

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

**SVV TECHNOLOGY INNOVATIONS
INC.**

Plaintiff,

v.

ASUSTEK COMPUTER INC.

Defendant.

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Civil Action No. 6:25-cv-00027

JURY DEMANDED

PLAINTIFF’S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SVV Technology Innovations Inc. (“SVVTI” or “Plaintiff”) files this Complaint for patent infringement against ASUSTeK Computer Inc. (“ASUSTeK” or “Defendant”). Plaintiff alleges infringement of United States Patent Numbers 10,439,088 (“’088 Patent”); 10,613,306 (“’306 Patent”); 10,627,562 (“’7562 Patent”); 11,402,562 (“’2562 Patent”); 11,821,621 (“’621 Patent”); and 12,159,951 (“’951 Patent”); collectively, the “Asserted Patents.”

RELATEDNESS TO OTHER CASES

1. This action is related to other actions considered by the District Court for the Western District of Texas, Waco Division, under Judge Alan D. Albright. Specifically, SVVTI asserted the ’088 Patent, ’306 Patent, and ’7562 Patent in other actions that it had previously filed in the Waco Division, and the Waco Division Court had construed claims of that patent. The Waco Division Court had also considered numerous motions, including discovery motions and dispositive motions, and resolved disputes between parties relating to the technology at issue in these patents.

The following is a list of SVVTI actions involving the '088 Patent considered by the Waco Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-313-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-513-ADA (through claim construction)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:24-cv-539-ADA (filed October 10, 2024, currently pending)

The following is a list of SVVTI actions involving the '306 Patent considered by the Waco Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-313-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-513-ADA (through claim construction)

The following is a list of SVVTI actions involving the '7562 Patent considered by the Waco Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-311-ADA (**through jury trial**)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-639-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-511-ADA (through claim construction)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:24-cv-539-ADA (filed October 10, 2024, currently pending)

In addition, the '951 Patent is related to United States Patent No. 11,276,795 (“’795 Patent”) in that the '951 Patent is a continuation of application No. 17/687,639, now Patent No. 11,616,157, which is a continuation of application No. 17/119,487, now the '795 Patent. The following is a list of SVVTI actions involving the '795 Patent considered by the Waco Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-313-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-513-ADA (through claim construction)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:24-cv-538-ADA (filed October 10, 2024, currently pending)

PARTIES

2. Plaintiff SVVTI is a California corporation with a place of business 1832 Tribute Road, Suite C, Sacramento, California 95815.

3. On information and belief, Defendant ASUSTeK is a company organized and existing under the laws of the country of the Republic of China (Taiwan), with its principal place of business at No. 15 Li-Te Road, Beitou District, Taipei 112, Taiwan, R.O.C.

4. ASUSTeK may be served with process pursuant to Fed. R. Civ. P. 4(f)(2)(C)(ii) by Plaintiff sending the Court's Clerk under a cover letter: (1) copies of the Complaints and Summons in the above-captioned matter; (2) a FedEx envelope into which the Court can pack said Complaints and Summons; (3) and a prepaid FedEx label that provides for shipment via a method that requires a signed receipt. *See Atlas Global Technologies v. ASUSTeK Computer, Inc.*, No. 6:21-cv-00820-ADA, ECF No. 31 (W.D. Tex. Mar. 4, 2022). That label should be addressed to: ASUSTEK COMPUTER INC. No. 15, Li-Te Road Beitou District, Taipei 112 Taiwan, R.O.C. *Id.* That label should have a return address of: Chambers of the Honorable Alan D Albright, United States District Court, 800 Franklin Avenue, Waco, TX 76701. *Id.*

JURISDICTION AND VENUE

5. This is an action for patent infringement arising under the patent laws of the United States, Title 35, United States Code. Jurisdiction as to these claims is conferred on this Court by 35 U.S.C. §§1331 and 1338(a).

6. This Court has personal jurisdiction over ASUSTeK because, directly or through intermediaries, each has committed acts within the Western District of Texas giving rise to this action and/or has established minimum contacts with the Western District of Texas such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.

7. ASUSTeK has placed or contributed to placing infringing products into the stream of commerce via an established distribution channel knowing or understanding that such products would be sold and used in the United States, including in the Western District of Texas.

8. This Court has specific personal jurisdiction over ASUSTeK at least in part because ASUSTeK conducts business in this Judicial District. SVVTI's causes of action arise, at least in part, from Defendant's contacts with and activities in the State of Texas and this Judicial District. The exercise of jurisdiction over ASUS would not offend traditional notions of fair play and substantial justice. Defendant ASUS, directly and/or through subsidiaries or intermediaries (including distributors, retailers, and others), has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the patents-in-suit, including the accused devices as alleged herein.

9. On information and belief, ASUSTeK also has derived substantial revenues from infringing acts in this Judicial District, including from the sale and use of infringing products including, but not limited to, the products accused of infringement below.

10. On information and belief, ASUSTeK maintains authorized sellers and sales representatives that offer and sell products pertinent to this Complaint throughout the State of

Texas, including this District and to consumers throughout this District, such as: Best Buy at 4627 S Jack Kultgen Expy, Waco, TX 76706; Sam's Club at 2301 E Waco Dr, Waco, TX 76705; Walmart Supercenter at 4320 Franklin Ave, Waco, TX 76710; and Amazon.com.

11. Defendant has established minimum contacts with this forum such that the exercise of jurisdiction over Defendant would not offend traditional notions of fair play and substantial justice.

12. Venue in this Judicial District is proper as to ASUSTeK under 28 U.S.C. § 1391(c)(3) because it is a foreign corporation. Defendant has committed acts within this judicial district giving rise to this action, and Defendant continues to conduct business in this judicial district, including one or more acts of selling, using, importing and/or offering for sale infringing products or providing service and support to Defendant's customers in this District. This district is familiar with the technology of the Patents-in-Suit having presided over other lawsuits involving the Patents-in-Suit.

13. In addition, Defendant has knowingly induced and continues to knowingly induce infringement within this District by advertising, marketing, offering for sale and/or selling devices pre-loaded with infringing functionality within this District, to consumers, customers, manufacturers, distributors, resellers, partners, and/or end users, and providing instructions, user manuals, advertising, and/or marketing materials which facilitate, direct or encourage the use of infringing functionality with knowledge thereof.

14. Personal jurisdiction also exists specifically over Defendant because Defendant, directly or through affiliates, subsidiaries, agents, or intermediaries, transacts business in this State or purposefully directed at this State (including, without limitation, retail stores including

Best Buy and Walmart) by making, importing, offering to sell, selling, and/or having sold infringing products within this State and District or purposefully directed at this State or District.

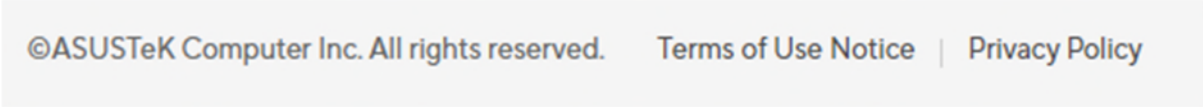
15. In addition, Defendant, directly or through affiliates, subsidiaries, agents, or intermediaries, places infringing products into the stream of commerce knowing they will be sold and used in Texas, and economically benefits from the retail sale of infringing products in this State. For example, Defendant's products have been sold and are available for sale in this District at Best Buy and Walmart retail stores and are also available for sale and offered for sale in this District through online retailers such as Best Buy, Walmart, and Amazon.

16. Via Defendant's agents, intermediaries, distributors, importers, customers, and/or consumers maintaining a business presence, operating in, and/or residing in the U.S., Defendant's products, including products and processes accused of infringing the patents-in-suit, are or have been widely distributed and sold in retail stores, both brick and mortar and online, in Texas including within this judicial district. *See Litecubes, LLC v. Northern Light Products, Inc.*, 523 F.3d 1353, 1369-70 (Fed. Cir. 2008) (“[T]he sale [for purposes of § 271] occurred at the location of the buyer.”); *see also Semcon IP Inc. v. Kyocera Corp.*, No. 2:18-cv-00197-JRG, 2019 WL 1979930, at *3 (E.D. Tex. May 3, 2019) (denying accused infringer's motion to dismiss because plaintiff sufficiently plead that purchases of infringing products outside of the United States for importation into and sales to end users in the U.S. may constitute an offer to sell under § 271(a)). For example, Defendant's products are sold to end users by online stores and at retail stores located throughout the Western District of Texas.

17. In the alternative, the Court has personal jurisdiction over Defendant under Fed. R. Civ. P. 4(k)(2), because the claims for patent infringement in this action arise under federal

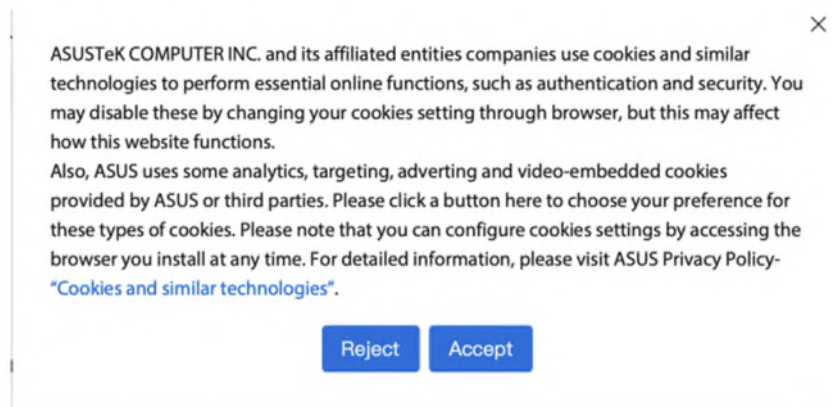
law, Defendant is not subject to the jurisdiction of the courts of general jurisdiction of any state, and exercising jurisdiction over Defendant is consistent with the U.S. Constitution.

18. ASUSTeK sells their products in the United States through their website, <https://www.asus.com/us/>, which states the following:



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19. When a U.S. consumer enters the ASUSTeK website, the following repeatedly pops up:



20. ASUSTeK's Terms of Use Notice Privacy Policy for the United States, available on its website at https://www.asus.com/us/terms_of_use_notice_privacy_policy/official-site, states:

Terms Of Use Notice

ALL PRODUCTS AND SERVICES ("SERVICE") PROVIDED BY ASUSTEK COMPUTER INC. ("ASUS") ARE SUBJECT TO THIS TERMS OF USE NOTICE ("NOTICE"). SERVICE MEANS, INCLUDING BUT NOT LIMITED TO, ANY PRODUCT, SERVICE, SERVICE EVENT (DEFINED AS BELOW), SOFTWARE, APPLICATION AND INFORMATION PROVIDED UNDER ASUS BRAND OR ANY OTHER BRAND OWNED BY ASUS. YOU EXPRESSLY ACKNOWLEDGE THAT YOU HAVE READ THIS NOTICE AND UNDERSTAND THE RIGHTS, OBLIGATIONS, TERMS AND CONDITIONS SET FORTH HEREIN. IF YOU ARE A MINOR, YOU SHALL REGISTER AS THE MEMBER OR ACCESS THE SERVICES ONLY AFTER YOUR PARENTS (OR YOUR GUARDIAN) READ AND UNDERSTAND THE RIGHTS, OBLIGATIONS, TERMS AND CONDITIONS CONTAINED IN THIS NOTICE. BY CONTINUING TO INSTALL, COPY, SURF, DOWNLOAD, ACCESS, PURCHASE, ENTER AND/OR OTHERWISE USE THE SERVICE, YOU OR YOUR PARENTS (OR GUARDIAN) EXPRESSLY CONSENT TO BE BOUND BY THIS NOTICE, INCLUDING UPDATED VERSION, AND ALL APPLICABLE LAWS AND REGULATIONS.

21. ASUSTeK's Terms of Use Notice Privacy Policy provides that for "further information regarding this NOTICE and referred guidelines, contact ASUS Legal Compliance Department by registered mail, facsimile, e-mail, or phone at:"

ASUSTeK Computer Inc.
Company Representative: Mr. Jonney Shih
Legal Affairs Center
Legal Compliance Department
Address: 15, Li-Te Rd., Taipei 112, Taiwan
Email: LegalCompliance@asus.com
Telephone: (886) 2 2894 3447
Fax: (886) 2 2890 7674
Updated March 04, 2015 by ASUS Legal Affairs Center

22. ASUSTeK's website also provides its U.S. consumers with a "Privacy Policy." At checkout, ASUSTeK requires its U.S. consumers to agree to the Privacy Policy and the Sales Terms and Conditions discussed above:



23. ASUSTeK's Privacy Policy, available online at https://www.asus.com/us/terms_of_use_notice_privacy_policy/privacy_policy/, states:

ASUSTeK COMPUTER INC. and its affiliated entities (hereinafter referred to as "ASUS", "we/our/us") are committed to protecting and respecting your privacy. We endeavor to comply with all applicable laws on privacy protection and personal data security. ASUS Privacy Policy, together with any privacy-related notices or statements that contain supplementary information in connection with particular ASUS products and services you are using (hereinafter referred to as "Privacy Policy"), outline our privacy practices regarding the collection, use and safeguard of your personal data through ASUS products and services, both online and offline we provide. In Privacy Policy, we also outline whom we may share or disclose to the collected personal data.

24. User manuals for infringing products can also be found on ASUSTeK's website at <https://www.asus.com/us/support/download-center/>.

25. The download page for any user manual accessed from the United States provides the following notice:

- Products certified by the Federal Communications Commission and Industry Canada will be distributed in the United States and Canada. Please visit the ASUS USA and ASUS Canada websites for information about locally available products.

26. As an example of an accused product, the user manual for the ROG Strix XG259QN LCD monitor contains the following statement:

Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

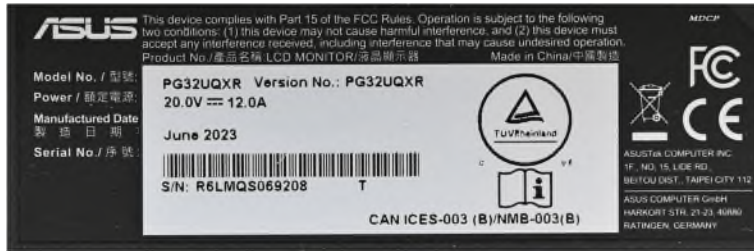
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential

27. The user manual for the ROG Strix XG259QN LCD monitor also represents ASUSTeK as the manufacturer of the device:

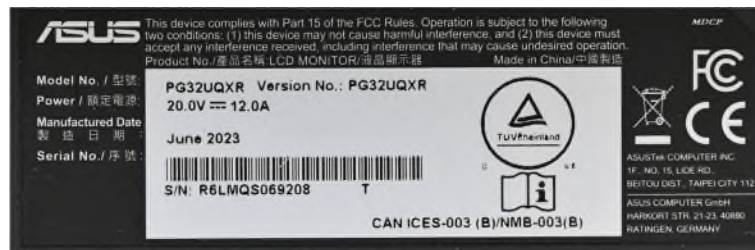
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No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. ("ASUS").

28. Like every other accused product sold and offered for sale in the U.S., the ASUSTeK PG32UQXR LCD monitor bears the ASUS trademark, substantially similar to the following:



29. The ASUSTeK PG32UQXR LCD monitor bears an FCC certification label:



30. In addition, ASUSTeK explains on its warranty page that it intends for its products certified by the Federal Communications Commission to be distributed in the United States and Canada (https://www.asus.com/supportonly/xg259qn/helpdesk_warranty/):

- Products certified by the Federal Communications Commission and Industry Canada will be distributed in the United States and Canada. Please visit the ASUS USA and ASUS Canada websites for information about locally available products.

31. The USPTO shows the current owner of the ASUS trademarks as “ASUSTeK Computer Incorporation, TAIWAN,” including at least the following:

Serial Number	Reg. Number	Word Mark	Live/Dead
97180242		Asus	LIVE
97310442		Asus	LIVE
90046134	6565260	Asus	LIVE
85892190	4651253	Asus	LIVE
78979284	3370930	Asus	LIVE
78342942	3379287	Asus	LIVE

32. To register a U.S. trademark, the mark must either be currently in use or intended to be used in commerce.

33. The USPTO shows “ASUSTeK Computer Incorporation, TAIWAN” as the owner of at least eighty-two trademarks in total.

34. The boxes containing the Accused Products are made in China:



35. Product warranty information is also available on ASUSTeK’s website. The warranty for ASUSTeK’s gaming monitors, among others, is available at https://www.asus.com/support/images/upload/warranty/us_Gaming%20NB.pdf. This warranty provides:

ASUS contact details

This warranty is provided by:

ASUSTeK Computer Inc.
1F., No. 15, Lide Rd., Beitou Dist.
Taipei City 112
Phone: +886-2-2894-3447

36. Additionally, in the United States, ASUSTeK offers “Asus Support” through its MyAsus app, including for example, “Blue screen error.” The MyAsus app identifies its “Developer” as “ASUSTeK” multiple times, including as follows:

Current Version

MyASUS: 3.1.16.0

ASUS System Control Interface: 3.1.13.0

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37. After the user selects “USA/English,” the app asks the customer to become an “Asus member” by agreeing to the “Asus ‘Privacy Policy’” and the “Asus Terms of Use.” The Privacy Policy ends with a copyright by “ASUSTeK COMPUTER INC.” as follows:

ASUSTeK COMPUTER INC.
Attn: Personal Data Protection Committee
Address: 15, Li-Te Rd., Taipei 112, Taiwan
Email: privacy@asus.com
Updated December 31, 2019 by ASUS Personal Data Protection Committee

38. ASUS then sends the U.S. customer an email “Thank you for being a valued ASUS Member!” that ends by stating the following:

This email and any attachments to it contain confidential information and are intended solely for the use of the individual to whom it is addressed. If you are not the intended recipient or receive it accidentally, please immediately notify the sender by e-mail and delete the message and any attachments from your computer system, and destroy all hard copies. Please be advised that any unauthorized disclosure, copying, distribution or any action taken or omitted in reliance on this, is illegal and prohibited. Any views or opinions expressed are solely those of the author and do not represent those of ASUSTeK.

39. Upon opening, the MyAsus app requires the U.S. customer to accept or reject a statement that begins: “ASUSTeK COMPUTER INC. and its affiliated companies use cookies and similar technologies to perform essential online functions, such as authentication and security. . . .”

40. ASUS’s 2022 Q4 report, available online at https://www.asus.com/EVENT/Investor/ir_quarterly, states:

Unit: NT\$ thousands

(5) Geographical information

Geographical information for the years ended December 31, 2022 and 2021 is as follows:

	Years Ended			
	December 31, 2022		December 31, 2021	
	Revenue	Non-current assets	Revenue	Non-current assets
Taiwan	\$ 55,913,086	\$ 23,900,131	\$ 58,115,720	\$ 24,216,555
China	107,280,367	7,215,633	93,558,202	6,994,363
Singapore	196,214,948	41,099	213,335,297	64,897
USA	108,498,432	1,479,767	101,713,640	1,248,163
Europe	22,709,036	423,353	25,368,477	359,969
Others	46,576,063	531,113	43,147,399	530,177
	<u>\$537,191,932</u>	<u>\$ 33,591,096</u>	<u>\$535,238,735</u>	<u>\$ 33,414,124</u>

The above non-current assets exclude financing instruments, deferred income tax assets and certain other non-current assets.

41. The 2022 Q4 Report also discloses that ASUSTeK owns 100% of its U.S.-based subsidiary “ASUS Computer International” (“ACI”), which ASUSTeK’s Q4 Report calls an “affiliated enterprise.” The Defendant includes ACI’s U.S. net income/profit in its annual results.

42. The 2022 Q4 Report includes Table 7, titled “Names, Locations, and Related Information of Investees Over Which the Company Exercises Significant Influence.” This table shows the following:

ASUSTEK COMPUTER INC. AND SUBSIDIARIES
 NAMES, LOCATIONS, AND RELATED INFORMATION OF INVESTEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE
 (EXCLUDING INFORMATION ON INVESTMENTS IN MAINLAND CHINA)
 YEAR ENDED DECEMBER 31, 2022

Table 7 (Amounts in thousands of New Taiwan dollars)

Investor Company	Investee Company	Location	Main Businesses	Original Investment Amount		December 31, 2022			Net Income (Loss) of the Investee	Share of Profit/Loss of Investee	Note
				December 31, 2022	December 31, 2021	Shares	Percentage of Ownership (%)	Carrying Value			
ASUS	ACI	U.S.A	Selling of 3C products in North America	13,320	13,320	50,000	100.00	1,182,489	248,145	248,145	Note 2
ASUS	ASUTC	Taiwan	Selling of 3C products in Taiwan	204,244	204,244	19,000,000	100.00	-	82,069	82,069	Note 1, 2 and 3

43. ASUS’s 2021 Annual Report, available online at https://www.asus.com/EVENT/Investor/ir_report, also states:

Unit: NT\$ thousands

Item \ Year	2020		2021	
	Subtotal	Total	Subtotal	Total
Sales to TW		21,419,537		28,999,151
Sales to region outside of Taiwan		395,773,510		506,239,584
America	107,573,633		132,380,886	
Asia Pacific / Oceania	162,267,972		222,885,520	
Europe	123,254,852		145,888,224	
Africa	2,677,053		5,084,954	
Net sales		417,193,047		535,238,735
(-) Revenue from contracts with customers from discontinued operations		(4,412,608)		-
Total		412,780,439		535,238,735

44. ASUSTeK's 2021 Annual Report states that 23% of members of the ASUSTeK Board of Directors serve as employees of ASUS subsidiaries, shown below. One of these Directors is Jonathan Tsang, President of ASUS Group.

(2) Independence of the board

- a. The Company's board of directors has 13 members, of which 3 are independent directors, or 23.08%.
- b. 38.46% of directors concurrently serve as employees of the Company, 23.07% of them serve as employees of subsidiaries and 38.46% of them do not have employee status.
- c. Therefore, there is no violation of the provisions of Paragraph 3 and 4 of Article 26-3 of the Securities and Exchange Act.

45. The 2021 Annual Report also discloses that Jonathan Tsang attended 100% of ASUSTeK Board meetings in 2021:

III. Corporate governance Implementation

(I) Board of Directors

The 2021 Board of Directors convened 8 meetings (A). The following is the attendance of the directors:

Title	Name	Attendance in Person (B)	By Proxy	Attendance Rate (%) (B/A)	Notes
Chairman	Jonney Shih	8	0	100%	
Vice Chairman	Ted Hsu	8	0	100%	
Director	Jonathan Tsang	8	0	100%	

46. The 2021 Annual Report includes a timeline of ASUSTeK activities. This timeline highlights a number of achievements and events in the company’s history, including recent U.S. activities including at least as follows:

March 2009	Eee PC series had been selected the top-three models on the shopping list of the benchmark online mall “AMAZON” for multiple times. The newly launched 1000HE model of Eee PC™ had taken up the top-two spots with successful pre-order as an evidence of the popularity of Eee PC. ASUS owned the heart of American consumers with Eee PC™.
October 2011	ASUS released of the latest ZENBOOK™ super-slim notebook in step with the world. Chairman Jonney Shih first released the product in New York, followed by London, Milan and Taipei. The synchronized global disclosure.
July 2021	ASUS teams up with Olive, an American healthcare startup unicorn, to relieve the burden on 775 hospitals across the United States.

47. As another example of the Defendant’s activities in the U.S., the timeline states that in January 2022 “ASUS breaks its own record to win 20 innovation awards at CES® 2022 in the United States.”

48. This timeline also includes the date of announcement of “a whole new series of innovative gaming products including 14-inch ultra slim gaming laptop computer ROG Zephyrus G14 . . .”.

January 2020	In CES 2020, ROG announced whole new series of innovative gaming products including 14-inch ultra slim gaming laptop computer ROG Zephyrus G14 boasting with most powerful computing capacity in the world, as well as gaming peripherals over ROG Swift 360Hz and ROG Swift PG32UQX monitors, ROG Pugio II and ROG Strix Impact II Wireless mouses, as well as ROG Z11 ITX case.
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49. The 2021 Annual Report again highlights the Zephyrus G14 laptop as a product innovation in a letter to the Defendant’s shareholders. The letter also highlights the ROG Flow X13 as follows:

User-Centric Design Thinking and Innovation in Products and Smart Applications

Through the company’s user-centric design thinking approach, ASUS has implemented a number of product innovations, such as the ProArt Studiobook 16 and Pro 16 creator laptops, which won Golden Pin Design Award’s highest honor — the Best Design of the Year award; **ROG Flow X13, the world’s first 13-inch convertible touchscreen gaming laptop**; the leading-edge Zenbook 17 Fold OLED foldable laptop; the trend-setting **ROG Zephyrus G14 AW SE gaming laptop**; ROG Maximus Z690 Extreme Glacial motherboards with top-notch water-cooling technology; ROG Strix LC RTX 3080 Ti O12G gaming graphics cards with both air- and water-cooling solutions; the ExpertBook B5 commercial laptop series; the ROG Phone 5 gaming smartphone series; the ROG Swift 360Hz PG27AQN, the world’s first 1440p/360 Hz gaming monitor; and the HPC server ESC8000A-E11.

50. The 2021 Annual Report also states:

The Company’s main areas of business are the design, research, development and sales of electronics and information products. In many of its electronics-integrated products, the Company has offered excellent quality and industry-leading technology, which have won many awards. In 2021, ASUS again was recognized as one of the “World’s Most Admired Companies” by “Fortune Magazine” of the United States. The product categories span motherboards, graphics cards, laptops, smart phones, displays, routers, and a full range of technology product solutions; the Company is also actively expanding its esports products and creates a variety of applications in new areas of AIoT. ASUS is committed to pursuing unparalleled technological innovations, creating a thoughtful intelligent life and ubiquitous happiness for global users; the vision of the brand is to become “a leading technology innovative enterprise highly respected by the new digital generation.” ASUS has about 15,000 employees around the world, and has a world-class R&D team of more than 5,000 people. **Its products are sold in more than 70 countries around the world** and have won more than 11 awards every day on

average. The product innovation, design and quality have been recognized by the global market.

The core of ASUS business is PC-related products.

51. ASUS's 2021 Annual Report also states:

ASUS has committed to R&D excellence since the day of its incorporation to rely on inhouse innovation for the R&D, production, and marketing of advanced motherboards, graphics cards, laptops, tablets, servers and smart phones; and to develop 4C (computers, communications, consumer electronics, and automobile electronics) integrated products.

52. ASUS's 2021 Annual Report also states that product development projects include "High Performance thin-and-light laptops," "ScreenPad Plus dual-screen laptops," "ProArt creator laptops," and "Professional gaming LED displays & PCs."

53. ASUS's 2021 Annual Report also states:

The market for thin & light laptop computers continues to expand. The emerging digital content and multimedia entertainment industries as well as the needs of the PC gamers drive the demand for 3D multimedia and high-performance video and audio. It is foreseeable that multimedia entertainment will create more demands for laptop computers with advanced equipment. The development of our laptops incorporates not only the qualities of 'lightweight, thin, small, and visually attractive' but also of 'personalization, video and audio entertainment, wireless communication, and our commitment to a green environment.'

54. ASUS's 2021 Annual Report also states:

To upgrade the product development technique and ensure stable supply of components, ASUS cooperates with many agents and distributors in the global channel architecture. **ASUS is the leading brand in many markets including** Europe, Asia and **America**, and the value of the brand and its identification are widely recognized by the users.

55. ASUS's 2021 Annual Report also states:

Technology is transformed to generate income, and then part of that income is contributed back to support the creativity or technology supplier. This cycle allows R&D to sustain continuous development. These commitments to R&D, and the incentives provided by the Company's management, allow ASUS to continuously recruit talented

R&D. In the constantly-changing computer world, ASUS has key technologies and leading products enabling it to compete in the market and create product value. The 2021 R&D expenses were NT\$20.1 billion, accounting for about 4% of the total revenue.

56. ASUS's 2021 Annual Report also states:

In terms of enhancing the core capabilities of esports computers, ASUS leads the industry, to introduce LCD displays with a refresh rate of 144 Hz and a 3-millisecond response time, as well as the innovative Active Aerodynamic System (AAS) cooling technology, to launch the most powerful compact esports notebooks on the market.

57. ASUS's 2021 Annual Report also states:

According to research conducted by an international market survey institute, ASUS stands in the world's top three Windows OS consumer laptop suppliers and constantly leads the industry in terms of product innovation, attaining high brand value and consumer recognition. The 2021 research institute estimated the shipment of ASUS consumer laptop computers to take about 13% of the global market share.

58. ASUS's 2021 Annual Report also states:

Sales and Marketability:

(1) Advantages

- a. Under the operation of a strong sales management program, **ASUS has achieved competitive computer sales in most regions**, limiting the impact that adverse economic situations in one area has on the corporate operations. By deploying product lines across the market, the Company can properly reduce the impact of economic risks.
- b. The pandemic has driven inelastic demand for computers and computer peripherals, and **demand is strong in markets around the world, including Europe, America**, and the Asia-Pacific region. ASUS has planned and acquired good brand and channel positioning.
- c. The Company mostly has the leading positions in each product line, and is the No. 1 in terms of the global market share of motherboards. **In terms of laptops, it ranks No. 1 in** Taiwan and Hong Kong, Southeast Asia (Indonesia, Malaysia, Thailand), Europe (France, Romania) and **America**.

59. ASUS's 2021 Annual Report also states:

ASUS provided recycling services in Taiwan, Europe, **North America**, China and India. Through recycling and resource circulation, replaced electronic products were given new value and life, which created the next wave of opportunity for economic development and became the key of the circular economy.

60. ASUS's 2021 Annual Report also states:

In 2020, ASUS acquired a total of 7 Green Marks in Europe, **North America** and Asia for maximizing resource benefits, promoting new energy conservation and reducing emissions of greenhouse gases.

61. In the alternative, ASUSTeK Computer Inc. is also responsible for the actions of its U.S. distributors and subsidiaries, which ASUSTeK owns, controls, and directs, based at least on all the facts set forth above.

FACTUAL BACKGROUND

62. SVVTI was founded in 2000 by Dr. Sergiy Vasylyev, a scientist and prolific inventor.

63. Dr. Sergiy Vasylyev has an academic background and more than 20 years of research experience in physical sciences. He received an M.S. equivalent in Physics and Astronomy from the Kharkiv State University, Ukraine in 1992 and a Ph.D. in Physics and Mathematics from the Main Astronomical Observatory of National Academy of Sciences of Ukraine in 1996. From 1996 to 1999, he worked with several major academic research institutions and was involved in diverse research projects in the areas of space physics and solar energy. After immigrating to the U.S., in 2000, Dr. Vasylyev founded SVV Technology Innovations, Inc. to develop and commercialize his ideas in several technical fields ranging from optics and information technology to solar energy and lighting. Dr. Vasylyev is the author of over one hundred patents and dozens of patent applications, has had numerous talks and presentations at the national and international conferences related to space physics, backlight display systems, solar

energy, and lighting and has authored/co-authored over 30 scientific and technical publications. Dr. Vasylyev's broad technical expertise areas include IT/IOT, optics, photonics, lightguide-based illumination systems, solar energy, daylighting, and solid-state lighting.

64. Since its inception, SVVTI has been a vehicle for developing and commercializing Dr. Vasylyev's inventions, particularly being dedicated to creating impactful technology solutions that find utility in energy efficiency, renewable energy and certain types consumer products. One technology focus is optical advances that enhance solar energy harvesting and save energy in illumination systems.

65. SVVTI has invented and validated several ground-breaking technology solutions and has accumulated an extensive knowledge and built a diverse IP portfolio in optics, photonics, solar energy, daylighting and solid-state lighting fields. SVVTI has received innovation awards from TechConnect, Cleantech Open, and Illuminating Engineering Society.

66. SVVTI has developed and demonstrated several novel types of optical collectors for solar energy applications, significantly improving over the traditional technologies in terms of material intensity, concentration ratio, beam uniformity and solar-to-electric conversion efficiency.

67. Another notable technology developed by SVVTI is a unique daylight redirecting film material (Daylighting Fabric®) which is applied to windows of a building façade to redirect natural daylight deep into the interior space for improving natural illumination and saving energy used for lighting.

68. SVVTI has also developed and demonstrated various types of innovative wide-area illumination panels and backlights employing light guides and light emitting diodes (LEDs). These panels can be tailored for specific applications and improving various characteristics of

illumination systems, including, for example, light beam diffusion, emission directionality, material efficiency, luminous efficacy, glare control, design options and aesthetics.

69. On February 25, 2021, ASUSTeK received a letter from SVVTI, introducing SVVTI, notifying ASUSTeK of several of the patents identified below, and identifying several of ASUSTeK's products that utilize SVVTI's intellectual property. In particular, the January 22, 2021 letter identified United States Patent Nos. 8,290,318; 8,740,397; 9,678,321; 9,097,826; 9,256,007; 9,880,342; 10,269,999; 10,439,088; 10,439,089; 10,613,306; 10,627,562; 10,797,191; 10,838,135; and 10,868,205. SVVTI also made ASUSTeK aware of United States Patent No. 11,276,795 through a March 23, 2022 follow-up letter.

70. Defendant has been aware of the '088 Patent, '306 Patent, and '7562 Patent since, at least, February 25, 2021 when ASUSTeK received SVVTI's letter disclosing and attaching each of these patents, and identifying several of ASUSTeK's products utilizing claims of such patents which were also identified in SVVTI's letter.

71. Defendant has been aware of the '088 Patent, '306 Patent, and '7562 Patent, since, at least, March 24, 2022 when SVVTI filed three patent infringement lawsuits against ASUSTeK, styled *SVV Technology Innovations, Inc. v. ASUSTeK Computer, Inc.*, No. 6:22-cv-311-ADA (W.D. Tex.), *SVV Technology Innovations, Inc. v. ASUSTeK Computer, Inc.*, No. 6:22-cv-312-ADA (W.D. Tex.), and *SVV Technology Innovations, Inc. v. ASUSTeK Computer, Inc.*, No. 6:22-cv-313-ADA (W.D. Tex.). The -311 case accused ASUSTeK of infringement involving the '7562 Patent, and the -313 case accused ASUSTeK of infringement involving the '088 Patent and '306 Patent.

72. Upon information and belief, Defendant has been aware of the '951 Patent because, as explained above, it is related to United States Patent No. 11,276,795, which was previously

asserted against ASUSTeK, as described above, and was disclosed in SVVTI's March 23, 2022 letter, as described above.

73. Upon information and belief, Defendant has been aware of the '621 Patent since, at least, November 21, 2023, when the '621 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least February 25, 2021 when ASUSTeK received SVVTI's letter disclosing patents relevant to ASUSTeK's products, as described above.

74. Upon information and belief, Defendant has been aware of the '621 Patent since, at least, November 21, 2023, when the '621 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least March 24, 2022 when SVVTI filed three patent infringement lawsuits against ASUSTeK, as described above.

75. Upon information and belief, Defendant has been aware of the '2562 Patent since, at least, August 2, 2022, when the '2562 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least February 25, 2021 when ASUSTeK received SVVTI's letter disclosing patents relevant to ASUSTeK's products, as described above.

76. Upon information and belief, Defendant has been aware of the '2562 Patent since, at least, August 2, 2022, when the '2562 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least March 24, 2022 when SVVTI filed three patent infringement lawsuits against ASUSTeK, as described above.

77. Upon information and belief, Defendant has been aware of the '951 Patent since, at least, December 3, 2024, when the '951 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least February 25, 2021 when ASUSTeK received SVVTI's letter disclosing patents relevant to ASUSTeK's products, as described above.

78. Upon information and belief, Defendant has been aware of the '951 Patent since, at least, December 3, 2024, when the '951 Patent issued, because ASUSTeK has been monitoring SVVTI's patent portfolio since at least March 24, 2022 when SVVTI filed three patent infringement lawsuits against ASUSTeK, as described above.

79. Defendant has been aware of the Asserted Patents since, at least, the filing and/or service of the original complaint in this case.

TECHNOLOGY BACKGROUND

80. Several of the products accused of infringement below are products that contain displays using LED-illuminated LCD technology. A LED-illuminated LCD (liquid-crystal display) is a flat-panel display that uses LED (light-emitting diode) illumination. The illumination may come from LEDs along one or more sides of the display (edge-lit) or from full-array backlighting (direct-lit). As explained below, some displays use a quantum dot enhancement film ("QDEF").

81. Several of the products accused of infringement below are QLED monitors. QLED stands for quantum dot LED.

82. ASUS sells monitors that use QLED technology and heavily markets them to the gaming community. One such notable product is the PG32UQXR monitor.

83. Generally, quantum dots are small, semiconductor particles that have unique optical and electronic properties, including the ability to produce pure monochromatic red, green, and/or blue light.

84. A widespread commercial application is using a quantum dot enhancement film ("QDEF") layer to improve the LED backlighting in LCD TVs. In this application, light from a blue LED backlight is converted by quantum dots to relatively pure red and green. This

combination of blue, green and red light incurs less blue-green crosstalk and light absorption in the color filters after the LCD screen, thereby increasing useful light throughput and providing a better color gamut.

85. The QDEF layer is able to replace a diffuser used in traditional LCD backlight units.

86. The use of quantum dots to produce monochromatic red, green and blue light is an improvement over traditional LCD backlight units which fed a blue LED through a yellow filter to create white light which was then passed through red, green and blue color filters.

THE ACCUSED PRODUCTS

87. The Accused Products are products which utilize LED-backlit LCD display panels.

88. The Accused Products are distinguishable into two categories. Products which utilize display panels containing one or more QDEF layers (“QDEF Accused Products”) and products which utilize display panels that do not contain QDEF layers (“Non-QDEF Accused Products”). The QDEF Accused Products are further distinguishable into two subcategories. QDEF Accused Products which are direct-lit, in that they use an LED array on the back side of the panel (“Direct-lit QDEF Accused Products”) and QDEF Accused Products which are edge-lit, in that they use LEDs around one or more edges of the panel (“Edge-lit QDEF Accused Products”).

89. The QDEF Accused Products include, but are not limited to, the ASUSTeK PG32UQXR monitor.

90. The Non-QDEF Accused Products include, but are not limited to, the following monitors: XG259Q3A, VG277QY1A, VG24VQ1BY, VP279Q-P, XG27ACS, MB16QHG, and MB16ACV.

COUNT I

DEFENDANT’S INFRINGEMENT OF U.S. PATENT NO. 10,439,088

91. On October 8, 2019, United States Patent No. 10,439,088 entitled “Light Converting System Employing Planar Light Trapping and Light Absorbing Structures” was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the ’088 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US10439088B2>.

92. The following products are accused of infringing the ’088 Patent (the “’342 Accused Products”):

ASUSTeK PG32UQXR.

In addition, the ’088 Accused Products shall include those products identified in SVVTI’s infringement contentions, to be served in accordance with the case scheduling order

93. Defendant has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least claim 1 of the ’088 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the ’088 Accused Products in the United States, in violation of 35 U.S.C. § 271(a).

94. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the ’088 Accused Products outside of the United

States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '088 Accused Products directly to its distributors or subsidiaries and importing the '088 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

95. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '088 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '088 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to

import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '088 Accused Products, creating established distribution channels for the '088 Accused Products into and within the United States, manufacturing the '088 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

96. The '088 Accused Products use a light converting optical system, specifically, an LCD display.¹ The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. The LEDs emit blue light, a portion of which is absorbed and converted to other wavelengths within the backlight. The LCD/backlighting assembly of the display contains LEDs that are used as a light source. The LEDs are a monochromatic (e.g., emitting light only in one color) light source which is configured to emit light in a preselected spectral range (the LEDs emit light in blue color when powered on). The LCD/backlighting assembly contains a planar lenticular lens array (an array of linear cylindrical lenses on a planar plastic substrate). The lens array is disposed in energy receiving relationship with respect to the light source (e.g., LEDs are shining light into an edge of the lens array) and is used to distribute light emitted by the LEDs.

¹ The explanation of how the Asserted Patents have been infringed appearing in this complaint are merely intended to satisfy Plaintiff's pleading obligations. These explanations are by no means exhaustive. Furthermore, any citation or reference to claim elements is not intended to modify the claim language itself, nor does it suggest that the claims should be construed in any particular manner. These narratives do not suggest how any claim term should be construed. These narratives are preliminary, and are subject to change. These narratives are not intended to represent the entire scope of use, or all possible theories of use.

The LCD/backlighting assembly contains a microstructured surface (e.g., a surface having structures on a microscopic scale) including a plurality of linear grooves. For example, the LCD/backlighting assembly contains a composite prism sheet, also called brightness enhancement film (BEF). The front surface of the prism sheet has a regular prismatic pattern formed by microscopic linear grooves disposed side by side. The LCD/backlighting assembly contains a reflective surface (back reflector) on a back side of the lens array. The backlight contains a generally planar photoresponsive layer. For example, the backlight contains a Quantum Dot Enhancement Film (QDEF) which is retained in a planar form within the backlight and contains an active layer which is responsive to blue light emitted by the LEDs (e.g., by absorbing that light and converting it to red and green colors). The photoresponsive layer comprises a semiconductor material in the form of quantum dots. For example, QDEF incorporates quantum dots² which are nano-sized crystals made of semiconductor materials. The quantum dots are embedded into an optically transmissive material. For example, the quantum dots are embedded into the active layer of QDEF which is formed from a material that transmits light. The thickness of the photoresponsive layer is less than a minimum thickness sufficient for absorbing substantially all received light in a single pass at normal incidence. For example, QDEF transmits at least some light without absorption in a single pass.

COUNT II

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,613,306

97. On April 7, 2020, United States Patent No. 10,613,306 entitled "Light Distribution System Employing Planar Microstructured Waveguide" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to

recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '306 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US10613306B2>.

98. The following products are accused of infringing the '306 Patent (the "'306 Accused Products"):

ASUSTeK VG259Q3A, VG277QY1A, VG24VQ1BY, VP279Q-P, XG27ACS, and MB16QHG.

In addition, the '306 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

99. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claim 1 of the '306 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '306 Accused Products, in the United States, in violation of 35 U.S.C. § 271(a).

100. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '306 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '306 Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '306 Accused Products directly to its distributors or subsidiaries and importing the '306 Accused

Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

101. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '306 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '306 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '306 Accused Products, creating established distribution channels for the '306 Accused Products into and within the United States, manufacturing the '306 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

102. The '306 Accused Products use a light distribution optical system, specifically, a LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit

using a backlighting panel assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. The light distribution optical system (display) incorporates a flexible optically transmissive sheet having a first broad-area surface and an opposing second broad-area surface. For example, the backlighting/LCD panel assembly contains a light guiding plate (LGP) formed by a thin, optically transmissive plastic sheet. The display also incorporates an artificial light source illuminating the optically transmissive sheet (LGP). For example, as explained above, the backlighting/LCD panel assembly of the display contains LEDs that are used as a light source. The LEDs illuminate the optically transmissive sheet (LGP) from an edge. The display also contains a plurality of cylindrical lenses formed in the first broad-area surface (front surface of LGP) and aligned parallel to an edge of the optically transmissive sheet (LGP). For example, the cylindrical lenses are incorporated into a linear array and aligned parallel to the bottom and top edges of LGP. The display incorporates a plurality of discrete cavities formed in the second broad-area surface (back surface of LGP) and distributed over an area of the second broad-area surface (back surface of LGP) according to a predetermined two-dimensional pattern. For example, the back surface of LGP has a two-dimensional pattern of microscopic cavities which are discrete (e.g., individually separate and distinct) and which are formed directly in the back surface. The two-dimensional pattern is predetermined (e.g., specifically designed to uniformly extract light from the LGP). Each of the plurality of discrete cavities is disposed in optical communication with respect to at least one of the plurality of cylindrical lenses. For example, each cavity receives light from one or more cylindrical lenses as the light is reflected from the cylindrical lenses while being guided within LGP. In addition, each cavity redirects at least a portion of light that enters the cavity towards one or more cylindrical lenses while extracting

light from LGP. The display incorporates a planar reflective surface extending parallel to the optically transmissive sheet (LGP) and disposed in an energy receiving relationship with respect to the optically transmissive sheet (LGP). For example, the backlight includes a planar reflector on the back of LGP. The back reflector extends parallel to LGP and is used to receive and reflect light emerging from the LGP. A light receiving aperture of each of the plurality of discrete cavities is less than a spacing distance between adjacent ones of the plurality of discrete cavities. Furthermore, a cumulative area of the cavities is less than areas of each of the first and second broad-area surfaces (front and back surfaces of LGP). For example, each cavity within the respective two-dimensional pattern has a size which is less than the spacing distances between adjacent cavities. A thickness of the optically transmissive sheet (LGP) is between a fraction of a millimeter and several millimeters. For example, measurements made using a digital caliper indicate that the LGP has a thickness of 3 mm or less. A width and/or length of the optically transmissive sheet (LGP) is 100 millimeters or more. For example, the LGP has a length and width in excess of 100 mm. The plurality of cylindrical lenses defines a lenticular lens array. For example, each cylindrical lens forms a lenticular lens. A large number of such lenticular lenses are disposed side by side, forming a lenticular lens array. The plurality of discrete cavities is disposed in a proximity to the focal plane. For example, the cavities, which are formed in the back surface of LGP, are very close to the focal plane of the lenticular lens, within a distance of the order of only several hundred micrometers.

COUNT III

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,627,562

103. On April 21, 2020, United States Patent No. 10,627,562 entitled "Illumination System Using Edge-Lit Waveguide and Microstructured Surfaces" was duly and legally issued

after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '7562 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US10627562B2>.

104. The following products are accused of infringing the '7562 Patent (the "'7562 Accused Products'"):

ASUSTeK XG259Q3A, VG277QY1A, VG24VQ1BY, VP279Q-P, XG27ACS, and MB16QHG.

In addition, the '7562 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order

105. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claim 1 of the '7562 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '7562 Accused Products, in the United States, in violation of 35 U.S.C. § 271(a).

106. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '7562 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '7562 Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the

activities of its distributors or subsidiaries, including by selling and offering for sale the '7562 Accused Products directly to its distributors or subsidiaries and importing the '7562 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

107. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '7562 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '7562 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '7562 Accused Products, creating established distribution channels for the '7562 Accused Products into and within the United States, manufacturing the '7562 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical

support, replacement parts, or services for these products to these purchasers in the United States.

108. The '7562 Accused Products use an edge-lit waveguide illumination system, specifically, an LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting panel assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. Light emitted by the LEDs is redistributed within the backlight using an optical waveguide. The display incorporates a thin planar body of an optically transmissive material having edges disposed between a first broad-area surface and an opposing second broad-area surface. For example, the backlight of the display contains a large-area light guiding plate (LGP) which is 3 mm in thickness and which transmits light. The LGP has edges disposed between its front surface and opposing back surface. Both the front and back surfaces have broad areas (e.g., extending along approximately the entire length and width of the visible portion of the display). The display also incorporates a plurality of light emitting diodes (LEDs) optically coupled to an edge of said optically transmissive material (LGP). For example, multiple LEDs are positioned along and oriented towards a light input edge of LGP such that the edge is illuminated when LEDs are turned on. The display incorporates a plurality of linear lenses formed in said first broad-area surface (front surface of LGP). For example, the front surface of LGP has a large number of long and narrow lenses which extend along straight lines between opposite edges of LGP. The display incorporates a plurality of surface relief features formed in said second broad-area surface (back surface of LGP) according to a predetermined two-dimensional pattern. For example, the back surface of LGP has a two-dimensional pattern of microstructures which are distributed over both length and width dimensions of the surface and

are used to extract light from LGP. The two-dimensional pattern is predetermined (e.g., designed to make LGP to uniformly emit light from its surface). The optically transmissive material (LGP) is configured to receive light on said edge and propagate the received light towards an opposing edge in response to optical transmission and total internal reflection. For example, LGP receives light from LEDs on its light input edge and propagates it towards the opposite edge using optical transmission and total internal reflection (TIR)³ from its front and back surfaces. The plurality of surface relief features (microstructures) is configured to extract light from said optically transmissive material (LGP) such that the extracted light is distributed from a surface of said plurality of linear lenses. For example, as explained above, the microstructures are used to extract light from LGP. The extracted light is distributed through the front surface of LGP, in which the linear lenses are formed, towards the front side of the display. Thus, the extracted light is distributed from the surface of linear lenses.

COUNT IV

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 11,821,621

109. On November 21, 2023, United States Patent No. 11,821,621 entitled “Method of Making Light Guide Illumination Systems with Enhanced Light Coupling” was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '621 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US11821621B2>.

110. The following products are accused of infringing the '621 Patent (the “'621 Accused Products”):

ASUSTeK MB16ACV and MB16QHG.

In addition, the '621 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order

111. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, the '621 Patent by selling, offering to sell, and/or importing into the United States LCD panels, their components, and/or products containing same, including, without limitation, the '621 Accused Products, that are made by a process covered by, at least, claim 1 of the '621 Patent, in violation of 35 U.S.C. § 271(g). Upon information and belief, at least as early as Defendant's awareness of the '621 Patent as described above, Defendant possessed actual knowledge of the '621 Patent, and/or possessed information sufficient to persuade a reasonable person that it is likely that a product was made by a process patented in the United States. Upon information and belief, the LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another.

112. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '621 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '621 Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '621

Accused Products directly to its distributors or subsidiaries and importing the '621 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

113. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '621 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '621 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '621 Accused Products, creating established distribution channels for the '621 Accused Products into and within the United States, manufacturing the '621 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

114. Alternatively, and in addition, Defendant jointly infringed, and continues to jointly infringe, literally or under the doctrine of equivalents, at least claim 1 of the '621 Patent by directing others to perform one or more of the claimed methods of the '621 Patent. For example, Defendant instructs its suppliers to supply to Defendant and Defendant's subsidiaries, the '621 Accused Products that are manufactured using one or more of the claimed methods of the '621 Patent. Defendant instructs its suppliers to incorporate within the '621 Accused Products certain LCD display panels that are manufactured using one or more of the claimed methods of the '621 Patent. Defendant also enables and instructs its subsidiaries to import, purchase, and sell the '621 Accused Products within the United States. At the time of its actions, Defendant was aware of the '621 Patent and/or had willfully blinded itself to the '621 Patent and the infringing nature of its activities.

115. The '621 Accused Products use a light guide illumination system, specifically, an LCD display. The LCD display is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are disposed at an edge of the display screen and provide a light source. The backlight further uses a light guide to distribute light emitted by the LEDs over the viewable area of the display. The light guide illumination system (LCD display) incorporates an optically transmissive sheet. For example, the backlight contains a light guide (LGP) which is formed by a thin plastic sheet which transmits light. The optically transmissive sheet (LGP) has a front surface and a back surface which extend along the entire length and width dimensions of the sheet parallel to one another. The optically transmissive sheet (LGP) has a first edge and an opposing second edge. For example, the LGP has a rectangular shape with four edges. One of the edges (the first edge/light input edge) is facing the LEDs and is used for light input from the LEDs into the LGP. An opposite edge (the

second edge) is facing away from the LEDs. The optically transmissive sheet (LGP) further has a light coupling area located near the first edge (light input edge), and a two-dimensional light extraction area located on at least one of the first and second broad-area surfaces and at a distance from the first edge. For example, the LGP includes a relatively narrow rectangular area which is adjacent to the light input edge and is used for optically coupling the LED light into the LGP and guiding light away from the LEDs. The light coupling area is located under an opaque housing and is not used for illuminating the viewable area of the display. Furthermore, the LGP includes a rectangular area which is located farther away from the light input edge and is used for extracting light from the LGP and illuminating the viewable area of the display. The light extraction area has a special light extraction pattern of microscopic structures (microstructures) formed in the back surface of the LGP. The light extraction pattern extends in two dimensions along the length and width dimensions of the LGP. The microstructures progressively extract light from the LGP by disrupting the lateral propagation of light within the LGP. The two-dimensional light extraction area comprises a plurality of light extraction features formed in or on one of the first and second broad-area surfaces with a variable density and configured for extracting light from the optically transmissive sheet. For example, the two-dimensional light extraction area has a rectangular area with a pattern of microstructures formed in the back surface of the LGP and used for extracting light from the LGP by disrupting lateral light propagation within the LGP. Further, a density of the light extraction features (microstructures) within the two-dimensional light extraction area (patterned area of the LGP) increases with a distance from the light coupling area (and hence has variable density). Specifically, the microstructures are more sparsely populated near the light coupling area and gradually become more densely populated with a distance from light coupling area. The optically transmissive

sheet (LGP) is configured to propagate light from the light coupling area towards the two-dimensional light extraction area (patterned area of LGP) using optical transmission and total internal reflection. For example, the LGP is used for guiding light away from the light input edge and the light coupling area and distribute that light over the entire area of the LGP using the optical transmission and the total internal reflection (TIR) mechanisms. The light is particularly propagated towards the light extraction area where it is extracted from the LGP using the microstructures to creating a uniform glow from the LGP. The backlight comprises an LED strip comprising a strip of heat-conducting printed circuit and a linear array of electrically interconnected side-emitting LED packages mounted to a major surface of the strip of heat-conducting printed circuit such that a plane of a light emitting aperture of each of the electrically interconnected side-emitting LED packages is oriented perpendicular to the major surface. For example, the backlight contains an LED strip which includes strip of printed circuit which is positioned directly under the light input edge of the LGP. This printed circuit strip is heat-conducting (e.g., it is used to spread heat generated by the LEDs using conduction). The printed circuit strip has a pair of major surfaces (e.g., front and back surfaces) which are oriented parallel to the front and back surfaces of the LGP. Furthermore, the LED strip includes a linear array of electrically interconnected side-emitting LED packages mounted to a major surface of the strip of heat-conducting printed circuit. Specifically, the LEDs are arranged into a linear array (e.g., a series of LEDs with regular spacing). The LEDs are mounted to the front surface of the printed circuit and electrically interconnected (e. g, connected to one another using electrical contacts). Each LED is a surface-mounted (SMD) package that includes an LED chip. The LED package is side emitting (e.g., emitting light from one of its sides rather than from its top). The LEDs are optically coupled to the LGP (e. g., are used to directly illuminate the LGP from its edge). In

addition, a plane of a light emitting aperture of each of the electrically interconnected side-emitting LED packages is oriented perpendicular to the major surface. The LED strip is aligned parallel to the first edge, i.e., the light input edge of the LGP. The LED strip is positioned at or near the first edge such that the major surface extends generally parallel to the first and second broad-area surfaces and at least a substantial portion of the major surface is disposed in a space between the first and second edges. For example, the LED strip is positioned directly under the light input edge (or the first edge) of the LGP. Further, as described above, the LED strip has a pair of major surfaces (e.g., front and back surfaces) which are oriented parallel to the front and back surfaces of the LGP. Furthermore, most of the front surface of the LED strip is located in a space between the light input edge and the opposite edge of the LGP.

COUNT V

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 11,402,562

116. On August 2, 2022, United States Patent No. 11,402,562 entitled “Method of Making Illumination Systems Employing Thin and Flexible Waveguides with Enhanced Light Coupling” was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '2562 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US11402562B2>.

117. The following products are accused of infringing the '2562 Patent (the “'2562 Accused Products”):

ASUSTeK MB16ACV and MB16QHG.

In addition, the '2562 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order

118. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, the '2562 Patent by selling, offering to sell, and/or importing into the United States LCD panels, their components, and/or products containing same, including, without limitation, the '2562 Accused Products, that are made by a process covered by, at least, claim 18 of the '2562 Patent, in violation of 35 U.S.C. § 271(g). Upon information and belief, at least as early as Defendant's awareness of the '2562 Patent as described above, Defendant possessed actual knowledge of the '2562 Patent, and/or possessed information sufficient to persuade a reasonable person that it is likely that a product was made by a process patented in the United States. Upon information and belief, the LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another.

119. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '2562 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '2562 Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '2562 Accused Products directly to its distributors or subsidiaries and importing the '2562 Accused

Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

120. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '2562 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '2562 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '2562 Accused Products, creating established distribution channels for the '2562 Accused Products into and within the United States, manufacturing the '2562 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

121. Alternatively, and in addition, Defendant jointly infringed, and continues to jointly infringe, literally or under the doctrine of equivalents, at least claim 18 of the '2562 Patent by directing others to perform one or more of the claimed methods of the '2562 Patent. For example, Defendant instructs its suppliers to supply to Defendant and Defendant's subsidiaries, the '2562 Accused Products that are manufactured using one or more of the claimed methods of the '2562 Patent. Defendant instructs its suppliers to incorporate within the '2562 Accused Products certain LCD display panels that are manufactured using one or more of the claimed methods of the '2562 Patent. Defendant also enables and instructs its subsidiaries to import, purchase, and sell the '2562 Accused Products within the United States. At the time of its actions, Defendant was aware of the '2562 Patent and/or had willfully blinded itself to the '2562 Patent and the infringing nature of its activities.

122. The '2562 Accused Products use an LCD display. The LCD display is backlit using a backlighting unit or a waveguide illumination unit. The backlight unit uses multiple light-emitting diodes (LEDs) which are disposed at an edge of the display screen and provide a light source. The backlight unit further uses a light guide to distribute light emitted by the LEDs over the viewable area of the display. The backlight includes an optical waveguide formed from a thin and flexible light transmissive sheet having a first broad-area surface, an opposing second broad-area surface, a first edge, an opposing second edge, a patterned light extraction area located at a distance from the first edge, and a light mixing area located between the first edge and the patterned light extraction area. For example, the backlight contains a light guide plate (LGP) which is formed by a thin flexible plastic sheet and which transmits light (hence is a light transmissive sheet). The optical waveguide (LGP) has a front broad-area surface and a back broad-area surface which extend along the entire length and width dimensions of the LGP

parallel to one another. The optical waveguide (LGP) further has a first edge and an opposing second edge. For example, the LGP has a rectangular shape with four edges. One of the edges (the first edge/light input edge) is facing the LEDs and is used for light input from the LEDs into the LGP. An opposite edge (the second edge) is facing away from the LEDs. The LGP further includes a patterned light extraction area located at a distance from the first edge, and a light mixing area located between the first edge and the patterned light extraction area. The backlight includes a plurality of light extraction microstructures formed in at least one of the first and second broad-area surfaces and distributed over the patterned light extraction area according to a two-dimensional pattern. For example, the back broad-area surface of the LGP includes a plurality of light extraction microstructures that are distributed over the patterned light extraction area according to a two-dimensional pattern. The backlight unit includes a flexible side-emitting LED strip comprising a flexible printed circuit, a linear array of side-emitting LED packages arranged along a length dimension of the flexible printed circuit with a regular spacing and mounted to a major surface of the flexible printed circuit. For example, the backlight unit of the display screen includes a flexible side-emitting LED strip that is disposed in proximity to the light input edge of the LGP. The flexible side-emitting LED strip includes a flexible printed circuit and a linear array of side-emitting LED packages arranged along a length dimension of the flexible printed circuit with a regular spacing. Each LED is a surface-mounted (SMD) package that includes an LED chip covered by phosphor and incorporated into a casing. The LED package is side emitting (e.g., emitting light from one of its sides rather than from its top). Further, the LEDs are mounted to the major surface of the flexible printed circuit. The flexible side-emitting LED strip further includes a plurality of electrical contacts configured for electrically connecting the flexible side-emitting LED strip to a power supply and/or electrically

interconnecting the side-emitting LED packages. For example, the side-emitting LEDs / LED packages are electrically connected to the flexible printed circuit via electrical contacts. The major surface of the flexible side-emitting LED strip is oriented parallel to the first and second broad-area surfaces. For example, the major surface of the flexible printed circuit is oriented parallel to the optical waveguide / LGP, and hence oriented parallel to the front and back surfaces of the LGP. At least a substantial portion of the major surface is disposed directly or indirectly in contact with at least a portion of one of the first or second broad-area surfaces of the thin and flexible light transmissive sheet. For example, a substantial portion of the major surface of the flexible side-emitting LED strip is directly in contact with the back surface of the LGP (i.e., the second broad-area surface). The backlight unit include a reflective layer (reflector) that is positioned on a back side of the thin and flexible light transmissive sheet (i.e., the LGP). The LGP is configured to receive the light from the LEDs, and guide / distribute the light from both the front and back sides of the LGP. Therefore, the back side of the LGP is a light emitting side. The backlight unit comprises an opaque housing at least partially enclosing the flexible side-emitting LED strip. For example, the backlight unit comprises an opaque housing that includes a metallic channel and an opaque film. The opaque housing covers both longitudinal sides of the flexible side-emitting LED strip and also the LED strip's side edge which is facing away from the LGP. As described above, the backlight unit comprises an opaque housing that includes a metallic channel and an opaque film. The upper wall of the channel is disposed in an indirect contact with the LED strip through the opaque film. The opaque film (which itself is a part of the housing) is disposed in a direct physical and thermal contact with the LED strip. The film is thermally conductive and is therefore providing an indirect thermal contact with the metallic channel. Furthermore, the back surface of the flexible side-emitting LED strip rests directly on

the lower wall of the metallic channel and is pressed against the lower wall when the metallic channel is closed. Therefore, the back surface of the LED strip is disposed in direct thermal contact with the lower wall of the metallic channel of the opaque housing. A surface of the first edge comprises a regular array of optical structures configured to deflect light entering the optical waveguide. For example, the light input edge of the LGP has a series / array of optical structures formed directly in a surface of the LGP, which is configured to deflect light entering into the LGP from the LEDs. A light-emitting surface of each of the side-emitting LED packages is oriented perpendicular to the major surface and has a first dimension which is greater than a prevalent thickness of the thin and flexible light transmissive sheet. For example, the light-emitting surface of each LED is oriented perpendicular to the major surface. Further, a first dimension (e.g., the length) of the light emitting surface is greater than a thickness of the thin and flexible light transmissive sheet, i.e., the LGP. The length of the light emitting surface of the LED is 3.695 mm, and the thickness of the LGP is ~0.745 mm. Thus, the length of the light emitting surface of the LED is greater than the thickness of the LGP.

COUNT VI

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 12,159,951

123. On December 3, 2024, United States Patent No. 12,159,951 entitled "Method of Making Light Converting Systems Using Thin Light Trapping Structures and Photoabsorptive Films" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '951 patent is incorporated by reference herein and may be accessed at <https://patents.google.com/patent/US12159951B2>.

124. The following products are accused of infringing the '951 Patent (the "'951 Accused Products'"):

ASUSTeK PG32UQXR.

In addition, the '951 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order

125. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, the '951 Patent by selling, offering to sell, and/or importing into the United States LCD panels, their components, and/or products containing same, including, without limitation, the '951 Accused Products, that are made by a process covered by, at least, claim 1 of the '951 Patent, in violation of 35 U.S.C. § 271(g). Upon information and belief, at least as early as Defendant's awareness of the '951 Patent as described above, Defendant possessed actual knowledge of the '951 Patent, and/or possessed information sufficient to persuade a reasonable person that it is likely that a product was made by a process patented in the United States. Upon information and belief, the LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another

126. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '951 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '951 Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658

(E.D. Tex. 2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '951 Accused Products directly to its distributors or subsidiaries and importing the '951 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

127. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '951 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '951 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '951 Accused Products, creating established distribution channels for the '951 Accused Products into and within the United States, manufacturing the '951 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and

prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

128. Alternatively, and in addition, Defendant jointly infringed, and continues to jointly infringe, literally or under the doctrine of equivalents, at least claim 1 of the '951 Patent by directing others to perform one or more of the claimed methods of the '951 Patent. For example, Defendant instructs its suppliers to supply to Defendant and Defendant's subsidiaries, the '951 Accused Products that are manufactured using one or more of the claimed methods of the '951 Patent. Defendant instructs its suppliers to incorporate within the '951 Accused Products certain LCD display panels that are manufactured using one or more of the claimed methods of the '951 Patent. Defendant also enables and instructs its subsidiaries to import, purchase, and sell the '951 Accused Products within the United States. At the time of its actions, Defendant was aware of the '951 Patent and/or had willfully blinded itself to the '951 Patent and the infringing nature of its activities.

129. The '951 Accused Products use an LCD display. The LCD display is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are distributed over the viewable area of the display and provide a light source. The LEDs emit blue light, a portion of which is absorbed and converted to other wavelengths within the backlight. The LCD/backlighting assembly contains a layered light trapping structure that includes a first optical layer. A front surface of the first optical layer comprises a plurality of linear grooves, each having a triangular cross-section. For example, the LCD/backlighting assembly includes Brightness Enhancement Films (BEFs). The front² surface of each BEF has a

² The terms "front" and "back" are used to describe various elements within the analyzed device assembly when the device is oriented with its viewable display towards the viewer.

regular pattern formed by a plurality of microscopic linear grooves (i.e., microstructures) disposed side by side. Each linear groove has a triangular cross-section. At least some of the plurality of linear grooves are arranged into a regular array of alternating ridges and valleys extending parallel to one another along a straight line and between two different edges of the first optical layer. For example, the plurality of linear grooves is arranged into an array of alternating ridges and valleys that extend along the length of the BEF, thus extending between two edges of the BEF. Further, the ridges and valleys are parallel to each other. Each of the plurality of linear grooves is configured to reflect first light rays having first incidence angles with respect to a surface normal using a total internal reflection and deflect second light rays having second incidence angles with respect to the surface normal using refraction. For example, each linear groove of the BEF has a pair of facets inclined at a 45° . Each facet reflects light that arrives from a perpendicular direction using total internal reflection³ and refracts light that strikes the BEF at slanted angles. The LCD/backlighting assembly contains a diffuse reflector approximately coextensive with and positioned parallel to the first optical layer. The diffuse reflector is formed from a thin sheet of a diffuse reflective material. For example, the LCD/backlighting assembly contains a reflective surface (reflector sheet) that is made of a thin sheet of diffuse reflective material, which is coextensive with and oriented parallel to the BEFs. The LCD/backlighting assembly contains a light converting film approximately coextensive with and positioned parallel to the first optical layer between the front surface and the diffuse reflector. For example, the backlight contains a Quantum Dot Enhancement Film (QDEF) which is retained in a planar form within the backlight and contains an active layer which absorbs blue light emitted by the LEDs

³ Total internal reflection is the phenomenon which occurs when a propagated wave strikes a medium boundary at an angle larger than a particular critical angle with respect to the normal to the surface. (source: Wikipedia)

and converts it to light of other colors, such as red and green colors. The QDEF is positioned coextensive with and parallel to the BEFs and the reflector sheet. The light converting film comprises an active layer configured to partially transmit and partially absorb and convert light propagating through the light converting film in a transverse direction. For example, the QDEF contains an active layer that includes quantum dots. The quantum dots partially absorb the blue light emitted from the LEDs and propagating through the QDEF in transverse direction, and convert the absorbed blue light into light of green or red color. The active layer of QDEF comprises a first light converting semiconductor material having a first bandgap (e.g., “red” quantum dots that convert blue light into light in red spectral band) and a second light converting semiconductor material having a second bandgap (e.g., “green” quantum dots that convert blue light into light in green spectral band) which is different than the first bandgap. For example, the QDEF includes an active (core) layer that includes a semiconductor material in the form of quantum dots. Quantum dots are nano-sized crystals made of semiconductor materials. The quantum dots are configured to absorb and convert light in the preselected spectral range (e.g., in the spectral range of blue light emitted by the LEDs). For example, the quantum dots are used to absorb blue light emitted by the LEDs and re-emit the absorbed light energy in other spectral bands of light (e.g., red and/or green colors). Further, quantum dots have bandgaps that are tunable across a wide range of energy levels by changing their size. As mentioned above, QDEF incorporated into the LCD/backlighting assembly includes two groups of quantum dots: “green” and “red” which emit light in green and red colors, respectively, based on the size of quantum dot. The “green” and “red” quantum dots have different sizes and hence different band gaps. The thickness of the active layer is less than a minimum thickness sufficient for absorbing substantially all light in a visible spectrum traversing through the active layer in a single pass.

For example, as illustrated below, QDEF transmits at least some light without absorption in a single pass. The LCD/backlighting assembly contains a light source configured to emit light in a visible spectrum. Specifically, the LCD/backlighting assembly of the display screen contains LEDs that are used as a light source. The LEDs are a monochromatic (e.g., emitting light only in one color) light source which is configured to emit light in a visible spectrum (the LEDs emit light in blue color when powered on). The BEFs, the QDEF and the reflector sheet are configured to receive the light emitted from the LEDs, and hence are positioned in an energy receiving relationship with respect to the light source (i.e., the LEDs).

FURTHER ASSERTIONS INVOLVING ALL CLAIMS

130. The Asserted Patents are valid and enforceable.
131. Defendant has had knowledge of the Asserted Patents as described above.
132. Defendant's affirmative acts of selling the Accused Products, causing the Accused Products to be sold, advertised, offered for sale, and/or distributed, and providing instruction manuals for the Accused Products have induced and continue to induce Defendant's customers, and/or end-users to use the Accused Products in their normal and customary way to infringe the Asserted Patents. For example, it can be reasonably inferred that end-users will use the infringing products, which will cause the end-users to use the elements that are the subject of the claimed invention. Defendant specifically intended and was aware that these normal and customary activities would infringe the Asserted Patents. In addition, Defendant provides marketing and/or instructional materials, such as user guides, that specifically teach end-users to use the Accused Products in an infringing manner. By providing such instructions, Defendant knows (and has known), or was willfully blind to the probability that its actions have, and continue to, actively induce infringement. By way of example only, Defendant has induced

infringement and continue to induce infringement of, in addition to other claims, at least the specific claims identified above of the Asserted Patents by selling in the United States, without SVVTI's authority, infringing products and providing instructional materials. These actions have induced and continue to induce the direct infringement of the Asserted Patents by end-users. Defendant performed acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the Asserted Patents and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. Upon information and belief, Defendant specifically intended (and intends) that its actions would result in infringement of at least the specific claims identified above of the Asserted Patents, or subjectively believed that its actions would result in infringement of the Asserted Patents but took deliberate actions to avoid learning of those facts, as set forth above. Upon information and belief, Defendant knew of the Asserted Patents and knew of its infringement, including by way of this lawsuit as described above.

133. Defendant's infringement has been and continues to be willful and deliberate. Upon information and belief, Defendant deliberately infringed the Asserted Patents and acted recklessly and in disregard to the Asserted Patents by making, having made, using, importing, and offering for sale products that infringe the Asserted Patents. Upon information and belief, the risks of infringement were known to Defendant and/or were so obvious under the circumstances that the infringement risks should have been known. Upon information and belief, Defendant has no reasonable non-infringement theories. Upon information and belief, Defendant has not attempted any design/sourcing change to avoid infringement. Defendant has acted despite an objectively high likelihood that its actions constituted infringement of the Asserted Patents. In addition, this objectively-defined risk was known or should have been

known to Defendant. Upon information and belief, Defendant has willfully infringed and/or continues to willfully infringe the Asserted Patents. Defendant exhibited egregious behavior beyond typical infringement in that, despite being aware of its infringement, defendant did not develop any non-infringement theories, did not attempt any design or sourcing change, and did not otherwise cease its infringement. Defendant's continued infringement of the Asserted Patents unabated by notice of the Asserted Patents constitutes willful and deliberate infringement.

134. Defendant has also had knowledge of its infringement of the '7562 Patent at least since September 26, 2024 when the jury in *SVV Technology Innovations, Inc. v. ASUSTeK Computer, Inc.*, No. 6:22-cv-311-ADA (W.D. Tex.) rendered its verdict, which included its determinations that Defendant infringed claims 1 and 7 of the '7562 Patent, and that Defendant's infringement of SVVTI's patents was willful.

135. On information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of SVVTI's patent rights.

136. To the extent any marking or notice was required by 35 U.S.C. § 287, Plaintiff has complied with the applicable marking and/or notice requirements of 35 U.S.C. § 287.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER

WHEREFORE, Plaintiff prays for judgment that:

1. Defendant has infringed and continues to infringe, one or more claims of the Asserted Patents;

2. Defendant be ordered to pay damages caused to Plaintiff by Defendant's unlawful acts of infringement;
3. Defendant's acts of infringement have been, and are, willful;
4. Plaintiff recover actual damages under 35 U.S.C. § 284;
5. Plaintiff be awarded supplemental damages for any continuing post-verdict infringement up until final judgment;
6. Plaintiff be awarded a compulsory ongoing royalty;
7. Plaintiff be awarded an accounting of damages;
8. Plaintiff be awarded enhanced damages for willful infringement as permitted under the law;
9. A judgment and order requiring Defendant to pay to Plaintiff pre-judgment and post-judgment interest on the damages awarded, including an award of pre-judgment interest, pursuant to 35 U.S.C. § 284, from the date of each act of infringement by Defendant to the day a damages judgment is entered, and a further award of post-judgment interest, pursuant to 28 U.S.C. § 1961, continuing until such judgment is paid, at the maximum rate allowed by law;
10. An award to Plaintiff of the costs of this action and its reasonable attorneys' fees pursuant to 35 U.S.C. §285; and
11. Such other and further relief as the Court deems just and equitable.

DATED: January 24, 2025

Respectfully submitted,

/s/Robert D. Katz

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