating, *inter alia*: “UDE has no problem to
19 either INK Marking or Stamping Pulse name & P/N on the shielding per Pulse
20 requirement”; “we can share design”; “Jointly working together to develop products
21 or shared license to approach customers as dual source”; “My idea is work closely
22 with Pulse to find the design problems for the 10Vrms requirement that UDE EE
23 has not been able to solve.”; “UDE and Pulse(have licensed this product together)”;
24 “moving together on future technology”; and “means for both parties to gain
25 adequate market share together where it makes sense.” A copy of this email is
26 attached hereto as Exhibit L.

27 24. On October 14, 2016, Pulse sent a letter to Mr. Gary Chen, Chairman
28 and CEO of UDE, putting UDE on notice that its ICM products infringe one or

1 more claims of a number of U.S. patents, including the '473 patent asserted in this
2 litigation. Pulse demanded that UDE immediately cease and desist all infringement
3 activity. A copy of this letter is attached hereto as Exhibit E.

4 25. On October 27, 2016, UDE provided a one-page response which stated
5 that it does not infringe the patents referenced in Pulse's October 14 letter because
6 UDE "verified that all the connectors [UDE] produced are based on the structure
7 developed with related patents applied by UDE." Further, UDE suggested that
8 Pulse's patents were invalid in light of the following prior art: "China Patent No.
9 02234347.4 publication date Jul.30, 2003, US patent No. 2003/002553 A1
10 Publication date: Jan.30, 2003, and US Patent No. 6,659,807 and etc." A copy of
11 this letter is attached hereto as Exhibit F.

12 26. On February 3, 2017, Pulse sent another letter to UDE indicating that,
13 based on UDE's October 27, 2016 correspondence, Pulse conducted an additional
14 investigation into UDE's ICM product line. Pulse identified patents that it believed
15 were infringed by UDE – including the '473 patent, the '318 patent, and the '840
16 Patent (the Patents-in-Suit in the instant litigation). Further, Pulse attached detailed
17 claim charts illustrating the applicability of selected claims of the referenced patents
18 to a selection of UDE's products. A copy of this letter is attached hereto as
19 Exhibit G.

20 27. Additionally, in the February 3, 2017 letter, Pulse explained to UDE
21 that the non-infringement and invalidity arguments it made in its October 27, 2016
22 letter demonstrate a fundamental misunderstanding and/or misinterpretation of U.S.
23 patent law. In particular, Pulse states that "the filing or existence of a patent
24 application (or patent stemming therefrom) provides no right for UDE to make, use,
25 sell, or have made its products within the U.S.; at best, it merely provides UDE
26 with the ability to exclude *others* from such activity...." (Emphasis in original.)
27 Further, Pulse explained that UDE's claim that it "doesn't infringe one or more
28 claims" of Pulse's patents is not exculpatory because "only one valid claim of a

1 patent need be infringed for liability to exist”. (Emphasis in original.) Also, Pulse
2 points out that the alleged prior art cited by UDE in its October 27, 2016 letter is “at
3 best cumulative to that already cited in the relevant file histories) and states that the
4 new patents identified in Pulse’s February 3, 2017 letter are highly distinguishable
5 over the prior art cited by UDE.

6 28. On March 6, 2017, UDE responded to Pulse’s March 4, 2017 letter
7 stating that Patents-in-Suit are invalid and provided annotations to Pulse’s March 4,
8 2017 claim charts in an effort to support its position. A copy of this letter is
9 attached hereto as Exhibit H.

10 29. On April 7, 2017, Pulse’s outside counsel sent a letter to UDE to
11 address UDE’s perplexing failure to address the substantive issues identified in
12 Pulse’s March 4, 2017 letter. In particular, Pulse’s counsel stated that, (1) UDE’s
13 analysis of only a small percentage of the Pulse claims is not exculpatory of UDE’s
14 behavior; (2) UDE makes *no* assertions regarding non-infringement of the
15 identified Pulse patents; and (3) UDE’s response is confusing because it conflates
16 public use, prior art, and non-infringement. Further, Pulse’s outside counsel pointed
17 out that a number of the “prior art” references relied upon by UDE are not “prior
18 art” because the references post-date the critical date of the Patents-in-Suit. A copy
19 of this letter is attached hereto as Exhibit I.

20 30. On April 25, 2017, UDE responded to Pulse’s outside counsel in a
21 further, unavailing attempt to excuse its infringing activity. A copy of this letter is
22 attached hereto as Exhibit J.

23 31. UDE’s legally deficient and ill-reasoned responses to Pulse’s cease
24 and desist letters and claim charts evidenced that it was not interested in addressing
25 Pulse’s concerns of patent infringement, and had no intent of ceasing its
26 infringement of the Patents-in-Suit. Accordingly, Pulse was left with no choice but
27 to initiate the instant legal action.
28

COUNT 1

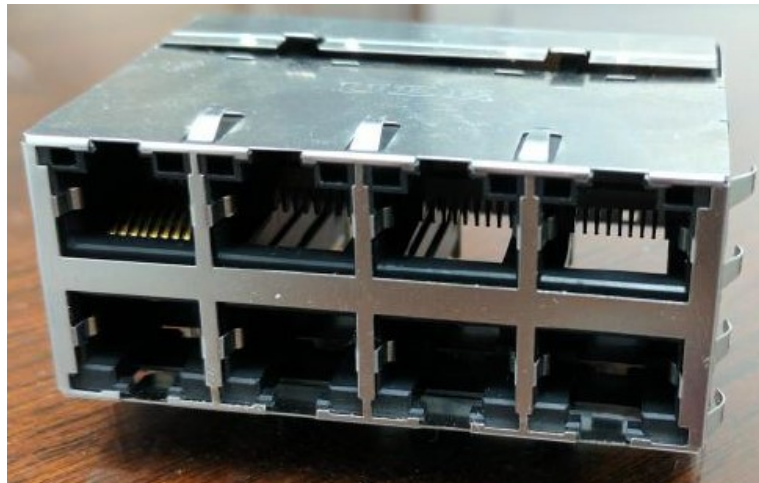
INFRINGEMENT OF THE '473 PATENT

32. Pulse incorporates paragraphs 1 through 32 by reference as if fully stated herein.

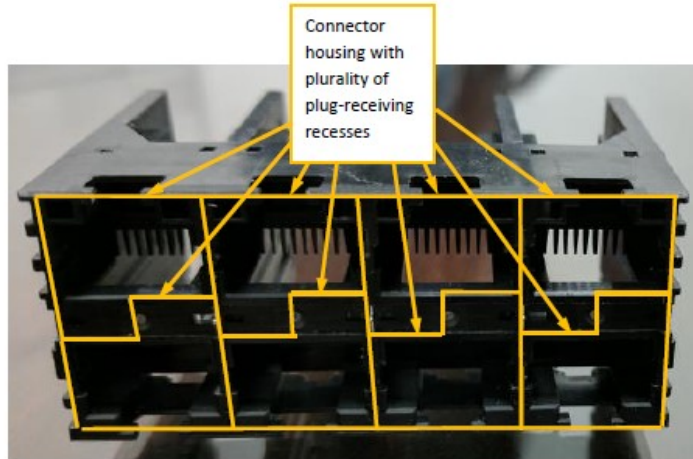
33. Defendant has directly infringed, and continues to directly infringe, either literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271(a), by making, using, offering to sell, selling, and/or importing into the United States, without authority, Accused Products that infringe at least Claims 1, 16, and 30 of the '473 Patent.

34. By way of example, Defendant's 2x4 10G ICM products directly infringe, literally and/or under the doctrine of equivalents, Claim 1 of the '473 Patent.

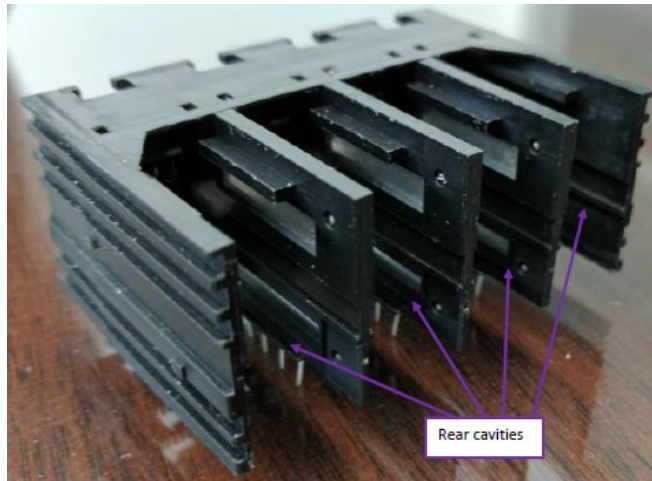
35. Defendant's 2x4 10G ICM products look substantially as follows:



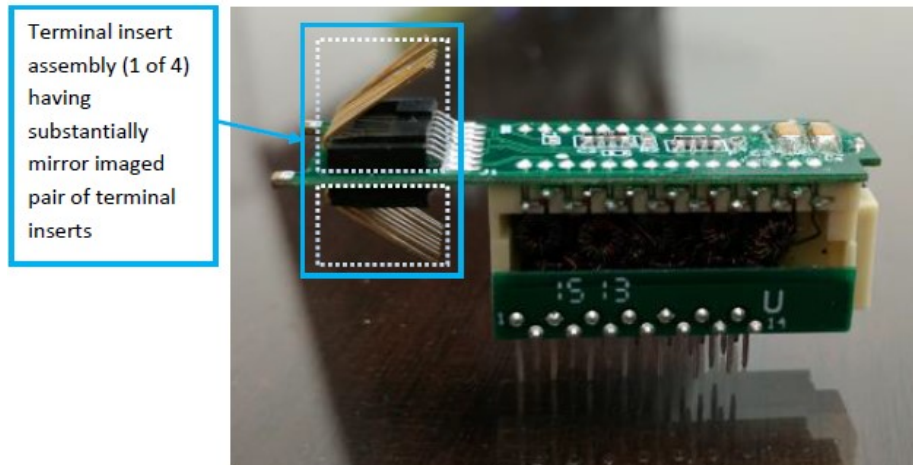
36. Independent Claim 1 of the '473 patent is directed to “[a] connector assembly comprising: a connector housing comprising a plurality of plug-receiving recesses....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



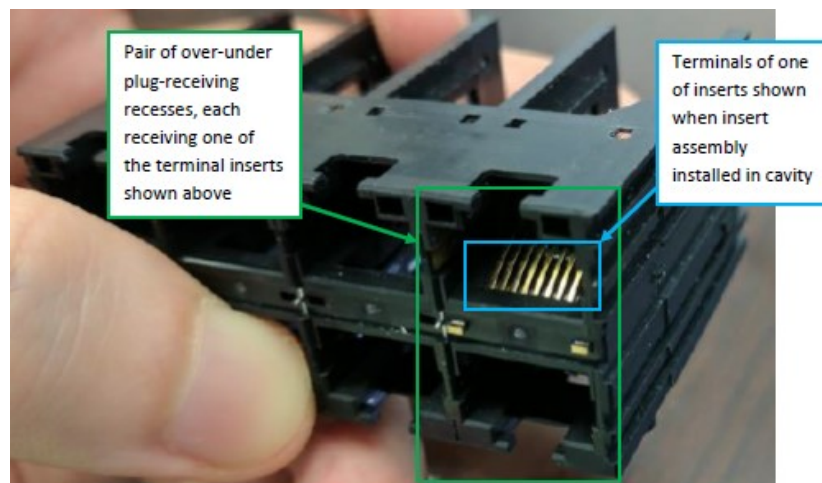
37. Claim 1 of the '473 Patent further requires “and at least one rear cavity....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



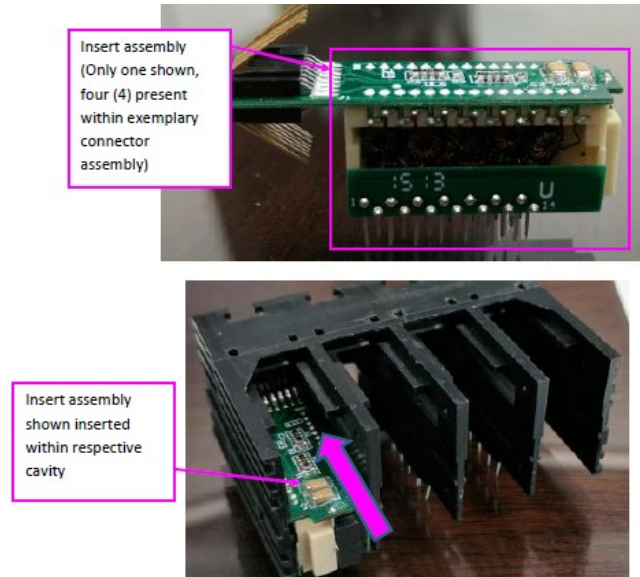
38. Claim 1 of the '473 Patent further requires “a plurality of terminal insert assemblies each comprised of a substantially mirror imaged pair of terminal inserts....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



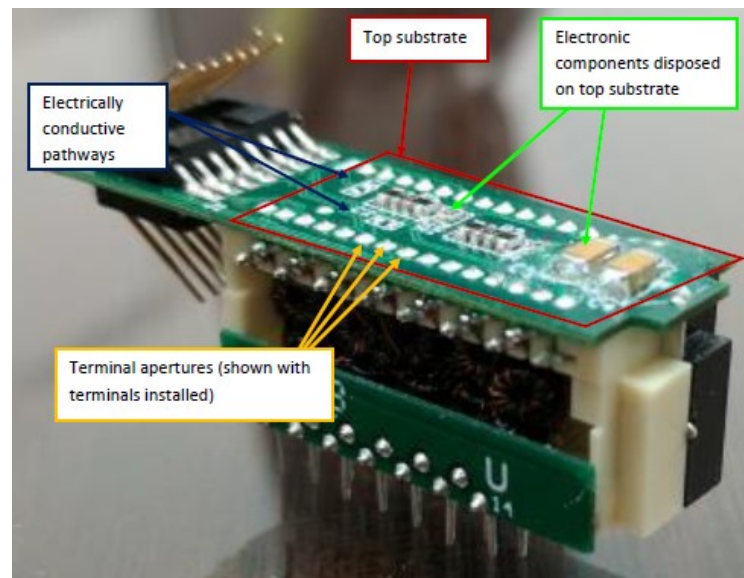
10 39. Claim 1 of the '473 Patent further requires “such that a given one of
11 the plurality of terminal insert assemblies is received at least partly within at least
12 two of the plug-receiving recesses....” These claimed features are present in
13 Defendant’s 2x4 10G ICM as follows:



23 40. Claim 1 of the '473 Patent further requires “a plurality of insert
24 assemblies, each said insert assembly comprising:” These claimed features are
25 present in Defendant’s 2x4 10G ICM as follows:

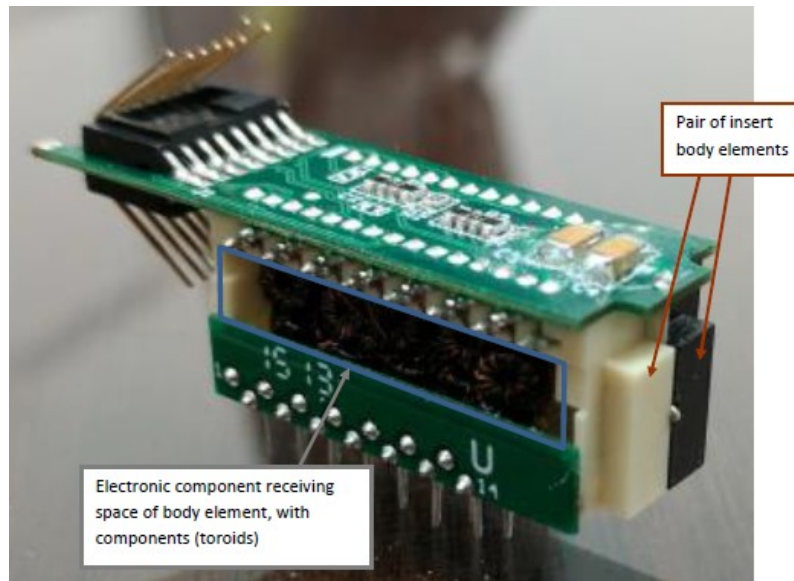


41. Claim 1 of the '473 Patent further requires “a top substrate having a plurality of electrically conductive pathways associated therewith, and at least one electronic component disposed substantially thereon, said top substrate further comprising a plurality of terminal apertures...” These claimed features are present in Defendant’s 2x4 10G ICM as follows:

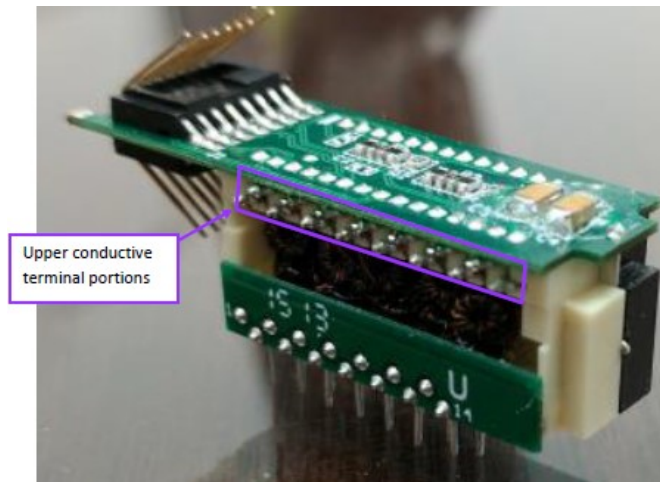


42. Claim 1 of the '473 Patent further requires “a pair of insert body elements comprised of an electronic component receiving space, each of said body elements comprising:” These claimed features are present in Defendant’s 2x4

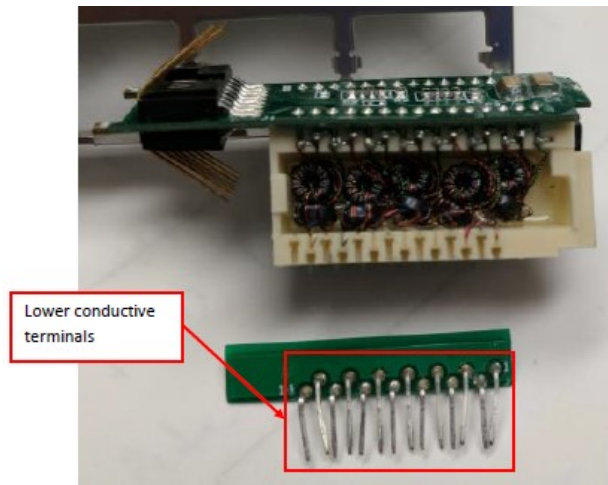
10G ICM as follows:



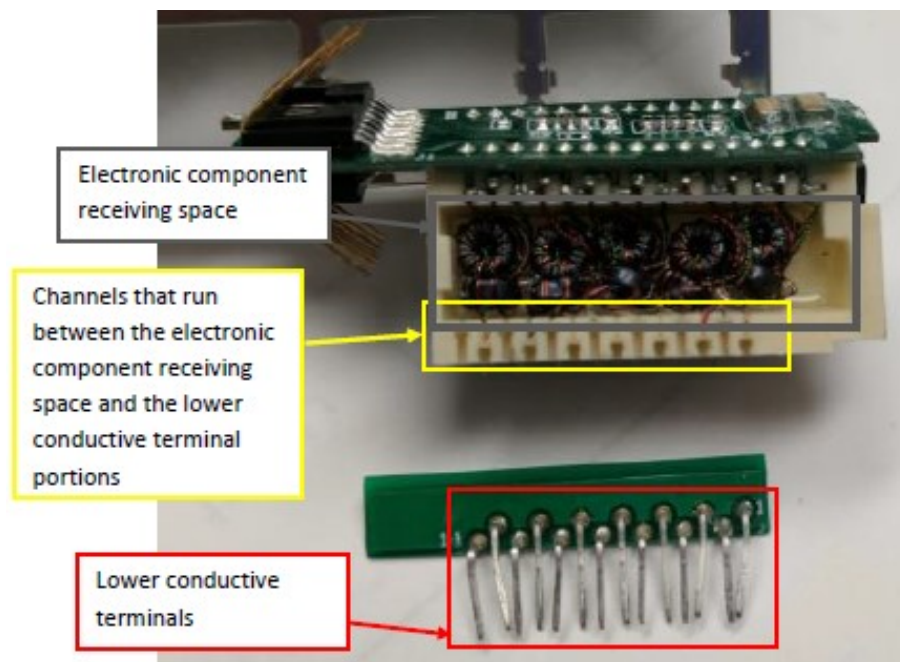
43. Claim 1 of the '473 Patent further requires “a plurality of upper conductive terminal portions...” These claimed features are present in Defendant’s 2x4 10G ICM as follows:

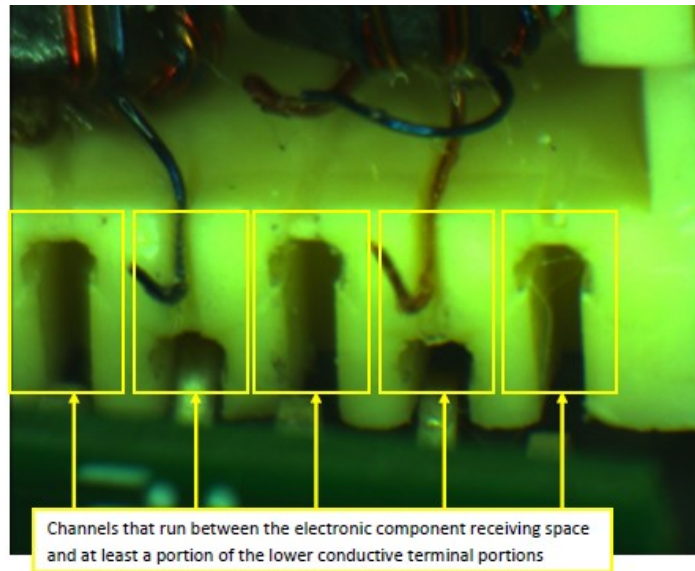


44. Claim 1 of the '473 Patent further requires “a plurality of lower conductive terminal portions...” These claimed features are present in Defendant’s 2x4 10G ICM as follows:

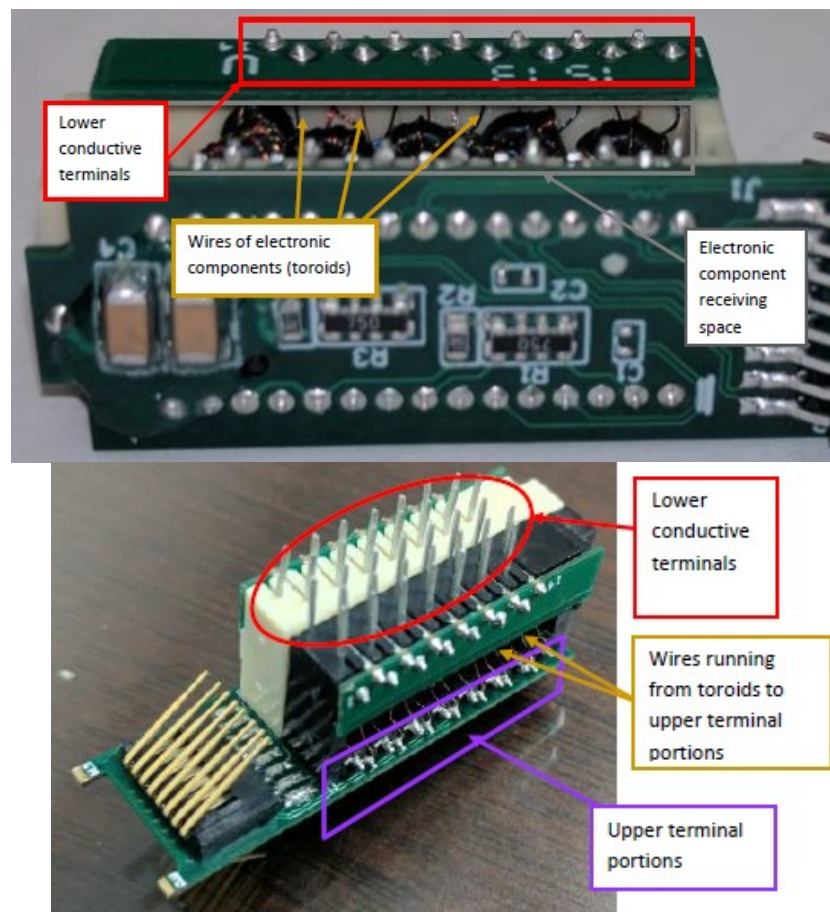


45. Claim 1 of the '473 Patent further requires “a plurality of channels that run between the electronic component receiving space and at least a portion of the lower conductive terminal portions....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:

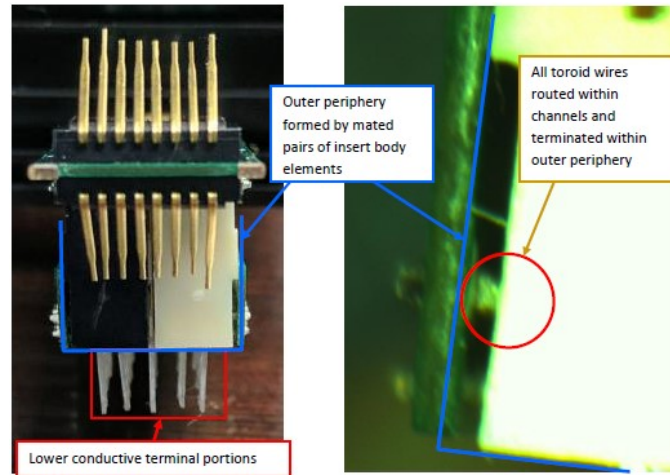




46. Claim 1 of the '473 Patent further requires “wherein said plurality of channels allow for the routing of wire between the electronic component receiving space and the lower conductive terminal portions....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



47. Claim 1 of the '473 Patent further requires "internal to an outer periphery formed by mated pairs of insert body elements." These claimed features are present in Defendant's 2x4 10G ICM as follows:



48. For at least the reasons stated in the preceding paragraphs, the Accused Products fall within the scope of at least independent Claim 1 of the '473 Patent.

49. Upon information and belief, based on the information presently available to Pulse absent discovery, in addition to and/or in the alternative to direct infringement, Pulse alleges that Defendant has, since at least as early as receiving Pulse's October 14, 2016 letter (Exhibit E), induced infringement and continues to induce infringement of at least Claims 18, 33, 39, and 41 of the '473 Patent under 35 U.S.C. § 271(b).

50. Upon information and belief, Defendant continues, since at least as early as receiving Pulse's October 14, 2016 letter (Exhibit E), to actively, knowingly, and intentionally induce infringement of the '473 Patent by making, using, selling, offering for sale, importing, and/or otherwise supplying products and/or services including the Accused Products to third parties, with the knowledge and specific intent that such third parties will use, sell, offer for sale, and/or import, products and/or services supplied by Defendants, including without limitation the 10G ICM products, to directly infringe the '473 Patent.

51. Pulse incorporates its inducement allegations from paragraphs 86

1 through 96 by reference as if fully stated herein.

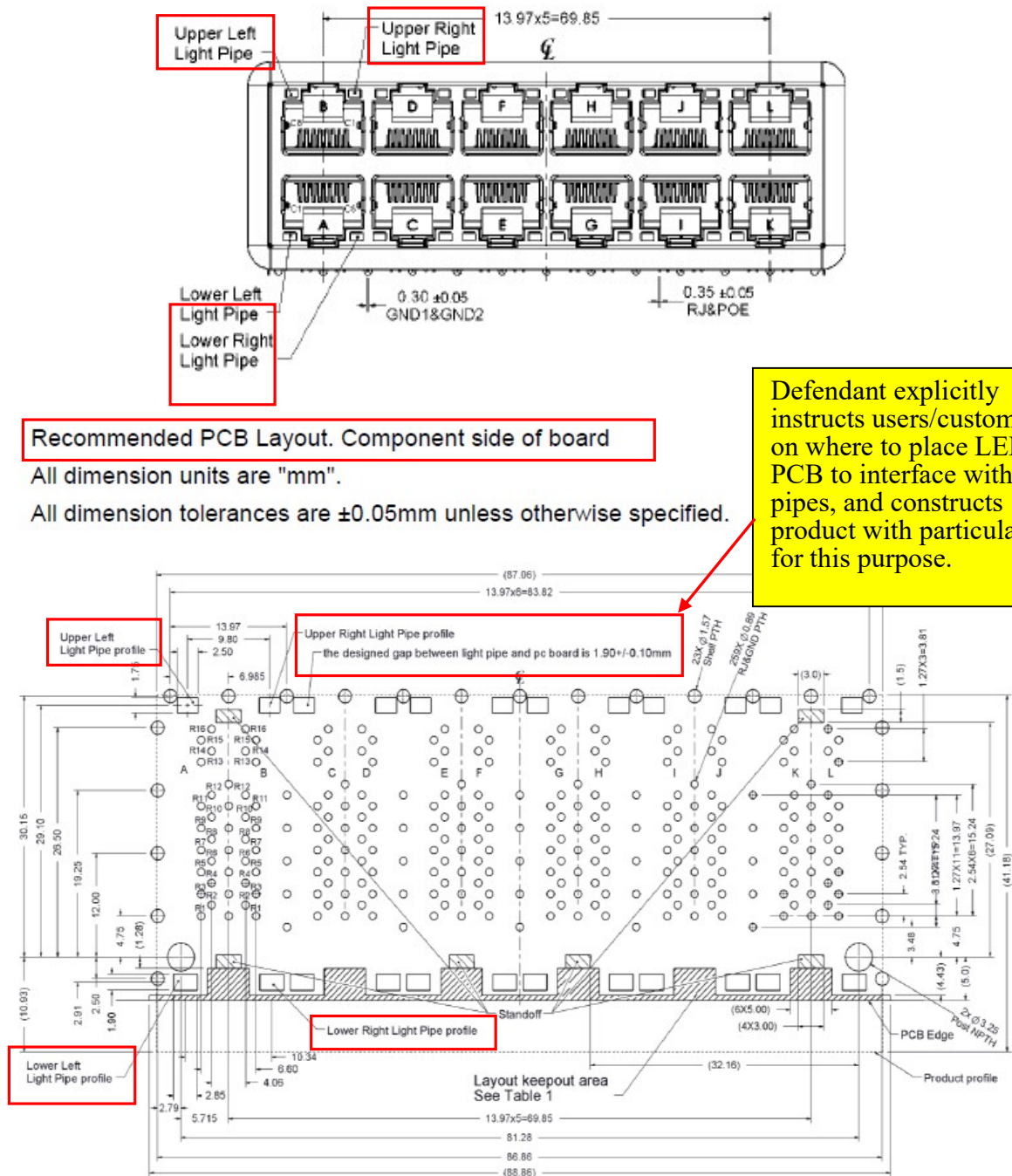
2 52. Upon information and belief, despite Defendant's knowledge of the
3 existence of the '473 Patent since at least as early as receiving Pulse's October 14,
4 2016 letter (Exhibit E), Defendant continues to encourage, instruct, enable and
5 otherwise aid and abet third parties, including but not limited to Defendant's
6 customers and sales or technical personnel, Defendant's agents, and/or users of the
7 Accused Products to use the Accused Products in a manner that directly infringes
8 the '473 Patent.

9 53. Upon information and belief, Defendant specifically intends that its
10 customers and sales or technical personnel, Defendant's agents, and/or users use the
11 Accused Products in such a way that directly infringes the '473 Patent by, at a
12 minimum, advertising, enticing, encouraging, instructing, and aiding and abetting
13 their customers, agents, and/or users, through the publication and dissemination of
14 marketing materials, detailed operational manuals, Internet sites, and/or technical
15 assistance related to the Accused Products, to use, sell, offer for sale, and/or import,
16 products and/or services supplied by Defendants, including the Accused Products,
17 to directly infringe the '473 Patent.

18 54. Upon information and belief, Defendant knew and knows that its
19 actions, including but not limited to providing detailed operating manuals, approval
20 sheets, and other literature, in relation to the Accused Products, would induce, have
21 induced, and continues to induce direct infringement of the '473 Patent by third
22 parties, including but not limited to Defendant's customers and sales or technical
23 personnel, Defendants' agents, and/or users.

24 55. Specifically, upon information and belief and by way of example,
25 through publication and dissemination of materials such as for example the GM6-
26 MA-0012 "Approval Sheet" (attached hereto as Exhibit K), as well as others,
27 Defendant actively encourages, solicits, enables, and teaches past, current, and
28 prospective customers and/or users of the Accused Products to avail themselves of

the so-called "light pipe" based indicators within the Accused Products.



Customer P/N :

UDE P/N : GM6-MA-0012

Description : RJ45 multiport 2X6

Through Hole

5G Base-T

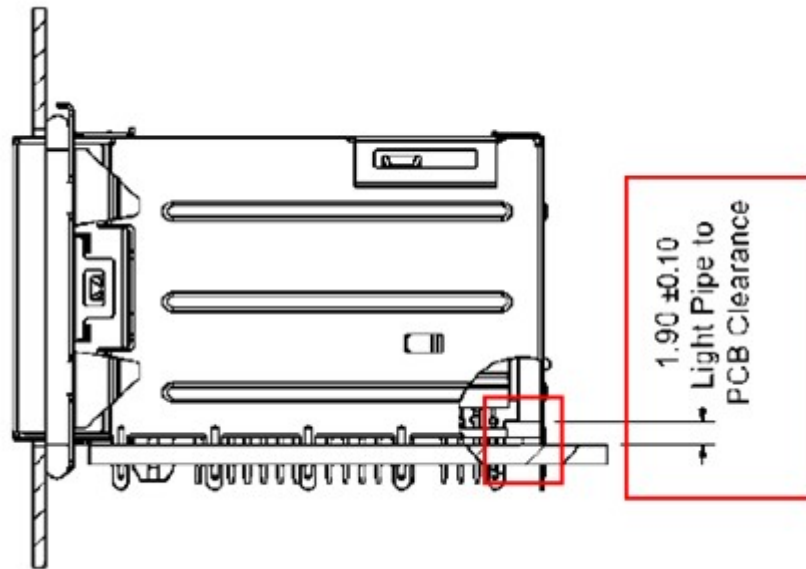
Contact Area : 30μ " Min. Gold

LED :Without LED

Light Pipe:Upper/Lower &POE 60W

SECOND AMENDED COMPLAINT

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56. Upon information and belief, based on the information presently available to Pulse absent discovery, in addition to and/or in the alternative to direct infringement, Pulse alleges that Defendant has contributorily infringed, and continues to contributorily infringe, at least Claims 18, 33, 39, and 41 of the '473 Patent under 35 U.S.C. § 271(c).

57. Upon information and belief, Defendant continues to contributorily infringe the '473 patent by making, using, selling, offering for sale, importing, and/or otherwise supplying products including the Accused Products to third parties, including without limitation the 10G ICM products, which are material to practicing the invention of the '473 Patent, and which when used or applied as intended by Defendant, directly infringe the '473 Patent.

58. Upon information and belief, Defendant continues to contributorily infringe the '473 patent by making, using, selling, offering for sale, importing, and/or otherwise supplying products including the Accused Products to third parties, including without limitation the 10G ICM products, which have no substantial non-infringing use or application, and which when used or applied, directly infringe the '473 patent.

1 59. Upon information and belief, Defendant continues to contributorily
2 infringe the '473 patent by making, using, selling, offering for sale, importing,
3 and/or otherwise supplying products including the Accused Products to third
4 parties, including without limitation the 10G ICM products, which Defendant
5 knows are especially made or especially adapted to infringe, and which when used
6 or applied, directly infringe the '473 patent.

7 60. Upon information and belief, Defendant specifically knows that its
8 customers and sales or technical personnel, Defendant's agents, and/or users use the
9 Accused Products in such a way that directly infringes the '473 patent by, at a
10 minimum, advertising, enticing, encouraging, instructing, and aiding and abetting
11 their customers, agents, and/or users, through the publication and dissemination of
12 marketing materials, detailed operational manuals, Internet sites, and/or technical
13 assistance related to the Accused Products, to combine the products supplied by
14 Defendants, including the Accused Products, with one or more other components
15 (including for example light-emitting diodes or LEDs) to directly infringe the '473
16 patent.

17 61. Specifically, upon information and belief and by way of example, as
18 shown for example in the GM6-MA-0012 "Approval Sheet" (attached hereto as
19 Exhibit K), as well as others, Defendant's Accused Products include the so-called
20 "light pipe" based indicators, and further are specifically adapted and configured to
21 interface with LEDs or other light sources (see discussion *supra*) so as to enable
22 third parties including customers and/users to avail themselves of the light pipe-
23 based indication functionality of the Accused Products.

24 62. Further, upon information and belief and by way of example, as shown
25 for example in the GM6-MA-0012 "Approval Sheet" (attached hereto as
26 Exhibit K), as well as others, Defendant's Accused Products have no substantial
27 non-infringing use other than that which directly infringes the '473 Patent.
28 Configuration of the Accused Products to have such light-pipe-based indicating

1 functionality requires specific adaptation of the Accused products, including the
 2 inclusion of the light pipe components themselves (provided by Defendant with the
 3 Accused Products), thereby requiring significant additional effort in manufacturing
 4 by Defendant, and cost to any customer or purchaser.

5 63. Any use of such Accused Products with light pipes without LEDs or
 6 other light sources would be at least impractical from a cost perspective, unusual
 7 (inconsistent with industry practice), and occasional at best.

8 64. Pulse has been irreparably harmed by Defendants' acts of infringement
 9 of the '473 Patent and will continue to be harmed unless Defendant's further acts of
 10 infringement are enjoined by order of this Court.

11 65. Defendant UDE has and continues to induce infringement of one or
 12 more claims of the '473 patent under 35 U.S.C § 271(b) by actively inducing
 13 related entities, retailers, and/or customers to make, use, sell, offer to sell, and/or
 14 import, products covered by one or more claims of the '473 patent.

15 66. For example, UDE's acts of inducement include, *inter alia*: providing
 16 ICM components and ICM products to its customers and other third parties and
 17 intending them to make, use, sell and/or import ICM products in the United States
 18 that infringe the '473 Patent. Customers and third parties induced by UDE and
 19 included in a UDE presentation attached hereto as Exhibit M, include, *inter alia*:
 20 HP Inc., Dell Technologies Inc., Acer Inc., Lenovo Group Limited, AsusTek
 21 Computer Inc., Gigabyte Technology, Elitegroup Computer Systems Co., Ltd.,
 22 Micro-Star International Co., Ltd, Foxconn Technology Group, Juniper Networks,
 23 Inc., Arris International Limited, Accton Technology Corporation, ZTE
 24 Corporation, Pace, Cisco Systems, Inc., Samsung, EchoStar Corporation,
 25 Technicolor, International Business Machines Corporation, Quanta Computer
 26 Incorporated, Wistron Corporation, LG, Sony, Panasonic, Canon, Lexmark, and
 27 Epson. Other companies induced are included in an email attached hereto as Exhibit
 28 L from UDE's Global Marketing Director, Greg Loudermilk. Specifically, the

1 companies include: “Aruba-HPE”; “Arista”; “Arris/Pace”; “Brocade”; “Dell”;
 2 “Extreme Net”; “HPE”; “HP”; “Fortinet”; “F5”; “Oracle”; “NetApp”; and
 3 “Siemens.” Additionally, UDE stated the United States presence and/or domestic
 4 activity for many of the customers, including: “Sunnyvale”; “Santa Clara”; “TX,
 5 NH, MN”; “NH & NC”; “Roseville”; “Boise”; “San Diego”; “Washington”; and
 6 “CA.” *See* Exhibit L.

7 67. Some ICM products were manufactured and sold abroad but were
 8 ultimately imported by UDE’s customers into the United States. Further, Mr. Sunky
 9 Shang was previously a mechanical design engineer for ICM products at Pulse in
 10 Pulse’s design center in Zhuhai. Mr. Sunky Shang was hired away from Pulse by
 11 UDE “to do what it takes, or guide any factory team member towards the direction I
 12 [Greg Loudermilk] require for my Global Market position.” Exhibit L.

13 68. As explained above, UDE has had actual knowledge of the ’473 patent
 14 prior to this Complaint and at least as of the date of the Original Complaint. UDE
 15 was notified that its ICM products infringe the ’473 patent no later than October 14,
 16 2016, and UDE provided further detail in the form of claim charts demonstrating
 17 that UDE infringes the ’473 patent on February 3, 2017. Despite having actual
 18 knowledge of infringement, UDE has continued to induce infringement of one or
 19 more claims of the ’473 patent.

20 69. Defendant continues to infringe the ’473 Patent since receiving notice
 21 of said infringement from Pulse. Defendant’s infringement activities have been and
 22 continue to be willful, wanton, malicious, bad-faith, deliberate, consciously
 23 wrongful, and flagrant, entitling Pulse to increased damages under 35 U.S.C. § 284
 24 and making this case exceptional within the meaning of 35 U.S.C. §285.

25 **COUNT 2**

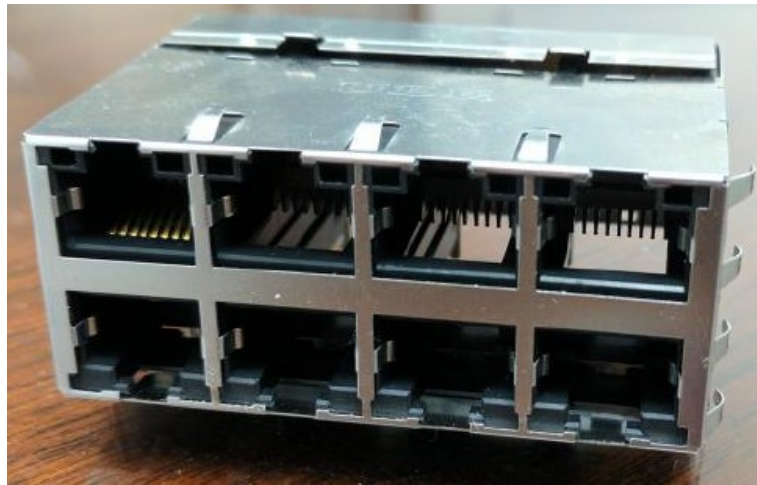
26 **INFRINGEMENT OF THE ’318 PATENT**

27 70. Pulse incorporates paragraphs 1 through 68 by reference as if fully
 28 stated herein.

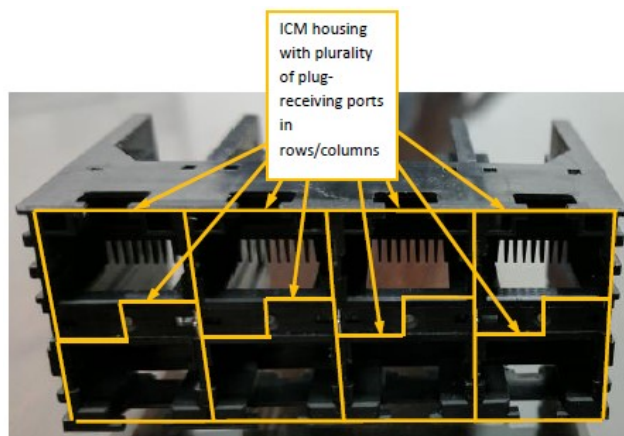
71. Defendant has directly infringed, and continues to directly infringe, either literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271(a), by making, using, offering to sell, selling, and/or importing into the United States, without authority, Accused Products that infringe at least Claims 14 and 17 of the '318 Patent.

72. By way of example, Defendant's 2x4 10G ICM product directly infringes, literally and/or under the doctrine of equivalents, Claim 14 of the '318 Patent.

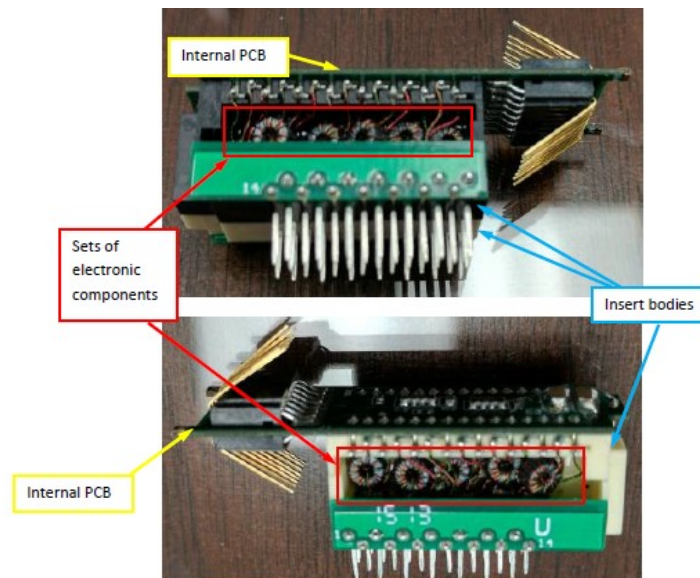
73. Defendant's 2x4 10G ICM looks substantially as follows:



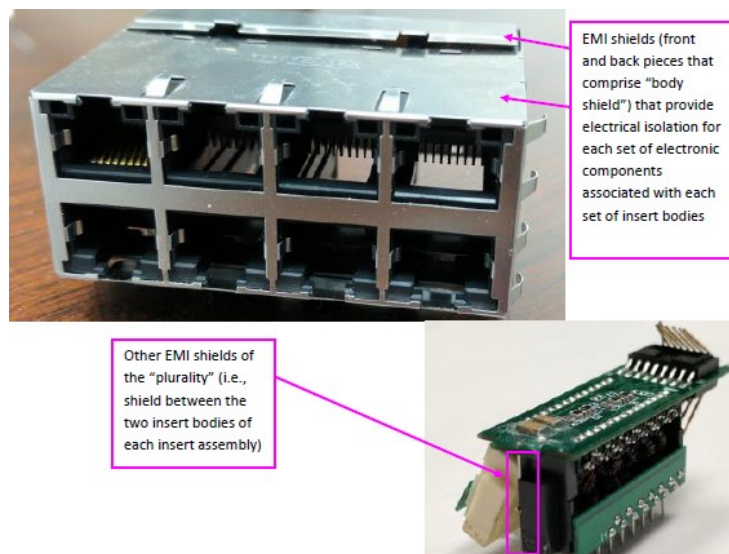
74. Independent Claim 14 of the '318 patent is directed to “[a]n integrated connector module, comprising: a connector housing comprising a plurality of connector ports arranged in a row-and-column fashion....” These claimed features are present in Defendant's 2x4 10G ICM as follows:



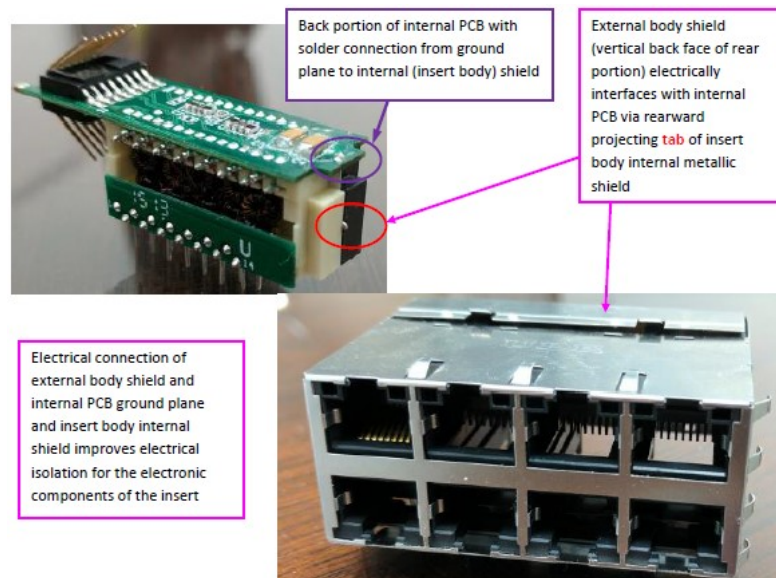
75. Claim 14 of the '318 Patent further requires "a plurality of sets of electronic components disposed within one or more insert bodies, the one or more insert bodies further comprising an internal printed circuit board...." These claimed features are present in Defendant's 2x4 10G ICM as follows:



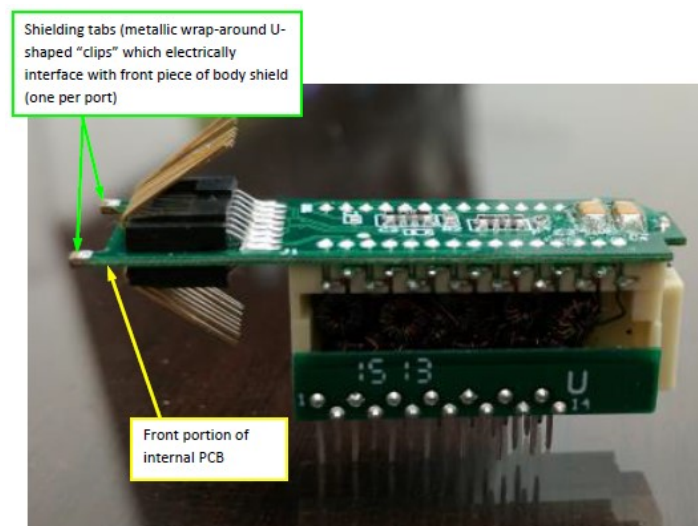
76. Claim 14 of the '318 Patent further requires "a plurality of electromagnetic interference (EMI) shields configured to provide electrical isolation for the plurality of sets of electronic components...." These claimed features are present in Defendant's 2x4 10G ICM as follows:



77. Claim 14 of the '318 Patent further requires “the plurality of EMI shields further comprising a body shield that interfaces with the internal printed circuit board at least at a back portion of the internal printed circuit board to improve electrical isolation for the plurality of sets of electronic components....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:

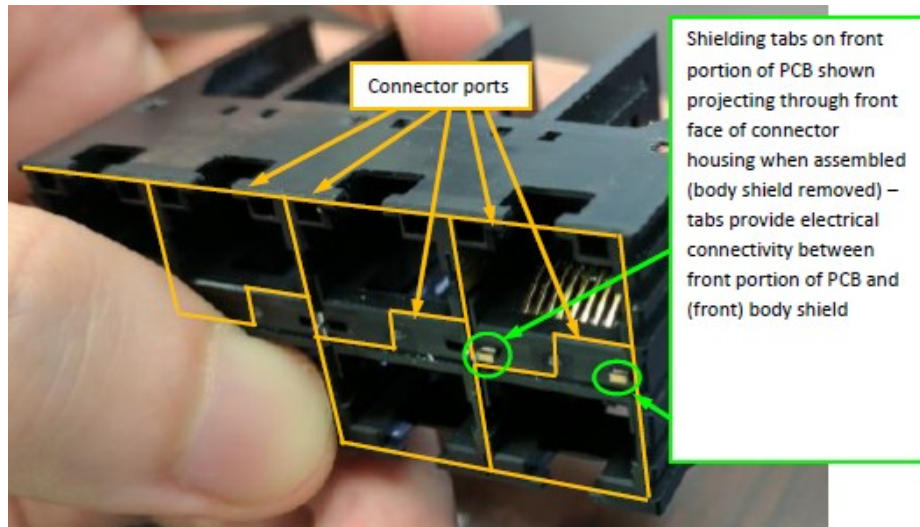


78. Claim 14 of the '318 Patent further requires “a shielding tab disposed at least partly within at least one of the plurality of connector ports....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



79. Claim 14 of the '318 Patent further requires “the shielding tab

1 configured to provide electrical connectivity between the internal printed circuit
 2 board and the body shield at a front portion of the internal printed circuit board.”
 3 These claimed features are present in Defendant’s 2x4 10G ICM as follows:



14 80. For at least the reasons stated in the preceding paragraphs, the Accused
 15 Products fall within the scope of at least independent Claim 14 of the '318 Patent.

16 81. Pulse has been irreparably harmed by Defendants’ acts of infringement
 17 of the '318 Patent and will continue to be harmed unless Defendant’s further acts of
 18 infringement are enjoined by order of this Court.

19 82. Defendant UDE has and continues to induce infringement of one or
 20 more claims of the '318 patent under 35 U.S.C § 271(b) by actively inducing
 21 related entities, retailers, and/or customers to make, use, sell, offer to sell, and/or
 22 import, products covered by one or more claims of the '318 patent.

23 83. For example, UDE actively induced (and continues to actively induce
 24 to the present) its customers with the knowledge and specific intent to encourage its
 25 customers to infringe the Patents-in-Suit by, *inter alia*: providing ICM components
 26 and ICM products to its customers and other third parties and intending them to
 27 make, use, sell and/or import ICM products in the United States that infringe the
 28 '318 Patent. Customers and third parties induced by UDE and included in a UDE

1 presentation attached hereto as Exhibit M, include, *inter alia*: HP Inc., Dell
 2 Technologies Inc., Acer Inc., Lenovo Group Limited, AsusTek Computer Inc.,
 3 Gigabyte Technology, Elitegroup Computer Systems Co., Ltd., Micro-Star
 4 International Co., Ltd, Foxconn Technology Group, Juniper Networks, Inc., Arris
 5 International Limited, Accton Technology Corporation, ZTE Corporation, Pace,
 6 Cisco Systems, Inc., Samsung, EchoStar Corporation, Technicolor, International
 7 Business Machines Corporation, Quanta Computer Incorporated, Wistron
 8 Corporation, LG, Sony, Panasonic, Canon, Lexmark, and Epson. Other companies
 9 induced are included in an email attached hereto as Exhibit L from UDE's Global
 10 Marketing Director, Greg Loudermilk. Specifically, the companies include:
 11 "Aruba-HPE"; "Arista"; "Arris/Pace"; "Brocade"; "Dell"; "Extreme Net"; "HPE";
 12 "HP"; "Fortinet"; "F5"; "Oracle"; "NetApp"; and "Siemens." Additionally, UDE
 13 stated the United States presence and/or domestic activity for many of the
 14 customers, including: "Sunnyvale"; "Santa Clara"; "TX, NH, MN"; "NH & NC";
 15 "Roseville"; "Boise"; "San Diego"; "Washington"; and "CA." *See* Exhibit L.

16 84. Some ICM products were manufactured and sold abroad but were
 17 ultimately imported by UDE's customers into the United States. Further, Mr. Sunky
 18 Shang was previously a mechanical design engineer for ICM products at Pulse in
 19 Pulse's design center in Zhuhai. Mr. Sunky Shang was hired away from Pulse by
 20 UDE "to do what it takes, or guide any factory team member towards the direction I
 21 [Greg Loudermilk] require for my Global Market position." Exhibit L.

22 85. As explained above, UDE has had actual knowledge of the '318 patent
 23 prior to this Complaint and at least as of the date of the Original Complaint. UDE
 24 was notified that its ICM products infringe the '318 patent no later than October 14,
 25 2016, and UDE provided further detail in the form of claim charts demonstrating
 26 that UDE infringes the '318 patent on February 3, 2017. Despite having actual
 27 knowledge of infringement, UDE has continued to induce infringement of one or
 28 more claims of the '318 patent.

1 86. UDE offers its infringing ICMs both to end-customers within the U.S.
2 and device manufacturers (*e.g.*, “ECMs” or Electronic Component Manufacturers
3 and Electronics Manufacturing Services “EMS” companies) acting on behalf of the
4 end-customers, with the objective of promoting its ICMs to infringe the Patents-in-
5 Suit, as shown by UDE’s affirmative steps taken to foster infringement via at least
6 sale, importation, and use within the U.S. Specifically and without limitation: (i)
7 UDE took and continues to undertake affirmative acts to induce third parties to
8 import its products into the United States; (ii) UDE designed and continues to
9 design its ICMs to meet certain standards applicable within, among other countries,
10 the United States; (iii) UDE competed for and continues to compete for, business it
11 knew was directed to and would involve infringing activities under the laws of the
12 United States, including through UDE’s U.S. sales representative Mr. Greg
13 Loudermilk; (iv) UDE worked directly and continues to work directly with its
14 customers in the United States to test its ICMs; (v) UDE’s website has enabled and
15 continues to enable customers to locate one or more United States-based
16 distributors that sold and sell UDE’s infringing ICMs.; and (vi) UDE has attempted
17 to purchase a direct U.S.-based competitor (Pulse) which it knows services large
18 ICM accounts within the U.S.

19 87. Pulse subpoenaed EMS companies that UDE uses as confirmed by
20 production from customers that Pulse subpoenaed earlier this year. Request 5 of the
21 subpoenas state: “Documents regarding the shipment of products that include 2xN
22 UDE ICMs to locations within the United States from January 2012 through May
23 2020.” On July 8, 2020, Pulse counsel spoke with the in-house counsel of one EMS
24 company regarding Request 5 and the EMS company confirmed this information is
25 within the custody and control of the EMS company. The EMS company further
26 confirmed that they would be providing this information in compliance with the
27 subpoena.
28

87. UDE has desired to make use of Pulse’s patented ICM technology for its own purposes since at least January of 2015, when UDE’s Mr. Greg Loudermilk expressed interest in purchasing Pulse in an email to Pulse’s then CEO, Mark Twaalfhoven. *See* Exhibit R (“Is Pulse open for sale the ICM or all of Pulse?”). In February of 2016, UDE’s Mr. Greg Loudermilk emailed Pulse’s CEO Mark Twaalfhoven again to explain that “UDE is taking more footprint from our competitors” including “10% from Pulse” annually over the past three years in the North American Market. *See* Exhibit S {emphasis added}. UDE has actively induced UDE’s customers (many of which are also Pulse’s customers) with knowledge of the Patents-in-Suit, and the specific intent that UDE’s customer’s directly infringe by selling end-user products with UDE ICMs therein (such as Multi-gigabit Ethernet switches) within the U.S.

88. Exhibit L is an email from UDE to Pulse showing specific intent to design and sell UDE ICM products in the United States. Mr. Greg Loudermilk, a UDE U.S. salesperson, states “UDE works closely...for the design in the US” and states sales in the tens of millions of dollars. *See* Exhibit L {emphasis added}. UDE by its own admission specifically designs its ICM products for the United States. *See* Exhibit L at Page 4 (“for the design in US”). Moreover, UDE claims to be “World No. 2 in ICM revenues” with approximately \$150,000,000 USD in ICM sales for 2016. *See* Exhibit M at Page 4. UDE sells about one hundred and fifty *million* dollars annually in ICMs alone – with substantial distribution of UDE’s infringing ICM products into the world’s largest economy (the U.S.) through indirect infringement. Moreover, UDE’s customers that are required to report to the SEC disclose a substantial amount of net revenue within the United States. *See, e.g.,* 2019 Cisco FORM 10-K accessed on July 15, 2020 at <http://d18rn0p25nwr6d.cloudfront.net/CIK-0000858877/d482eb08-abf3-42c0-b2ae-553eb8e2af37.pdf> (showing \$22.7 billion, or more than half Cisco’s product revenue is from the Americas); 2019 Juniper FORM 10-K accessed on July 15,

2020 at <http://d18rn0p25nwr6d.cloudfront.net/CIK-0001043604/aa36dfa9-56f2-4614-96cf-dc43b0333250.pdf> (showing \$2.29 billion, or more than half Juniper’s net revenue is from the United States); 2019 HPE FORM 10-K accessed on July 15, 2020 at <https://investors.hpe.com/~media/Files/H/HP-Enterprise-IR/documents/hpe-10k2019.pdf> (“Approximately 67% of our overall net revenue in fiscal 2019 came from outside the United States.”). Assuming, *arguendo*, that UDE truly does not know its infringing ICMs end up in the United States, UDE can not take deliberate actions to avoid confirming a high probability of wrongdoing because the Supreme Court and Federal Circuit agree that a willfully blind infringer is still liable for inducement. *See, e.g., Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 767, 131 S. Ct. 2060, 2069, 179 L. Ed. 2d 1167 (2011); *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 824 F.3d 1344, 1347 (Fed. Cir. 2016).

89. UDE has taken additional steps to conceal its inducement by teaming with, selling its ICMs through, third parties (*i.e.*, Aquantia). *See, e.g.*, Sealed Exhibit P (“what you get from AQ[Aquantia], is what you get from UDE every time”). UDE and Aquantia cooperate for design, qualification testing, and marketing (“offering for sale”) of the ICMs to entities in the U.S. These actions highlight UDE’s culpability and knowledge of the Patents-in-Suit. Specifically, UDE sells its ICMs as bundles using a third party. UDE also completely rebrands some of its ICMs under a third party as evidenced by its corresponding product numbers with a third party (*e.g.*, a single UDE ICM has a UDE model product number and an Aquantia model product number).

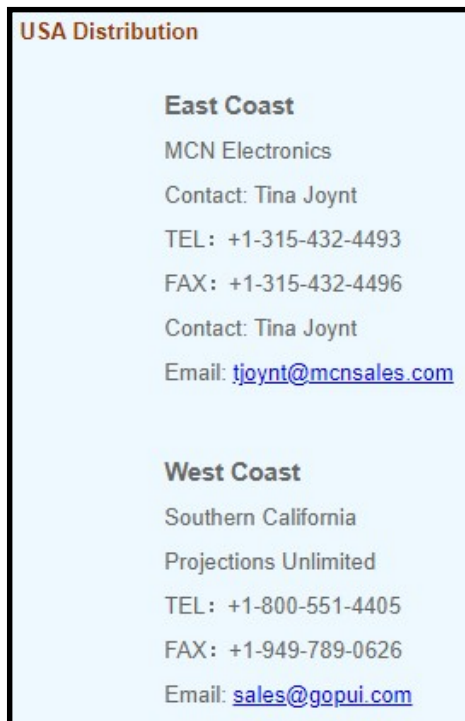
90. UDE’s encouragement, marketing, and other promotion of its ICMs to UDE’s customers, including numerous companies which both are based in the U.S. and which sell devices with multi-gigabit ICMs in the U.S., reflect an affirmative intent on behalf of UDE which actively aids the infringement by UDE’s customers. These actions by UDE lead its customers to engage in conduct that UDE knows is

1 infringement; i.e., the sale, use, and importation of multi-gigabit capable devices
2 including UDE ICMs in the United States.

3 91. Mr. Greg Loudermilk is listed as the UDE contact for USA on UDE's
4 website. *See below from <http://www.ude-corp.com/about/about/id/3/lang/en.html>*
5 *accessed July 13, 2020.*



14 Further, the UDE website lists "USA Distribution" and "USA Agent" contacts for
15 the West Coast and East Coast. *See below from [http://www.ude-](http://www.ude-corp.com/about/about/id/3/lang/en.html)*
16 *corp.com/about/about/id/3/lang/en.html accessed July 13, 2020.*



1
2 UDE's Mr. Loudermilk and UDE use the corporate office in San Ramon,
3 California, along with UDE's USA distribution centers and USA agents, to actively
4 and knowingly aid and abet entities to infringe the Patents-In-Suit, including within
5 the United States.

6 92. Mr. Greg Loudermilk has declared: "I spend perhaps 20% of my time
7 focused on the North America market." Dkt. 74-6, February 27, 2020 Loudermilk
8 Declaration at ¶ 10. Mr. Loudermilk's "focus" includes the active encouragement
9 of entities to infringe the Patents-in-Suit within the United States.

10 93. Mr. Loudermilk emailed Pulse on January 7, 2015 discussing UDE's
11 ability to manufacture at a lower cost and stating, *inter alia*, "...we work with Pulse
12 to use their tooling designs, or buy their tooling designs for SFP and Press fit RJ,
13 10GigE, standard RJ, offer to tool and build for Pulse, saving them money, while
14 UDE can use to offer to our customers. In competing situations, we collaborate how
15 to cooperate." Exhibit R at PEI0003108. Instead of collaborating with Pulse, UDE
16 decided to actively seek out entities to infringe the Patents-in-Suit with the specific
17 intent to aid and abet those entities with the knowledge that those entities would
18 infringe. Further, Mr. Loudermilk also stated: "UDE has a large interest in
19 growing our connector content to our customer in NA...". *Id.* {emphasis added}
20 Also, Mr. Loudermilk wrote: "Annually UDE is taking more footprint from our
21 competitors and/or sharing a majority of the allocation: 10% from Pulse." Exhibit S
22 at PEI0003039.

23 94. Additionally, discovery from subpoenas to several UDE's customers
24 including several based in the United States has revealed that UDE is liable for the
25 misconduct alleged, including indirect infringement (inducement and contributory).
26 For example, UDE actively induced (and continues to actively induce) its
27 customers with the knowledge and specific intent to encourage its customers to
28 infringe the Patents-in-Suit by creating specific tooling based on specifications and

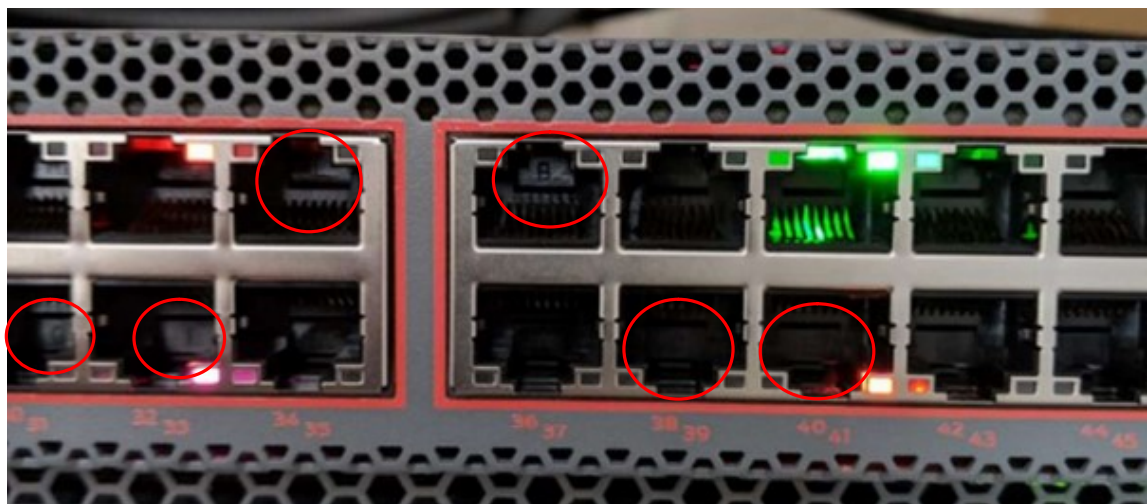
1 permission from its customers, including the development of an ICM design. *See*,
2 *e.g.*, Sealed Exhibit N (email from Mr. Loudermilk to a customer explaining the
3 tooling process and design development). Sealed Exhibit N shows one example of
4 UDE “actively and *knowingly*” aiding and abetting another’s direct infringement
5 (i.e., creating designs and tooling for products to be used in a customer’s products
6 to be sold, used, and imported in the U.S.) Also, UDE has conference calls with its
7 customers regarding the electrical reports of the ICMs, quality of the ICMs, cost
8 differences, and manufacturing processes. *See, e.g.*, Sealed Exhibit O. UDE knows
9 that the products described in these conversations which UDE actively designs for,
10 as well as encourages and promotes the use of UDE’s ICMs for products in the
11 United States. Sealed Exhibits N, O, P, and Q show successful communication by
12 UDE (the inducer) to a customer (direct infringer) as required for inducement. *See*
13 *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 843 F.3d 1315, 1331
14 (Fed. Cir. 2016)(“Each definition [of inducement] requires successful
15 communication between the alleged inducer and the third-party direct infringer.”)

16 95. UDE has memorialized some of its active inducement to its customers in
17 emails UDE sent to Pulse. For example, Mr. Loudermilk wrote:

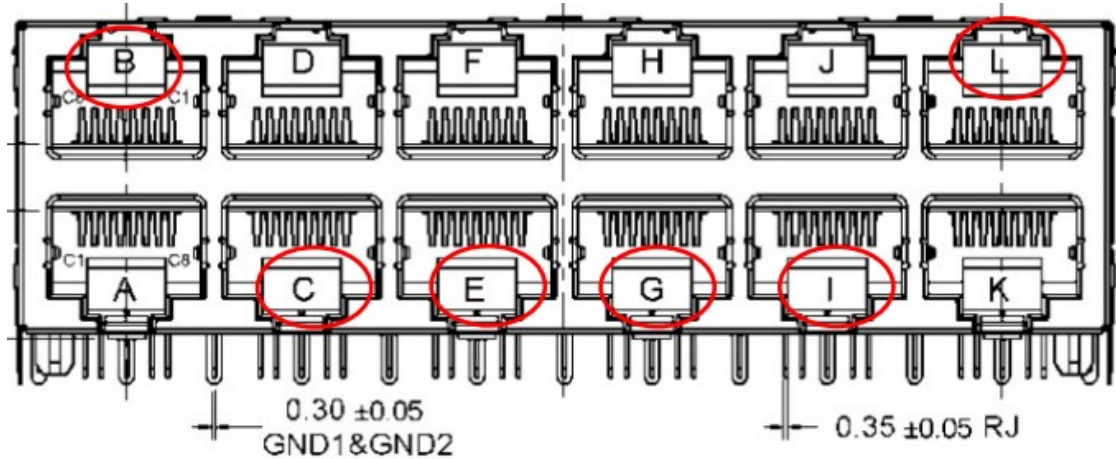
18 “As discussed briefly: I have a design which I approached Juniper last year
19 that will allow them to use Discrete LAN Filter and Passive RJ45 Jack to
20 save cost and board skews when requiring PoE. See attached PDF UDE
21 Juniper T1 & T2 SMT LAN and PoE Option & RMV connector spec. My
22 idea is work closely with Pulse to find the design problems for the 10Vrms
23 requirement that UDE EE has not been able to solve. Later advise Juniper
24 that they will have dual sources: UDE and Pulse (have licensed this product
25 together) ... Juniper has tested UDE jack, function is OK, however we fail to
26 solve this 10Vrms issue and the engineer left Juniper. Now we started back
27 as a NEW Engineer on board and Juniper is highly motivated to get this
28 product going. I would like to open the doors for this product for our first

1 start of Channel to Mark Collaboration as it seems fitting and Juniper is both
2 Pulse and UDE customer.”
3 2016 UDE email to Pulse, Exhibit L, top of Page 2.

4 UDE admits to taking affirmative actions (*i.e.*, “I approached Juniper...”) that
5 constitute inducement. UDE also admits that its own electrical engineer could not
6 solve the design problems and that UDE would like to work with Pulse to jointly
7 license the ICMs as a “first start of Channel to Mark[sic] Collaboration as it seems
8 fitting and Juniper is both Pulse and UDE customer.” Instead of working together,
9 or taking a license to Pulse’s patented designs, UDE decided to willfully infringe
10 Pulse’s Patents-in-Suit. Mr. Loudermilk acknowledges that UDE has knowledge of
11 the Patents-in-Suit and UDE’s infringement of the Patents-in-Suit because Mr.
12 Loudermilk writes “UDE and Pulse (have licensed this product together).” Pulse
13 purchased the exemplary Juniper EX4300-48MP Ethernet Switch in San Diego, CA
14 (*i.e.*, the United States) to confirm the infringement of UDE manufactured ICMs
15 within Juniper’s product. The Juniper EX4300-48MP has the same markings as the
16 UDE ICM design drawings as shown below.



25 Picture of Juniper EX4300-48MP Ethernet Switch.
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27
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Drawing of UDE Infringing ICM (MPN: GM6-ZZ-0004).

As shown in port 36 at top near the middle of the picture of the Juniper EX4300-48MP, the capital letter “B” is noted molded into the plastic at the back of port 36. See also port 31 (left side of picture), with the capital letter “G,” and port 33 with the capital letter “I.” See also port 34, with the capital letter “L.” See also port 39, with the capital letter “C” therein, port 41 with capital letter “E,” and so forth.

97. Further, UDE has its mechanical and electrical engineers prepare data sheets directed to the infringing ICMs for its customers and perform tests of the infringing ICMs for its customers. *See generally* Sealed Exhibit P. UDE even knows the design of its competitors, including Pulse, and shares that information with its customers to knowingly aid and abet in their infringement. *See, e.g.,* Sealed Exhibit P (UDE email to customer stating “Pulse have the same exact designs”). Sealed Exhibits N, O, P, and Q are direct evidence of UDE’s active inducement. At trial, Pulse can meet its burden to show inducement by direct or circumstantial evidence. *See Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 723 (Fed. Cir. 2008) (“A patentee may rely on either direct or circumstantial evidence to prove infringement.”).

96. UDE knows that its customers infringe the Patents-in-Suit and takes actions towards gaining market share through encouraging customers to use UDE’s

1 infringing ICMs by copying Pulse’s patent designs. *See, e.g.*, Sealed Exhibit Q
2 (UDE email to customer stating that Pulse “can’t sell an ICM for these prices”).

3 97. Further, Claim 17 of the ‘318 Patent requires “...a wall structure that
4 separates the shielding tab from a plurality of electrical conductors disposed within the
5 plurality of connector ports” which, under one interpretation, requires a modular plug
6 (which includes a “plurality of electrical conductors”) be inserted into at least one of
7 the recited connector ports. UDE provides instructions (in English) in its data sheets
8 available on its website, including in the U.S., the type of plug and cable that must be
9 used to fulfill such limitation, as well as the force necessary to insert and remove the
10 plug. *See, e.g.*, Exhibit K reproduced in part below:
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19 [INTENTIONNALLY LEFT BLANK]
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GM6-MA-0012

- All dimensions follow :
FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)
IEC 60603-7
- All plugs must be meeting the requirements of plug Go & No-Go gauge
Gauge follow : FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)
- There must be no damage to Housing and Locking Latch.
- There must be no nicks and cuts in cable.
- Durability : 750 cycles generally

GM617026-00

GM6-MA-0012

5. Operating and Storage Temperature

Operating Temperature : -40°C to +85°C

Storage Temperature : -40°C to +85°C

6. RJ45 specifications

Insulation Resistance : 500MΩ min.

Insertion force with the latch depressed : 20N max.

Removal force with the latch depressed : 20N max.

Locking Force of Plug Latch : 50N min. @ 60+/-5 sec.

Durability : 2500 cycles

Thus, UDE actively induces users on the plug dimensions, insertion/removal, etc., and such plugs would only be used by end-users (including in the U.S., where such products end up as evidenced by the Juniper EX-4300 switch depicted above) or those testing the host device with UDE ICMs installed.

98. UDE has contributed and continues to contribute to infringement of one or more claims of the '318 Patent under 35 U.S.C. § 271(c), including but not limited to Claims 14 and 17, by offering to sell or selling within the United States and/or importing into the United States, without authorization, one or more components or products of which the '318 Patent covers with the knowledge (at least as of October 14, 2016 or the filing of the Original Complaint) that such component(s) are especially made or especially adapted for use in infringement of the '318 Patent and are not are staple articles of commerce suitable for substantial non-infringing use.

99. Specifically, UDE's infringing ICMs that are a material part of the '318 invention are electrical connectors commonly used for Ethernet networking that do not have substantial non-infringing uses other than Ethernet networking. Moreover, as discussed *supra*, Claim 17 in one interpretation requires the presence of a modular plug with electrical contacts inserted into at least one of the recited

1 ports. There is no substantial non-infringing use of the ICMs as sold by UDE and as
 2 ultimately distributed into the U.S. and other markets that does not involve insertion
 3 of a modular plug in a front port. The UDE ICMs are non-functional for their
 4 intended purpose (i.e., high-speed signal transmission) without such modular plug
 5 (no data transmission can occur), and there is no other reasonable use for them
 6 other than such transmission of data.

7 100. Defendant continues to infringe the '318 Patent since receiving notice
 8 of said infringement from Pulse. Defendant's infringement activities have been and
 9 continue to be willful, wanton, malicious, bad-faith, deliberate, consciously
 10 wrongful, and flagrant, entitling Pulse to increased damages under 35 U.S.C. § 284
 11 and making this case exceptional within the meaning of 35 U.S.C. §285.

12 **COUNT 3**

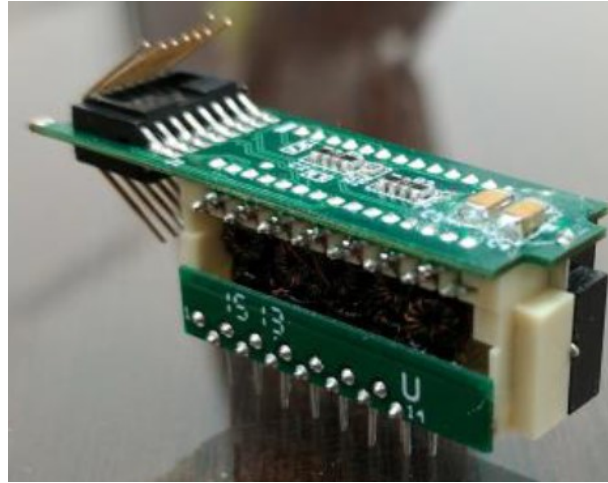
13 **INFRINGEMENT OF THE '840 PATENT**

14 101. Pulse incorporates paragraphs 1 through 86 by reference as if fully
 15 stated herein.

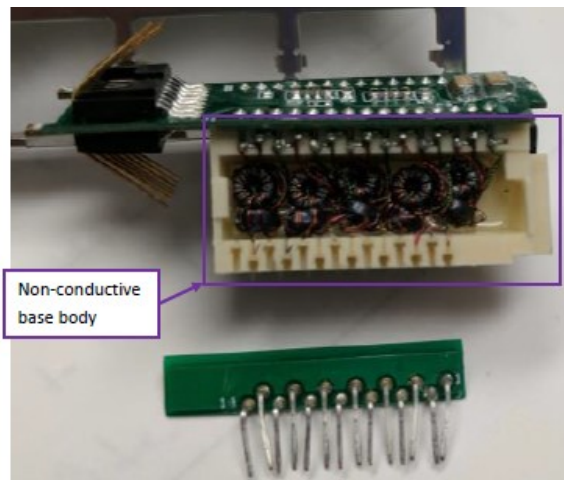
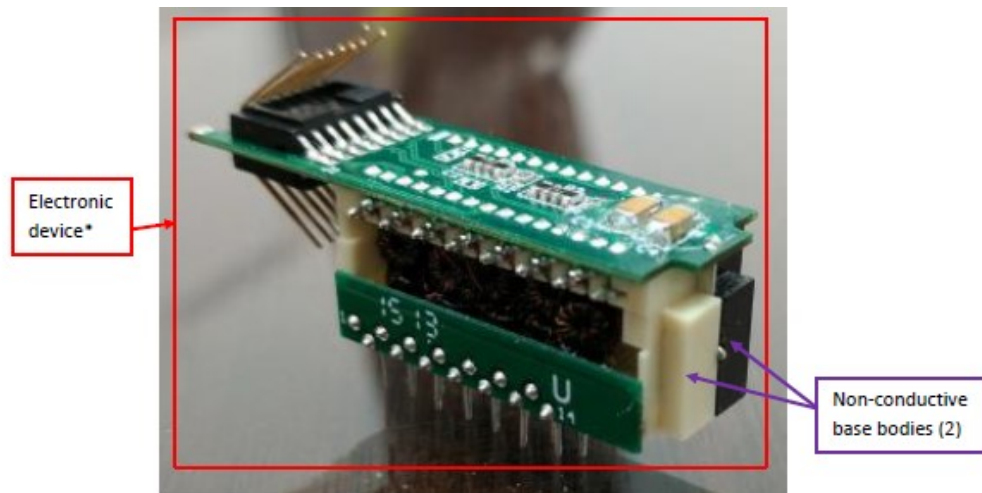
16 102. Defendant has directly infringed, and continues to directly infringe,
 17 either literally and/or under the doctrine of equivalents, in violation of 35 U.S.C.
 18 § 271(a), by making, using, offering to sell, selling, and/or importing into the
 19 United States, without authority, Accused Products that infringe at least Claims 1,
 20 7, 10, 11, 12, and 16 of the '840 Patent.

21 103. By way of example, Defendant's 2x4 10G ICM product directly
 22 infringes, literally and/or under the doctrine of equivalents, Claim 1 of the '840
 23 Patent.

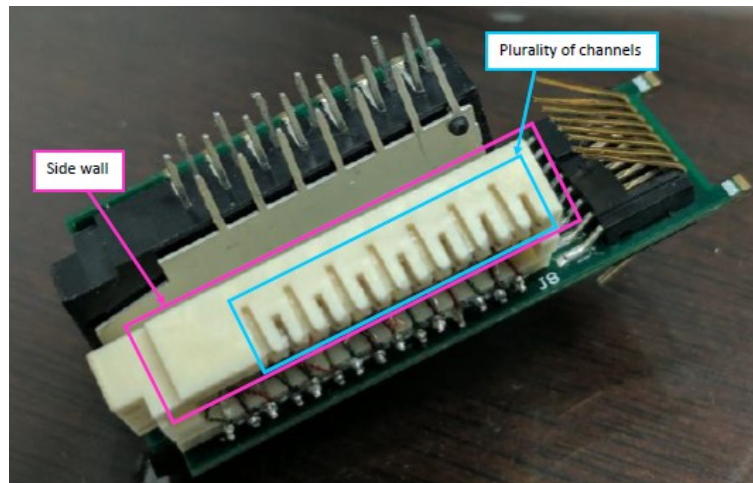
24 104. The relevant portion of Defendant's 2x4 10G ICM looks substantially
 25 as follows:
 26
 27
 28



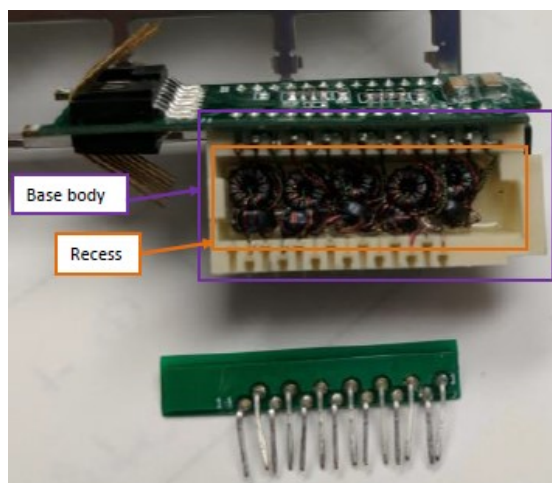
105. Independent Claim 1 of the '840 patent is directed to “[a]n electronic device, comprising; a non-conducting base body having:” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



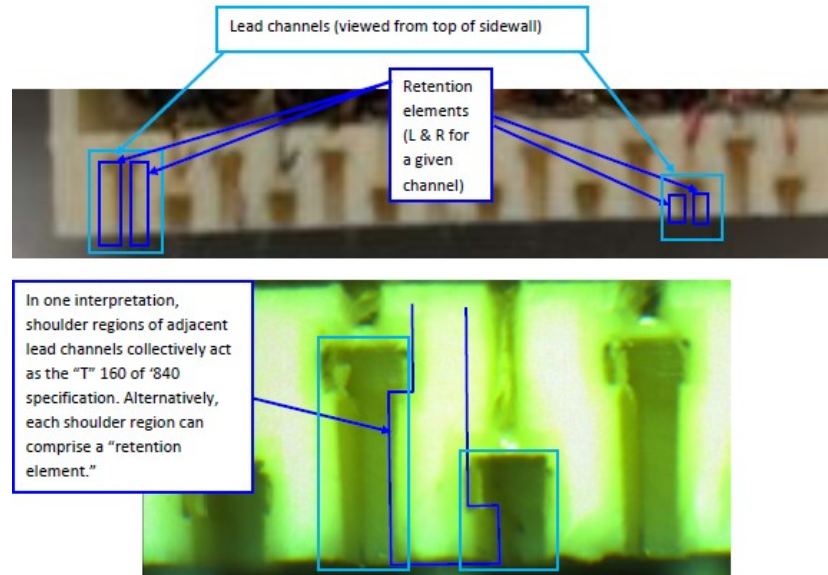
106. Claim 1 of the '840 Patent further requires "at least one side wall, wherein a portion of said at least one side wall defines a plurality of lead channels in said side wall...." These claimed features are present in Defendant's 2x4 10G ICM as follows:



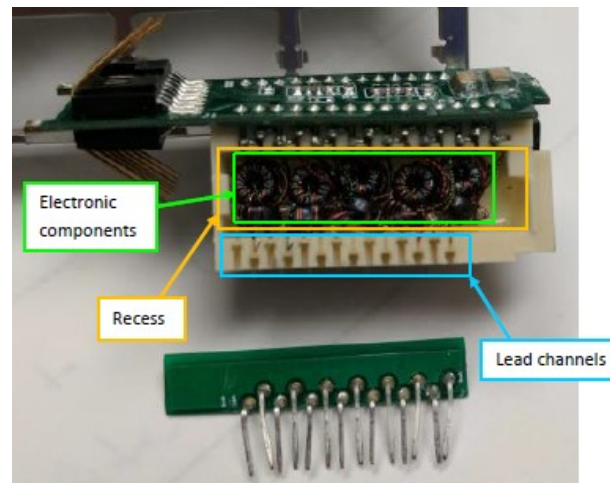
107. Claim 1 of the '840 Patent further requires "a portion of the base body defining at least one recess disposed therein...." These claimed features are present in Defendant's 2x4 10G ICM as follows:

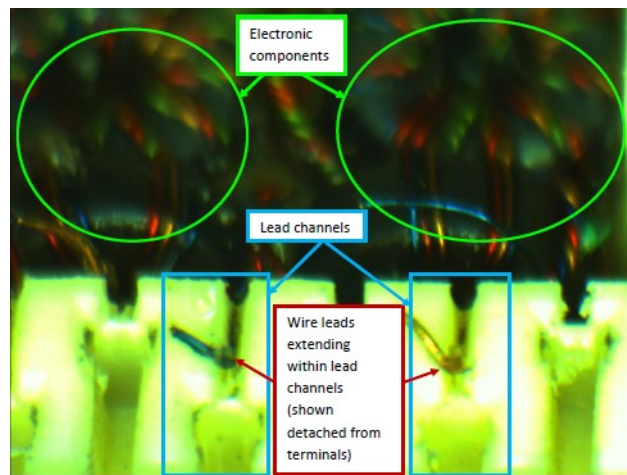


108. Claim 1 of the '840 Patent further requires "at least one retention element disposed in at least one of said plurality of lead channels...." These claimed features are present in Defendant's 2x4 10G ICM as follows:

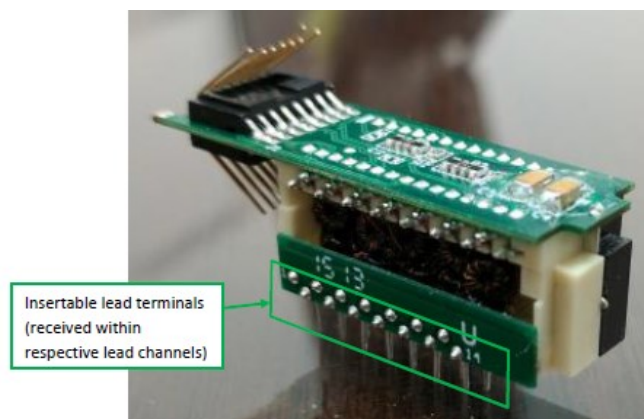
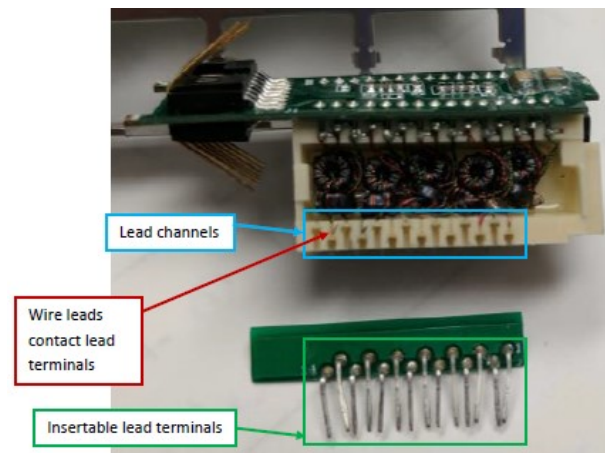


109. Claim 1 of the '840 Patent further requires "at least one electronic component disposed in said at least one recess, said electronic component having a plurality of wire leads, at least one of said plurality of wire leads extending within at least one of said plurality of lead channels...." These claimed features are present in Defendant's 2x4 10G ICM as follows:

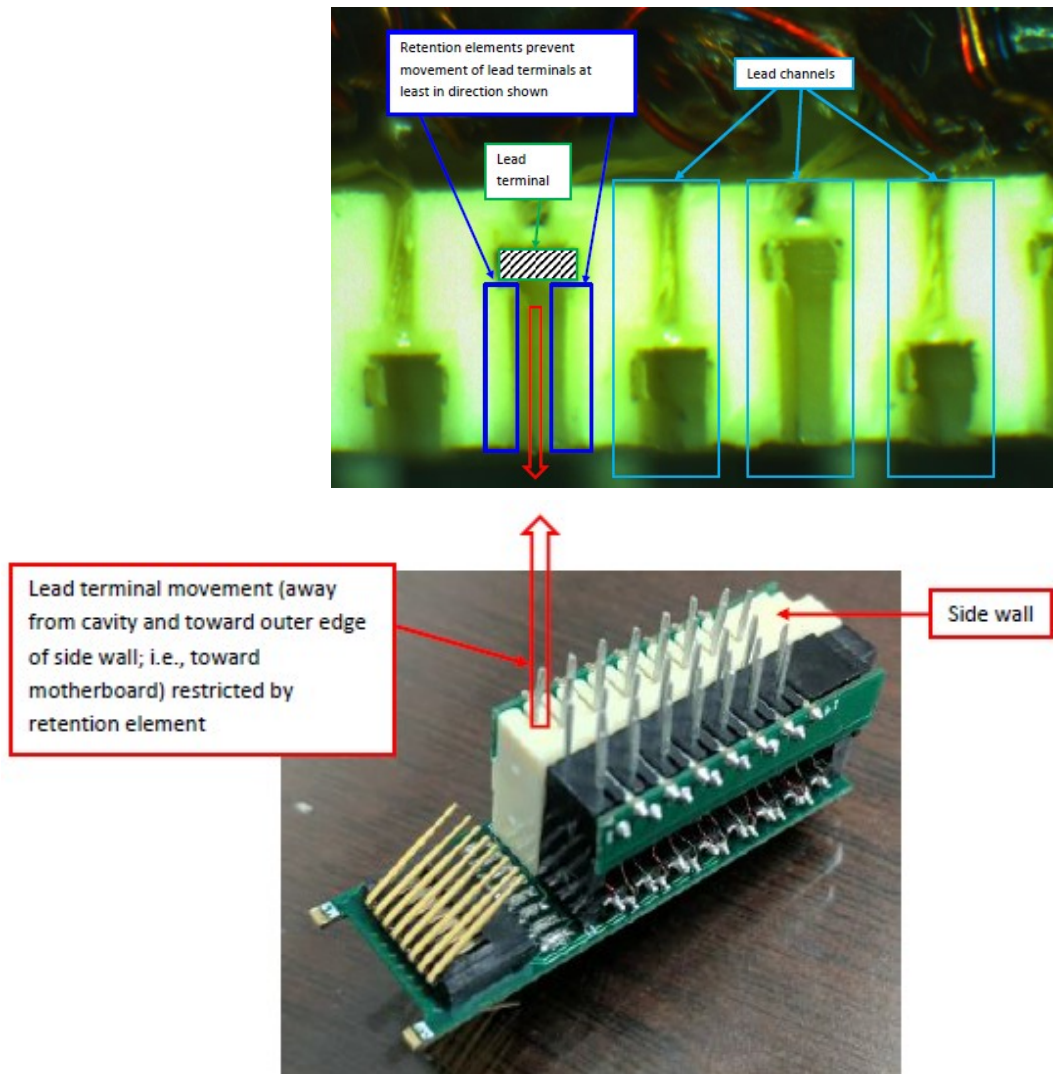




110. Claim 1 of the '840 Patent further requires “a plurality of insertable lead terminals, each of said lead terminals received within a respective one of said plurality of lead channels, at least one of said lead terminals forming a conductive contact with said at least one of said plurality of wire leads....” These claimed features are present in Defendant’s 2x4 10G ICM as follows:



111. Claim 1 of the '840 Patent further requires "wherein movement of said lead terminals within said plurality of lead channels is restricted by said retention element." These claimed features are present in Defendant's 2x4 10G ICM as follows:



112. For at least the reasons stated in the preceding paragraphs, the Accused Products fall within the scope of at least independent Claim 1 of the '840 Patent.

113. Pulse has been irreparably harmed by Defendants' acts of infringement of the '840 Patent and will continue to be harmed unless Defendant's further acts of infringement are enjoined by order of this Court.

114. Defendant UDE has and continues to induce infringement of one or more claims of the '840 patent under 35 U.S.C § 271(b) by actively inducing related entities, retailers, and/or customers to make, use, sell, offer to sell, and/or import, products covered by one or more claims of the '840 patent.

115. For example, UDE actively induced (and continues to actively induce to the present) its customers with the knowledge and specific intent to encourage its customers to infringe the Patents-in-Suit by, *inter alia*: providing ICM components and ICM products to its customers and other third parties and intending them to make, use, sell and/or import ICM products in the United States that infringe the '840 Patent. Customers and third parties induced by UDE and included in a UDE presentation attached hereto as Exhibit M, include, *inter alia*: HP Inc., Dell Technologies Inc., Acer Inc., Lenovo Group Limited, AsusTek Computer Inc., Gigabyte Technology, Elitegroup Computer Systems Co., Ltd., Micro-Star International Co., Ltd, Foxconn Technology Group, Juniper Networks, Inc., Arris International Limited, Accton Technology Corporation, ZTE Corporation, Pace, Cisco Systems, Inc., Samsung, EchoStar Corporation, Technicolor, International Business Machines Corporation, Quanta Computer Incorporated, Wistron Corporation, LG, Sony, Panasonic, Canon, Lexmark, and Epson. Other companies induced are included in an email attached hereto as Exhibit L from UDE's Global Marketing Director, Greg Loudermilk. Specifically, the companies include: "Aruba-HPE"; "Arista"; "Arris/Pace"; "Brocade"; "Dell"; "Extreme Net"; "HPE"; "HP"; "Fortinet"; "F5"; "Oracle"; "NetApp"; and "Siemens." Additionally, UDE stated the United States presence and/or domestic activity for many of the customers, including: "Sunnyvale"; "Santa Clara"; "TX, NH, MN"; "NH & NC"; "Roseville"; "Boise"; "San Diego"; "Washington"; and "CA." *See* Exhibit L.

116. Some ICM products were manufactured and sold abroad but were ultimately imported by UDE's customers into the United States. Further, Mr. Sunky Shang was previously a mechanical design engineer for ICM products at Pulse in

1 Pulse's design center in Zhuhai. Mr. Sunky Shang was hired away from Pulse by
2 UDE "to do what it takes, or guide any factory team member towards the direction I
3 [Greg Loudermilk] require for my Global Market position." Exhibit L.

4 117. As explained above, UDE has had actual knowledge of the '840 patent
5 prior to this Complaint and at least as of the date of the Original Complaint. UDE
6 was notified that its ICM products infringe the '840 patent no later than October 14,
7 2016, and UDE provided further detail in the form of claim charts demonstrating
8 that UDE infringes the '840 patent on February 3, 2017. Despite having actual
9 knowledge of infringement, UDE has continued to induce infringement of one or
10 more claims of the '840 patent.

11 118. UDE offers its infringing ICMs both to end-customers within the U.S.
12 and device manufacturers (*e.g.*, "ECMs" or Electronic Component Manufacturers
13 and Electronics Manufacturing Services "EMS" companies) acting on behalf of the
14 end-customers, with the objective of promoting its ICMs to infringe the Patents-in-
15 Suit, as shown by UDE's affirmative steps taken to foster infringement via at least
16 sale, importation, and use within the U.S. Specifically and without limitation: (i)
17 UDE took and continues to undertake affirmative acts to induce third parties to
18 import its products into the United States; (ii) UDE designed and continues to
19 design its ICMs to meet certain standards applicable within, among other countries,
20 the United States; (iii) UDE competed for and continues to compete for, business it
21 knew was directed to and would involve infringing activities under the laws of the
22 United States, including through UDE's U.S. sales representative Mr. Greg
23 Loudermilk; (iv) UDE worked directly and continues to work directly with its
24 customers in the United States to test its ICMs; (v) UDE's website has enabled and
25 continues to enable customers to locate one or more United States-based
26 distributors that sold and sell UDE's infringing ICMs.; and (vi) UDE has attempted
27 to purchase a direct U.S.-based competitor (Pulse) which it knows services large
28 ICM accounts within the U.S.

87. Pulse subpoenaed EMS companies that UDE uses as confirmed by production from customers that Pulse subpoenaed earlier this year. Request 5 of the subpoenas state: “Documents regarding the shipment of products that include 2xN UDE ICMs to locations within the United States from January 2012 through May 2020.” On July 8, 2020, Pulse counsel spoke with the in-house counsel of one EMS company regarding Request 5 and the EMS company confirmed this information is within the custody and control of the EMS company. The EMS company further confirmed that they would be providing this information in compliance with the subpoena.

119. UDE has desired to make use of Pulse’s patented ICM technology for its own purposes since at least January of 2015, when UDE’s Mr. Greg Loudermilk expressed interest in purchasing Pulse in an email to Pulse’s then CEO, Mark Twaalfhoven. *See* Exhibit R (“Is Pulse open for sale the ICM or all of Pulse?”). In February of 2016, UDE’s Mr. Greg Loudermilk emailed Pulse’s CEO Mark Twaalfhoven again to explain that “UDE is taking more footprint from our competitors” including “10% from Pulse” annually over the past three years in the North American Market. *See* Exhibit S {emphasis added}. UDE has actively induced UDE’s customers (many of which are also Pulse’s customers) with knowledge of the Patents-in-Suit, and the specific intent that UDE’s customer’s directly infringe by selling end-user products with UDE ICMs therein (such as Multi-gigabit Ethernet switches) within the U.S.

120. Exhibit L is an email from UDE to Pulse showing specific intent to design and sell UDE ICM products in the United States. Mr. Greg Loudermilk, a UDE U.S. salesperson, states “UDE works closely...for the design in the US” and states sales in the tens of millions of dollars. *See* Exhibit L {emphasis added}. UDE by its own admission specifically designs its ICM products for the United States. *See* Exhibit L at Page 4 (“for the design in US”). Moreover, UDE claims to be “World No. 2 in ICM revenues” with approximately \$150,000,000 USD in ICM

1 sales for 2016. *See* Exhibit M at Page 4. UDE sells about one hundred and fifty
 2 *million* dollars annually in ICMs alone – with substantial distribution of UDE’s
 3 infringing ICM products into the world’s largest economy (the U.S.) through
 4 indirect infringement. Moreover, UDE’s customers that are required to report to the
 5 SEC disclose a substantial amount of net revenue within the United States. *See*,
 6 *e.g.*, 2019 Cisco FORM 10-K accessed on July 15, 2020 at
 7 [http://d18rn0p25nwr6d.cloudfront.net/CIK-0000858877/d482eb08-abf3-42c0-b2ae-](http://d18rn0p25nwr6d.cloudfront.net/CIK-0000858877/d482eb08-abf3-42c0-b2ae-553eb8e2af37.pdf)
 8 [553eb8e2af37.pdf](http://d18rn0p25nwr6d.cloudfront.net/CIK-0000858877/d482eb08-abf3-42c0-b2ae-553eb8e2af37.pdf) (showing \$22.7 billion, or more than half Cisco’s product
 9 revenue is from the Americas); 2019 Juniper FORM 10-K accessed on July 15,
 10 2020 at [http://d18rn0p25nwr6d.cloudfront.net/CIK-0001043604/aa36dfa9-56f2-](http://d18rn0p25nwr6d.cloudfront.net/CIK-0001043604/aa36dfa9-56f2-4614-96cf-dc43b0333250.pdf)
 11 [4614-96cf-dc43b0333250.pdf](http://d18rn0p25nwr6d.cloudfront.net/CIK-0001043604/aa36dfa9-56f2-4614-96cf-dc43b0333250.pdf) (showing \$2.29 billion, or more than half Juniper’s
 12 net revenue is from the United States); 2019 HPE FORM 10-K accessed on July 15,
 13 2020 at [https://investors.hpe.com/~media/Files/H/HP-Enterprise-](https://investors.hpe.com/~media/Files/H/HP-Enterprise-IR/documents/hpe-10k2019.pdf)
 14 [IR/documents/hpe-10k2019.pdf](https://investors.hpe.com/~media/Files/H/HP-Enterprise-IR/documents/hpe-10k2019.pdf) (“Approximately 67% of our overall net revenue in
 15 fiscal 2019 came from outside the United States.”). Assuming, *arguendo*, that UDE
 16 truly does not know its infringing ICMs end up in the United States, UDE can not
 17 take deliberate actions to avoid confirming a high probability of wrongdoing
 18 because the Supreme Court and Federal Circuit agree that a willfully blind infringer
 19 is still liable for inducement. *See, e.g., Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563
 20 U.S. 754, 767, 131 S. Ct. 2060, 2069, 179 L. Ed. 2d 1167 (2011); *Warsaw*
 21 *Orthopedic, Inc. v. NuVasive, Inc.*, 824 F.3d 1344, 1347 (Fed. Cir. 2016).

22 121. UDE has taken additional steps to conceal its inducement by teaming
 23 with, selling its ICMs through, third parties (*i.e.*, Aquantia). *See, e.g.*, Sealed
 24 Exhibit P (“what you get from AQ[Aquantia], is what you get from UDE every
 25 time”). UDE and Aquantia cooperate for design, qualification testing, and
 26 marketing (“offering for sale”) of the ICMs to entities in the U.S. These actions
 27 highlight UDE’s culpability and knowledge of the Patents-in-Suit. Specifically,
 28 UDE sells its ICMs as bundles using a third party. UDE also completely rebrands

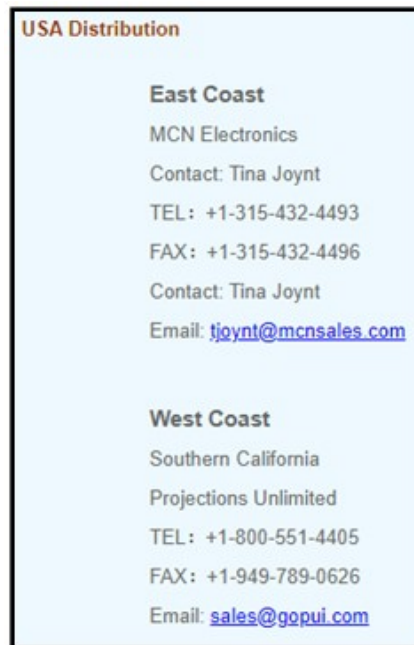
1 some of its ICMs under a third party as evidenced by its corresponding product
 2 numbers with a third party (e.g., a single UDE ICM has a UDE model product
 3 number and an Aquantia model product number).

4 122. UDE's encouragement, marketing, and other promotion of its ICMs to
 5 UDE's customers, including numerous companies which both are based in the U.S.
 6 and which sell devices with multi-gigabit ICMs in the U.S., reflect an affirmative
 7 intent on behalf of UDE which actively aids the infringement by UDE's customers.
 8 These actions by UDE lead its customers to engage in conduct that UDE knows is
 9 infringement; i.e., the sale, use, and importation of multi-gigabit capable devices
 10 including UDE ICMs in the United States.

11 123. Mr. Greg Loudermilk is listed as the UDE contact for USA on UDE's
 12 website. *See* below from <http://www.ude-corp.com/about/about/id/3/lang/en.html>
 13 *accessed* July 13, 2020.



22 Further, the UDE website lists "USA Distribution" and "USA Agent" contacts for
 23 the West Coast and East Coast. *See* below from [http://www.ude-](http://www.ude-corp.com/about/about/id/3/lang/en.html)
 24 [corp.com/about/about/id/3/lang/en.html](http://www.ude-corp.com/about/about/id/3/lang/en.html) *accessed* July 13, 2020.



UDE's Mr. Loudermilk and UDE use the corporate office in San Ramon, California, along with UDE's USA distribution centers and USA agents, to actively and knowingly aid and abet entities to infringe the Patents-In-Suit, including within the United States.

124. Mr. Greg Loudermilk has declared: "I spend perhaps 20% of my time focused on the North America market." Dkt. 74-6, February 27, 2020 Loudermilk Declaration at ¶ 10. Mr. Loudermilk's "focus" includes the active encouragement of entities to infringe the Patents-in-Suit within the United States.

125. Mr. Loudermilk emailed Pulse on January 7, 2015 discussing UDE's ability to manufacture at a lower cost and stating, *inter alia*, "...we work with Pulse to use their tooling designs, or buy their tooling designs for SFP and Press fit RJ, 10GigE, standard RJ, offer to tool and build for Pulse, saving them money, while UDE can use to offer to our customers. In competing situations, we collaborate how to cooperate." Exhibit R at PEI0003108. Instead of collaborating with Pulse, UDE decided to actively seek out entities to infringe the Patents-in-Suit with the specific intent to aid and abet those entities with the knowledge that those entities would infringe. Further, Mr. Loudermilk also stated: "UDE has a large interesting in

1 growing our connector content to our customer in NA...". *Id.* {emphasis added}
 2 Also, Mr. Loudermilk wrote: "Annually UDE is taking more footprint from our
 3 competitors and/or sharing a majority of the allocation: 10% from Pulse." Exhibit S
 4 at PEI0003039.

5 126. Additionally, discovery from subpoenas to several UDE's customers
 6 including several based in the United States has revealed that UDE is liable for the
 7 misconduct alleged, including indirect infringement (inducement and contributory).
 8 For example, UDE actively induced (and continues to actively induce) its
 9 customers with the knowledge and specific intent to encourage its customers to
 10 infringe the Patents-in-Suit by creating specific tooling based on specifications and
 11 permission from its customers, including the development of an ICM design. *See,*
 12 *e.g.,* Sealed Exhibit N (email from Mr. Loudermilk to a customer explaining the
 13 tooling process and design development). Sealed Exhibit N shows one example of
 14 UDE "actively and *knowingly*" aiding and abetting another's direct infringement
 15 (i.e., creating designs and tooling for products to be used in a customer's products
 16 to be sold, used, and imported in the U.S.) Also, UDE has conference calls with its
 17 customers regarding the electrical reports of the ICMs, quality of the ICMs, cost
 18 differences, and manufacturing processes. *See, e.g.,* Sealed Exhibit O. UDE knows
 19 that the products described in these conversations which UDE actively designs for,
 20 as well as encourages and promotes the use of UDE's ICMs for products in the
 21 United States. Sealed Exhibits N, O, P, and Q show successful communication by
 22 UDE (the inducer) to a customer (direct infringer) as required for inducement. *See*
 23 *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 843 F.3d 1315, 1331
 24 (Fed. Cir. 2016)("Each definition [of inducement] requires successful
 25 communication between the alleged inducer and the third-party direct infringer.")

26 127. UDE has memorialized some of its active inducement to its customers in
 27 emails UDE sent to Pulse. For example, Mr. Loudermilk wrote:
 28

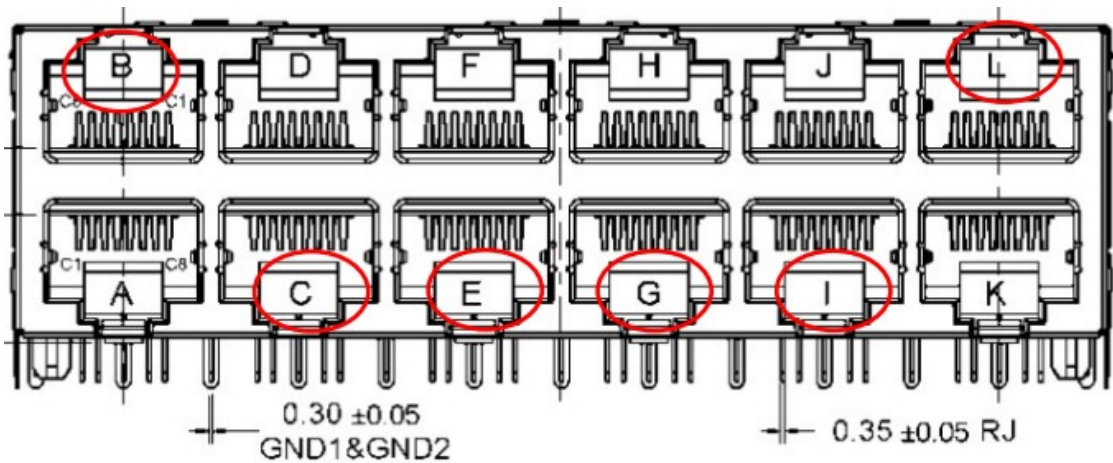
1 “As discussed briefly: I have a design which I approached Juniper last year
 2 that will allow them to use Discrete LAN Filter and Passive RJ45 Jack to
 3 save cost and board skews when requiring PoE. See attached PDF UDE
 4 Juniper T1 & T2 SMT LAN and PoE Option & RMV connector spec. My
 5 idea is work closely with Pulse to find the design problems for the 10Vrms
 6 requirement that UDE EE has not been able to solve. Later advise Juniper
 7 that they will have dual sources: UDE and Pulse (have licensed this product
 8 together) ... Juniper has tested UDE jack, function is OK, however we fail to
 9 solve this 10Vrms issue and the engineer left Juniper. Now we started back
 10 as a NEW Engineer on board and Juniper is highly motivated to get this
 11 product going. I would like to open the doors for this product for our first
 12 start of Channel to Mark Collaboration as it seems fitting and Juniper is both
 13 Pulse and UDE customer.”

14 2016 UDE email to Pulse, Exhibit L, top of Page 2.

15 UDE admits to taking affirmative actions (*i.e.*, “I approached Juniper...”) that
 16 constitute inducement. UDE also admits that its own electrical engineer could not
 17 solve the design problems and that UDE would like to work with Pulse to jointly
 18 license the ICMs as a “first start of Channel to Mark[sic] Collaboration as it seems
 19 fitting and Juniper is both Pulse and UDE customer.” Instead of working together,
 20 or taking a license to Pulse’s patented designs, UDE decided to willfully infringe
 21 Pulse’s Patents-in-Suit. Mr. Loudermilk acknowledges that UDE has knowledge of
 22 the Patents-in-Suit and UDE’s infringement of the Patents-in-Suit because Mr.
 23 Loudermilk writes “UDE and Pulse (have licensed this product together).” Pulse
 24 purchased the exemplary Juniper EX4300-48MP Ethernet Switch in San Diego, CA
 25 (*i.e.*, the United States) to confirm the infringement of UDE manufactured ICMs
 26 within Juniper’s product. The Juniper EX4300-48MP has the same markings as the
 27 UDE ICM design drawings as shown below.
 28



Picture of Juniper EX4300-48MP Ethernet Switch.



Drawing of UDE Infringing ICM (MPN: GM6-ZZ-0004).

As shown in port 36 at top near the middle of the picture of the Juniper EX4300-48MP, the capital letter “B” is noted molded into the plastic at the back of port 36. See also port 31 (left side of picture), with the capital letter “G,” and port 33 with the capital letter “I.” See also port 34, with the capital letter “L.” See also port 39, with the capital letter “C” therein, port 41 with capital letter “E,” and so forth.

97. Further, UDE has its mechanical and electrical engineers prepare data sheets directed to the infringing ICMs for its customers and perform tests of the infringing ICMs for its customers. *See generally* Sealed Exhibit P. UDE even knows the design of its competitors, including Pulse, and shares that information

1 with its customers to knowingly aid and abet in their infringement. *See, e.g.*, Sealed
2 Exhibit P (UDE email to customer stating “Pulse have the same exact designs”).
3 Sealed Exhibits N, O, P, and Q are direct evidence of UDE’s active inducement. At,
4 trial, Pulse can meet its burden to show inducement by direct or circumstantial
5 evidence. *See Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 723 (Fed. Cir.
6 2008) (“A patentee may rely on either direct or circumstantial evidence to prove
7 infringement.”).

8 128. UDE knows that its customers infringe the Patents-in-Suit and takes
9 actions towards gaining market share through encouraging customers to use UDE’s
10 infringing ICMs by copying Pulse’s patent designs. *See, e.g.*, Sealed Exhibit Q
11 (UDE email to customer stating that Pulse “can’t sell an ICM for these prices”).

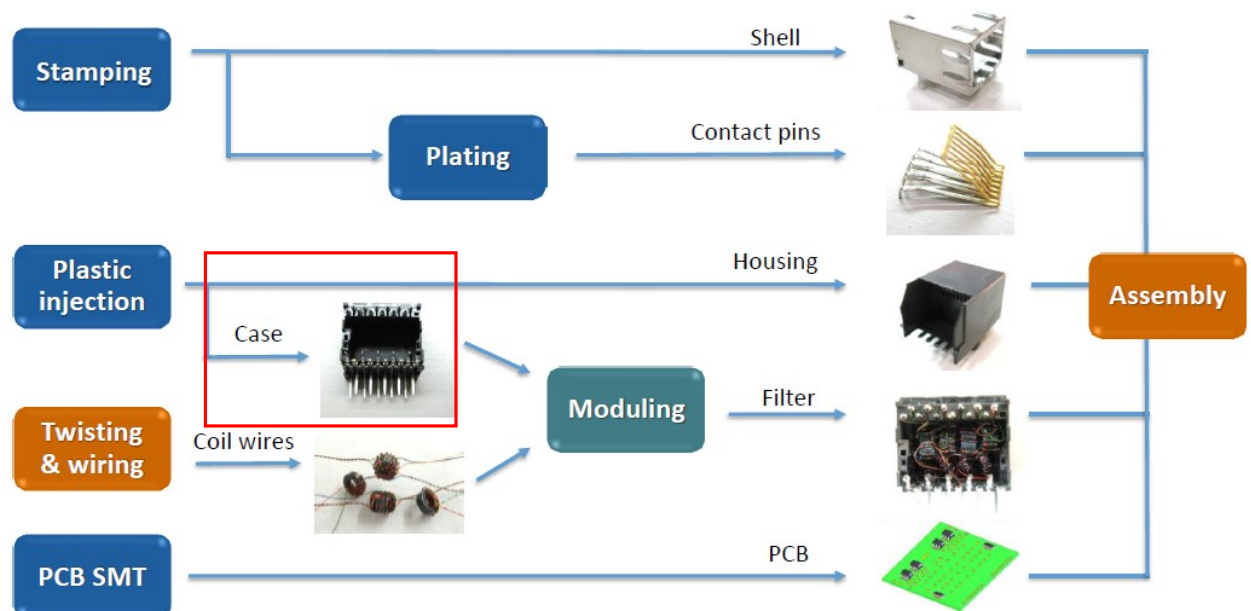
12 129. UDE further induces infringement of the ‘840 Patent by virtue of its
13 publications (e.g., data sheets) which induce customers to place the UDE ICMs on
14 host device motherboards. Note that asserted Claims 1 and 7 and 16 of the ‘840
15 Patent each recite in their preambles “an electronic device” and also separately
16 recite a separate base body component, whereas asserted Claim 10 recites in its
17 preamble “an electronic device base member” {emphasis added}. Hence, Claims 1,
18 7 and 16 may readily apply to the host device within which the base member (and
19 larger ICM) is used, including e.g., an Ethernet switch or router. *See, e.g.*, FIG. 10A
20 of the ‘840 Patent, showing mounting of an exemplary connector device to a host
21 device motherboard. As such, UDE induces infringement of at least Claims 1, 7 and
22 16 by instructing users on how and where to place its ICMs within such host
23 devices, as shown below in the example of Exhibit K:



3:18-CV-00373-BEN (DEB)

14, 2016 or the filing of the Original Complaint) that such component(s) are especially made or especially adapted for use in infringement of the '840 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

131. UDE contributorily infringes the '840 Patent by offering its molded base (e.g., "case" shown below; see Dkt. 61-14 at 18) and larger infringing ICMs. Both the base and larger ICM are a material part of the '840 invention. Asserted Claims 1 and 7 and 16 each recite "an electronic device" in the preamble, and also separately recite a separate base body component, whereas asserted Claim 10 recites in its preamble "an electronic device base member" {emphasis added}. Hence, Claims 1, 7 and 16 may readily apply to, without limitation, the host device within which the base member (and larger ICM) is used, including e.g., an Ethernet switch or router. As such, there is no substantial non-infringing use for the molded base, because it is specifically designed to be put in an ICM which can only be used in such a host device, as shown below. Further, the ICMs have no substantial non-infringing use or utility other than Ethernet networking, such as in the host device motherboard application shown in Exhibit K hereto and discussed *supra*, and are non-functional unless mounted on such motherboard (including its electrical contacts and traces).



132. Defendant continues to infringe the '840 Patent since receiving notice of said infringement from Pulse. Defendant's infringement activities have been and continue to be willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, and flagrant, entitling Pulse to increased damages under 35 U.S.C. § 284 and making this case exceptional within the meaning of 35 U.S.C. § 285.

PRAYER FOR RELIEF

133. Wherefore, Pulse respectfully requests that the Court enters judgment in its favor and grant the following relief:

134. Declare that the Patents-in-Suit are valid, and that the Defendant directly and/or indirectly infringed one or more claims of each of the Patents-in-Suit;

135. Preliminarily and permanently enjoin Defendant, its officers, agents, representatives, distributors, employees, affiliates, parents and subsidiary corporations, attorneys, and other person(s) in active concert or participation with them from infringing, directly or indirectly, the Patents-in-Suit;

136. Award Pulse damages, together with prejudgment and post-judgment interest, in an amount according to proof adequate to compensate Pulse for the Defendants' infringement of the Patents-in-Suit Patents;

137. Award Pulse treble damages pursuant to 35 U.S.C. § 284 as a consequence of Defendant's willful infringement;

138. Declare this case exceptional pursuant to 35 U.S.C. § 285 and award Pulse its costs and attorneys' fees or as otherwise permitted by law; and

139. Grant Pulse such other costs and further relief as is just and proper.

DEMAND FOR JURY TRIAL

140. Pursuant to Federal Rule of Civil Procedure 38(b), Pulse respectfully demands a trial by jury on all issues so triable.

1
2 Dated: July 16, 2020

Respectfully submitted,

GAZDZINSKI & ASSOCIATES, P.C.

3 /s/ Robert F. Gazdzinski

4 Robert F. Gazdzinski

Derek L. Midkiff

5 Attorneys for Plaintiff

6 Pulse Electronics, Inc.