

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

BIDIRECTIONAL DISPLAY, INC.,	)	
	)	
Plaintiff,	)	
	)	Civil Action No.
v.	)	
	)	
DERMALOG JENETRIC, GMBH	)	Jury Trial Demanded
	)	
Defendant.	)	
	)	

**COMPLAINT FOR PATENT INFRINGEMENT**

Bidirectional Display, Inc. brings this action against Dermalog Jenetric, GmbH for infringement of U.S. Patent No. 10,469,694 (“the ’694 Patent”) and U.S. Patent No. 10,440,223 (“the ’223 Patent”) (collectively, the “Patents-in-suit”).

**THE PARTIES**

1. Bidirectional Display, Inc. (“BDI” or “Plaintiff”) is a Massachusetts corporation with its principal place of business at 399 Boylston Street, Boston, MA 02116.
2. A leading innovator in the field of Thin Film Transistor or TFT-based optical image sensing technology, BDI has developed fundamental patents for its Image Sensor Panel (ISP™) products for large-area image sensing applications, such as optical thin film fingerprint sensing as well as fingerprint-on-display technology. From its inception, BDI has engaged in startup incubator and accelerator programs and has caught the attention of multiple tier-one smartphone makers, such as Samsung, Google, and others.
3. On information and belief, Dermalog Jenetric, GmbH (“Jenetric” or “Defendant”) is a German company with its principal place of business at Mittelweg 120, Hamburg 20148, Germany. On information and belief, Jenetric was acquired by Dermalog Identifications Systems,

GmbH in 2023 and is currently that company's 100% owned subsidiary. On information and belief, Jenetric has been developing, distributing, marketing, selling, and offering to sell TFT-based optical image sensing products for capturing high-quality fingerprints, including Livetouch Quattro, Livetouch Quattro Compact Up, Livetouch Duo and Livetouch Flipcase (collectively, the "Accused Products"). The Accused Products, without authorization, contain one or more of the claimed inventions of each of the Patents-in-suit, and Jenetric introduces these products into the stream of commerce knowing that they will be sold and/or used in this District and elsewhere in the United States.

### **JURISDICTION AND VENUE**


4. This action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Jenetric in this District due at least to Jenetric's substantial business in Texas and in this District. Jenetric has purposefully and voluntarily availed itself of the privileges of conducting business in the United States, in Texas, and in this District by placing goods into the stream of commerce through an established distribution channel with the expectation that they will be purchased by customers in this District. In Texas and in this District, Jenetric distributes, markets, sells, or offers to sell the Accused Products to customers. These activities by Jenetric constitute acts of patent infringement and/or contribute to and/or induce acts of patent infringement within this District.


6. Jenetric has publicly acknowledged its extensive business activities in the United States, in Texas and in this District by, for example, describing its sale of Accused Products to its customer, United Parcel Service, Inc. ("UPS"). In its presentation at a March 2022 Security Solutions Conference hosted by the German-Slovak Chamber of Industry and Commerce, Jenetric


noted that 1,000 Livetouch Quattro products provided to UPS were for “background checks in UPS stores across the US.” On information and belief, the UPS store in Marshall, Texas uses at least one of these Jenetric Accused Products. Therefore, Defendant has purposefully availed itself of the privilege of conducting activities within this District.

**Reference: Background check service in the US**

**The UPS Store** 

<b>Use case:</b>	Background checks in UPS stores across the US
<b>Our customer:</b>	SureID Inc.
<b>End-customer:</b>	United Parcel Service
<b>Number of units:</b>	1,000 LIVETOUCH QUATTRO



25 February, 2022 © JENETRIC  40

JENETRIC introduction and portfolio, [https://slowakei.ahk.de/filehub/deliverFile/577159cc-f57e-495d-9dbe-a246a616924e/1580069/JENETRIC%20presentation\\_2022\\_AHK%20SLOVAKIA\\_1580069.pdf](https://slowakei.ahk.de/filehub/deliverFile/577159cc-f57e-495d-9dbe-a246a616924e/1580069/JENETRIC%20presentation_2022_AHK%20SLOVAKIA_1580069.pdf) at 40 (last visited Nov. 29, 2023).<sup>1</sup>

7. Venue is proper in this district pursuant to 28 U.S.C. §1391. Defendant is a foreign

<sup>1</sup> The itinerary for the March 2022 conference (in German) may be found at: <https://slowakei.ahk.de/events/event-details/zivile-sicherheitstechnologien-und-dienstleistungen-fuer-die-slowakei>. Jenetric has also acknowledged its business activities in the United States relating to “Fingerprint-based background checks in self-service” in a presentation on its website, *Company and Products*, JENETRIC, [https://www.jenetric.com/fileadmin/user\\_upload/Downloads/JC\\_company\\_and\\_products\\_web\\_8\\_2022.pdf](https://www.jenetric.com/fileadmin/user_upload/Downloads/JC_company_and_products_web_8_2022.pdf) at 14 (last visited Dec. 5, 2023).

entity and may be sued in any judicial district, including this one, under 28 U.S.C. §1391(c).

8. On information and belief, BDI's causes of action arise directly from Jenetric's activities in this District. Moreover, on information and belief, Jenetric has derived substantial revenues from its infringing acts occurring within Texas and this District.

### **THE PATENTS-IN-SUIT**

9. The '694 Patent, entitled IMAGE SENSOR PANEL AND METHOD FOR CAPTURING GRAPHICAL INFORMATION USING SAME, was duly and legally issued on November 5, 2019, and names Hsuan-Yeh Chang ("Dr. Chang") and Anping Liu as the inventors. Attached as Exhibit A is a true and correct copy of the '694 Patent.

10. The '223 Patent, entitled SYSTEM AND METHOD FOR CONSTRUCTING DOCUMENT IMAGE FROM SNAPSHOTS TAKEN BY IMAGE SENSOR PANEL, was duly and legally issued on October 8, 2019, and names Zachary Michael Thomas ("Dr. Thomas") and Dr. Chang as the inventors. Attached as Exhibit B is a true and correct copy of the '223 Patent.

11. Plaintiff is the assignee of the entire right, title, and interest in the Patents-in-suit.

12. The Patents-in-suit are fundamental patents related to Image Sensor Panels (ISPs) that incorporate TFT technology for use in optical image sensing applications. The Patents-in-suit have enabled the deployment of large-area "lensless" image sensing applications, strategically addressing challenges inherent in traditional image scanning technologies. Notably, the ISPs are tailored to overcome issues such as the cumbersome size of devices employing conventional optical imaging technology, a challenge stemming from the necessity of imaging at a focal point through an optical lens assembly. The Patents-in-suit are also designed to surmount the elevated cost per unit area typically linked to silicon-based image capturing technologies.

13. Flat panel displays are commonly used in various electronic devices, serving as a

visual means of monitoring the device's output. Some displays also include input functionalities such as a touch screen for user interaction. Prior to the invention of the Patents-in-suit, however, touch screens could not capture graphical information from the two-dimensional surface of an information bearing substrate (for example, a document or a finger). Electronic devices with cameras, such as smartphones and laptops, often require lens focusing and frequently produce distorted or low-quality images due to shaky hands.

14. The '694 Patent represents a notable breakthrough. The '694 Patent provides an image sensor panel that can capture graphical information from a two-dimensional information bearing substrate, and that can be integrated with a planar light source or a display panel. FIG. 1 of the '694 Patent, reproduced below, illustrates an exemplary combination of an image sensor panel with a planar light source.

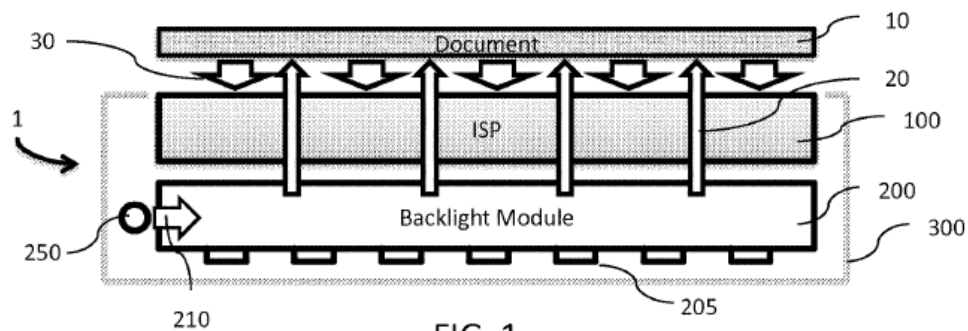


FIG. 1

Further, a smartphone equipped with both a display module and an image sensor panel (together, a “bidirectional display”), can be used to discern information on a customer’s credit card for use in mobile transactions or to capture a user’s fingerprint or other biometric data. In the last example, this bidirectional display can be divided into sections, such as square or rectangular areas, where one section is used for optically detecting a fingerprint, while another section simultaneously displays the real-time results of this detection. The acquired fingerprint data can then be cross-referenced with existing fingerprint data stored in the electronic device to manage access to it.

15. The '223 Patent provides a system and a method for constructing a complete image from snapshots of portions of the complete image taken by an ISP. One such application of these systems and methods enables the imaging of an object having a shape that does not conform to the shape of the ISP, such as a complete fingerprint. While a finger can be pressed against a flat ISP, it cannot be completely imaged in one frame because the fingerprint continues up around the finger towards the nail. During sequential capture, a user can perform a fingerprint recording motion on the ISP surface, while the ISP captures a sequence of frames, no one of which captures the complete fingerprint. The sequentially captured frames are then used to construct the complete fingerprint.

**JENETRIC'S PRE-SUIT KNOWLEDGE OF THE PATENTS-IN-SUIT**

16. At least as early as October 2020, BDI contacted Jenetric concerning the Patents-in-Suit and other intellectual property. BDI invited Jenetric to collaborate on developing products utilizing BDI's patented ISP technology, and, after Jenetric had been provided basic information regarding BDI's technology and corporate information, the parties entered into a mutual non-disclosure agreement to allow for substantive technical discussions.

17. On December 4, 2020, the parties participated in a Zoom meeting to discuss collaboration and development using BDI's patented technology, again, including the Patents-in-suit. No further collaboration or discussion took place between the parties after that date.

18. On July 7, 2022, after learning of Jenetric's infringing activity and the Accused Products, BDI, via electronic mail, notified Jenetric again of the Patents-in-suit and extended an invitation to Jenetric to take a license of BDI's patented technology. In the same communication, BDI also informed Jenetric that the Accused Products infringed the Patents-in-suit, identifying specific features of the Accused Products that comprised claimed features of the Patents-in-suit.

True and correct copies of the electronic mail and its attached letter are attached hereto as Exhibits C and D.

19. Despite BDI's efforts to find a business solution to this dispute, Jenetric continues its infringing activities, and has refused to communicate with BDI.

**COUNT I – INFRINGEMENT OF U.S. PATENT No. 10,469,694**

20. Plaintiff re-alleges and incorporates the allegations of paragraphs 1-19 above.

21. Plaintiff is the current assignee of the '694 Patent and has all substantial rights to enforce the '694 Patent, including the right to exclude others and to sue and recover damages for past and future infringement.

22. The '694 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

23. On information and belief, Defendant has been and is currently infringing, directly or indirectly, one or more claims of the '694 Patent in this District and elsewhere in Texas and the United States by making, using, selling, offering to sell and/or importing, and by actively inducing others (including at least Defendant's subsidiaries, distributors, affiliates, retailers, customers and/or consumers) to make, use, sell, offer to sell, and/or import the Accused Products, their components, and/or other products containing the same that incorporate the inventions of the '694 Patent, in violation of 35 U.S.C. § 271.

24. On information and belief, and by way of illustration only, the Accused Products include each and every element of at least claim 8 of the '694 Patent. Claim 8 of the '694 Patent recites "An image sensor device, comprising: a planar light source having a light emitting surface; and an image sensor panel disposed directly on the light emitting surface of the planar light source, the image sensor panel being devoid of information display pixels and comprising: a

transparent substrate having a first surface, and a sensor array comprising a plurality of photosensitive pixels on the first surface and spaced apart from each other, wherein each of the photosensitive pixels comprises a control component, a photosensitive component, and a dielectric layer between the control component and the photosensitive component.” As shown below, the Accused products are image sensing devices.



*LIVETOUGH QUATTRO - Feature Comparison*, JENETRIC, <https://www.jenetric.com/en/products/livetoUGH-quattro.html> (last visited Dec. 5, 2023).

## JENETRIC – PIONEERS in DIGITAL FINGERPRINTING

JENETRIC are experts in digital fingerprint capturing. We develop and manufacture biometric fingerprint scanners that meet today's requirements for simplicity, mobility and a multipurpose usage. Our products are based on a holistic design. We focus not only on technical parameters, but much more on a noticeable simplification of fingerprint capturing for operators, agencies and users.

Our biometric fingerprint scanners **LIVETOUGH QUATTRO**, **LIVETOUGH QUATTRO Compact Up**, **LIVETOUGH DUO** and **LIVETOUGH Flipcase** represent a new class of compact and user-friendly devices that help to simplify and improve the fingerprint capture process.

At border controls, in local authorities, in banks, at elections – fingerprints are used everywhere today to provide security and prove identity. This new range of applications requires devices that can be used regardless of the language, culture and education of the users. This is exactly where we invest our creativity, our know-how and our energy to provide you with innovations on the cutting edge of technology.

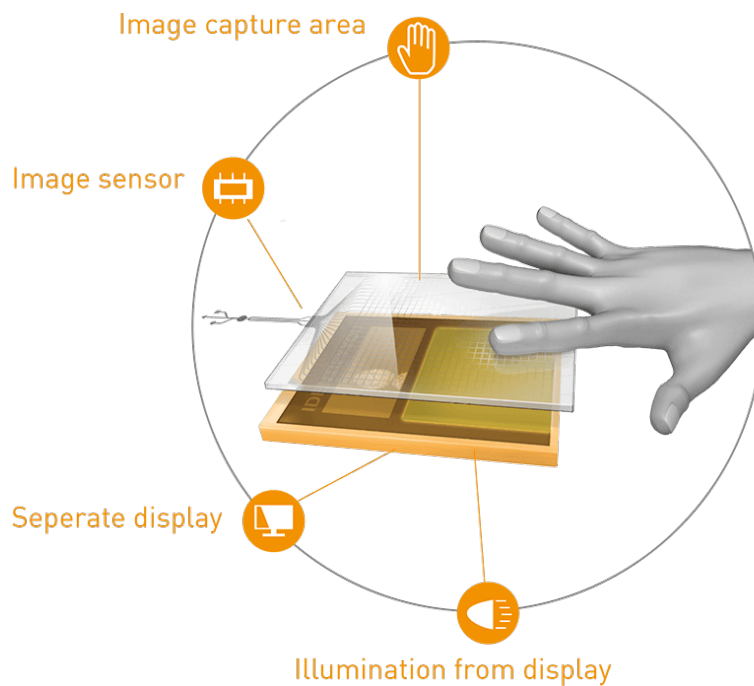
Our CEOs ▶  
Dirk Morgeneier (I) and Roberto Wolfer (R)  
at the JENETRIC location in Jena, Germany

2 | sales@jenetric.com

*Company & Products*, JENETRIC, [https://www.jenetric.com/fileadmin/user\\_upload/Downloads/JC\\_company\\_and\\_products\\_web\\_8\\_2022.pdf](https://www.jenetric.com/fileadmin/user_upload/Downloads/JC_company_and_products_web_8_2022.pdf) at 2 (last visited Dec. 5, 2023).

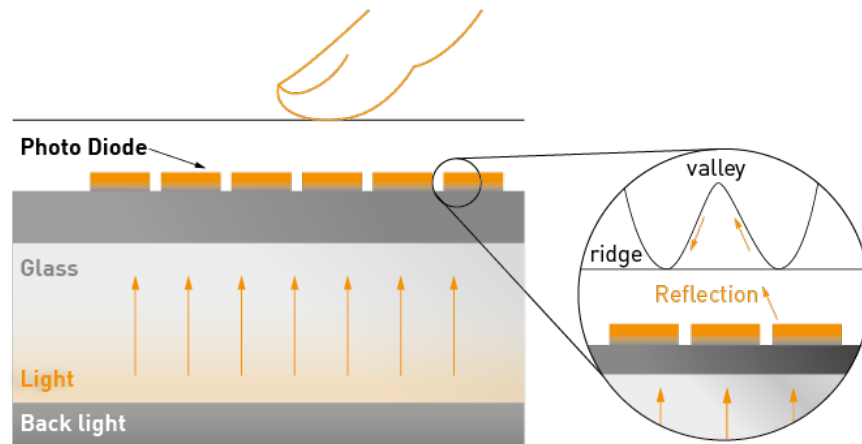


25. According to the disclosure on the Defendant’s technology page, the Accused Products employ e-c-thru technology, which is based on optical TFT technology, to capture biometrics, and each of these products comprises a planar light source having a light emitting surface, and each has an image sensor panel disposed directly on the light emitting surface of the planar light source, the image sensor panels being devoid of information display pixels.



*E-C-Thru Technology - How It Works*, JENETRIC, <https://www.jenetric.com/en/technology/e-c-thru-technology.html> (last visited Dec. 5, 2023).

26. Furthermore, the Accused Products use “transparent optical TFT sensors for capturing biometrics” - each an image sensor panel comprising a transparent substrate having a first surface and a sensor array comprising a plurality of photosensitive pixels on the first surface and spaced apart from each other. On information and belief, in the Accused Products, each of the photosensitive pixels comprises a control component, a photosensitive component, and a dielectric layer between the control component and the photosensitive component.



*E-C-Thru Technology - How It Works*, JENETRIC, <https://www.jenetric.com/en/technology/e-c-thru-technology.html> (last visited Dec. 5, 2023).

27. Defendant is given notice under 35 U.S.C. § 287(a) of the '694 Patent at least as early as July 7, 2022, via a licensing invitation letter that formally notified Jenetric of the infringement of the Patents-in-suit by specific products. Attached as Exhibit D is a true and correct copy of BDI's licensing invitation letter. Defendant's infringement has been, and continues to be knowing, intentional, and willful. Moreover, Defendant has knowingly and intentionally induced others, including its subsidiaries, distributors, affiliates, retailers, customers and/or consumers, to directly infringe by making, using, selling, offering to sell, and/or importing into the United States the Accused Products that infringe one or more claims of the '694 Patent.

28. Defendant's acts of infringement of the '694 Patent have caused and will continue to cause Plaintiff damages for which Plaintiff is entitled to compensation pursuant to 35 U.S.C. § 284.

29. Defendant's acts of infringement of the '694 Patent have caused and will continue to cause Plaintiff immediate and irreparable harm, for which there is no adequate remedy at law unless this Court enjoins such infringing activities pursuant to 35 U.S.C. § 283.

30. This case is exceptional and, therefore, Plaintiff is entitled to an award of attorney

fees pursuant to 35 U.S.C. § 285.

**COUNT II – INFRINGEMENT OF U.S. PATENT NO. 10,440,223**

31. Plaintiff re-alleges and incorporates the allegations of paragraphs 1-30 above.

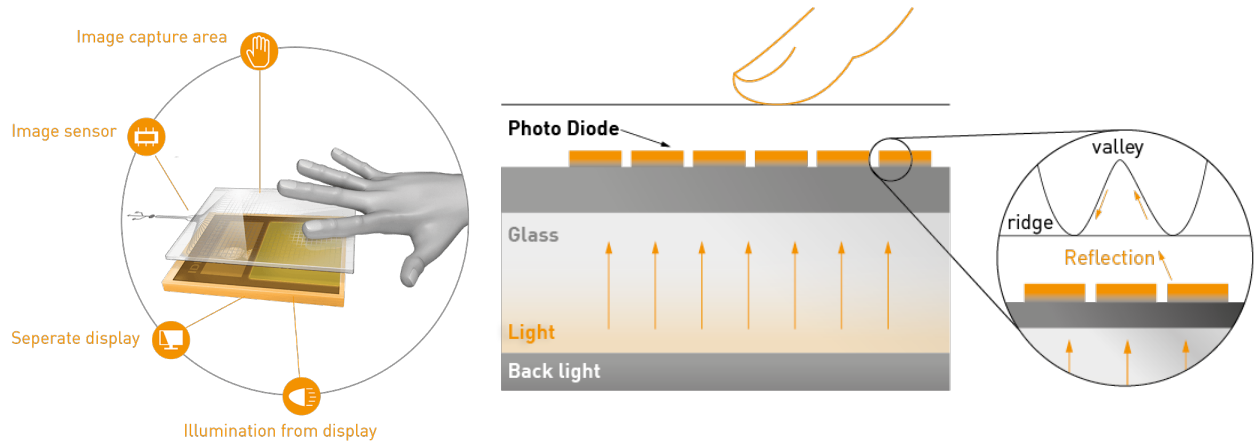
32. Plaintiff is the current assignee of the '223 Patent and has all substantial rights to enforce the '223 Patent, including the right to exclude others and to sue and recover damages for past and future infringement.

33. The '223 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

34. On information and belief, Defendant has been and is currently infringing, directly or indirectly, one or more claims of the '223 Patent in this District and elsewhere in Texas and the United States by making, using, selling, offering to sell and/or importing, and by actively inducing others (including at least Defendant's subsidiaries, distributors, affiliates, retailers, customers and/or consumers) to make, use, sell, offer to sell, and/or import the Accused Products, their components, and/or other products containing the same that incorporate the inventions of the '223 Patent, in violation of 35 U.S.C. § 271.

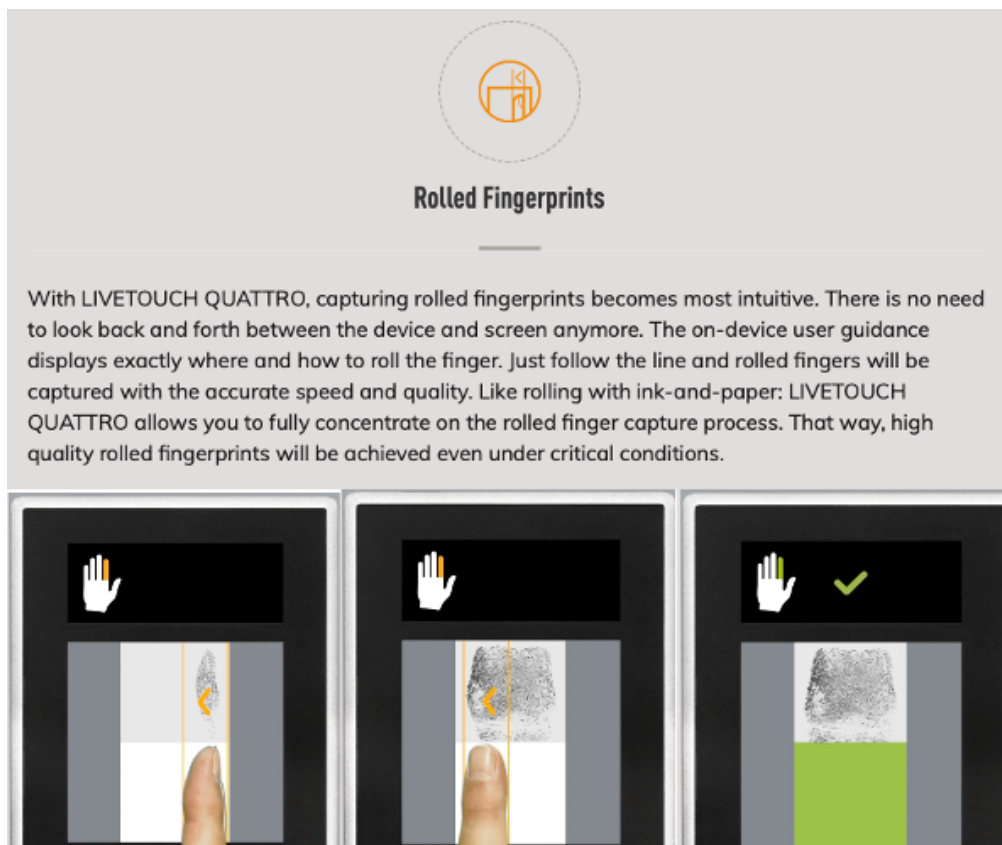
35. On information and belief, and by way of illustration only, the Accused Products include each and every element of at least claim 18 of the '223 Patent. Claim 18 of the '223 Patent recites "An electronic device comprising: a display screen; a two-dimensional photosensor, the photosensor and the display screen being stacked on top of each other, the photosensor configured to capture a plurality of image frames of an area over the display screen; a processor configured to combine said plurality of frames into a resultant image based on common features of neighboring ones of said plurality of image frames, such that the common features are spatially collocated in the resultant image; and a non-transitory computer readable memory configured to

store the resultant image.” As shown below, each of the Accused products is an electronic device comprising a display screen and a two-dimensional photosensor, the photosensor and the display screen being stacked on top of each other, the photosensor configured to capture a plurality of image frames of an area over the display screen.



*E-C-Thru Technology - How It Works*, JENETRIC, <https://www.jenetric.com/en/technology/e-c-thru-technology.html> (last visited Dec. 5, 2023).

36. Furthermore, as shown by Jenetric's description of its LIVEQUATTRO technology and how it captures rolled fingerprints, the Accused Products each have a processor configured to combine said plurality of frames into a resultant image based on common features of neighboring ones of said plurality of image frames, such that the common features are spatially collocated in the resultant image. On information and belief, the Accused Products further comprise a non-transitory computer readable memory configured to store the resultant image.



*LIVETOUGH QUATTRO - Rolled Fingerprints*, JENETRIC, <https://www.jenetric.com/en/products/livetouch-quattro.html> (last visited Dec. 5, 2023) (including still images of embedded video).

37. Defendant is given notice under 35 U.S.C. § 287(a) of the '223 Patent at least as early as July 7, 2022, via a licensing invitation letter that formally notified Jenetric of the infringement of the Patents-in-suit by specific products. Defendant's infringement has been, and continues to be knowing, intentional, and willful. Moreover, Defendant has knowingly and intentionally induced others, including its subsidiaries, distributors, affiliates, retailers, customers and/or consumers, to directly infringe by making, using, selling, offering to sell, and/or importing into the United States the Accused Products that infringe one or more claims of the '223 Patent.

38. Defendant's acts of infringement of the '223 Patent have caused and will continue to cause Plaintiff damages for which Plaintiff is entitled to compensation pursuant to 35 U.S.C. § 284.

39. Defendant's acts of infringement of the '223 Patent have caused and will continue to cause Plaintiff immediate and irreparable harm, for which there is no adequate remedy at law unless this Court enjoins such infringing activities pursuant to 35 U.S.C. § 283.

40. This case is exceptional and, therefore, Plaintiff is entitled to an award of attorney fees pursuant to 35 U.S.C. § 285.

### **PRAYER FOR RELIEF**

WHEREFORE, BDI respectfully requests the following:

A. A judgment that Defendant has infringed one or more claims of the Patents-in-suit;

B. A judgment awarding BDI damages resulting from Defendant's infringement of the Patents-in-suit;

C. A judgment that Defendant has willfully infringed the Patents-in-suit;

D. A judgment that the damages award be increased up to three times the actual amount assessed, pursuant to 35 U.S.C. § 284;

E. A permanent injunction preventing Defendant, its officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from infringing the Patents-in-suit;

F. A judgment requiring Defendant to pay BDI's costs, expenses, and prejudgment and post-judgment interest for Defendant's infringement of the Patents-in-suit;

G. A judgment finding that this is an exceptional case and awarding BDI its reasonable attorneys' fees pursuant to 35 U.S.C. § 285; and

H. Such other relief as the Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Plaintiff respectfully demands a jury trial of all issues triable to a jury.

Respectfully submitted,

Dated: December 6, 2023

*/s/ Douglas E. Chin*

\_\_\_\_\_  
Douglas E. Chin, Esq.

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**ATTORNEY FOR PLAINTIFF  
BIDIRECTIONAL DISPLAY, INC.**