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ANZA TECHNOLOGY, INC.

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA**

Anza Technology, Inc.,

Plaintiff,

v.

Edge-Core Networks Corporation and
SMC Networks, Inc.,

Defendants.

Case No. 3:16-cv-01267-BEN-AGS

**FIRST AMENDED COMPLAINT
FOR PATENT INFRINGEMENT**

DEMAND FOR JURY TRIAL

Plaintiff Anza Technology, Inc. (“Anza” or “Plaintiff”), by and through its undersigned counsel, complains and alleges against Edge-Core Networks Corporation (“Edge-Core”) and SMC Networks, Inc. (“SMC”) (collectively, “Defendants”) as follows:

NATURE OF THE ACTION

1. This is a civil action for infringement of a patent arising under the laws of the United States relating to patents, 35 U.S.C. § 101, *et seq.*, including, without limitation, 35 U.S.C. §§ 271, 281. Plaintiff Anza seeks monetary damages for patent

1 infringement.

2 **JURISDICTION AND VENUE**

3 2. This court has subject matter jurisdiction over this case for patent
4 infringement under 28 U.S.C. §§ 1331 and 1338(a) and pursuant to the patent laws
5 of the United States of America, 35 U.S.C. § 101, *et seq.*

6 3. Venue properly lies within the Southern District of California pursuant
7 to the provisions of 28 U.S.C. §§ 1391(b), (c), and (d) and 1400(b). On information
8 and belief, Defendants conduct substantial business directly and/or through third
9 parties or agents in this judicial district by selling and/or offering to sell the
10 infringing products and/or by conducting other business in this judicial district.
11 Furthermore, Plaintiff is informed and believes that Defendants engage in business
12 in this district, and that Plaintiff has been harmed by Defendants' conduct, business
13 transactions and sales in this district.

14 4. This Court has personal jurisdiction over Defendants because, on
15 information and belief, Defendants maintain their United States headquarters and
16 offices at 20 Mason, Irvine, California. Defendant SMC is also registered to do
17 business in the State of California. Also, Plaintiff is informed and believes that
18 Defendants transact continuous and systematic retail business within the State of
19 California and the Southern District of California. This Court has personal
20 jurisdiction over the Defendants because Plaintiff is informed and believes that these
21 Defendants' infringing activities, including, without limitation, the making, using,
22 selling and/or offers for sale of infringing products occur in the State of California
23 and the Southern District of California. In particular, Defendants are selling their
24 infringing products to customers within the Southern District through national and
25 California-based websites such as asipartner.com, synnex.com, avnet.com, cdw.com,
26 tamayatech.com, memory4less.com, and tessco.com, among others. Finally, this
27 Court has personal jurisdiction over Defendants because, on information and belief,
28 Defendants have made, used, sold and/or offered for sale its infringing products and

1 placed such infringing products in the stream of interstate commerce with the
2 expectation that such infringing products would be made, used, sold and/or offered
3 for sale within the State of California and the Southern District of California.

4 5. Upon information and belief, certain of the products manufactured by
5 or for Defendants have been and/or are currently designed and/or offered for sale by
6 Defendants through an in-house sales and marketing team operating in California.

7 **PARTIES**

8 6. Plaintiff Anza is a corporation organized and existing under the laws of
9 the State of California with an office and principal place of business at 4121 Citrus
10 Avenue, Suite 4, Rocklin, California 95677. Anza is a designer, manufacturer and
11 seller of bonding tools; ESD tools and other products directed to the manufacture
12 and assembly of electronics, in particular the bonding of electrostatic-sensitive
13 devices.

14 7. Upon information and belief, Edge-Core is a corporation organized and
15 existing under the laws of Taiwan, with a principal place of business at 1, Creation
16 Rd. 3, Hsinchu Science Park, Hsinchu, 30077, Taiwan, R.O.C. and a principal place
17 of business for U.S. operations at 20 Mason, Irvine, California.

18 8. Upon information and belief, SMC is a corporation organized and
19 existing under the laws of the State of Delaware, with a principal place of business at
20 20 Mason, Irvine, California.

21 **THE ACCUSED PRODUCTS**

22 9. Defendant designs, manufactures, assembles and/or imports products
23 that depend on high density integrated circuit ("IC") chips that are manufactured and
24 mounted on printed circuit boards using a "flip chip" bonding process that require
25 special electrostatic discharge ("ESD") handling in the Accused Products' assembly
26 process. Defendants hereby allege that the Accused Products are assembled using
27 the methods of the claims of the asserted patents as set forth in more detail below.

28 10. The Defendant's accused products for purposes of the asserted patents

1 include but are not limited to its router, modem, transmitter, receiver, transponder
 2 products and systems, and products containing same, that utilize integrated circuit
 3 chips that were mounted on printed circuit boards using a “flip chip” bonding
 4 process and sold under the “Edge-Core,” “SMC,” and/or “SMC Networks” brands or
 5 as manufactured and sold under other brands (the “Accused Products”). These
 6 products include, but are not limited to the following products and/or product
 7 families: Edge Core’s ECW5212; ECW5320; ECWO5320; ECW7210-L;
 8 ECW7220-L; AS5710-54X-EC; ECS4810-12M; ES4625M-FLF-08 XFP; ES3526S;
 9 ES3528M; ECS4110-28P, -28T, -52P, and -52-T; ECS4120-52T; ECS4510-52T;
 10 ECS4660-28F; AS 4600 Series; AS5600 Series; AS5700 Series; AS5800 Series;
 11 AS6700-32X; AS6701-32X; AS6712-32X; AS7712-32X; and SMC’s SMC2862W-
 12 G; SMC2632W; SMC2635W; SMC2531W-B; SMC2435W; SMC2835W;
 13 SMC2536W-AG; SMC2336W-AG; SMC2642W; SMCWUSB-N2; SMCDW3;
 14 SMCDW02-Z; SMCKF01-Z; and RB6741-Z.

15 **THE ASSERTED PATENTS**

16 11. On October 24, 2006, the United States Patent and Trademark Office
 17 (“USPTO”) duly and legally issued United States Patent No. 7,124,927 B2 entitled
 18 “FLIP CHIP BONDING TOOL AND BALL PLACEMENT CAPILLARY” (“the
 19 ’927 patent”). Steven F. Reiber is the patent’s sole named inventor and Plaintiff is
 20 owner, by assignment, of the entire right, title and interest in and to the ’927 patent
 21 and vested with the right to bring this suit for damages and other relief. A true and
 22 correct copy of the ’927 patent is attached hereto as Exhibit “A.”

23 12. On June 24, 2008, the USPTO duly and legally issued United States
 24 Patent No. 7,389,905 B2 entitled “FLIP CHIP BONDING TOOL TIP” (“the ’905
 25 patent”). Steven F. Reiber is the patent’s sole named inventor and Plaintiff is owner,
 26 by assignment, of the entire right, title and interest in and to the ’905 patent and
 27 vested with the right to bring this suit for damages and other relief. A true and
 28 correct copy of the ’905 patent is attached hereto as Exhibit “B.”

COUNT ONE

INFRINGEMENT OF THE '927 PATENT BY DEFENDANT

13. Plaintiff re-alleges and incorporates by reference each of the allegations set forth in paragraphs 1 through 12 above.

14. Plaintiff alleges that the Accused Products, alone or in combination with other products, directly or alternatively, under the doctrine of equivalents, infringe each of the limitations of independent claim 16 of the '927 patent in violation of 35 U.S.C. § 271(g) when Defendant imports into the United States or offers to sell, sells, or uses within the United States a product which is made by the processes described below.

15. Defendant designs, manufactures, assembles or imports products that depend on high density integrated circuit ("IC") chips that require the use of flip chip bonding techniques during manufacture and/or assembly. The ICs of the Accused Products that are bonded according to the claimed methods include one or more of the following brands: Atheros, Broadcom, Celeno, Conexant, CSR, Envara, Intersil, Lantiq, Marvell, MediaTek, Ralink, Realtek Texas Instruments, Quantenna and/or Wilocity. These ICs are highly sensitive to ESD events as evidenced by the charge load tolerance specifications promulgated by their manufacturers.

16. Generically speaking, flip chip microelectronic assembly is the direct electronic connection of facedown electronic components onto substrates, circuit boards, or carriers by means of conductive bumps on an IC's bond pads. ICs are handled in the course of manufacturing the Accused Products by tools and machines that pick them up and place them on surfaces where they are bonded so as to allow for the interconnection of circuits. The risk of an ESD event or discharge exists when an IC comes in contact with a tool or surface. The event or discharge may damage the IC rendering the Accused Product unusable.

17. The susceptibility of an IC to damage from ESD events is well known in the electronics industry, which has lead to the development of certain standards

1 and techniques to reduce the risk of damage from electrostatic discharges. Standards
2 and techniques have been developed by several standards setting organizations to
3 include, ANSI, JEDEC, the IEC and/or the ESDA (cumulatively, “ESD Standards”).
4 ANSI standards, for example, specify that manufacturing techniques, involving
5 ESD-Sensitive devices require tools that utilize dissipative materials. Such materials
6 have a resistance value between 1×10^4 and 1×10^{11} ohms surface or volume
7 resistance. JEDEC, IEC and ESDA require similar resistance ranges. Each of the
8 aforementioned industry standards thus requires the use of manufacturing tools
9 having approximately the same resistance values in connection with handling ICs
10 that are particularly sensitive to ESD events.

11 18. Failing to adhere to such standards could otherwise lead to ESD events
12 during the bonding process that could damage the ICs and render them defective
13 and/or unusable. Accordingly, Plaintiff is informed, believes and thereon alleges
14 that the Defendant designs, specifies and directs that the Accused Products be made
15 using methods that meet or exceeds such ESD Standards

16 19. Claim 16 teaches “providing a bonding machine capable of being
17 equipped with a flip chip bonding tool and ball placement capillary having a tip
18 comprised of a dissipative material, the dissipative material having a resistance low
19 enough to prevent a discharge of a charge to the device being bonded and high
20 enough to stop all current flow to the device being bonded” and “equipping the
21 bonding machine with the flip chip bonding tool.” The resistance values specified
22 by the aforementioned ESD Standards, *e.g.*, ANSI’s required 1×10^4 and 1×10^{11}
23 ohms surface or volume resistance and similar ranges specified by the other
24 standards organizations, are low enough to prevent a discharge of a charge to the
25 device being bonded and high enough to stop all current flow to the device being
26 bonded.” Accordingly, Plaintiff alleges that, in manufacturing the Accused Products
27 consistent with such standards, the ICs of the Accused Products are bonded using
28 bonding tools meeting the resistance range specified in claim 16 in order to reduce

1 the risk of damage to the Accused Products' ICs and surrounding circuitry.

2 20. Plaintiff is informed and believes and thereon alleges that the ICs used
3 in Accused Products utilize a ball grid array(s) ("BGA") or variations thereof for
4 mounting the IC's to a surface. A BGA mounting system provides for the surface
5 mounting of an IC *via* an array of solder balls, applied using a ball placement
6 capillary. The solder balls are "thermally and electrically conductive" as taught by
7 claim 16 of the '927 patent. Otherwise, the ICs would not affix to the board and
8 would not pass electricity.

9 21. The solder balls in a BGA mounting system are also substantially
10 spherical in shape as taught by claim 16 of the '927 patent.

11 22. The IC is flipped so that the solder balls are face down with a tool that
12 picks the IC up and places it at a predesigned location, pressing the substantially
13 spherical-shaped bonding material such that it forms a conductive bump as taught by
14 claim 16 of the '927 patent.

15 23. Based on the foregoing, Anza alleges that Defendant directly infringes
16 claim 16 of the '927 patent under 35 U.S.C. § 271(g).

17 24. Defendant has, since at least the filing of the original complaint, had
18 knowledge of infringement of the '927 patent.

19 COUNT TWO

20 **INFRINGEMENT OF THE '905 PATENT BY DEFENDANT**

21 25. Plaintiff re-alleges and incorporates by reference each of the allegations
22 set forth in paragraphs 1 through 24 above.

23 26. The Accused Products, alone or in combination with other products,
24 directly or alternatively under the doctrine of equivalents infringe each of the
25 limitations of independent claims 53 and 55 of the '905 patent in violation of 35
26 U.S.C. § 271(g) when Defendant imports into the United States or offers to sell,
27 sells, or uses within the United States a product which is made by the processes
28 described above.

1 27. Plaintiff is informed and believes and thereon alleges that Defendant
2 manufactures and assembles the Accused Products utilizing the methods described
3 by claim 53 and 55 of the '905 patent.

4 28. Claim 53 of the '905 patent is substantially similar to claim 16 of the
5 '927 patent discussed above except that claim 53 of the '905 patent does not require
6 equipping the bonding machine tool with a "ball placement capillary." Accordingly,
7 Defendant's infringe claim 53 of the '905 patent for the same reasons set forth in
8 Count One, above.

9 29. The Accused Products are also assembled using the method described
10 in claim 55 of the '905 patent. As alleged above, the ICs used in the Accused
11 Products are bonded to a surface using an electrically dissipative flip chip bonding
12 tool tip.

13 30. As set forth in more detail above, Plaintiff alleges that in the process of
14 manufacturing the Accused Products, Defendants use tools for mounting ICs to
15 circuit boards that meet industry standards for electric current resistance. The
16 resistance ranges specified in the most common ESD standards identified above,
17 such as, *e.g.*, the ANSI standard, are within the 1×10^2 to 1×10^{12} range taught by
18 claim 55 of the '905 patent.

19 31. Flip chip bonding requires the step of making contact with a device
20 being bonded during bonding, which results in establishing an electrostatic potential
21 between the tool and the device ("triboelectric charging") such that the tool acts as a
22 dissipative device to dissipate current away from the IC so as to avoid charge build
23 up but resistive enough to allow for a smooth current flow as taught by claim 55.

24 32. The flip chip bonding process also requires chip grounding leads/pins to
25 be connected to the device ground. By way of example, the Atheros chips utilized in
26 the Accused Products comprise several grounding points for connecting with the
27 circuit board. The assembly of the Accused Products therefore satisfies this
28 disclosure of claim 55.

35. Defendant has knowledge of infringement of the '905 patent since at least the filing of this complaint.

5. Awarding such other relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury on all claims.

HANDAL & ASSOCIATES

Dated: November 23, 2016 By: /s/ Gabriel G. Hedrick
Gabriel G. Hedrick
Attorneys for Plaintiff
Anza Technology, Inc.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document has been served on this date to all current and/or opposing counsel of record, if any to date, who are deemed to have consented to electronic service via the Court's CM/ECF system. Any other counsel of record will be served by electronic mail, facsimile and/or overnight delivery.

I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct. Executed this 23rd day of November, 2016 at San Diego, California.

/s/ Gabriel G. Hedrick

Gabriel G. Hedrick