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8 *Attorneys for Plaintiff Optima Direct, LLC*

9 **IN THE UNITED STATES DISTRICT COURT**
 10 **FOR THE SOUTHERN DISTRICT OF CALIFORNIA**

11 OPTIMA DIRECT, LLC,

12 *Plaintiff,*

13 v.

14 PULSE ELECTRONICS INC.,

15 *Defendant.*

16 CASE NO.: '21CV768 GPC MDD

17 **COMPLAINT FOR PATENT**
 18 **INFRINGEMENT**

19 **JURY TRIAL DEMANDED**

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ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

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1. Optima Direct, LLC (“Optima” or “Plaintiff”), by and through its counsel, hereby brings this action for patent infringement against Pulse Electronic Inc. (“Pulse” or “Defendant”) alleging infringement of the following validly issued patent (the “Patent-in-Suit”): U.S. Patent No. 6,396,460 titled “Chip Antenna” (the ’460 Patent) attached hereto as Exhibit A.

NATURE OF THE ACTION

2. This is an action for patent infringement arising under the United States Patent Act 35 U.S.C. §§ 1 et seq., including 35 U.S.C. § 271.

PARTIES

3. Plaintiff, Optima Direct, LLC is a corporation organized and existing under the laws of Wyoming that maintains its principal place of business at 30 N. Gould St. STE R, Sheridan, WY 82801.

4. On information and belief, Defendant Pulse Electronics, Inc. is a Delaware corporation with a regular and established place of business at 15255 Innovation Drive, Suite 100, San Diego, CA 92128.

JURISDICTION AND VENUE

5. This lawsuit is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 101 et seq. The Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1332, 1338(a), and 1367.

6. The Court has personal jurisdiction over Defendant for the following reasons: (1) Defendant is present within or has minimum contacts within the State of California and the Southern District of California; (2) Defendant has purposefully availed itself of the privileges of conducting business in the State of California and in this district; (3) Defendant has sought protection and benefit from the laws of the State of California; (4) Defendant regularly conducts business within the State of California and within this district, and Plaintiff’s cause of action arises directly from Defendant’s business contacts and other activities in the State of California and in this district; and

1 (5) Defendant has purposely availed itself of the privileges and benefits of the laws of
2 the State of California.

3 7. Defendant, directly and/or through intermediaries, ships, distributes, uses,
4 offers for sale, sells, and/or advertises products and services in the United States, the
5 State of California, and the Southern District of California including but not limited to
6 the products which contain the infringing '460 Patent systems and methods as detailed
7 below. Upon information and belief, Defendant has committed patent infringement in
8 the State of California and in this district; Defendant solicits and has solicited customers
9 in the State of California and in this district; and Defendant has paying customers who
10 are residents of the State of California and this district and who each use and have used
11 the Defendant's products and services in the State of California and in this district.

12 8. Venue is proper in the Southern District of California pursuant to 28
13 U.S.C. §§ 1400(b). Defendant has a regular and established place of business in this
14 district, has transacted business in this district, and has directly committed acts of patent
15 infringement in this district.

16 **PATENT-IN-SUIT**

17 9. Plaintiff incorporates the above paragraphs herein by reference.

18 10. On May 28, 2002, United States Patent No. 6,396,460 titled "Chip
19 Antenna" was duly and legally issued by the United States Patent and Trademark
20 Office. The '460 Patent is presumed valid and enforceable.

21 11. Plaintiff is the assignee of all right, title and interest in the '460 patent,
22 including all rights to enforce and prosecute actions for infringement and to collect
23 damages for all relevant times against infringers of the '460 Patent.

24 12. The '460 Patent relates to the chip antennas such as broadband chip
25 antennas used in wireless communication networks and equipment. This includes short
26 range wireless communication and personal mobile communication network and
27 equipment. (*See* Ex. A at 1:5-10).

28 13. The inventions disclosed in the Patent-in-Suit were not well-understood,

1 routine, or conventional. At the time the '460 Patent was filed, the monopole antennas
2 with quarter of a wavelength were incorporated in the device as basic units. (*See Ex. A*
3 at 1:12-15). They were considered to be bulkier. The development of antennas that were
4 considered to be lighter, thinner, shorter and smaller was very slow. Then there were
5 special winding shaped antennas that were developed such as a meandering shape.
6 Subsequently, bow-tie shaped antennas were developed which further shortened the
7 length of the antennas. (*See Ex. A* at 1:18-26). The conventional chip antennas of a
8 meandering type had a substrate made of a dielectric material or a magnetic material.
9 A metallic meandered conductor was disposed on the substrate with one end acting as
10 a feeding point. However, the design principle of such antennas was inherently flawed
11 mostly regarding the reduction of the size. (*See Ex. A* at 1:28-41). Another type of chip
12 antenna was developed which had a spirally winding conductor with a capacitor
13 connected in parallel that achieved the matching function for the antenna. Even though
14 it was a smaller sized antenna, it was bandwidth restricted. (*See Ex. A* at 1:42-47).
15 There has not been a single design proposed for a chip antenna that has a capability of
16 expanding the bandwidth while reducing its size.

17 14. The Patent-in-Suit addressed these technical challenges by, for example,
18 by proposing a chip antenna design having a substrate, feeding pad, feeding conductor,
19 matching unit, and a meandering conductor. By using such a design, expansion of the
20 bandwidth is possible while being smaller in size. (*See Ex. A* at 1:50-55).

21 15. More specifically, the '460 patent discusses in detail a chip antenna design
22 in which a substrate is made of a dielectric material such as ceramic ceramics,
23 glass/epoxy, or the like. Furthermore, the substrate has a feeding pad for injecting a
24 signal. In addition to the feeding pad, a meandering conductor is disclosed that acts as
25 a radiator unit. The substrate is also disposed with a feeding conductor for propagating
26 signals when signal is injected. Additionally, a matching unit which includes a
27 matching conductor and a ground which is shielded by at least one plate of the ground
28 is also disposed on the dielectric substrate. More specifically, the matching conductor

1 is positioned between the feeding pad and the meandering conductor and are connected
2 to them along with being connected to ground. (See Ex. A at 1:57-67-2:1-3).

3 16. The claims of the '460 Patent do not merely recite the performance of a
4 familiar business practice with a requirement to perform it on the Internet. Instead, the
5 claims recite one or more inventive concepts that are rooted in increasing the bandwidth
6 and reduction in size of the chip antennas.

7 17. Moreover, the inventions taught in the '460 Patent, which are rooted in
8 improving the chip antenna design cannot be performed with pen and paper or in the
9 human mind. One of ordinary skill in the art at the time of the patent would have
10 understood that the inventions could not be performed with pen and paper.
11 Additionally, because the '460 Patent teaches a mechanism to improve the bandwidth
12 and reduce the size of the chip antenna, the solutions it teaches are not merely drawn to
13 longstanding human activities.

14 **ACCUSED PRODUCT**

15 18. Defendant makes, uses, offers for sale and sells in the U.S. products,
16 systems, and/or services that infringe the Patent-in-Suit, including, but not limited to,
17 Ceramic Chip Antennas, such as the CW3006 (the "Accused Products" or "Accused
18 Instrumentality").

19 19. The Accused Instrumentality is a chip antenna system for 2.4GHz/5 GHz
20 Wi-Fi industrial, scientific, and medical (ISM) antennas.

21 **COUNT I**

22 **(Infringement of U.S. Patent No. 6,396,460)**

23 20. Plaintiff incorporates the above paragraphs herein by reference.

24 21. The '460 Patent is valid, enforceable, and was duly and legally issued by
25 the United States Patent and Trademark Office ("USPTO") on May 28, 2002. The '460
26 Patent is presumed valid and enforceable. *See* 35 U.S.C. § 282.

27 22. Plaintiff is the owner by assignment of the '460 patent and possesses all
28 rights of recovery under the '460 patent, including the exclusive right enforce the '460

1 patent and pursue lawsuits against infringers.

2 23. Upon information and belief, to the extent any marking was required by
3 35 U.S.C. § 287 with regards to the '460 Patent, Plaintiff has complied with such
4 requirements.

5 24. Without a license or permission from Plaintiff, Defendant has infringed
6 and continues to directly and indirectly infringe on one or more claims of the '460
7 Patent by importing, making, using, offering for sale, or selling products and devices
8 that embody the patented inventions, including, without limitation, one or more of the
9 patented '460 systems and methods, in violation of 35 U.S.C. § 271.

10 **Direct Infringement – 35 U.S.C. § 271(a)**

11 25. Plaintiff incorporates the above paragraphs herein by reference, the same
12 as if set forth herein Plaintiff incorporates the above paragraphs herein by reference,
13 the same as if set forth herein.

14 26. Without a license or permission from Plaintiff, Defendant has infringed
15 and continues to directly infringe on one or more claims of the '460 Patent by
16 importing, making, using, offering for sale, or selling products and devices that embody
17 the patented inventions, including, without limitation, one or more of the patented '460
18 systems and methods, in violation of 35 U.S.C. § 271.

19 27. Defendant has been and now is directly infringing by, among other things,
20 practicing all of the steps of the '668 Patent, for example, internal testing, quality
21 assurance, research and development, and troubleshooting. *See, e.g., Waymark Corp.*
22 *v. Porta Sys. Corp.*, 245 F.3d 1364, 1366 (Fed. Cir. 2001) (noting that “testing is a use
23 of the invention that may infringe under § 271(a)”).

24 28. By way of example, Defendant has infringed and continues to infringe at
25 least one or more claims of the '460 Patent, including at least Claim 1. Attached hereto
26 as Exhibit B is an exemplary claim chart detailing representative infringement of Claim
27 1 of the '460 Patent.

28 **Induced Infringement – 35 U.S.C. § 271(b)**

1 29. Plaintiff incorporates the above paragraphs herein by reference, the same
2 as if set forth herein.

3 30. Defendant has been and now is indirectly infringing by way of inducing
4 infringement by others and/or contributing to the infringement by others of the '460
5 Patent in the State of California, in this judicial District, and elsewhere in the United
6 States, by, among other things, making, using, offering for sale, and/or selling, without
7 license or authority, products incorporating the accused technology. End users include,
8 for example, Defendant's customers and other third parties interacting with the accused
9 technology.

10 31. Defendant had pre-suit knowledge of the Patents-in-Suit as early as March
11 19, 2021 when it received a letter from Plaintiff notifying Defendant of Defendant's
12 infringement. Defendant had post-suit knowledge when this suit was filed. *EON Corp.*
13 *IP Holdings, LLC v. Sensus USA, Inc.*, No. C-12-1011 EMC, 2012 WL 4514138, at *1
14 (N.D. Cal. 2012) (citing *In re Bill of Lading Transmission and Processing System*
15 *Patent Litigation*, 681 F.3d 1323, 1345 (Fed.Cir.2012)) (noting that the Federal Circuit
16 has determined that post-filing knowledge is sufficient to meet the knowledge
17 requirement for indirect infringement).

18 32. Defendant knew the Accused Product infringes the '460 Patent and yet
19 Defendant induced and continues to induce others-including partners, customers, and
20 third parties-to directly infringe at least one claim of the '460 Patent under 35 U.S.C. §
21 271(b). Defendant took active steps to induce infringement, such as advertising an
22 infringing use, which supports a finding of an intention. *See Metro-Goldwyn-Mayer*
23 *Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 932 (2005) ("[I]t may be presumed from
24 distribution of an article in commerce that the distributor intended the article to be used
25 to infringe another's patent, and so may justly be held liable for that infringement").

26 33. For example, Defendant induces its users to use the infringing Accused
27 Product for various applications such as Wi-Fi based applications, actively prompting
28 infringement by directing its customers to layout footprints and evaluation board design

1 guide for the antenna device. *See, e.g.*, Ex. C¹ (instructing customers on how to mount
2 and tune the antenna via the datasheet).

3 34. The allegations herein support a finding that Defendant induced
4 infringement of the '460 Patent. *See Power Integrations v. Fairchild Semiconductor*,
5 843 F.3d 1315, 1335 (Fed. Cir. 2016) (“[W]e have affirmed induced infringement
6 verdicts based on circumstantial evidence of inducement [e.g., advertisements, user
7 manuals] directed to a class of direct infringers [e.g., customers, end users] without
8 requiring hard proof that any individual third-party direct infringer was actually
9 persuaded to infringe by that material.”).

10 **Contributory Infringement – 35 U.S.C. § 271(c)**

11 35. Plaintiff incorporates the above paragraphs herein by reference, the same
12 as if set forth herein.

13 36. Defendant had pre-suit knowledge of the Patents-in-Suit as early as March
14 19, 2021 when it received a letter from Plaintiff notifying Defendant of Defendant’s
15 infringement. Defendant had post-suit knowledge when this suit was filed. *EON Corp.*
16 *IP Holdings, LLC v. Sensus USA, Inc.*, No. C-12-1011 EMC, 2012 WL 4514138, at *1
17 (N.D. Cal. 2012) (citing *In re Bill of Lading Transmission and Processing System*
18 *Patent Litigation*, 681 F.3d 1323, 1345 (Fed.Cir.2012)) (noting that the Federal Circuit
19 has determined that post-filing knowledge is sufficient to meet the knowledge
20 requirement for indirect infringement).

21 37. On information and belief, Defendant’s implementation of the accused
22 functionality has no substantial non-infringing uses. *See, e.g., Lucent Techs., Inc. v.*
23 *Gateway, Inc.*, 580 F.3d 1301, 1321 (Fed. Cir. 2009) (holding that the “substantial non-
24 infringing use” element of a contributory infringement claim applies to an infringing
25 feature or component, and that an “infringing feature” of a product does not escape
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27 _____
28 ¹<http://antennas.pulseelectronics.com/files/uploads/2017/11/2.45-GHz-Dualband-WiFi-Ceramic-Chip-Antenna-CW3006.pdf>

1 liability simply because the product as a whole has other non-infringing uses). The
2 Accused Product does not allow one to disable the infringing technology when used.

3 **Willful Infringement**

4 38. Plaintiff incorporates the above paragraphs herein by reference, the same
5 as if set forth herein.

6 39. Defendant had pre-suit knowledge of the Patents-in-Suit as early as March
7 19, 2021 when it received a letter from Plaintiff notifying Defendant of Defendant's
8 infringement. Defendant had post-suit knowledge when this suit was filed. *EON Corp.*
9 *IP Holdings, LLC v. Sensus USA, Inc.*, No. C-12-1011 EMC, 2012 WL 4514138, at *1
10 (N.D. Cal. 2012) (citing *In re Bill of Lading Transmission and Processing System*
11 *Patent Litigation*, 681 F.3d 1323, 1345 (Fed.Cir.2012)) (noting that the Federal Circuit
12 has determined that post-filing knowledge is sufficient to meet the knowledge
13 requirement for indirect infringement).

14 40. Despite its knowledge of the '460 Patent, Defendant has sold the Accused
15 Product in egregious disregard of Plaintiff's patent rights. Defendant has acted
16 recklessly and engaged in willful, wanton, and deliberately acts of infringement of the
17 '460 Patent, justifying an award to Plaintiff of increased damages under 35 U.S.C. §
18 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.

19 **Plaintiff Suffered Damages**

20 41. Defendant's infringement of the '460 Patent has caused damage to
21 Plaintiff, and Plaintiff is entitled to recover from Defendant the damages sustained as a
22 result of Defendant's wrongful acts in an amount subject to proof at trial pursuant to
23 35 U.S.C. § 271. Defendant's infringement of Plaintiff's exclusive rights under the
24 '460 Patent will continue to damage Plaintiff causing it irreparable harm for which there
25 is no adequate remedy at law, warranting an injunction from the Court.

26 **REQUEST FOR RELIEF**

27 42. Plaintiff incorporates each of the allegations in the paragraphs above and
28 respectfully asks the Court to:

1 (a) enter a judgment that Defendant has directly infringed, contributorily
2 infringed, and/or induced infringement of one or more claims of each of the '460
3 Patent;

4 (b) enter a judgment awarding Plaintiff all damages adequate to compensate
5 it for Defendant's infringement of, direct or contributory, or inducement to
6 infringe, the including all pre-judgment and post-judgment interest at the
7 maximum rate permitted by law;

8 (c) enter a judgment awarding treble damages pursuant to 35 U.S.C. § 284 for
9 Defendant's willful infringement of the '460 Patent;

10 (d) issue a preliminary injunction and thereafter a permanent injunction
11 enjoining and restraining Defendant, its directors, officers, agents, servants,
12 employees, and those acting in privity or in concert with them, and their
13 subsidiaries, divisions, successors, and assigns, from further acts of
14 infringement, contributory infringement, or inducement of infringement of the
15 '460 Patent.

16 (e) enter a judgment requiring Defendant to pay the costs of this action, including
17 all disbursements, and attorneys' fees as provided by 35 U.S.C. § 285, together
18 with prejudgment interest; and

19 (f) award Plaintiff all other relief that the Court may deem just and proper.

20 Dated: April 19, 2021

21 Respectfully submitted,
22 /s/ Kirk J. Anderson
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