PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN HIGH-DENSITY FIBER OPTIC EQUIPMENT AND COMPONENTS THEREOF**	**Investigation No. 337-TA-1194**

COMMISSION OPINION

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I. INTRODUCTION

On May 24, 2021, the Commission determined to review in part the final initial determination ("ID") issued by the presiding administrative law judge ("ALJ") on March 23, 2021. Notice at 3-6 (May 24, 2021) ("Notice of Review"), *published at* 86 Fed. Reg. 28890-893 (May 28, 2021). On review, the Commission has determined that there has been a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to claims 1 and 3 of U.S. Patent No. 9,020,320 ("the '320 patent"); claims 11, 12, 14-16, 19, 21, 27, and 28 of U.S. Patent No. 10,444,456 ("the '456 patent"); claims 9, 16, 23, and 26 of U.S. Patent No. 10,120,153 ("the '153 patent"); and claims 22 and 23 of U.S. Patent No. 8,712,206 ("the '206 patent"). The Commission has also determined to issue a general exclusion order ("GEO") prohibiting the importation of infringing high-density fiber optic equipment and components thereof and cease and desist orders ("CDO") directed to three respondents. This opinion sets forth the Commission's reasoning in support of its determination.

II. BACKGROUND

A. Procedural History

The Commission instituted this investigation on March 24, 2020, based on a complaint filed on behalf of Corning Optical Communications LLC ("Corning") of Charlotte, North Carolina. 85 Fed. Reg. 16653-54 (Mar. 24, 2020). The complaint, as supplemented, alleged violations of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain high-density fiber optic equipment and components thereof by reason of infringement of certain claims of the '153, '206, '320, and '456 patents and U.S. Patent No. 10,094,996 ("the '996 patent"). *Id*.

The Commission's notice of investigation named thirteen respondents:

1. Total Cable Solutions, Inc. ("TCS") of Springboro, Ohio;

2. Legrand North America, LLC ("Legrand") of West Hartford, Connecticut;

3. AFL Telecommunications Holdings LLC ("AFL Holdings") of Duncan, South Carolina;

4. Huber+Suhner AG of Herisau, Switzerland;

5. Huber + Suhner, Inc. of Charlotte, North Carolina;

6. Shenzhen Anfkom Telecom Co., Ltd. d/b/a Anfkom Telecom ("Anfkom") of Shenzhen, China;

7. Shanghai TARLUZ Telecom Tech. Co., Ltd. d/b/a TARLUZ ("TARLUZ") of Shanghai, China;

8. Wulei Technology Co., Ltd. d/b/a Bonelinks ("Wulei Bonelinks") of Shenzhen, China;

9. FS.com Inc. ("FS") of New Castle, Delaware;

10. Leviton Manufacturing Co., Inc. ("Leviton") of Melville, New York;

11. Panduit Corporation ("Panduit") of Tinley, Illinois;

12. The LAN Wirewerks Research Laboratories Inc. d/b/a Wirewerks ("Wirewerks") of Quebec, Canada; and

13. The Siemon Company ("Siemon") of Watertown, Connecticut.

Id. at 16653-54. *Id*. The notice of investigation also named the Office of Unfair Import Investigations ("OUII") as a party. *Id.* at 16654.

Respondent Legrand was terminated from the investigation based on withdrawal of the allegations in the complaint pursuant to Commission Rule 210.21(a), 19 C.F.R. § 210.21(a). *See* Order No. 5 (Apr. 16, 2020); *unreviewed by* Comm'n Notice (May 7, 2020). The complaint and notice of investigation were amended to substitute AFL Telecommunications LLC for respondent AFL Holdings. 85 Fed. Reg. 44923 (July 24, 2020). Thereafter, Respondent AFL Telecommunications LLC was terminated from the investigation based on a settlement agreement. *See* Order No. 27 (Oct. 20, 2020), *unreviewed by* Comm'n Notice (Nov. 2, 2020).

Respondents Huber+Suhner AG, Huber + Suhner, Inc., Anfkom, TARLUZ, and Wulei Bonelinks (collectively, "Defaulting Respondents") were found in default pursuant to Commission Rule 210.16, 19 C.F.R. § 210.16. *See* Order Nos. 7 & 8 (June 9, 2020), *unreviewed by* Comm'n Notice (June 22, 2020); Order No. 13 (Aug. 21, 2020), *unreviewed by* Comm'n Notice (Sept. 15, 2020). Respondent TCS was terminated from the investigation based on a consent order. *See* Comm'n Notice (Sept. 28, 2020). Accordingly, Respondents Panduit, Leviton, Siemon, FS, and Wirewerks (collectively, "Active Respondents") remain active in the investigation.

As a result of the termination of all asserted claims of the '996 patent and certain other asserted claims, *see* Order No. 11 (July 29, 2020), *unreviewed by* Comm'n Notice (Aug. 13, 2020); Order No. 18 (Sept. 14, 2020), *unreviewed by* Comm'n Notice (Oct. 14, 2020); Order No. 19 (Oct. 2, 2020), *unreviewed by* Comm'n Notice (Oct. 27, 2020), the following table identifies the claims asserted against each Active and Defaulting Respondent and for satisfying the domestic industry requirement.

Table 1. Asserted Claims

Active Respondents	'320	'456	'153	'206
Panduit	1*, 3	11*, 12, 14-16, 19, 21, 27*, 28	9, 16, 23*, 26	22, 23
Leviton	1*, 3	11*, 14-16, 19, 27*		
Siemon	1*, 3	11*, 12, 14-16, 19, 21, 27*, 28	9, 23*	22
FS	1*, 3	11*, 12, 14-16, 19, 21	9, 16, 23*, 26	22, 23
Wirewerks				22, 23

Defaulting Respondents	'320	'456	'153	'206
Anfkom	1*, 3	11*, 12, 14-16, 19, 21	9, 16, 23*, 26	22, 23
Huber+Suhner AG and Huber + Suhner, Inc.	1*, 3	11*, 14-16, 19, 21, 27*	9, 16, 23*, 26	
TARLUZ	1*, 3	11*, 12, 14-16, 19, 21		22, 23
Wulei Bonelinks	1*, 3	11*, 12, 14-16, 19, 21		22, 23
Complainant	**'320**	**'456**	**'153**	**'206**
Corning	1*, 3	11*, 12, 14-16, 19, 21, 27*, 28	9, 16, 23*, 26	22, 23

* denotes an independent claim

A prehearing conference and evidentiary hearing were held in this investigation from October 21-26, 2020.

On March 23, 2021, the ALJ issued a final ID finding that certain accused products infringed the asserted claims and those claims had not been shown to be invalid. The ID also found that the economic prong of the domestic industry requirement was satisfied with respect to all the asserted patents under section 337(a)(3)(B) and (C). Accordingly, the ID found a violation of section 337 with respect to claims 1 and 3 of the '320 patent; claims 11, 12, 14-16, 19, 21, 27, and 28 of the '456 patent; claims 9, 16, 23, and 26 of the '153 patent; and claims 22 and 23 of the '206 patent.

On April 5, 2021, OUII and Respondent Leviton each filed a petition for review of the ID.[1] That same day, Respondents FS, Panduit, Wirewerks, and Siemon (collectively, "Joint

[1] *See* Office of Unfair Import Investigations' Petition for Review (Apr. 5, 2021) ("OUII Pet."); Respondent Leviton's Petition for Review of Initial Determination (Apr. 5, 2021) ("Leviton Pet.").

Respondents") also filed a joint petition for review.[2] Complainant Corning did not file a petition for review. On April 13, 2021, OUII, Leviton, and Corning each filed a response to the petitions.[3] On April 22, 2021, Leviton and Corning each filed comments regarding the public interest pursuant to Rule 210.50(a)(4).[4]

On May 24, 2021, the Commission determined to review the ID in part. Notice of Review at 3-6, *published at* 86 Fed. Reg. 28890-93 (May 28, 2021). Specifically, the Commission determined to review: (1) the ID's finding that the importation requirement of section 337 is met with respect to the accused products of Respondents Leviton, Panduit, and Siemon; (2) the ID's interpretation of the "width of the front side of [the] fiber optic module" limitation in the asserted claims of the '456 patent, and the associated infringement findings; (3) the ID's construction of "a front opening" in the asserted claims of the '206 patent, and the associated infringement findings; (4) the ID's finding that Leviton directly infringes the asserted claims of the '320 and '456 patents; (5) the ID's findings on indirect infringement of the asserted claims of the '320, '456, and/or '153 patents by Respondents Leviton, Panduit, FS, and Siemon; and (6) the ID's finding that Corning has satisfied the economic prong of the domestic industry requirement under section 337(a)(3)(B) and (C). The Commission did not review any other issues, including the ID's determination that the Active Respondents failed to show the asserted

[2] *See* Respondent FS.com Inc.'s, Panduit Corp.'s, The LAN Wirewerks Research Laboratories, Inc. d/b/a Wirewerks', and The Siemon Company's Joint Petition for Commission Review (Apr. 5, 2021) ("Joint Pet.").

[3] *See* Office of Unfair Import Investigations' Combined Response to Respondents' Petitions for Review (Apr. 13, 2021) ("OUII Resp."); Leviton's Response to Petitions for Review (Apr. 13, 2021) ("Leviton Resp."); Complainant's Response to Petitions for Review of the Initial Determination (Apr. 13, 2021) ("Compl. Resp.").

[4] *See* Leviton Manufacturing Co., Inc.'s Public Interest Statement (Apr. 22, 2021) ("Leviton Stmt"); Complainant's Public Interest Statement (Apr. 22, 2021) ("Compl. Stmt").

claims were invalid. In connection with its review, the Commission requested that the parties brief certain issues under review and requested the parties, interested government agencies, and other interested persons to submit briefing on the issues of remedy, the public interest, and bonding. *Id*.

On June 7, 2021, the parties filed initial submissions in response to the Notice of Review.[5] On June 14, 2021, the parties filed replies to each other's submissions.[6] Defaulting Respondents, Huber+Suhner AG and Huber + Suhner, Inc., filed a comment in response to the Commission's Notice of Request for Submissions on the Public Interest.[7] 86 Fed. Reg. 22067-68 (Apr. 26, 2021).

[5] *See* Complainant's Initial Submission in Response to Commission Determination to Review in Part a Final Initial Determination Finding a Violation of Section 337 and the Request for Written Submissions on the Issues Under Review and on Remedy, the Public Interest, and Bonding (June 7, 2021) ("Compl. Sub."); Respondent Leviton Manufacturing Co. Inc.'s Brief to the Commission on Issues Under Review, Remedy, and Bonding (June 7, 2021) ("Leviton Sub."); Respondent FS.com Inc.'s, Panduit Corp.'s, The Siemon Company's, and The LAN Wirewerks Research Laboratories, Inc. d/b/a Wirewerks' Joint Responses to Commission Questions (June 7, 2021) ("Joint Sub."); Brief of the Office of Unfair Import Investigations on the Issues Under Review and on Remedy, the Public Interest, and Bonding (June 7, 2021) ("OUII Sub.").

[6] *See* Complainant's Reply Submission in Response to Commission Determination to Review in Part a Final Initial Determination Finding a Violation of Section 337 and the Request for Written Submissions on the Issues Under Review and on Remedy, the Public Interest, and Bonding (June 14, 2021) ("Compl. Reply"); Respondent Leviton Manufacturing Co. Inc.'s Reply Brief to the Commission on Issues Under Review, Remedy, and Bonding (June 14, 2021) ("Leviton Reply"); Respondent FS.com Inc.'s, Panduit Corp.'s, The Siemon Company's, and The LAN Wirewerks Research Laboratories, Inc. d/b/a Wirewerks' Reply to Complainant's and Staff's Responses to Commission Notice (June 14, 2021) ("Joint Reply"); Reply Brief of the Office of Unfair Import Investigations on the Issues Under Review and on Remedy, the Public Interest, and Bonding (June 14, 2021) ("OUII Reply").

[7] *See* Submission on the Issue of the Public Interest, EDIS DOC ID 744156 (June 7, 2021) ("H+S Stmt").

B. The Asserted Patents

The ’320, ’456, ’153, and ’206 patents are related. The ’320 and ’456 patents share a specification, and the ’153 patent is in the same family as the ’320 and ’456 patents. The ’206 patent is from a different family but shares the same 25 figures with the ’320 and ’456 patents.

The technology at issue in this investigation is high-density fiber optic equipment and components thereof, of the kind commonly used in data centers. A data center is a facility that houses communication equipment. CX-2041 (J. Technology Stip.) at 2. Data centers typically contain multiple racks for mounting electronic equipment, which is attached to the racks using mounting holes on the sides of each rack. *Id*. at 3. The racks are typically either 19 or 23 inches wide. *Id*. A “rack unit” is a measurement of vertical space within a rack. A standard rack unit is 1.75 inches tall. *Id*. at 4. One 1.75-inch rack unit is referred to as a “U space,” which is abbreviated as “1U” or “1RU.” *Id.* at 4-5; Blumenthal Tr. 671:5-13. Two such spaces, totaling 3.5 inches in height, are known as “2U.” Four such spaces, totaling seven inches in height, are known as “4U.” The purpose of the racks in fiber optic data centers is to house chassis (also referred to as “enclosures”) that can be configured to connect fiber optic cables. These chassis may contain trays that carry subenclosures such as “modules,” “cassettes,” “adapter plates,” and “patch panels.” CX-2041 at 6.

Figure 7 of the ’320 patent (reproduced below) illustrates a front perspective view of fiber optic equipment trays supporting fiber optic modules with one fiber optic equipment tray extended out from the chassis. JX-4 (’320 patent) at 3:16-18.

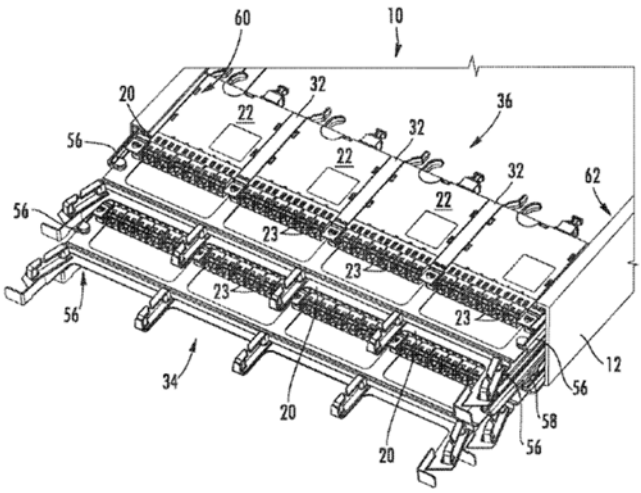

FIG. 7

JX-4 ('320 patent), Fig. 7

As shown in Figure 7, "the fiber optic equipment **10** includes a plurality of extendable fiber optic equipment trays **20** that each carries one or more fiber optic modules **22**." *Id.* at 5:9-12. "The chassis **12** and fiber optic equipment trays **20** support fiber optic modules **22** that support high-density fiber optic modules and a fiber optic connection density and bandwidth connections in a given space, including in a 1-U space." *Id.* at 5:12-16. The fiber optic equipment in this embodiment can support a high fiber optic connection density, as described below:

> The fiber optic equipment trays **20** in this embodiment support up to four (4) of the fiber optic modules **22** in approximately the width of a 1-U space, and three (3) fiber optic equipment trays **20** in the height of a 1-U space for a total of twelve (12) fiber optic modules **22** in a 1-U space. Thus, for example, if six (6) duplex fiber optic components were disposed in each of the twelve (12) fiber optic modules **22** installed in fiber optic equipment trays **20** of the chassis **12** as illustrated in FIG. 1, a total of one hundred forty-four (144) fiber optic connections, or seventy-two (72) duplex channels (i.e., transmit and receive channels), would be supported by the chassis **12** in a 1-U space. If five (5) duplex fiber optic adapters are disposed in each of the twelve (12) fiber optic modules **22** installed in fiber optic equipment trays **20** of the chassis **12**, a total of one hundred twenty (120) fiber optic connections, or sixty (60) duplex channels, would be supported by

> the chassis **12** in a 1-U space. The chassis **12** also supports at least ninety-eight (98) fiber optic components in a 1-U space wherein at least one of the fiber optic components is a simplex or duplex fiber optic component.

Id. at 5:33-52.

Figure 10A below illustrates an exemplary fiber optic module **22** that can be inserted in the fiber optic equipment trays **20** to provide fiber optic connections in the chassis **12**. *Id.* at 8:52-56. Fiber optic components **23** can be disposed through the front side **96** of the main body **90** and are connected to a fiber optic component **100** disposed through the rear side **98** of the main body **90**. *Id.* at 8:61-9:10. In one embodiment, the fiber optic components **23** on the front side **96** are duplex Lucent Connector (LC) fiber topic adapters and the fiber optic component **100** on the rear side **98** is a multi-fiber push-on/pull (MPO) fiber optic adapter. *See id.*; CX-0001C (Prucnal WS) Q/A 29-31, 34-35.

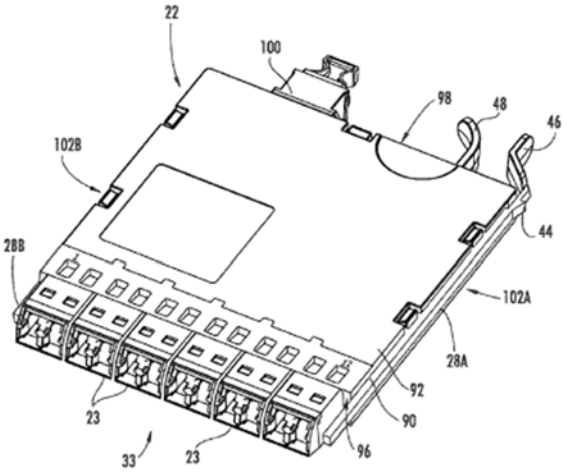

FIG. 10A

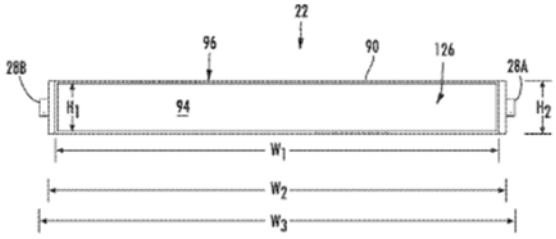

FIG. 13

Figure 13 above "illustrates a front view of the fiber optic module **22** without loaded fiber optic components **23** in the front side **96** to further illustrate the form factor of the fiber optic module **22**." JX-4 ('320 patent) at 9:64-67. "[T]he front opening **126** is disposed through the front side **96** of the main body **90** to receive the fiber optic components **23**." *Id.* at 9:67-10:2. In

one embodiment, "the width W_1 of the front opening **126** is design[ed] to be at least eighty-five percent (85%) of the width W_2 of the front side **96**." *Id.* at 10:10-13. "The greater the percentage of the width W_1 to width W_2, the larger the area provided in the front opening **126** to receive fiber optic components **23** without increasing width W_2." *Id.* at 10:13-16. Width W_3 is "the overall width of the fiber optic module **22**," and "may be 86.6 mm or 3.5 inches in this embodiment." *Id.* at 10:16-18.

The asserted claims of the '320, '456, and '153 patents ("Apparatus Claims") are directed to fiber optic apparatuses that include at least a chassis and one or more fiber optic modules, whereas the asserted claims of the '206 patents ("Module Claims") are directed to fiber optic modules only. *Compare, e.g.*, JX-4 ('320 patent) at 19:52-59; JX-10 ('456 patent) at 21:43-22:9; JX-7 ('153 patent) at 19:8-20:10 *with* JX-1 ('206 patent) at 20:48-65, 21:27-31. Claims 1 and 3 of the '320 patent and claims 11, 19 and 27 of the '456 patent are directed to fiber optic apparatuses that achieve a certain number of fiber optic connections per U space. *See, e.g.*, JX-4 ('320 patent) at 19:52-59; JX-10 ('456 patent) at 21:43-22:9; CX-0001C (Prucnal WS) Q/A 570. Claims 21 and 28 of the '456 patent and the asserted claims of the '153 patent read on features that improve accessibility, such as sliding trays holding modules and features that guide tray and module movement. *See, e.g.*, JX-10 ('456 patent) at 22:63-23:3, 24:39-43; JX-7 ('153 patent) at 19:8-20:10; CX-0001C (Prucnal WS) Q/A 571. Claims 11 and 27 of the '456 patent and the asserted claims of the '206 patent read on features of modules and features guiding and allowing their installation and movement, which help to protect fibers from damage or excessive bending. *See, e.g.*, JX-10 ('456 patent) at 24:3-38; JX-1 ('206 patent) at 20:48-65, 21:27-31; CX-0001C (Prucnal WS) Q/A 572.

C. The Accused Products

The accused products consist of chassis (or enclosures), modules (or cassettes), and combinations thereof. ID at 10. There are three categories of accused products: Base-8, Base-12, and Base-24, which are defined by the number of fiber connections available per module. A Base-8 module supports eight fiber connections, and a Base-8 chassis supports eighteen Base-8 modules per 1U space. CX-0001C (Prucnal WS) Q/A 63. A Base-12 module supports twelve fiber connections, and a Base-12 chassis supports twelve Base-12 modules per 1U space. *Id*. A Base-24 module supports twenty-four fiber connections, and a Base-24 chassis supports six Base-24 modules per 1U space. *Id*. In each case, there are a total of 144 connections available in a 1U space; the difference in the three categories is in the number of modules needed to fill that space. Within each category, there are three chassis sizes: 1U, 2U, and 4U, which refer to the chassis height. *Id*. Apart from the total height, these types are materially the same for each Respondent. *Id*. The accused modules provide LC fiber optic connections on the front and at least one MPO or MTP (a proprietary version of an MPO) connection on the rear. *Id.* Q/A 27-29, 33.

The following table describes the accused products allegedly imported and/or sold in the United States by each Active Respondent:

Table 2. Summary of Accused Products

Respondent	Brand	Chassis			Module		
		Base-8	Base-12	Base-24	Base-8	Base-12	Base-24
FS	FHX	1U	1U		X	X	
Leviton	OPT-X		1U/2U/4U			X	X
Panduit	HD FLEX	1U/2U/4U	1U/2U/4U	1U/2U/4U	X	X	X
Siemon	LightStack	1U/2U/4U	1U/2U/4U		X	X	
Wirewerks	NextSTEP					X	

See ID at 12-14.

FS' Accused Products are marketed under the name FHX Series and FHXFCP/ FHX-C Series and include both chassis and modules. CX-0001C at Q/A 117.

Leviton's Accused Products are marketed under the name OPT-X UHDX Enclosures (chassis) and HDX Enterprise Cassettes (modules). *Id.* at Q/A 98.

Panduit's Accused Products are marketed as HD FLEX Fiber Enclosures and HD Flex Fiber Cassettes. *Id.* at Q/A 85. The parties agree that Panduit's FHCZA-12-10U, FH3CZA-08H-10B, and FHCZO-23-10BN cassettes are representative Base-12, Base-8, and Base-24 modules. RX-0006C (Min WS) Q/A 36; RX-1672C (Kuffel WS) Q/A 20-21.

Siemon's Accused Products are marketed under the name LightStack Ultra High-Density Fiber Plug and Play system and include LightStack and LightStack 8 Ultra High Density Fiber Enclosures (chassis) and LightStack and LightStack8 Ultra High Density Plug & Play Modules. CX-0001C at Q/A 106. Siemon's accused chassis underwent a relatively recent design change. *Id.* Effective August 26, 2019, Siemon modified its Siemon Base-12 and Base-8 Chassis to remove the front module latches that enabled Siemon Base-12 and Base-8 Modules, respectively, to be removed from the front of the chassis. *Id.* Siemon did not change any of the model numbers of its products following this change. *Id.* As a result of disabling the functionality of removing modules from the front of the chassis, there is no dispute that the post-August 2019 versions do not infringe the asserted claims that require front removability – namely claims 9 and 23 of the '153 patent. *Id.* at Q/A 107.

Wirewerks' Accused Products are modules marketed under the name NextSTEP. *Id.* at Q/A 126. In addition to Wirewerks' accused NextSTEP module, Wirewerks seeks adjudication of an additional Wirewerks product identified as the "Wirewerks First Alternative Design." ID at 14 (citing Order No. 23 at 5 (Oct. 14, 2020); RPX-0078C (First Alternative Design module)).

The Wirewerks First Alternative Design includes a new adapter, which is used in the same housing as the accused NextSTEP module. *Id.* (citing RX-0006C (Min RWS) Q/A 227-28). The adapter includes additional material on the front side that, according to Wirewerks, increases the "connection density" of the total product when using the method for measuring density that was used in the complaint. *Id.*; RX-1673C (Tabet WS) Q/A 41-53.

D. The Domestic Industry Products

For purposes of domestic industry, Corning relies on its "EDGE" system consisting of equipment for providing high-density connections in data centers. *See* ID at 14 (citing CX-0002C (Ralph WS) Q/A 23). As with the accused products, Corning submits that the 1U versions of the chassis are representative of the other available heights. Corning asserts that the following representative products, and the groups of Corning products that they represent, practice at least one claim of an asserted patent:

Table 3. Summary of Domestic Industry Products

Asserted Patents	Representative Product	Model Nos.
'320 Patent '153 Patent '456 Patent (claims 11-12, 14-16, 19, 21)	Representative EDGE Base-12 combination (EDGE Base-12 chassis with EDGE Base-12 modules)	Chassis: EDGE-01U-SP Module: ECM-UM12-05-93T
	Representative EDGE Base-8 combination (EDGE Base-8 chassis with EDGE Base-8 modules)	Chassis: EDGE8-01U-SP Module: ECM8-UM08-05-E6Q-ULL
'456 Patent (claims 27-28)	Representative EDGE 4U Base-12 chassis with Representative EDGE Base-12 module	Chassis: LS-4U-01 Module: ECM-UM12-05-93T
	Representative EDGE 4U Base-8 chassis with Representative EDGE Base-8 module	Chassis: LS8-4U-01 Module: ECM8-UM08-05-E6Q-ULL
'206 Patent	Representative EDGE Base-12 module	Module: ECM-UM12-05-93T
	Representative EDGE Base-8 module	Module: ECM8-UM08-05-E6Q-ULL

See ID at 15-16.

III. COMMISSION REVIEW OF THE FINAL ID

When the Commission reviews an initial determination, in whole or in part, it reviews the determination *de novo*. *Certain Soft-Edged Trampolines and Components Thereof*, Inv. No. 337-TA-908, Comm'n Op. at 4 (May 1, 2015). With respect to the issues under review, "the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge." 19 C.F.R. § 210.45(c). The Commission also "may take no position on specific issues or portions of the initial determination," and "may make any finding or conclusions that in its judgment are proper based on the record in the proceeding." *Id.*

IV. ANALYSIS

The Commission has determined that Corning established a violation of section 337 with respect to claims 1 and 3 of the '320 patent; claims 11, 12, 14-16, 19, 21, 27, and 28 of the '456 patent; claims 9, 16, 23, and 26 of the '153 patent; and claims 22 and 23 of the '206 patent. Specifically, the Commission affirms with modified reasoning the ID's finding that Respondents Leviton, Panduit, and Siemon satisfy the importation requirement. Respondents FS and Wirewerks did not contest the ID's findings that the importation requirement was met as to their products. With regard to claim construction, the Commission has determined to: (1) adopt OUII's proposed construction for the "width of the front side of [the] fiber optic module" limitation in claims 12 and 28 of the '456 patent and find that the accused products meet this limitation under the proper construction; and (2) adopt Corning's proposed construction for the "front opening" limitation in the asserted claims of the '206 patent and find that the accused modules meet this limitation under the proper construction. The Commission also affirms with modifications the ID's finding that Respondents Panduit, Siemon, and FS induced infringement of the asserted claims of the '320, '456, and '153 patents, and that Respondent Leviton induced

infringement of the asserted claims of the ’320 and ’456 patents. Further, the Commission affirms the ID’s finding of no contributory infringement by Respondents Leviton, Panduit, and Siemon, and takes no position on the ID’s finding of no contributory infringement by FS. The Commission takes no position on the ID’s finding that Leviton directly infringes the asserted claims of the ’320 and ’456 patents. Finally, the Commission affirms with modifications the ID’s finding that Corning has satisfied the economic prong of the domestic industry requirement under subparagraphs (B) and (C) of section 337(a)(3). The Commission affirms and adopts the ID’s findings, conclusions, and supporting analysis that are not inconsistent with the Commission’s opinion.

A. Satisfaction of the Importation Requirement for the ’320, ’456, and ’153 Patents by Respondents Leviton, Panduit, and Siemon

The Commission affirms, with modifications, the ID’s finding that the importation requirement of section 337 is satisfied with respect to Respondents Leviton, Panduit, and Siemon. *See* ID at 51 (Leviton), 60-61 (Panduit and Siemon). Respondents FS and Wirewerks did not challenge the ID’s finding that the importation requirement was met as to them, and the Commission did not review those findings. *Id.* at 61 (FS and Wirewerks).

The importation requirement as set forth in section 337(a)(1)(B) requires that there be an “importation into the United States, the sale for importation, or the sale within the United States after importation . . . of articles[.]” 19 U.S.C. § 1337(a)(1)(B). As explained below, the record shows that Respondents Leviton, Panduit, and Siemon each import components of their accused fiber optic apparatuses into the United States. That is sufficient to establish the requirement that there be an “importation into the United States” as provided in section 337(a)(1)(B).

Leviton challenges the ID’s finding that the importation requirement is satisfied by asserting that it does not import its accused modules, its accused chassis, or the accused chassis

and modules in combination. Leviton Pet. at 8-14. It is undisputed that Leviton does not import its accused modules. *See* ID at 52 (finding that "Leviton manufactures all of its HDX Enterprise Cassettes [(modules)] in Bloomingdale, Illinois."). As shown in the chart below, Leviton manufactures its accused modules in its manufacturing plant in the United States.

RDX-0005C; *see also* RDX-0019C.0005.

As to the accused chassis,[8] Leviton submits that it has not imported a complete chassis but, rather, it imported "certain materials used to make components of the enclosures." Leviton Pet. at 14. The fact that a complete chassis is assembled in the United States is irrelevant to the question of whether the chassis subcomponents were imported into the United States. The Commission finds Leviton's admission of its importation of "materials" used to assemble the

[8] Leviton's "accused chassis" are the accused products marketed under the name OPT-X UHDX Enclosures. CX-0001C at Q/A 98. As shown in RDX-0005C, [redacted] are both components of Leviton's accused chassis. However, we note that the asserted apparatus claims do not include "trays" as part of the claimed "chassis." *See, e.g.*, JX-10 ('456 patent) at 21:50-51 (claim 11: "a plurality of fiber optic equipment trays supported by the chassis"). Rather, the claimed "chassis," trays," and "modules" are separate components of the claimed fiber optic apparatus. *See, e.g.*, *id.* at 21:43-54.

accused chassis is sufficient to establish that those materials were imported into the United States.

The record evidence shows that Leviton imported from Mexico its [redacted], as shown below, until July 31, 2020, when Leviton asserts that it began sourcing them from the United States. Accordingly, Leviton imported its [redacted] prior to, as well as after, the complaint was filed on February 21, 2020.

[redacted]

Compl. Sub. at 6. Leviton's Vice President of Engineering, Frank Kim,[9] testified that until July 31, 2020, just before the evidentiary hearing, other than the [redacted] included in the accused chassis were manufactured and assembled in Mexico.[10]

[9] Frank Kim is Vice President of Engineering in Leviton's Network Solutions division. RX-0005C at Q/A 2.

[10] Shortly before the evidentiary hearing, Mr. Kim amended his testimony to state that the [redacted] formerly imported from Mexico are now sourced in the United States. RX-0005.1C (Errata to Kim WS). Leviton stopped importing the [redacted] from Mexico on July 31, 2020 (after the complaint was filed). Kim Tr. 534. Before this change, Mr. Kim confirmed that the country of origin for the completed chassis was listed as Mexico. *Id.*; CX-0055 (packaging labels for Leviton 1U and 4U chassis); JX-0013C at 50:1-51:17.

Kim Tr. 487-89. Specifically, the [redacted] included the manufacture and assembly in Mexico of [redacted] parts for the 1U enclosure, [redacted] parts for the 2U, and [redacted] parts for the 4U enclosures in Mexico. Kim Tr. 487:23-488:4, 490:23-491:7, 494:8-25; CX-0095C (Leviton UHD-W2 1RU Sub Drawing); CX-0062C (Leviton UHD-W2 2RU Sub Assembly Drawing) at 1; CX-0063C (Leviton UHD-W2 4RU Sub Assembly Drawing) at 1. Each [redacted] included the manufacture and assembly of [redacted] parts in Mexico. Kim Tr. 503:8-17; CX-0091C at 1. The [redacted] were manufactured in the United States and shipped to Mexico to be assembled with the [redacted] that were manufactured in Mexico. CX-0095C (Leviton UHD-W2 1RU Sub Drawing) (showing the [redacted] as imported, including the tray guides (item 6)); JX-0013C (Byquist Dep. Tr.) 139:15-140:13; Kim Tr. 489:3-25; JX-0016C (Kim Dep. Tr.) 233:20-234:6. The [redacted] manufactured in Mexico were then shipped as one piece to Leviton's assembly plant in the United States for final assembly. ID at 52-53 (citing JX-0013C (Byquist Dep. Tr.) at 130-38; CX-0059C (Leviton UHD-W2 1RU sub drawing)). Other parts for the chassis such as the [redacted] were also manufactured in Mexico and imported for assembly with the [redacted] in the United States. *See* RDX-0005C; CX-0054C (Leviton BOMs) at 2, Rows 27-29 (showing that these parts are all imported); CX-0060C (Leviton 001-5R1UD-S12 Assembly Instructions) at 10-11. Indeed, the labels on Leviton's imported [redacted] say "Country of Origin: Mexico."[11] *See, e.g.*, CX-0055 (packaging labels for Leviton 1U and 4U chassis); JX-0013C (Byquist Dep. Tr.) at 50:1-51:17; Kim Tr. 534:11-20. Based on these facts, the

[11] The labels on Leviton's imported [redacted] say, "Country of Origin: Mexico," not "Made in Mexico" as stated in the ID. ID at 53.

Commission concludes that the importation requirement of section 337 has been satisfied as to Leviton.[12]

Leviton also submits that its "imported materials are not the enclosures sold to or used by customers." Leviton Sub. at 22. To the extent Leviton is arguing that the components that it is importing into the United States are not "articles" because they are [redacted] or noncommercial items, we find that that argument lacks merit. *See Certain Non-Volatile Memory Devices & Prods. Containing the Same*, Inv. No. 337-TA-1046 ("*Non-Volatile Memory Devices*"), Comm'n Op. at 41-42 (Oct. 26, 2018) ("The term 'article' on its own is sufficiently capacious to embrace pre-commercial or noncommercial items.") (citing *Certain Computers and Computer Peripheral Devices, and Components Thereof, and Products Containing Same*, Inv. No. 337-TA-841, Comm'n Op. at 37, 39 (Jan. 9, 2014)).

After finding "Leviton's accused chassis were actually 'manufactured' in Mexico, with the exception of certain minor and insignificant assembly steps performed after importation," the ID also analyzed whether "[t]here was a sufficient nexus between the imported [redacted] and the 'articles that infringe' sold after importation." ID at 53-54. Leviton argues that the importation requirement is not met because its imported [redacted] "do not meet any claim limitations, and do not have any nexus to those claims." Leviton Sub. at 26. Both the ID and

[12] The ID found the "imported components represented over [redacted] percent of the value of Leviton's chassis, in terms of materials costs." ID at 53. The ID also found "[w]hen the cost of labor in Mexico is added, the percentage rises to [redacted] percent." *Id*. Leviton contends this latter finding is a misrepresentation of the evidence and that the percentage value of Mexico materials decreases to only [redacted] when the total cost of labor is considered. Leviton Pet. at 11. The Commission notes these considerations are not relevant to the importation analysis. The Commission does not adopt the ID's finding that when "the cost of labor in Mexico is added, the percentage rises to [redacted] percent" because it was based on including in the percentage calculation a unit cost for labor in the U.S., not in Mexico. *See* OUII Resp. at 48 n.16.

Leviton conflate the importation requirement with the separate inquiry of whether the imported components constitute "articles that infringe" within the meaning of section 337(a)(1)(B).

The Commission does not adopt the ID's analysis and findings regarding a "nexus" between the imported components and the "articles that infringe." *See* ID at 54-57 (Leviton), 58-61 (Panduit and Siemon). Whether imported components meet any claim limitations or have a nexus to the asserted claims is irrelevant to the issue of whether there is an "importation into the United States" of those components. Here, the evidence shows that Leviton's importation of its [redacted] from Mexico for assembly in its accused chassis satisfies the importation requirement under section 337(a)(1)(B). The question of whether Leviton's imported components may be considered "articles that infringe" is analyzed below in connection with infringement.

Regarding importation by Panduit and Siemon, the ID found that they import their accused modules, which are components of their accused fiber optic apparatuses. Panduit and Siemon do not dispute that they import their accused modules, but they argue that the ID improperly applied Federal Circuit and Commission precedent to importation of a noninfringing component with substantial noninfringing uses with respect to an apparatus claim. *See* Joint Pet. at 20-21. Again, these arguments do not address whether there is an "importation in the United States" of accused modules. Rather, these arguments are directed to whether the accused modules that are imported in the United States constitute "articles that infringe." Those arguments are addressed in connection with infringement below.

Based on the foregoing, the Commission finds that the importation requirement of section 337(a)(1)(B) is satisfied as to Respondents Leviton, Panduit, and Siemon. In the case of Leviton,

Leviton imported chassis components, which include the [redacted]. Panduit and Siemon import their accused modules.

B. Infringement of the Asserted Apparatus Claims (the '320, '456, and '153 Patents), Articles That Infringe, and the Scope of Section 337

The ID found that Leviton and its customers directly infringe the asserted claims of the '320 and '456 patents and that, while Panduit, FS, and Siemon do not directly infringe, their customers directly infringe the asserted claims of the '320, '456, and '153 patents. The ID also found that Leviton, Panduit, FS, and Siemon actively induce their customers to infringe the asserted apparatus claims, but they do not contributorily infringe those claims. The Commission determined to review these infringement findings and the ID's construction of the "width of the front side of [the] fiber optic module" limitation in claims 12 and 28 of the '456 patent.

As discussed below, the Commission has determined to: (1) adopt OUII's proposed construction for the "width of the front side of [the] fiber optic module" limitation in claims 12 and 28 of the '456 patent and find that the accused products meet this limitation as construed;[13] (2) affirm with modifications the ID's finding of induced infringement of the asserted apparatus claims by Leviton, Panduit, Siemon, and FS; (3) affirm the ID's finding of no contributory infringement with respect to Leviton, Panduit, and Siemon; (4) take no position on the ID's finding of no contributory infringement with respect to FS; and (5) take no position on the ID's findings concerning Leviton's direct infringement.

[13] The Commission's adoption of OUII's proposal for the "width of the front side of [the] fiber optic module" limitation does not affect the ID's findings as to the technical prong of the domestic industry requirement and validity of claims 12 and 28 of the '456 patent.

1. Limitation "width of the front side of [the] fiber optic module" (claims 12 and 28 of the '456 patent)

Claims 12 and 28 of the '456 patent recite "wherein the plurality of first fiber optic adapters is disposed through at least eighty-five percent (85%) of a width of the front side of at least one fiber optic module of the plurality of fiber optic modules." JX-10 ('456 patent) at 22:10-15, 24:39-43.

Before the ALJ, the parties proposed the following constructions for the "width of the front side of [the] fiber optic module" limitation.

Complainant	Respondents	OUII
"the width of the side of the module that when inserted faces the front of the chassis, excluding any module rail guides or protrusions **that are used to insert the module into the chassis or remove it from the chassis**"	"width of the front side of the fiber optic module including areas dedicated to latches, sidewalls, flanges, and other nonadapter functions" Otherwise indefinite.	"the width of the side of the module that when inserted faces the front of the chassis, excluding any module rail guides or protrusions**, *e.g.*, the dimension identified as 'W2' in Figure 13 of the '456 and '206 Patents"**

ID at 202 (emphasis added). The ID adopted Corning's proposal, but effectively applied OUII's construction in its infringement analysis because OUII's construction is "not materially different" from Corning's. *Id.* at 203. The Commission agrees with the Joint Respondents and OUII that OUII's proposed construction actually differed from Complainant's in one material respect: OUII's construction excluded all module rail guides or protrusions, while Complainant's construction only excluded protrusions that are used to insert or remove the module from the chassis. Joint Pet. at 71; OUII Resp. at 30. For this reason, the Commission *sua sponte* reviewed the ID's construction of this limitation.

On review, the Commission finds OUII's proposal, which adds a reference to "the dimension identified as 'W2' in Figure 13 of the '456 and '206 Patents," is better supported by the intrinsic record. As an initial matter, the ID's rationale for adopting Corning's construction

applies equally to OUII's. *See* ID at 203 (comparing Corning's and OUII's proposals, which are "similar" as they exclude "any module rail guides or protrusions" with Respondents' proposal, which would not exclude rails or rail guides and would add the phrase "including areas dedicated to latches, sidewalls, flanges, and other nonadapter functions"), 203-05 (finding the specification and the function of measuring the width of the front side supports excluding rails), 205 (finding no prosecution history estoppel). Moreover, the '456 patent specification clearly defines the "width of the front side of [the] fiber optic module" to be equivalent to the width "W2," as shown in Figure 13. JX-10 ('456 patent) at 10:35-36 ("the width W2 of the front side **96** of the main body **90** of the fiber optic module **22**"). The patent specification also compares the width "W2" to other widths such as the narrower "width W1 of the front opening **126**," *id.* at 10:31, and the wider "[w]idth W3, the overall width of the fiber optic module **22**," *id.* at 10:39-40. Nowhere does the specification teach excluding only module rail guides or protrusions that are used to insert the module into, or remove it from, the chassis, as Corning's construction requires. Accordingly, the Commission adopts OUII's proposal and construes the "width of the front side of [the] fiber optic module" limitation in claims 12 and 28 of the '456 patent to mean "the width of the side of the module that when inserted faces the front of the chassis, excluding any module rail guides or protrusions, *e.g.*, the dimension identified as 'W2' in Figure 13 of the '456 and '206 Patents."

Adopting OUII's proposal does not affect the ID's infringement analysis with respect to Panduit's and FS' accused products because Panduit infringes claims 12 and 28 and FS infringes claim 12 under both Corning's and OUII's proposed constructions. ID at 216-218, 221, 226-27; *see*, *e.g.*, CDX-0001C at 168-69; CX-0001C (Prucnal WS) Q/A 303-07, 312-15. Accordingly, the Commission adopts the ID's analysis. With regard to Siemon, Corning's expert admits that

Siemon's Base-12 accused modules do not infringe claim 12 under Corning's construction. CX-0001C Q/A 310 ("These modules do not infringe under Corning's proposed construction, which excludes the protrusions on the top of the front side of the module, because according to Siemon these protrusions are not used to guide the module in and out of the chassis, as Corning's construction requires"); *see also id.* Q/A 311 (Siemon's Base-8 accused modules). The evidence shows, however, that Siemon's accused modules meet this limitation under OUII's construction. *See* CX-0001C (Prucnal WS) Q/A 310-11; JX-0010 ('456 patent) at 22:10-14. The Commission did not review the ID's finding that Siemon's accused combinations meet the other limitations of the asserted claims of the '456 patent. *See* ID at 223, 225. Thus, the Commission finds that Siemon's accused combinations infringe claims 12 and 28 of the '456 patent.

2. Induced Infringement

a. Scope of Section 337

The ID found that Leviton, Panduit, FS and Siemon's induced infringement constituted a violation of section 337. Leviton, Panduit, and Siemon argue that to the extent they are found to induce infringement under 35 U.S.C. § 271(b), their induced infringement does not constitute a section 337 violation because they do not import any "articles that infringe" within the meaning of section 337(a)(1)(B). According to their argument, the ID improperly extended *Suprema, Inc. v. Int'l Trade Comm'n*, 796 F.3d 1338 (Fed. Cir. 2015) (en banc), and Commission precedent to find a violation based on the importation of non-infringing components. *See* Leviton Pet. at 15-16; Joint Pet. at 20-21. As explained more fully below, we find that Leviton, Panduit, and Siemon's argument lacks merit.

In both *Suprema* and *Comcast Corp. v. International Trade Commission*, 951 F.3d 1301, 1308 (Fed. Cir. 2020), the Federal Circuit opined on the meaning of "articles that infringe" in the context of induced infringement under section 271(b). The Court concluded in *Suprema* that

"articles that infringe" can encompass a respondent's induced infringement in the context of selling an imported article that is used by another to directly infringe. *Suprema*, 796 F.3d at 1352-53 ("We hold that the Commission's interpretation that the phrase 'articles that infringe' covers goods that were used by an importer to directly infringe post-importation as a result of the seller's inducement is reasonable."); *id.* at 1349 ("Induced infringement is one kind of infringement, and when it is accomplished by supplying an article, the article supplied can be an 'article that infringes' if the other requirements of inducement are met."). The use of the imported scanner at issue in *Suprema* by itself did not practice the asserted method claim. *Id.* at 1341-42. But because the imported scanner was used with domestically developed software after importation to directly infringe the fingerprint image processing claim, and the requirements of induced infringement were otherwise satisfied, it was sufficient to establish that the imported scanners constituted "articles that infringe." *Id.* at 1349, 1352-53.

Similarly, the Federal Circuit in *Comcast* upheld the Commission's determination that section 337 liability applies to a respondent's induced infringement in the context of products that were imported on behalf of the respondent and supplied to its customers with instructions to use the imported products to directly infringe. *See Comcast Corp. v. Int'l Trade Comm'n*, 951 F.3d 1301, 1308 (Fed. Cir. 2020) ("It is undisputed that direct infringement of the '263 and '413 patents occurs when the imported X1 set-top boxes are fitted by or on behalf of Comcast and used with Comcast's customers' mobile devices. Reversible error has not been shown in the Commission's determinations that the X1 set-top boxes imported by and for Comcast for use by Comcast's customers are 'articles that infringe' in terms of Section 337."); *see also Certain Digital Video Receivers and Related Hardware and Software Components*, Inv. No. 337-TA-1103 ("*Digital Video Receivers II*"), Comm'n Op. at 9, 12, 18-20. The use of the imported set-

top boxes at issue in *Comcast* by themselves did not practice the system claims. But similar to *Suprema*, because the imported set-top boxes were used with domestic servers and customer's mobile devices after importation to directly infringe the claimed interactive television program guide system, and the other requirements of induced infringement were met, the Court found the imported set-top boxes are "articles that infringe." Thus, consistent with *Suprema*, *Comcast*, and subsequent Commission precedent, the ID properly found a section 337 violation based on the Respondents' induced infringement in connection with importation of the accused components, even though the imported components do not satisfy the claim limitations.[14]

In this case, Corning seeks to establish a violation of section 337 by the Active Respondents based on a theory of induced infringement of apparatus claims of the '320, '456, and/or '153 patents. Corning accuses Leviton of inducing infringement of apparatus claims in the '320 and '456 patents through importation of [redacted], assembling them with other materials to complete the accused chassis, selling the chassis to customers in the United States, and encouraging, teaching, or otherwise aiding its customers to use the accused chassis, at least some of the time, in combination with one or more domestically-produced accused modules. *See, e.g.*, ID at 51-57, 99-102. Corning accuses Respondents Panduit and Siemon of inducing infringement of claims in the '320, '456, and '153 patents through

[14] *Suprema* explained that "[b]y using the word 'infringe,' Section 337 refers to 35 U.S.C. § 271, the statutory provision defining patent infringement." 796 F.3d at 1346. The Federal Circuit confirmed that the word "infringe" does not narrow section 337's scope to any particular subsections of section 271, and explained that the term encompasses direct infringement, induced infringement, and contributory infringement. *Id.* Accordingly, the phrase "articles that infringe" under section 337(a)(1)(B)(i) is analyzed based on the particular facts of the investigation and the complainant's theory of infringement (*i.e.*, direct, induced, or contributory infringement) asserted against the respondent as the basis of the violation. Here the theory is inducement, and the Court has already clarified that under an inducement theory, the fact that the imported articles do not by themselves satisfy the claims does not preclude a finding of a violation of section 337.

importation of the accused modules, selling those modules to customers in the United States, and encouraging, teaching, or otherwise aiding its customers to use one or more accused modules, at least some of the time, in combination with domestically-produced accused chassis. *See, e.g.*, *id.* at 57-61, 97-99, 102-104.

Consistent with *Suprema*, *Comcast*, and *Digital Video Receivers II*, the Commission finds that section 337 applies to the facts pertaining to Corning's allegations of induced infringement by Leviton, Panduit, and Siemon. Specifically, the Commission finds that Leviton's imported [redacted] and Panduit's and Siemon's imported modules constitute "articles that infringe" for purposes of induced infringement when they are used by third-parties to directly infringe in the United States and the requirements of induced infringement under § 271(b) are established. In this case, the imported articles are components of the accused apparatuses similar to the set-top boxes at issue in *Comcast* and *Digital Video Receivers II*. Respondents' attempts to distinguish these authorities are without merit. Thus, the Commission affirms with the modified reasoning herein the ID's finding that Leviton's, Panduit's, and Siemon's imported articles meet the "articles that infringe" clause of section 337(a)(1)(B)(i) when these Respondents induce their customers to use the imported articles in combination with other components in the United States after importation to directly infringe the asserted apparatus claims.[15]

[15] Corning also seeks to establish a violation of section 337 by Leviton based on a theory of Leviton's own post-importation direct infringement of the asserted apparatus claims of the '320 and '456 patents. Having found Leviton liable for violating section 337 under a theory of indirect infringement, the Commission takes no position on Corning's direct infringement claim against Leviton. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984). While Chair Kearns takes no position on Corning's direct infringement claim against Leviton, he offers, below, Additional Views Regarding "Articles that Infringe".

Panduit and Siemon also argue the ID erred in addressing the "factors in *Blood Cholesterol Testing Strips*" because it purportedly did not give weight to the fact that the ID found the modules have substantial non-infringing uses and the chassis includes "features key to infringing." Joint Pet. at 21, 22. They also attempt to distinguish this case from Commission precedent by arguing that the imported articles in *Suprema* and *Blood Cholesterol Testing Strips* were "the primary article" used in the method claims or must be "quintessential articles that infringe an apparatus claim." Joint Pet. at 20, 21. We find these arguments lack merit.

As discussed above, the Federal Circuit and the Commission have recognized an "article supplied" to induce infringement can be an "article that infringes." *See Suprema*, 796 F.3d at 1349. In applying the Federal Circuit's *Suprema* and *Comcast* decisions in *Digital Video Receivers II*, for example, the Commission acknowledged that the imported set-top box was a component article that was found to have a substantial non-infringing use. Nevertheless, the Commission determined that Comcast was liable for induced infringement of the system claim at issue when its customers used the imported set-top box with Comcast's domestic servers and its customers' mobile devices to directly infringe the asserted claims. *Digital Video Receivers II*, Comm'n Op. at 12, 18-20. Panduit and Siemon also misconstrue Federal Circuit and Commission precedent, none of which sets forth a "primary" or "quintessential" legal requirement for imported articles.[16]

[16] We consider *Suprema* the more relevant precedent in relation to our analysis of induced infringement here as *Suprema* specifically addressed induced infringement whereas *Blood Cholesterol Test Strips* concerned an infringement theory based on respondent's own direct infringement. Moreover, as the Commission noted in *Blood Cholesterol Test Strips*, its analysis and findings were specific to the facts in that investigation. *Blood Cholesterol Testing Strips*, Comm'n Op. at 32.

Panduit and Siemon further submit that the claims of the '320 patent are solely directed to a "chassis" and fiber optic connection equipment within that chassis, but no module is recited in the claims. Joint Pet. at 22. On the contrary, as the specification makes clear, the "fiber optic connection equipment provided in the chassis" in claim 1 of the '320 patent is a reference to module(s) inserted in the claimed chassis.[17] *See, e.g.*, JX-4 ('320 patent) at 2:66-3:3 (describing Figure 1 as showing a rack with an installed "chassis supporting high-density fiber optic modules to provide a given fiber optic connection density and bandwidth capability"), 4:44-47 (describing the "fiber optic equipment **10** supports high-density fiber optic modules that support a high fiber optic connection density and bandwidth in a 1-U space"); CX-0001C (Prucnal WS) Q/A 144 (stating the "plain meaning of 'fiber optic connection equipment' to a person of ordinary skill in the art of the '320 patent is equipment used to make or facilitate connections between or among fiber optic cables."), 148 (testifying that fiber optic connection equipment includes Panduit's accused modules), 152 (Siemon's accused modules). The record evidence supports the ID's finding that Panduit's and Siemon's accused modules are "one of just two custom components that together make up infringing combinations of chassis and modules." ID at 60. The evidence also supports the ID's finding that the imported modules "are not modified in any way before installation" and the "only remaining activity needed to form the infringing combination is to insert the modules into the chassis." *Id.* at 60-61. There is no dispute that it is the combination of module(s) and chassis that infringes the asserted claims of the '320, '456, and '153 patents.

Finally, Panduit and Siemon argue that "the ID erred in expanding the reach of Section 337 beyond circumstances where intent can be ascertained based on the imported article." Joint Pet. at 22. They note that in "every case pre-*Suprema* the Commission only banned staple

[17] The asserted claims of the '456 and '153 patents recite "fiber optic modules."

articles for importation on an inducement theory in circumstances where inducing instructions were imported alongside the article." *Id.* at 23. Respondents' argument is unpersuasive. There is no legal requirement that "inducing instructions" be included in the same package as the component used to induce infringement. Respondents rely on Judge Dyk's dissent in *Suprema*, *id.*, but Respondents' timing argument was rejected by the Federal Circuit in *Suprema* (en banc) and *Comcast* and by the Commission in *Digital Video Receivers II*. The respondent in *Comcast* "argue[d] that *Suprema* should be limited to its facts, whereby the inducement liability must be attached to the imported article at the time of the article's importation[,]" and that "any inducing conduct of articles that infringe occurs entirely after the boxes' importation." 951 F.3d at 1308. But the Federal Circuit upheld the Commission's contrary determination "that Section 337 applies to articles that infringe after importation," including the Commission's reasoning — which the Federal Circuit quoted with approval — that "the location of Comcast's inducing conduct" is not "legally relevant." *Id.* In other words, the inducing activities can occur before, during, or after importation. Thus, *Suprema*, *Comcast*, and Commission precedent support the ID's finding that "the statutory phrase 'articles that . . . infringe' covers chassis and module combinations that, after importation of the modules, were used by Panduit's and Siemon's customers to directly infringe as a result of Panduit's and Siemon's inducement." ID at 59.

b. Leviton's Induced Infringement

On review, the Commission affirms, with the modifications set forth below, the ID's finding that Leviton induced its customers to infringe claims 1 and 3 of the '320 patent and claims 11, 14-16, 19, and 27 of the '456 patent.[18]

[18] The ID's reasoning for finding indirect infringement of the asserted claims of the '320 patent also applies to the '456 and '153 patents. *See* ID at 221, 223, 226, 227, 292, 294, 300.

As an initial matter, Leviton does not challenge the ID's finding that Leviton's accused combinations, which include both imported and domestically produced components, satisfy each element of claims 1 and 3 of the '320 patent and claims 11, 14-16, 19, and 27 of the '456 patent under the ID's claim constructions.[19] ID at 80-81 (citing CX-0001C (Prucnal WS) Q/A 134, 141, 150-51, 172-76), 221-223 (citations omitted).

Corning relies on circumstantial evidence to show that Leviton's customers used the accused chassis and accused modules together in an infringing way. The direct infringement requirement for induced infringement can be proven by circumstantial evidence. *See Vita-Mix Corp. v. Basic Holding, Inc*., 581 F.3d 1317, 1326 (Fed. Cir. 2009). The Federal Circuit has held that "where an alleged infringer designs a product for use in an infringing way and instructs users to use the product in an infringing way, there is sufficient evidence for a jury to find direct infringement." *Toshiba Corp. v. Imation Corp*., 681 F.3d 1358, 1365 (Fed. Cir. 2012). This type of circumstantial evidence is sufficient for the fact-finder to "reasonably conclude that, sometime during the relevant period[,] more likely than not one [entity] somewhere in the United States" performed each of the claim steps, even when there is no direct evidence of a specific person doing so. *C. R. Bard Inc. v. AngioDynamics, Inc.*, 979 F.3d 1372, 1379 (Fed. Cir. 2020) (quoting *Toshiba*, 681 F.3d at 1366) (ellipsis omitted, alterations added)); *see*, *e.g.*, *GlaxoSmithKline LLC v. Teva Pharms. USA, Inc.*, 976 F.3d 1347, 1352-53 (Fed. Cir. 2020); *Lucent Techs., Inc. v.*

[19] The ID found an accused chassis "fully loaded" with accused modules to infringe. The Commission notes that under the ID's claim constructions infringement requires only one ('320 patent) or two ('456 patent) modules to be inserted into the chassis. *See* ID at 99 ("[T]here is sufficient circumstantial evidence that Leviton, and at least some of its customers, have fully loaded at least one accused chassis with accused modules."), 85 ("the record demonstrates that Leviton itself has fully loaded its accused chassis with accused modules"), 86-87 (Leviton "created videos further showing that it fully loads chassis and encourages customers to do so."). Thus, while a "fully loaded" chassis infringes the asserted claims of the '320 and '456 patents, infringement does not require a chassis to be "fully loaded." *See*, *e.g.*, ID at 215.

Gateway, Inc., 580 F.3d 1301, 1318 (Fed. Cir. 2009) ("Microsoft not only designed the accused products to practice the claimed invention, but also instructed its customers to use the accused products in an infringing way.").

Here, Leviton's witness, Mr. Kim, testified that Leviton designed the accused chassis and modules to be used together. *See* JX-0016C (Kim Dep.) at 69:1-70:1; *see also id.* at 203:3-14 (When asked "[Y]our intent in designing this was for the Leviton cassettes to be used with the Leviton enclosures; correct?," Mr. Kim replied "Correct. Intent of the design is only to be used with a Leviton-designed cassette with a Leviton-designed tray.").

The evidence also shows that Leviton offered to sell the accused chassis preassembled with modules and Mr. Kim testified that customers have ordered these combinations. ID at 100 (citing Prucnal Tr. 368-69 (testifying that Leviton ordering guide CX-0150 (Leviton Fiber Systems Prod. Literature) instructs customers to purchase accused chassis preassembled with accused modules)), 81-82 (citing CX-0152 (Leviton OPT-X enclosure product specifications) ("Enclosures shall be pre-configured or ma[d]e to order with respective adapter plates and MTP cassettes, for easy ordering with one part number."); CX-0150 (Leviton *Fiber Systems* product literature) at 12-15 (Ordering Guide: "(1) Select Enclosures & Panels . . . (2) Select Enclosure Accessories . . . (3) Select Adapter Plates OR Select MTP Cassettes . . . (4) Select Splice Trays/Modules . . . (5) Select Connectors")); JX-0016C (Kim Dep.) 135 (naming customers who have purchased the combination), 140 ("[W]e have had customer order HDX enclosure with cassettes — cassettes inserted into the enclosure.").

Leviton asserts the ID erred in its assessment of Mr. Kim's testimony. *See* Leviton Pet. at 24; Leviton Reply at 26-28. According to Leviton, "Mr. Kim merely named three customers who had 'purchased the final product,' *i.e.*, the *Leviton enclosure* by itself, as described in the

presentation that he was testifying about."[20] Leviton Pet. at 24 (citing JX-0016C (Kim Dep.) 135 (discussing CX-0083C.55)). However, as indicated above, Mr. Kim also testified that customers have ordered the accused chassis with cassettes. JX-0016C (Kim Dep.) 140. Nevertheless, as Leviton points out, Mr. Kim did not specify which cassettes were inserted into the purchased enclosure and the front of the accused modules and some noninfringing adapter plates and modules look identical. *See* Leviton Reply at 28; Leviton Sub. at 18-19. Still, Mr. Kim testified extensively as to the use of the accused modules with the accused chassis. *See, e.g.*, JX-0016C (Kim Dep.) at 22-24, 47-48, 85, 100, 121, 123:3-11, 129:13-130:8 (identifying CX-0083C), 135:4-22 (discussing "page 39," which is CX-0083C.61), 177. Moreover, the documents that he testified about mention not only the accused chassis but also its use with the accused modules and non-accused adapter plates and MTP cassettes. *See* CX-0083 at 79 (showing accused combination), 123 (same). Thus, when Mr. Kim's testimony is considered along with the other evidence of record discussed below, it is sufficient circumstantial evidence that at least some customers purchased and assembled the accused combination in the United States according to Leviton's instructions.

Leviton instructed its customers how to assemble the accused chassis and modules into infringing configurations, which is further circumstantial evidence that customers have used such combinations. *See*, *e.g.*, ID at 100[21] (citing CX-0087C (Leviton Enclosure Instructions)); JX-

[20] Emphasis in original unless otherwise specified.

[21] Leviton submits that the ID made several factual errors at pages 100 and 101. First, Leviton asserts that the ID erred in citing to Dr. Min to support its finding that Leviton acted with specific intent because Dr. Min was not retained by Leviton. Leviton Pet. at 27 (citing ID at 100). Second, Leviton asserts that the ID relied on marketing documents that were not admitted into evidence. *Id*. at 27-28 (citing ID at 101 (citing RX-0198, RX-0212)). We find these to be harmless errors because the ID relied on other evidence to support its findings. *See* ID at 100

0016C (Kim Dep.) at 199-200 (confirming installation instructions are sent to customers who purchase the accused chassis); CPX-0025 (How to Install the Opt-X UHDX Enclosure Video) at 0:28-1:02; CX-0086C (Leviton email dated Mar. 20, 2020) (showing Leviton customer using infringing combination). The Supreme Court in *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.,* recognized that providing instruction on how to engage in an infringing use "show[s] an affirmative intent that the product be used to infringe." 545 U.S. 913, 936 (2005).

The record shows that [redacted]. Leviton Sub. at 37. Leviton did not provide sales data for its accused modules, but it is undisputed that Leviton's accused modules are manufactured in the United States. The importation and sale of Leviton's accused products in the United States together with Mr. Kim's testimony that Leviton designed the accused chassis and modules for use together is circumstantial evidence that Leviton induced at least some customers to purchase and assemble the accused combination in the United States according to Leviton's instructions.

Evidence that Leviton markets the accused chassis and modules for use together is also circumstantial evidence supporting Corning's claim of induced infringement. *See* ID at 95; *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1311 (Fed. Cir. 1998). Specifically, the ID found that Leviton's advertisements and product literature promoted the use of the accused combinations and touted the high-density capabilities to their customers. *See* ID at 82 (citing Prucnal Tr. 306-307 ("I've seen Leviton marketing material with preloaded chassis. And I don't know if that means offering to sell legally, but I have seen them configured

(citing Prucnal Tr. 368-69; CX-0150; CX-0087C), 101 (citing Prucnal Tr. 370; Mulhern Tr. 956).

that way.")), 85 (citing CX-0150 (Leviton Fiber Systems Prod. Literature) at 3-4 (stating Leviton's new system offers "144 LC Fibers (1 RU)," describing this as "[u]ltra high density to help meet increasing network demands in data centers," and promoting the "maximum capacity" of the Leviton accused chassis and showing that it is reached when filled with 12 Leviton accused modules); CX-1602C (Leviton HDX Cassette Presentation) at 3 (Leviton presentation made to a customer ( ) highlighting the "144 fibers per RU" for its accused combination and contrasting it with Leviton's prior 72 and 96 fiber products.)); CX-0093 (Leviton HDX MTP cassette specifications) (promoting accused modules as fitting in "UHDX 1RU, 2RU, and 4RU enclosures for 144 LC fibers per RU"); JX-0016C (Kim Dep.) at 216-23 (confirming CX-0093 is shown to customers and shows accused chassis and modules). Leviton also encouraged its salespeople to promote the use of the accused combination providing 144 fiber connections per rack unit. *See* JX-0016C (Kim Dep.) at 99:12-100:17, 146:19-147:8 (Leviton provided salespeople with comparisons of Leviton's products to other competitors' products).

Leviton argues that "the sale of a product that has substantial non-infringing uses along with instructions disclosing uses that might, but need not, infringe is insufficient as a matter of law to prove a predicate act of infringement." Leviton Sub. at 48. Leviton also argues that, "[w]here, as here, a product has substantial non-infringing uses, 'intent to induce cannot be inferred even when the defendant has actual knowledge that some users of its product may be infringing the patent.'" Leviton Pet. at 25 (citations omitted).

Leviton's accused modules all contain LC adapters on the front side and either MPO or MTP adapters on the rear side.[22] CX-0001C at Q/A 28, 33. While the ID found that Leviton's accused products have substantial noninfringing uses and, thus, Corning did not establish contributory infringement by Leviton, ID at 109, the ID also determined that the substantial noninfringing uses did not preclude a finding of induced infringement by Leviton, *id.* at 102. With one exception, the other non-accused Leviton modules do not have the LC-MPO configuration.[23] *See id.*; Compl. Sub. at 26. The ID thus concluded that "none of the [non-accused modules] are designed for the customer application that was the primary driver in developing and marketing the Leviton accused products – the need for 144 fiber optic simplex or duplex connections in a single U space[.]" ID at 102.

The ID's finding is consistent with Supreme Court and Federal Circuit precedent. The Supreme Court has explained "the Patent Act's exemption from liability for those who distribute a staple article of commerce, 35 U.S.C. § 271(c)," does not extend "to those who induce patent infringement, § 271(b)." *Grokster*, 545 U.S. at 935 n.10; *see also Toshiba.,* 681 F.3d at 1364 ("The existence of a substantial non-infringing use does not preclude a finding of inducement."). Rather, when faced with a substantial noninfringing use, the Federal Circuit has explained that a patentee must present evidence that "goes beyond a product's characteristics or the knowledge

[22] Independent claims 11 and 27 of the '456 patent require "a plurality of first fiber optic adapters disposed through the front side, at least one second fiber optic adapter disposed through the rear side." JX-0010 ('456 patent) at 21:57-59, 24:17-19. Claim 14 of the '456 patent requires the first fiber optic adapters to be "a simplex LC fiber optic adapter or a duplex LC fiber optic adapter" and the second fiber optic adapter to be a "multi-fiber push-on (MPO) fiber optic adapter." *Id.* at 22:21-27.

[23] Specifically, the ID noted that Leviton's expert "identifies only one such product with LC adapters on the front and multiple fiber MPO/MTP adapters on the rear, that product is for an unusual case of adapting a base-8 system to a base-12 enclosure." ID at 102 (citing RX-0008C (Lebby RWS) Q/A 207).

that it may be put to infringing uses, and shows statements or actions directed to promoting infringement." *Ricoh Co. v. Quanta Computer Inc*., 550 F.3d 1325, 1341 (Fed. Cir. 2008) (quoting *Grokster, Ltd*., 545 U.S. at 935 & n. 10). The Commission finds the evidence discussed herein evidences Leviton's intent to induce infringement of the asserted apparatus claims.

The record evidence supports the ID's finding that Leviton designed its accused products "for use in an infringing way" to match EDGE's 144 connections. *Toshiba*, 681 F.3d at 1365. The ID found Leviton developed its accused products to match EDGE's 144 connections using LC adapters, even though they already had existing products that provided 72 or 96 LC connections and other products that provided a much greater number of connections using non-LC adapters. ID at 100-01 & n.21 ("In developing the Leviton accused products, Mr. Kim admitted that Leviton had obtained copies of the EDGE products and analyzed them."); *see* CX-0083C (6/16/15 Leviton Email) at 135 (Business Proposal for the new Leviton enclosure to match EDGE), 137 ([redacted]); CX-2060C (Prucnal Rebuttal) at Q/A 313 (discussing CX-0083C and the development timeline for Leviton's accused products). Evidence that Leviton set out to develop its accused products to support the same high fiber density as Corning's EDGE to capture Corning's customers and that segment of the market shows "purposeful, culpable expression and conduct" with an "intent . . . to bring about infringement." *Grokster*, 545 U.S. at 937-39.

The record evidence also supports the ID's finding that the LC-MPO configuration found in all of Leviton's accused modules is the most common application in data centers. Dr. Prucnal testified regarding the importance and dominance of the LC-MPO modules. CX-2060C (Prucnal

Rebuttal WS) at Q/A 379 (noting that Respondents' engineers[24] recognized the LC interface is "the industry's most popular interface" and "all the—the fiber interface of the equipment, server and switches, they were all LC); *id.* at Q/A 374 (during the development of the EDGE products, the EDGE inventors recognized that "LC connections were becoming the most popular types of connections in data centers"); CX-0001C at Q/A 29 (testifying that LC connectors are "the most popular type of connector in [high-density] networks today, particularly in data centers"); Prucnal Tr. 430:8-12 ("[T]he Base-12 modules on front are a very important application."); CX-0006C (Staber WS) at Q/A 12. He explained that it is common for data centers to fill chassis with modules having LC and MPO connectors:

> The Accused Products are often used to provide connections between [active equipment such as small form-factor pluggable] SFP transceivers and other network components. One principal type of connection required in data centers is connection between two fiber cables with LC duplex connectors and multi-fiber cables with MPO connectors. That is because the opto-electronics used to transmit over fiber primarily rely on the LC duplex standard, while the multi-fiber trunks used in data centers primarily rely on the MPO standard. Within a data center, it is typically necessary to transmit data over distances of as much as several hundred meters for distribution to individual terminal equipment such as servers. It would be impractical and complicated to route individual optical fibers for this purpose, so the fibers are typically grouped together and bound into trunk cables, which can be routed under the sub-floor or on ceiling tracks to traverse long spans. Trunk cables typically contain bundles of fibers in either 12-fiber increments (or subunits) or 8-fiber increments (or subunits). The ends of these subunits typically contain a multi-fiber connector, such as MPO or MTP connector.

CX-0001C at Q/A 38; *see id.* at Q/A 34 (testifying the "12-fiber MPO has gained widespread use in high-density networks and data centers"); CX-0152 at 1 (stating the "application" of Leviton's accused chassis to "provide an inter-connect or cross-connect between backbone horizontal cable

[24] Dr. Prucnal referenced statements made by Wirewerks' and Siemon's engineers.

and active equipment"); CX-2060C (Prucnal Rebuttal WS) at Q/A 256 ("[A]t the time of the inventions, growing demand for bandwidth in data centers was driving the need for fiber optic connection equipment that could provide connections between duplex LC jumper cables on the front side of an equipment rack and MPO trunk cables on the rear side of an equipment rack."); CX-0006C (Staber WS) at Q/A 9, 27. The Commission finds no error in the ID's finding that the LC-MPO module usage in data centers is the customer application that was the primary driver in developing and marketing the Leviton accused products. *See* ID at 101-102.

Leviton argues that its product literature and instructions "merely describe the capabilities of the product and are insufficient as a matter of law to prove that Leviton acted with the specific intent to induce infringement." Leviton Pet. at 26-27 (citing *Vita-Mix Corp.*, 581 F.3d at 1329). While some of Leviton's instruction manuals and marketing materials show both infringing and non-infringing combinations, the Commission finds Leviton induced its customers to use the accused products in an infringing way by promoting the popular LC-MPO configuration in its marketing materials. For example, Leviton's fiber systems product literature promotes the infringing combination before all other configurations. CX-0150 at 2 (listing "Ultra high density (144F per RU)" as the first system feature of its fiber systems), 4 (highlighting infringing combination before all other configurations). Leviton's product specifications for its accused chassis and its accused modules also promote the infringing combination as the stated "application" for these products. CX-0152 at 1 (describing the "application" for Leviton's accused chassis is to "provide an inter-connect or cross-connect between backbone horizontal cable and active equipment.");[25] CX-0093 at 1 (describing

[25] Dr. Prucnal explained, "the 'backbone horizontal cable' involves the trunk or rear side, which typically uses multi-fiber connectors; the 'active equipment' is equipment 'to generate and receive the light pulses used to send and receive information over fiber optic cables.'" Compl.

Leviton's accused modules "come with 12-fiber MTP connectors on the back that break out to single or array connectors on the front," and are "[a]vailable with LC connectors.").

Leviton submits that it "offers *non-accused* cassettes, adapter plates, and splice modules that offer density *equivalent to or greater than* the [accused] modules."[26] Leviton Pet. at 27. For example, a Leviton chassis filled with 12 LC adapter plates (*see, e.g.*, RX-0225.007) or 12 LC splice modules (*see, e.g.*, RX-0225.015) can support up to 144 LC fiber connections/1RU. Leviton Sub. at 40-42. As another example, Leviton submits that its chassis filled with MTP adapter plates, splice modules, or cassettes that can also support fiber densities equivalent to or greater than the accused modules. *Id.* at 43-44. Leviton argues that both its and Corning's experts testified that a chassis filled with LC adapter plates, LC splice modules, or MTP adapter plates, splice modules, or cassettes do not infringe. *Id.* at 41-44 (citations omitted). The Commission finds these noninfringing uses that do not apply to the most common application in data centers do not absolve Leviton of liability for induced infringement. As discussed above, the evidence supports the ID's finding that it is the infringing combination of the accused Leviton chassis and modules that satisfies the need for connecting LC jumper cables with MPO trunk cables in data centers, and the ID properly concluded, based on the evidence, that Leviton encourages its users to make and use that infringing combination. *See* ID at 100-102.

Reply at 25 (quoting CX-0001C (Prucnal WS) Q/A 38). Dr. Prucnal also explained that "[a]ctive equipment 'primarily rel[ies] on the LC duplex standard.'" *Id.* (quoting CX-0001C (Prucnal WS) Q/A 38).

[26] As Corning explains, "adapter plates are designed for LC cables to pass through the rear, while splice modules are designed for cables that end in bare fibers to pass through the rear." Compl. Sub. at 22-23 (citing RX-0008C (Lebby RWS) Q/A 38, 53-54; RDX-0008C (Lebby Demonstratives) at 16-17; RPX-0009 (Leviton 5FUHD-SQL Adapter Plate)).

Moreover, there is no evidence that Leviton intends its users to engage only in noninfringing uses of its products, or that the infringing combination is an unauthorized, "off-label" use. *Cf. Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1365 (Fed. Cir. 2003) (holding that where it was shown that 97.9% of end uses of a prescription drug were noninfringing, in a summary determination context the court was "not in a position to infer or not infer intent . . . without any direct evidence"). On the contrary, Corning's witnesses testified that it was "common" for its customers to use the patented combination and "fully load EDGE chassis with EDGE modules," CX-0004C (Hicks WS) Q/A 25; that Corning "markets EDGE as enabling 144 single-fiber connections per 1U space precisely because data centers typically want to make as many connections as possible," *id*.; that Corning's "competitors do the same thing," *id*.; and that "[c]ustomers with large data centers typically have bay after bay, row after row, of fiber optic connection equipment, which is why high-density equipment is so important," CX-0006C (Staber WS) Q/A 12. Steve Polidan of former respondent AFL confirmed that, based on his 21 years of experience, he has seen chassis "completely loaded," and that he has personally seen AFL, Panduit, and Corning EDGE chassis fully loaded at customer sites.[27] Polidan Tr. 192-194.

Finally, regarding knowledge of the asserted patents, Leviton does not dispute the ID's finding that "Leviton knew of each asserted patent at least as of February 2020, when the complaint was filed." ID at 99. Leviton, however, contends that Corning failed to prove that Leviton was aware of the asserted patents before the Complaint was filed and failed to prove that

[27] The Commission gives Steve Polidan's testimony less weight because, as Leviton argues, the "front of the accused modules incorporate the very same adapters and look the *same* as the front of the non-accused LC adapter plates and non-accused LC splice modules." *See* Leviton Sub. at 18-19.

Leviton took any acts to induce infringement after the Complaint was filed. Leviton Pet. at 29. However, as the ID found, the record shows that Leviton obtained copies of the EDGE products and examined them in developing the Leviton accused products and "the EDGE products bear labels indicating patent protection and directing users to Corning's website, which contains virtual patent marking—including all four asserted patents—regarding the EDGE products." ID at 99 (citing CPX-0043); 100-01 & n.21 ("In developing the Leviton accused products, Mr. Kim admitted that Leviton had obtained copies of the EDGE products and analyzed them."); *see also* CX-0083C (6/16/15 Leviton Email) at 135 (Business Proposal for the new Leviton enclosure to match EDGE), 140 (photos of the EDGE products); CX-0081C at 8 (Leviton email dated Apr. 17, 2013) (noting the proprietary nature of Corning's products). As such, the Commission finds the ID did not err in finding that "Leviton was aware of the 'proprietary' nature of EDGE's patented features" before the filing of the complaint. ID at 100.

Based on the evidence discussed above, the Commission finds the ID reasonably concluded that Respondents' claims that "they are unaware of how their customers use their products" was "somewhat implausibl[e.]"[28] *Id.* at 96. Mr. Kim's testimony along with circumstantial evidence that Leviton designed the accused chassis to work together with the accused modules to meet the growing demand for LC-MPO connections in data centers, that Leviton markets and promotes the accused combination as a high fiber density offering, and that it instructs customers how to purchase and assemble the accused combination, all support the

[28] Leviton asserts that the "ID does not find that any customer ever used a 4RU Leviton Enclosure loaded with modules." Leviton Pet. at 25. The circumstantial evidence discussed above references not only the accused 1RU and 2RU chassis but also the 4RU chassis. *See, e.g.*, JX-0016C at 100-102, 127, 144, 175-77, 199-200; CX-0150 at 12 (showing the accused 4RU chassis can be preinstalled with 48 accused modules); CX-0087C; CX-0093.

ID's finding that Leviton induced its customers to use the accused combinations to infringe claims 1 and 3 of the '320 patent and claims 11, 14-16, 19, and 27 of the '456 patent.

c. Panduit's and Siemon's Induced Infringement

On review, the Commission affirms, with the supplemental analysis set forth below, the ID's finding that Panduit and Siemon induced their customers to infringe claims 1 and 3 of the '320 patent, claims 11-12, 14-16, 19, 21, and 27-28 of the '456 patent, and claims 9 and 23 of the '153 patent and the ID's finding that Panduit also induced its customers to infringe claims 16 and 26 of the '153 patent.

As an initial matter, Panduit and Siemon did not challenge the ID's finding of knowledge of the asserted patents. *See* Joint Pet. at 47-50. The ID found Panduit knew of each asserted patent when it was first issued. ID at 97. The ID found that Siemon admitted knowledge of the '320 patent by October 30, 2019 and modified its products in mid-2019 in view of Corning's patents covering EDGE. *Id.* at 103.

The ID found that Panduit and Siemon sell their accused products to customers in the United States. *See id.* at 97; CX-1839C; CX-1998C; CX-1835C; CX-0320C; CX-0176C; JX-0026C (Veatch Dep.) at 13-14. In particular, the evidence shows that Panduit sold 13,946 accused chassis and 121,116 accused modules between January 2018 and July 2020. CX-1839C. Siemon sold 1,215 accused chassis and 14,550 accused modules between January 2018 and March 2020. CX-1835C. Significant sales data for the accused product support an inference of direct infringement. *See, e.g.*, *Lucent Techs*., 580 F.3d at 1318; *see also Moleculon Research Corp. v. CBS, Inc*., 793 F.2d 1261, 1272 (Fed. Cir. 1986), *overruled-in-part on other grounds by Egyptian Goddess, Inc. v. Swisa, Inc.,* 543 F.3d 665 (Fed. Cir. 2008) (en banc) (affirming a district court's finding of direct infringement based on circumstantial evidence of extensive

puzzle sales, dissemination of an instruction sheet teaching the infringing method, and the availability of a solution booklet on how to solve the puzzle).

The evidence also supports the ID's finding that Panduit and Siemon instructed their customers how to assemble the accused chassis and modules into infringing configurations. *See* ID at 98 (citing CX-1623 (Panduit FLEX1U, FLEX4U Installation Instructions); CX-1705 (Panduit FLEX1U, FLEX2U, & FLEX4U Installation Instructions)); *id.* at 103 (citing Min Tr. 839-40 (testifying that respondents advertise that their accused products can be combined); CX-1791C (2/17 Siemon LightStack 4U Install Instructions)); Polidan Tr. 193-194 (Respondent AFL's witness testified that he has "seen Panduit's cassettes fully loaded" in the chassis); JX-0018C (Maynard Dep. Tr.) 213 (Siemon shows customers how to install modules in chassis).

Panduit's and Siemon's marketing and promotional materials also encouraged users to use the accused combinations to infringe. ID at 98 (citing CX-0199 (Panduit HD Flex Enclosures Spec.); JX-0029C (Wiltjer Dep. Tr.) 121:7-14; CX-0382 (Panduit HD FLEX Ordering Guide) at 3-6; CX-0146C (6/19/19 Panduit Email);[29] CX-1708 (Panduit HD Flex Fiber Enclosure Spec.); CX-0147 (Panduit HD Flex Cassettes Spec.)); 104 (citing CX-0180C (11/19 Siemon LightStack Spec.) at 1-2 (promoting accused combination and showing users how to install modules in chassis to reach 144 connections per 1U); CX-0181C (11/19 Siemon LightStack 8 Spec.) at 1-2 (same for base-8 combination); CX-0179C (Siemon Plug and Play Presentation) at 1, 3-5, and 10 (promoting accused combination); CX-0173C (Siemon 4U Presentation) (same)).

[29] Panduit did not challenge the ID's reliance on CX-0146 in its petition for review. However, in its submissions before the Commission, Panduit argues that the exhibit does not show a sale of the accused combination in the United States because the customer described in CX-0146 is located in Belgium. Joint Sub. at 6-8. This argument was not raised before the ALJ and, thus, the Commission finds it is waived.

Panduit and Siemon submit that their accused products have substantial noninfringing uses. Joint Pet. at 4-5, 21. The ID found that Panduit's and Siemon's accused chassis and modules have substantial noninfringing uses and, thus, Corning did not establish contributory infringement by Panduit and Siemon. *See* ID at 109 (finding Panduit's accused modules can be used with unaccused alternative systems such as SFQ and Opticom systems and Siemon's accused modules can be used in a floor mounted enclosure that cannot be mounted to a rack and therefore does not infringe any of the asserted apparatus claims). Corning did not petition for review of this finding and, as discussed below, the Commission adopts it. However, just as with Leviton's products, the Commission finds the substantial noninfringing uses do not preclude a finding of induced infringement by Panduit and Siemon because the evidence discussed above shows statements and actions directed to promoting infringement by their customers. *See Toshiba.,* 681 F.3d at 1364; *Ricoh Co.*, 550 F.3d at 1341.

Moreover, none of Panduit's and Siemon's non-accused products are designed for the customer application that was the primary driver in developing and marketing the accused products. Panduit's and Siemon's documents demonstrate that, like Corning, they sought to satisfy the demands of data center customers by designing their products to support the most common application in data centers using modules with LC adapters on the front and either MPO or MTP adapters on the rear. *See* ID at 96, 98-99 (citing CX-0621 (Panduit Chassis Spec.) at 3 (stating that enclosures provide a "fiber capacity" of "144" in "1 RU"); CX-1623 (Panduit FLEX1U, FLEX4U Installation Instructions) at 3 (instructing customers to "[p]opulate an entire row" before moving to the next and "[r]epeat [the] process until all desired slots are filled"; "FLEX1U can hold up to 12 cassettes"); *id*. at 4 (illustrating cable routing for a fully populated 1U); CX-1705 (Panduit FLEX1U, FLEX2U, & FLEX4U Installation Instructions) at 8-9

(similar)); CX-0145C (Panduit HD Flex Project Charter); CX-2060C (Prucnal RWS) Q/A 269-276; CX-0138C (Panduit HDFE Business Plan) at 4; CX-0164C (Siemon NPD PRS) at 3; CX-0165C (Siemon Fiber-0030 Gate 1) at 7; CX-0222C (Siemon Octopus Enclosures Stage 2 Presentation) (describing a design of the accused combination);[30] CDX-0016C.15 (citing CX-0102C (Panduit Project Charter, stating "This project is required to evaluate if Corning's new high density 4RU enclosure/system is a threat to Panduit's fiber business" and stating one deliverable is "to achieve a density of 576 fibers" or 144 fibers per 1RU); CDX-0005C.75-131 (Panduit's development timeline and assessment of EDGE products); CDX-0005C.177-194 (Siemon's development timeline and assessment of EDGE products); CX-0116C (Panduit Market Spec. Requirements) at 2 (In 2011, Panduit identified its products' "[l]ack of super high density (>48 ports/RU)" as one factor that "led customers to search for alternate suppliers . . . (read: Corning)."); Kuffel Tr. 621-22 (admitting that Panduit used 3-D printing technology to make EDGE cassette shells during its process of developing its accused chassis); Blumenthal Tr. 718:20-23 (discussing same).

In sum, the Commission affirms, with the supplemental analysis discussed above, the ID's findings that Panduit and Siemon induced their customers to infringe claims 1 and 3 of the '320 patent, claims 11-12, 14-16, 19, 21, and 27-28 of the '456 patent, and claims 9 and 23 of the '153 patent and that Panduit also induced its customers to infringe claims 16 and 26 of the '153 patent.

[30] Siemon did not challenge the ID's reliance on CX-0222 in its petition for review. However, in its submissions before the Commission, Siemon argues that the exhibit does not show sales of the accused products and provides no evidence that any customer combined the accused products in an infringing way. Joint Sub. at 12. This argument was not raised before the ALJ and, thus, the Commission finds it is waived.

d. FS' Induced Infringement

The Commission affirms the ID's finding that FS induced their customers to infringe claims 1 and 3 of the '320 patent, claims 11-12, 14-16, 19, and 21 of the '456 patent, and claims 9, 16, 23, and 26 of the '153 patent.

As an initial matter, Respondent FS did not challenge the ID's findings that FS' "customers directly infringe the asserted patents" and "FS sells the accused products to customers in the United States" in its petition. ID at 105 (citing Zhang Tr. 580, 588; CX-0428C (FS Sales and Inventory Data) (listing U.S. sales of accused products); JX-0031C (Zhang Dep. Tr.) 115-116), 97 (citing Zhang Tr. 586-587, 589-590, 592-593, 594). FS also did not challenge the ID's finding that it knew of each asserted patent at least as of February 2020, when the complaint was filed. *Id.* at 105.

Before the Commission, FS only challenges the ID's alleged reliance on "unauthenticated evidence in finding that FS had induced infringement." Joint Pet. at 50. FS submits that the ID points to no credible evidence that FS committed any inducing acts after February 2020. *Id*. at 50-51. FS asserts that the ID cited to evidence of FS' "online resources captured in July 2020," ID at 106, but that same evidence was found not authenticated in the context of contributory infringement. Joint Pet. at 50. FS misapprehends the ID in this regard. The ID did not reject all of FS' online resources captured in July 2020, but only one piece of evidence involving a YouTube video screen shot. ID at 110-11; *see* OUII Resp. at 27; Compl. Resp. at 40. The remaining evidence downloaded from FS' website in July 2020 shows that FS has continued to encourage the use of its accused products in an infringing manner even after it learned of the existence of the asserted patents in February 2020. *See* ID at 106 (citing CX-1515 (FS Ultra High Density Solution) (advertising the infringing combination with the Accused Products); CX-

1520 (FS Microsoft Webpage) at 2 (promoting use of accused combination); CX-2059 (FS FHX Ultra HD User Guide)).

The record evidence supports the ID's finding that FS induced its customers to use the accused chassis and modules in an infringing way. Specifically, the ID found that FS instructed its customers how to assemble the accused chassis and modules into infringing configurations. *Id.* at 105 (citing CX-0392C (FS FHX Ultra Fiber Enclosure Spec.)); *see also* CX-0589 (FHX Module Install Instructions) at 2; Prucnal Tr. 370 (testifying that customers learn how to assemble the chassis and modules in infringing combinations from respondents' product literature and instructions).

The ID also found that FS' marketing and promotional materials encouraged customers to use FS' accused products in infringing combinations and touted their ability to provide 144 LC connections. ID at 105-106; *see* CX-1515 (FS Ultra High Density Solution) (advertising the infringing combination of Accused Chassis and Modules on the FS.com webpage); CX-1520 (FS Microsoft Webpage) at 2 (same); CX-0391 (FS FHX Enclosure System article) (same), CX-0397 (FS Tweet) (including an image of an accused chassis filled with multiple accused modules); CX-2059 (FS FHX Ultra HD User Guide) (promoting FS' accused combinations: "This fiber enclosure can hold up to 144 fibers in 1U space. This 1U rack mount enclosure houses 3 independent sliding trays, each of which is able to hold 4 or 6 modules/cassettes that pick up the fibers and their reserves. The front panel of it contains different connectors for transmitting signals via copper. Here you can see two types of cassettes, FHX 8F MTP to LC cassette and FHX 12F MTP to LC cassette with a capacity of 8 fibers and 12 fibers respectively."); CX-0392C (FS FHX Ultra Fiber Enclosure Spec.) ("The 1U enclosure houses 3 independently sliding drawers, each drawer is able to hold MTP-12 cassettes or fiber adapter panels by

default."); CX-0419C (FS FHX Ultra Enclosure for MTP-8 Cassette Prod. Spec.) (same); CX-0420C (FS FHX-1UFCP Ultra Fiber Enclosure Prod. Spec.) (same); CX-0421C (FS FHX MTP-12 Cassettes Spec.) ("FHX Ultra Fiber Cassettes are used in conjunction with FHX Ultra Fiber Enclosures . . . ."); CX-0422C (FS FHX MPO-LC Cassettes) (same); CX-0423C (FS FHX MTP-12 Cassettes Prod. Spec.) (same); CX-0424C (FS FHX MTP-8 Cassettes Spec.) (same); CX-0425C (FS FHX MPO-8 Cassettes) (same); CX-0587 (FS.com FHX Chassis Datasheet).

In view of the record evidence discussed above, the Commission affirms the ID's finding that FS induced its customers to infringe claims 1 and 3 of the '320 patent, claims 11-12, 14-16, 19, and 21 of the '456 patent, and claims 9, 16, 23, and 26 of the '153 patent.

3. Contributory Infringement

The ID found the evidence does not establish contributory infringement by Leviton, Panduit, and Siemon because Corning failed to meet its burden to prove lack of substantial non-infringing uses. ID at 60, n.16, 109-10; *see Toshiba*, 681 F.3d at 1363. Corning did not petition the Commission to review these findings on contributory infringement and the Commission finds no clear error in those findings. With regard to Leviton, the ID found that "Leviton's accused UHDX Enclosures can be used with at least 64 varieties of other cassettes, 21 varieties of adapter plates, and 12 varieties of splice modules, none of which are accused of infringement." ID at 109 (citing RX-0005C (Kim WS) Q/A 23-27; RX-0008C (Lebby RWS) Q/A 203-10). The ID noted that Complainant's expert conceded that these uses constitute substantial non-infringing uses. *Id*. (citing Prucnal Tr. 338-339). With respect to Panduit's accused modules, the ID found they "can be used with Panduit products other than the Panduit accused chassis" and Panduit has "developed adapters to allow its accused modules to be used with unaccused alternative systems such as the SFQ and Opticom systems." *Id.* (citations omitted). As to Siemon's accused modules, the ID found "the trays in each of the Siemon accused chassis can be filled with one or

more adapter plates instead of the accused modules." *Id.* (citations omitted). Moreover, the ID stated that "Siemon's accused modules can be used in a floor mounted enclosure that cannot be mounted to a rack and therefore does not infringe." *Id.* The Commission thus affirms the ID's finding of no contributory infringement with regard to Leviton, Panduit, and Siemon.

FS did not present any evidence of substantial noninfringing uses, relying instead on its argument that "no [] predicate sales occurred with the knowledge requisite for indirect infringement." *Id.* at 110 (quoting Resps. Br. at 76-77). To rebut this argument, Corning presented screenshots downloaded from the FS.com website on July 7, 2020 and a Youtube video screen shot bearing a date of July 2, 2020. *Id.* The ID found that Corning did not meet its burden in establishing contributory infringement by FS because of Corning's failure to properly authenticate certain evidence. *Id.* at 110-11. Corning did not petition the Commission to review this finding. The Commission determines to take no position on the ID's finding of no contributory infringement by FS.

C. Infringement of the Asserted Module Claims (the '206 patent)

1. Limitation "front opening"

The ID found that (1) FS' and Wirewerks' accused modules infringe claims 22 and 23 of the '206 patent; (2) Siemon's accused modules infringe claim 22 of the '206 patent; and (3) Panduit's accused modules do not infringe claims 22 or 23 of the '206 patent.[31] *Id.* at 323. The Commission determined to review only ID's construction of "a front opening" in the asserted claims of the '206 patent, and the associated infringement findings.

[31] Corning did not petition for review, and the Commission did not review, the ID's finding that Panduit's accused modules do not have a "rail" as required by claims 22 and 23 of the '206 patent. *See* ID at 346-49.

The claim term "front opening" appears in unasserted claim 14 of the '206 patent, from which asserted claims 22 and 23 depend. Claims 14, 22 and 23 recite:

> **14**. A fiber optic module, comprising:
>
> a main body defining an internal chamber disposed between a front side and a rear side;
>
> a plurality of optical fibers disposed in the internal chamber;
>
> a front opening disposed along a longitudinal axis in the front side;
>
> a first plurality of fiber optic components optically connected to the plurality of optical fibers, the first plurality of fiber optic components disposed through the front opening providing a fiber optic connection density of at least one fiber optic connection per 7.0 millimeters (mm) of width of the front opening; and
>
> at least one second fiber optic component optically connected to at least one of the plurality of optical fibers to provide optical connection between the at least one second fiber optic component and at least one of the first plurality of fiber optic components.
>
> **22**. The fiber optic module of claim **14**, further comprising at least one rail disposed on the main body.
>
> **23**. The fiber optic module of claim **22**, further comprising at least one latch attached to the at least one rail and configured to engage the at least one rail.

JX-1 ('206 patent) at 20:48-65, 21:27-31.

Below is a chart showing the parties' proposed claim constructions before the Commission.

Complainant	Respondents	OUII
"an opening located in the front side of a fiber optic module, *e.g.*, the opening depicted in Figure 13 of the '206 Patent as having dimensions H1 and W1"	"a single opening located in the front side of a fiber optic module"	"a single opening located in the front side of a fiber optic module, *e.g.*, the opening depicted in Figure 13 of the '206 patent as having dimensions H1 and W1, which limits claim 14 to embodiments with one, and only one, contiguous opening, uninterrupted by spacers or other structures.

While the ID states that it adopted OUII's proposed construction, its interpretation of the construction to encompass modules with multiple front openings separated by spacers or other structures is inconsistent with OUII's interpretation and effectively adopts Corning's interpretation.

As explained below, the Commission adopts Corning's proposed construction of "front opening." It is undisputed that the claimed "front opening" is an opening "located in the front side of a fiber optic module." In the embodiment depicted in Figures 11 & 13 of the '206 patent (reproduced below), this front opening has dimensions H1 and W1. The specification explains that "in this embodiment, the width W1 of the front opening **126** is design[ed] to be at least eighty-five percent (85%) of the width W2 of the front side **96** of the main body **90** of the fiber optic module **22**." JX-1 at 10:10-13; *see also* CDX-0005C.22.

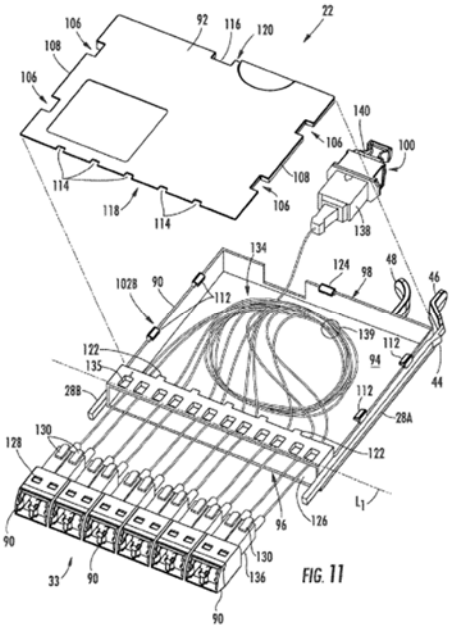

FIG. 11

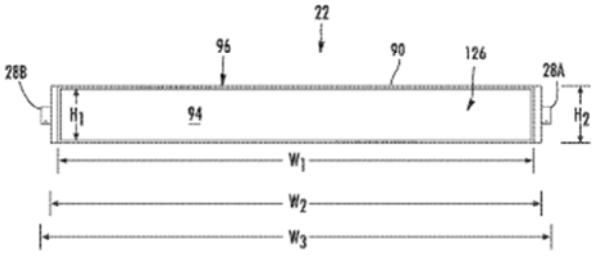

FIG. 13

Whereas Figures 11 & 13 of the '206 patent depict an embodiment of a module **22** with one front opening **126**, Figures 17 & 18 (reproduced below) depict an embodiment of a module **160** with two "[f]ront openings **178**A, **178**B disposed on each side of the channel **162**." JX-1 at 14:38-39.

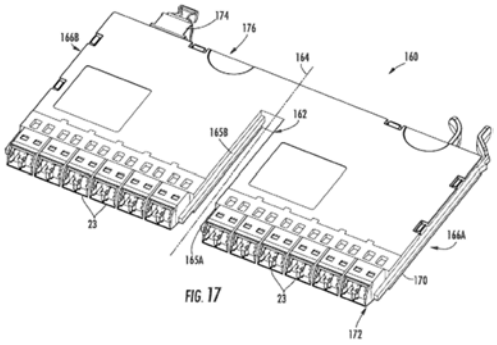

FIG. 17

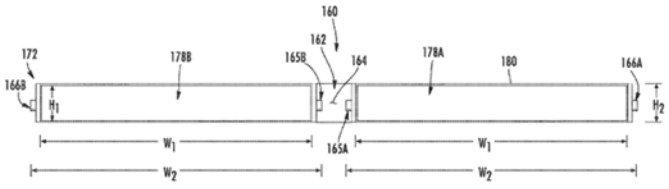

FIG. 18

In yet another embodiment, Figures 23 & 34 (reproduced below) depict an embodiment of a module **220** with one front opening **238** that is "about twice the width" of the front opening **126** illustrated in Figure 13. *Id.* at 17:26-27.

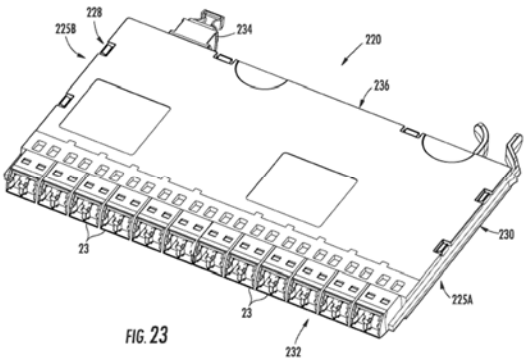

FIG. 23

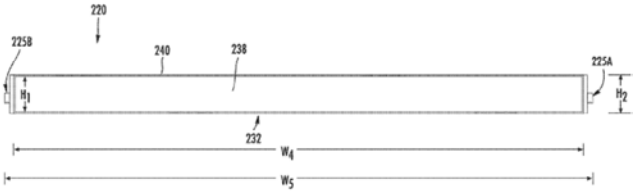

FIG. 24

Thus, the specification teaches that a module can be designed with one or more front openings to support a high connection density capacity.

The specification supports the ID's finding that the claimed "front opening" may contain dividers or spacers and does not have to be "contiguous," as OUII and the Joint Respondents argue. ID at 334, 340-42. The modules in Figures 10A, 14, and 15 of the '206 patent, shown below, all have the same form factor as the module in Figure 13, meaning they have the same dimensions as front opening **126**. *Id.* at 332, 334; JX-1 at 8:20-21, 9:64-10:2, 11:54-59, 12:54-58.

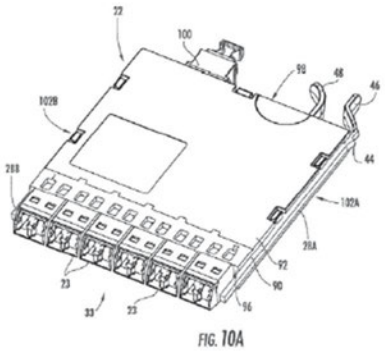

FIG. 10A

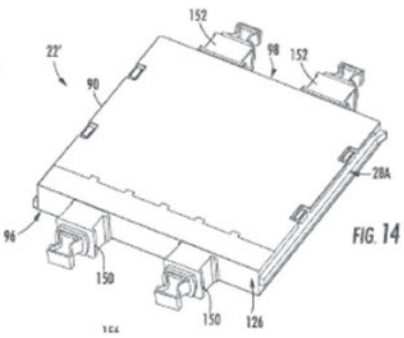

FIG. 14

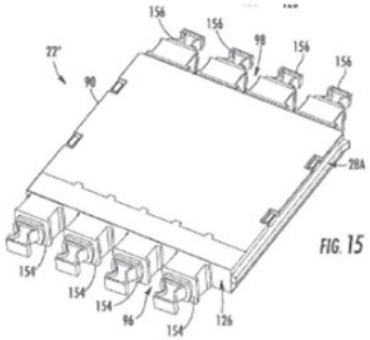

FIG. 15

The ID found the modules in Figures 14 and 15 "contain multiple spaces and [] include the structural material separating the adapters as part of the front opening **126**." ID at 331; *see* CDX-0005C.23. "The main difference between the embodiments," the ID explained, "is that in [Figures 14 and 15], the spacing between the two or four MPO adapters can be easily defined

whereas the spacing between the six LC adapters shown in [FIG. 10A] cannot easily be seen. . . . This does not mean that there are no spaces (or dividers) between the six LC adapters." ID at 334. The ID's finding is supported by the opinion of Corning's expert, Dr. Prucnal, who opined that "[f]rom the drawing in Figure 15, a person of ordinary skill would understand . . . that the spaces between the adapters are filled with material that is necessary to support them and to maintain the structural integrity of the module." CX-2060C (Prucnal RWS) Q/A 113. Thus, the Commission finds the ID's conclusion that the claimed "front opening" may include dividers or spacers between the fiber optic components is supported by the record evidence. The Joint Respondents rely on only attorney argument to criticize the ID's findings regarding Figure 15. Joint Pet. at 25. OUII's petition for review does not address the ID's findings regarding Figures 14 and 15. Accordingly, the Commission finds Corning's proposal is supported by the record evidence.

OUII and the Joint Respondents contend the difference between claim 14, which recites "a front opening," and claim 63, which recites "front openings," necessitates a departure from the general rule that the words "a" or "an" in a patent claim carry the meaning of one or more. OUII Pet. at 13; Joint Pet. at 25. The ID adopted their position and, therefore, construed "a front opening" to require a "single opening." However, the Commission finds that claim 63 does not support a narrower reading of claim 14 that excludes modules with multiple openings created by dividers or spacers. As Corning argued in its post-hearing brief, claim 63 is directed to modules with multiple openings, but that does not show that claim 14 must be restricted to modules with only a single opening. Compl. PHB at 51-52 n.11. "It is equally plausible that the drafters of the patent used 'an . . . opening' when they meant to claim either single or plural openings ([as shown in the embodiments of Figures 18 & 24 and] as consistent with *01 Communique* and

Baldwin Graphic) and 'openings' when they meant to narrow a claim to plural openings only." *Id.* In addition, as Corning notes, "claim 63 does not depend from claim 14, so any inference to be drawn from contrasting them is weak." *Id.*

Our adoption of Corning's proposal does not affect the ID's conclusions with regard to infringement, validity, and technical prong of the domestic industry since the ID effectively applied Corning's construction. Under Corning's construction, the front opening of each accused module is the total area in the front of the module that provides for the insertion of adapters. ID at 339-40 (citing CX-0001C (Prucnal WS) Q/A 522-23; CDX-0001C (Prucnal Direct) at 609). Further, that space supports a plurality of fiber optic components. *Id.* at 340. Panduit's Base-12 Module, for example, has six spaces for six duplex LC adapters, and each duplex LC adapter is comprised of two simplex LC adapters. *Id.* (citing CX-0001C (Prucnal WS) Q/A 532; CDX-0001C (Prucnal Direct) at 613-14). The same is true of Panduit's Base-8 modules, which have three spaces for four duplex LC adapters. *Id.* (citing CX-0001C (Prucnal WS) Q/A 307, 533; CDX-0001C (Prucnal Direct) at 615). The other Accused Base-12 and Base-8 Modules have similar arrangements. *Id.* (citing CX-0001C (Prucnal WS) Q/A 310-11, 314-15, 533-38; CDX-0001C (Prucnal Direct) at 618, 621).

In view of the evidence above, the Commission finds the accused modules each have an infringing "front opening" as required by claim 14 of the '206 patent. Because the accused modules literally infringe the "front opening" limitation, the Commission need not reach the ID's alternate finding of infringement under the doctrine of equivalents, and does not adopt that finding. ID at 342-45. The Commission thus affirms, with the modified reasoning set forth

above, the ID's finding that FS' and Wirewerks' accused modules[32] infringe claims 22 and 23 of the '206 patent, and Siemon's accused modules infringe claim 22 of the '206 patent.

D. Economic Prong of the Domestic Industry Requirement

When a section 337 investigation is based on allegations of patent infringement, the complainant must show that "an industry in the United States, relating to the articles protected by the patent . . . exists or is in the process of being established." 19 U.S.C. § 1337(a)(2). "[A]n industry is considered to exist if there is in the United States, with respect to the articles protected by the patent . . . concerned –

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing." 19 U.S.C. § 1337(a)(3).

On review, the Commission affirms, with the supplemental analysis set forth below, the ID's finding that Corning has shown the existence of a domestic industry under section 337(a)(3)(B) and (C) for each of the asserted patents.[33, 34]

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[32] Wirewerks asked for an additional new design to be adjudicated in this investigation, the Wirewerks First Alternative Design. ID at 357 (citing Order No. 23 at 5 (Oct. 14, 2020)). For purposes of its infringement analysis, the ID found there is no difference between the designs of Wirewerks' accused modules and the First Alternative Design. *Id.* at 356-58. Accordingly, the Commission adopts the ID's finding that the First Alternative Design infringes claims 22 and 23 of the '206 patent for the same reasons as Wirewerks' accused modules. *Id.* at 360.

[33] Chair Kearns finds the existence of a domestic industry under section 337(a)(3)(C) and takes no position with respect to subparagraph (B).

[34] Corning's asserted domestic industry investments comprise EDGE-related expenditures directed to labor and capital employed in research and development. More specifically, the investments are described as expenditures in direct labor and capital, field engineering services provided by full-time Corning employees, and field engineer services and technical support provided by contractors, or Pioneer. *See* ID at 396-401.

1. Section 337(a)(3)(B): Significant Employment of Labor or Capital[35]

The evidence shows that Corning's EDGE-related investments directed to labor and capital employed in research and development ("R&D") varied from year to year starting in 2007, at one point [redacted] with next-generation research in 2019 and continuing into 2020. ID at 389-90 (citations omitted). Despite [redacted], the ID's determination to include the entire date range (2008 to February 21, 2020) for Corning's investments in its EDGE solutions in the domestic industry analysis is consistent with Commission precedent as cited in the ID and elaborated below. *Id.* at 390-91 (citing, *e.g.*, *Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Products Containing the Same, and Components Thereof*, Inv. No. 337-TA-921, Comm'n Op. at 54-57 (Jan. 6. 2016) (crediting past investments in research and development for discontinued products because of ongoing investments in warranty, technical support, and software updates); *Certain Electronic Digital Media Devices and*

[35] Chair Kearns joins the discussion and conclusions in this section with respect to (a) including Corning's 2019-2020 R&D investments, (b) the amount of EDGE Project Labor and Direct Expenses, and (c) use of a sales-based allocation to eliminate non-DI related investments, as these are relevant to his analysis and finding under section 337(a)(3)(C). He does not join the remainder of this section. In particular, he does not join the discussion of expenses for Field Engineering Services and Pioneer Technical Support, at least some of which may involve activities akin to those of a mere importer, and thus may not in his view qualify for inclusion in the domestic industry.

Chair Kearns also notes that where a complainant is relying on a comparison of its domestic and foreign expenditures to show significance under section 337(a)(3)(A) or (B), it remains an open question for him whether, in general, a proper assessment of the significance of the domestic expenditures should include all expenditures (including those for manufacturing) related to the domestic industry product(s), and not merely a subset of expenditures that the complainant wishes to rely upon. He expects complainants that are relying on a comparison of domestic to foreign expenditures to place evidence on the record that would enable the Commission to compare all the claimed domestic expenditures to all worldwide expenditures, including manufacturing expenditures. *See Certain Movable Barrier Operator Sys. & Components Thereof*, Inv. No. 337-TA-1118, Separate Views of Chair Kearns Regarding Economic Prong Issues.

Components Thereof, Inv. No. 337-TA-796, Comm'n Op. at 99-100 (Sept. 6, 2013) (crediting past investments where complainant was "further develop[ing] its existing products")). Neither Leviton nor the Joint Respondents address this Commission precedent in their petitions.

When Corning's domestic labor and capital related expenses are added together from 2008 to February 21, 2020, such as direct expense, field engineering services, and Pioneer technical support expenditures, the ID found the result is a total investment in EDGE of [redacted], [redacted] of which was incurred in the period from January 1, 2019 to February 21, 2020. *Id.* at 401.

Summary of Alleged Corning Domestic Industry Investments

Investment Type	2008-Feb. 21, 2020	2019-Feb. 21, 2020
EDGE Project Labor	[redacted]	
EDGE Project Direct Expenses		
EDGE Field Engineering Services		
EDGE Pioneer Technical Support		
Total Investment in Labor and Capital		

Having determined that Corning's past investments in R&D of its EDGE and EDGE8 products may be considered to support its domestic industry claim, we turn to Respondents' argument that the ID improperly included non-DI related investments. The Commission finds that Corning's expert, Mr. Schoettelkotte, reasonably applied a sales-based allocation to eliminate non-DI related investments (*i.e.*, "investments related to EDGE cable assemblies and the small number of EDGE chassis and modules that are not alleged to practice the asserted patents"). *See id.* at 401-05; CX-0003C Q/A 158, 161.

Sales-Based Allocation of Corning DI Investments Including Assemblies

Product Type	Quantity	Quantity-Based Allocation		Revenue	Revenue-Based Allocation	
		% of Total	Investment		% of Total	Investment
All Chassis, Modules, & Cable Assemblies	[redacted]					
DI Chassis & Modules Only						
DI Modules Only ('206 Patent)						

Of the [redacted] amount, approximately [redacted] is attributable to chassis and modules that practice the '320, '153, and '456 patents, and approximately [redacted] is attributable to modules that practice the '206 patent. ID at 403.

Leviton argues that no portion of the investments in the four R&D projects from 2019-2020 should be considered in the DI analysis, using any allocation methodology based on sales or otherwise because those investments are "devoted *exclusively* to non-DI products." Leviton Pet. at 33-34, 40-41. The Commission finds that Leviton is incorrect. Corning's fact witnesses, Mr. Hicks and Mr. Staber, and its economic expert, Mr. Schoettelkotte, testified that since 2015, Corning has continued work related to the DI products. CX-0004C (Hicks WS) Q/A 49 (over the next five years, Corning plans to "continue to sell the current products and invest further in R&D so we can roll out new product developments for both EDGE and EDGE8."), 50 (explaining that Corning's ongoing R&D projects are "trying to increase the density currently available in the EDGE and EDGE8 systems," "continuing to provide accessibility and fiber guides," and "innovation . . . on a new type of EDGE module that will fit into a standard EDGE chassis."); CX-0006C (Staber WS) Q/A 56 ("[A]ll of the project codes were a significant part of the overall research and development work for the overall EDGE solution that is based on that chassis and

module design."); CX-0003C (Schoettelkotte WS) Q/A 64-65; Schoettelkotte Tr. 174:14-175:14. The Commission, thus, finds at least a portion of Corning's R&D expenditures in 2019-2020 relate to its DI products and the ALJ did not err in rejecting Leviton's characterization of Corning's R&D projects based on the record evidence.

Mr. Staber, Corning's prior Technology Program Manager, who was responsible for the development of the EDGE and EDGE8 products, explained that Corning's business record-keeping is not able to distinguish between projects related to the DI products versus projects related to non-DI products because its R&D programs were "based on the overall solution set" and the project codes "were based on the different functionalities of the solution set that we needed and were not intended to describe independent projects." CX-0006C (Staber WS) Q/A 33. Another Corning witness explained that its R&D projects, including the 2019 and 2020 R&D projects, involved "getting feedback from customers and us[ing] that feedback to make continuous improvements, such as increases in fiber density and the quality of cable routing." CX-0005C (Clark WS) at Q/A 25. When asked why he chose to use the sales-based allocation, Corning's economic expert, Mr. Schoettelkotte, answered:

> And then, finally, I looked specifically at these project codes and the manner in which they were described to me by Corning witnesses, including Mr. Staber, and what I learned is -- is that the investments themselves are very parallel to the sales, meaning these are not disparate investments. I understand that each one of these project codes is not an independent project but that, for lack of a better phrase, the left hand understood what the right hand was doing at every step of the -- at every step of the way. And the reason that that was important is because trunks function within Corning specifically with the chassis and the way that they're clipped, such that they can provide the density and ease of use that Corning requires.
>
> So it was that level of interaction between the project codes, again, not disparate activities.

Schoettelkotte Tr. 174:14-175:4. Respondents' economic expert does not dispute this. *See* Mulhern Tr. 928:17-932:2. The Commission finds that Respondents have not persuasively rebutted the record evidence discussed above showing that Corning is not able to distinguish between projects related to the EDGE chassis and modules and projects related to non-DI products and that it is therefore reasonable for Corning to have applied an allocation method to estimate DI expenditures.

We agree with the ID that the sales-based allocation method Corning applied was reasonable. In particular, Mr. Schoettelkotte testified that it is possible to eliminate non-DI related investments by using a sales-based allocation method. *See* CX-0003C (Schoettelkotte WS) Q/A 150. He explained that a sales-based allocation was a reasonable approach given that it was not possible to do an allocation based on project codes:

> **Q153. Why did you perform sales-based allocations rather than an allocation based on the project codes you relied on?**
>
> A153. Although Corning tracks its R&D investments and activities according to project codes in the normal course of business, like most companies it does not track them on a product-by-product or patent-by-patent basis. Importantly, I understand that Corning's R&D efforts with respect to EDGE and EDGE8 have involved an overall holistic approach that have taken advantage of Corning's vertical integration, whereby all of the component engineered, and designed to work together to provide an optimal solution that Corning offers to the market as a single integrated platform. In my opinion, a sales-based allocation takes into account those shared research, development, and engineering efforts associated with the various EDGE Project Codes, each of which is geared towards improving and furthering the development of the complete EDGE and EDGE8 solutions, rather than being limited to any particular component. Based on the facts of this case and the realities of the marketplace, I believe a sales-based allocate on is a reasonable approach here given the way Corning has developed and marketed EDGE and EDGE8 as single integrated solutions as opposed to disparate products and components that have no relationship to one another.

Id. Q/A 153. Mr. Schoettelkotte's allocation methodology appears to be reasonable and fact-based. While Leviton objects to the use of a sales-based allocation method, it suggested no alternative method and in the absence of a better alternative, it was reasonable for all of Corning's EDGE R&D projects to be included in the total investment figure and for the ID to adopt the sales allocation approach suggested by Corning's economic expert to ensure that a reasonable share of that total investment was allocated to the DI products that practice the asserted claims. Another methodology also might be acceptable, but a complainant is not obligated to use a particular allocation methodology. *See Certain Solid State Storage Drives, Stacked Electronics Components, and Products Containing Same*, Inv. No. 337-TA-1097 ("*Solid State Storage Drives*"), Comm'n Op. at 21-22 (June 29, 2018) ("[A]ll that is required is the use of reasonable allocations for the purposes of establishing the economic prong of the domestic industry requirement.").

Respondents rely on *Certain Television Sets, Television Receivers, Television Tuners, & Components Thereof*, Inv. No. 337-TA-910 ("*Television Sets*"), Comm'n Op. at 68 (Oct. 30, 2015), to argue that Corning cannot show a domestic industry based on its R&D expenditures because it abandoned any qualifying R&D at least three years before filing the complaint. Leviton Pet. at 38. But *Television Sets* does not support Leviton's position. The Commission held in *Television Sets* that "[p]ast expenditures may be considered to support a DI claim as long as those investments pertain to the complainant's industry with respect to the articles protected by the asserted IP rights and the complainant is continuing to make qualifying investments at the time the complaint is filed." *Television Sets*, Comm'n Op. at 68. Unlike in *Television Sets*, the investments in this case are ongoing, as explained above with regard to Corning's 2019-2020

R&D investment, and also with respect to ongoing field services and technical support. *See* ID at 399-401.

Even if Corning's 2019 and 2020 R&D investments are removed from consideration, as Leviton argues they should be, Corning's ongoing field service and technical support investments of its DI products (sales of which were in the [redacted] dollars), coupled with its R&D expenditures for the DI products from 2008-2017, adds up to [redacted] of dollars.[36] *See* CX-1809C. There is no dispute that Corning has invested in the installation, maintenance, and technical support for its DI products, and those investments are ongoing because it continues to sell the EDGE products in significant volumes.[37] *See* CX-0005C (Clark WS) Q/A 49-55, 57-65; CX-0003C (Schoettelkotte WS) Q/A 96 ("[F]rom January 1, 2017, through February 21, 2020, Corning engineers spent a total of [redacted] days (or [redacted] hours, assuming an 8-hour workday) performing field engineering services for its EDGE customers in the United States), 98, 102 ("[F]rom January 1, 2016, through February 21, 2020, the Pioneer contractors reported spending a total of [redacted] hours performing technical support services for Corning's EDGE customers in the United States), 104; CX-1814C (Corning Field Engineering Investments); CX-1815C (Corning Pioneer Investments); CX-0004C (Hicks WS) Q/A 53; CX-0749C (2016 Pioneer time entries) at 12 ("setting up visit to test Edg[e] modules"), 24 ("switch out trays"), 98

[36] Removing only Corning's 2019 and 2020 R&D investments from Corning's 2008-2020 qualifying investments would decrease the total DI investment figure from [redacted] to [redacted]. *See* CX-1809C (summary of Corning DI investments). Applying the same sales allocation percentage, Corning's domestic industry for the '320, '456, and '153 patents decreases from [redacted] to [redacted] and its domestic industry for the '206 patent decreases from [redacted] to [redacted].

[37] Corning's investments in service and technical support totaled [redacted] from 2019 to Feb. 21, 2020, ID at 401, which amounts to approximately [redacted] after applying the same sales allocation percentage.

("connector issue with modules"; "module issue"); CX-0751C (2018 Pioneer time entries) at 185 ("Rewire EDGE modules"); CX-0999C (2020 Pioneer time entries) at 7 ("Fiber tray replacement"), 13 ("Fiber tray replacement"), 19 ("fiber tray replacement"), 25 ("Module testing"). Indeed, from 2015-2019, Corning's sales of the DI products alone totaled [redacted], CX-1821C (Corning EDGE Chassis & Modules Sales Revenue Ex. 5.4), CX-1000C (Corning Chassis Sales Data), CX-0973C (Corning Module and Assembly Sales Data), and Corning's witnesses testified that over the next five years Corning intends to "continue to sell the current products and invest in further R&D so we can roll out new product developments for both EDGE and EDGE8." CX-0004C (Hicks WS) Q/A 49.

Most recently, in *Certain Automated Teller Machines, ATM Modules, Components Thereof and Products Containing the Same*, the ALJ considered ongoing field service expenses in conjunction with past investments in research and development that ended more than five years before the complaint, finding that even though the ongoing investments "m[ight] not be significant enough to substantiate a domestic industry on their own," they warranted consideration of past R&D expenses. Inv. No. 337-TA-972, Initial Det. at 198 (Nov. 30, 2016), *not reviewed*, Comm'n Op. (June 12, 2017), *aff'd sub nom*, *Hyosung TNS v. Int'l Trade Comm'n*, 926 F.3d 1353, 1362 (Fed. Cir. 2019).

Leviton argues the ID also erred in finding Corning's employment of labor and capital significant. The ID found that Corning's [redacted] investment for the '320, '456, and '153 patents and its [redacted] investment for the '206 patent are quantitatively significant in and of themselves. Corning contextualizes the significance of its domestic R&D by calculating the percentage of global labor hours that were worked in the United States. The ID found that Corning's domestic R&D labor hours represented approximately [redacted] of Corning's total

R&D labor hours in EDGE-related projects globally when calculated as a percentage of global labor hours.[38] ID at 407 (citing CX-0003C (Schoettelkotte WS) Q/A 136 (calculated as percentage of global labor hours that were worked in the United States)); *see also* CX-1816C (Corning global labor hours); CX-1817C (Corning U.S. vs. global labor hours). Although contextually significant when considering labor hours alone, the ID found that the share of Corning's domestic R&D labor relative to its global R&D labor for EDGE-related products is likely even larger if valued by costs in wages, given the relatively high cost of U.S. employee labor relative to other countries where EDGE-related R&D is being conducted. ID at 407 (citing CX-0003C (Schoettelkotte WS) Q/A 138; Schoettelkotte Tr. 169:8-21); *see* CX-1811C (comparison of Corning's U.S. labor rate with its Mexico labor rate). The Commission adopts these findings.

Leviton claims that Corning artificially compared U.S. to foreign investments by identifying only research projects that had U.S. hours. Leviton Pet. at 43. To the contrary, Corning's expert, Mr. Staber, testified that he identified all of the project codes that were related to the development of the EDGE products, not just those with U.S. hours. CX-0006C (Staber WS) at Q/A 34-35.

Leviton also claims that the ID erred in finding that Corning's foreign manufacturing costs are irrelevant to ascertaining whether the qualifying investments are significant. But the Commission has made clear that there is no requirement that a complainant compare different kinds of domestic and foreign investments. *See Certain Movable Barrier Operator Sys. &*

[38] Corning employees reported spending a total of [redacted] hours working on projects that correspond to the EDGE Project Codes globally, of which [redacted] hours were spent in the United States on research, development, and engineering activities associated with the EDGE and EDGE8 products. CX-0003C Q/A 75, 136; *see* CX-1810C; 1816C; 1817C.

Components Thereof, Inv. No. 337-TA-1118 ("*Movable Barrier*"), Comm'n Op. at 24 (Jan. 12, 2021) ("Nortek has provided no authority that compels a finding that domestic investments cannot satisfy the domestic industry requirement in the absence of presenting a comparison of foreign manufacturing costs to a complainant's U.S. investments."). For instance, the Commission has found a complainant's U.S. investments in R&D and testing activities to be significant because it accounted for a substantial proportion of total worldwide investments in these activities without consideration of foreign manufacturing costs. *See Certain Semiconductor Devices and Consumer Audiovisual Products Containing the Same*, Inv. No. 337-TA-1047, Initial Det. at 438 (May 11, 2018), *unreviewed by* Comm'n Notice (July 17, 2018). Therefore, a complainant may compare its domestic investments with its foreign investments to inform the contextual analysis for determining whether the claimed domestic investments are significant or substantial. *Movable Barrier*, Comm'n Op. at 23.

The evidence also shows that Corning's domestic industry investments are qualitatively significant. As noted in the ID, the result of those investments was a highly successful product line that captured over 50 percent of the market and generated [redacted] in revenue from 2015 to 2019. CX-0004C (Hicks WS) Q/A 23, 55; CX-0003C (Schoettelkotte WS) Q/A 130, 132 (noting Corning's position as "the recognized market leader and largest supplier of high-density fiber optic equipment"). This represents a significant return on Corning's [redacted] investment in the development of EDGE and EDGE8 chassis and modules that practice the asserted patents. *See* CX-0003 Q/A 132. Indeed, the EDGE and EDGE8 solutions have been installed in data centers of "some of the largest U.S.-based technology and financial industry institutions, including [redacted]

[redacted]."[39] *Id*. Q/A 133; CX-0004C (Hicks WS) Q/A 57.

Based on the foregoing, the Commission concludes that Corning has satisfied the economic prong of the domestic industry requirement under section 337(a)(3)(B) for each of the asserted patents.

2. Section 337(a)(3)(C): Substantial Investment in its Exploitation, Including Engineering, Research and Development, or Licensing[40]

The ID found that the same labor and capital related expenses that support a domestic industry under section 337(a)(3)(B) "separately constitute" a domestic industry under subparagraph (C) of section 337(a)(3). ID at 404. Regarding subparagraph (C)'s additional requirement of a substantial investment in the "exploitation" of the asserted patents, the ID found:

> Each asserted patent claims technology relating to aspects of the chassis and modules that make up the base infrastructure of Corning's EDGE and EDGE8 solutions. *See* CX-0003C (Schoettelkotte WS) Q/A 122 ("More specifically, I understand that the Asserted Patents cover the EDGE and EDGE8 system of sliding trays, removable modules, and other innovative features that enable fiber optic connections to be densely packed inside an equipment rack while improving access to adapters and cables.").

[39] The ID also found Corning's domestic investments are significant when compared to Respondents' own spending in connection with the development of the accused products. ID at 408. The ID relied on Respondents' projected costs for developing their accused products, which are speculative and may not even reflect Respondents' actual development costs. *See* CX-0003C (Schoettelkotte WS) Q/A 145 ("Corning's domestic industry investments, which total more than [redacted], are also significant and/or substantial when considered in the context of the marketplace and what certain Respondents ***appeared to contemplate spending*** in connection with the development of their directly competing high-density fiber optic equipment solutions …") (emphasis added). The Commission does not adopt the ID's finding that Corning's domestic investments are significant when compared to Respondents' own spending in connection with the development of the accused products in light of the speculative nature of the underlying evidence and the fact that this ground for finding significance is not necessary to the decision. ID at 408.

[40] Chair Kearns joins this section except as indicated below.

> Investments related to the research, development, engineering, and implementation of those features of the EDGE chassis and modules are thus related to the asserted patents.

Id. at 405. Thus, the ID concluded the evidence demonstrates a sufficient "nexus" between the asserted patents and Corning's claimed domestic industry investments to consider them an exploitation of the patent. *Id.*

The evidence supports finding that Corning's R&D for its EDGE products substantially occurs in the United States, and that Corning's engineering and R&D efforts went towards developing and improving the functionality of the DI products. ID at 406; CX-0003C (Schoettelkotte WS) at Q/A 68, 133-37. There is also no dispute that the asserted patents relate to the fundamental technology embedded in the DI products. *See* CX-0003C (Schoettelkotte WS) Q/A 122; *see generally Certain Gas Spring Nailer Products and Components Thereof*, Inv. No. 337-TA-1082 ("*Gas Spring Nailer*"), Comm'n Op. at 80 (Apr. 28, 2020) ("The requisite nexus between Kyocera's exploitation activities and the '718 patent is met here because the activities here go toward developing DI products that embody and practice the asserted claims."). While Corning developed and released its first EDGE product more than ten years ago, Corning continues to exploit the technologies claimed in the asserted patents through its ongoing investments in research and engineering of its EDGE products. *See* CX-0003C (Schoettelkotte WS) at Q/A 84, 132. Accordingly, the Commission agrees with the ID that Corning's U.S. R&D and engineering expenditures directed to the DI products exploit the inventions of the asserted patents, and for the period 2008 to February 21, 2020, total approximately [redacted] for the

apparatus combination claims and approximately [redacted] for the module claims.[41] ID at 404-405.

Leviton and the Joint Respondents do not challenge the finding that Corning's engineering and R&D investments prior to 2018 exploited the asserted patents. Rather, they assert that Corning's 2019 and 2020 research projects and Corning's field engineering and Pioneer technical support investments do not practice any of the claims of the asserted patents. *See* Joint Sub. at 25-27; Leviton Sub. at 53-54, 56. However, as discussed above, Corning's expert applied a sales-based allocation of Corning's domestic engineering and R&D expenditures for the DI products to eliminate non-DI related investments. ID at 403; CX-0003C (Schoettelkotte WS) at Q/A 158, 160-61. The Commission routinely accepts a sales-based allocation method for expenditures that are allocated to prong (C) of section 337(a)(3). *See, e.g.*, *Certain Industrial Automation Systems and Components Thereof Including Control Systems, Controllers, Visualization Hardware, Motion and Motor Control Systems, Networking Equipment, Safety Devices, and Power Supplies*, Inv. No. 337-TA-1074, Final ID at 50 (Nov. 15, 2018), *unreviewed by* Comm'n Notice (Dec. 20, 2018) (allocating complainant's R&D investments using sales allocation and finding those investments meet the nexus requirement for sub-prong (C) because they are "closely related to and enable exploitation of" the copyrighted software). Thus, the Commission finds the ID reasonably adopted Mr. Schoettelkotte's

[41] Chair Kearns does not include investments for Field Engineering Services and Pioneer Technical Support, some of which may involve activities akin to those of a mere importer, and thus may not in his view qualify for inclusion in the domestic industry. He need not resolve the issue of how much of those investments to credit because he finds the economic prong satisfied based on Corning's other credited investments, which when allocated amount to approximately [redacted] for the apparatus combination claims and approximately [redacted] for the module claims.

allocation, which resulted in approximately [redacted] of investments for the '320, '456, and '153 patents and approximately [redacted] of investments for the '206 patent.[42]

The Commission also adopts the ID's finding that Corning's investments in the exploitation of the asserted patents are quantitatively and qualitatively substantial. ID at 406-08.[43, 44]

Based on the foregoing, the Commission affirms the ID's finding that Corning has satisfied the economic prong of the domestic industry requirement under section 337(a)(3)(C) for each of the asserted patents.

V. REMEDY, PUBLIC INTEREST, AND BONDING

The Commission has determined above that Corning has shown a violation of section 337 based on infringement of the asserted claims of the '320, '456, '153, and '206 patents. Under the

[42] As discussed above in fn. 41, Chair Kearns bases his analysis on allocated amounts of approximately [redacted] for the '320, '456, and '153 patents and approximately [redacted] for the '206 patent. These values are not materially lower than those relied upon by the ID and his colleagues.

[43] As discussed in fn. 39, the Commission does not adopt the ID's finding regarding Corning's domestic investments compared to Respondents' own spending in connection with the development of the accused products. ID at 408.

[44] Chair Kearns adopts the ID's finding that Corning's research and development investments are substantial with the following modifications. He does not adopt the discussion on p. 407 of the ID regarding the relevance of comparing activities in different areas. However, because his analysis is under (C) only (whereas the ID's discussion is for both (B) and (C)) he finds it appropriate to compare Corning's domestic investments in research and development with foreign investments in the same activities. In this regard, while he does not consider the Field Engineering Services and Pioneer Technical Support in his analysis regarding substantiality, the monetary figures he considered are not materially different from those used in the ID and by his colleagues. Moreover, he adopts the analysis in the ID at 406-407 relating to labor costs for research and development, which do not include Field Engineering Services and Pioneer Technical Support. Finally, he does not adopt the ID's finding regarding Corning's domestic investments compared to Respondents' own spending in connection with the development of the accused products. ID at 408.

statute, if the Commission determines that a violation has occurred, "it shall direct that the articles concerned . . . be excluded from entry into the United States, unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry." 19 U.S.C. § 1337(d)(1). The Commission may also issue CDOs to prevent further violations, including sale or distribution of infringing articles within the United States, after consideration of these public interest factors. *See* 19 U.S.C. § 1337(f)(1), (g)(1).

As explained below, the Commission has determined that the appropriate remedy is: (1) a GEO prohibiting the entry of infringing high-density fiber optic equipment and components thereof; and (2) CDOs directed to respondents Leviton, Panduit, and FS. The Commission has also determined that the public interest factors do not preclude issuance of these remedial orders and that a bond as set forth in the orders is required during the period of Presidential review. 19 U.S.C. § 1337(j)(3).

A. Remedy

The Commission has "broad discretion in selecting the form, scope, and extent of the remedy." *Viscofan, S.A. v. US. Int'1 Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). The RD recommends issuance of a GEO under subparagraph (B) of section 337(d)(2), but not under subparagraph (A), and issuance of CDOs against the Defaulting Respondents and Respondents Leviton, Panduit, and FS. RD at 420-43.

1. General Exclusion Order

Section 337(d)(2) provides that "[t]he authority of the Commission to order an exclusion from entry of articles shall be limited to persons determined by the Commission to be violating this section unless the Commission determines that— (A) a general exclusion from entry of

articles is necessary to prevent circumvention of an exclusion order limited to products of named persons; or (B) there is a pattern of violation of this section and it is difficult to identify the source of infringing products." 19 U.S.C. § 1337(d)(2); *see also* 19 C.F.R. § 210.50(c). The Active Respondents seek certain exceptions to any exclusion order, as explained *infra* at part (c), but do not dispute that issuance of a GEO is appropriate in this investigation.

a. Section 337(d)(2)(B): A Pattern of Violation and Difficulty in Identifying the Source of Infringing Products

Based on the evidence in the record, the Commission agrees with the ALJ that Corning has established the need for a GEO under section 337(d)(2)(B). The RD found that a pattern of violation of the asserted patents exists. Of the thirteen original Respondents in this investigation, the RD found that the five Active Respondents infringe and that it is more likely than not that the five Defaulting Respondents also infringe. RD at 426-27. Corning's Mr. Hicks identified 31 nonrespondent entities that sell or offer to sell products that he alleges are "strikingly similar to EDGE" and likely to infringe the asserted patents. *Id.* at 427 (quoting CX-0004C (Hicks WS) Q/A 70). This evidence thus establishes a pattern of violation.

Mr. Hicks also testified regarding the difficulty in identifying the sources of potentially infringing products. *Id.* at 428. For example, he testified that some entities, such as defaulting respondents TARLUZ and Wulei Bonelinks, sell potentially infringing products without branding or identification. *Id*. (citing CX-0004C at Q/A 77; CX-0640; CX-0651). He explained that original equipment manufacturers "may easily produce EDGE copies and then sell them to anyone under any brand." *Id.* (citing CX-0004C at Q/A 79). Additionally, Corning demonstrated that a number of nonrespondents' products closely resemble Respondent's infringing products. *Id.* at 429-30. Finally, the RD noted that while Corning and the Respondents account for the majority of the fiber optic equipment market, both globally and in

the United States, "the portion of the market not occupied by the named respondents, appears to be full of rapidly appearing and disappearing manufacturers and distributors that make and sell products with strong similarities to both Corning's EDGE products and the infringing products of the named respondents." *Id.* at 430-31. In view of the evidence discussed above, the Commission finds that Corning has established the need for a GEO under section 337(d)(2)(B).

b. Section 337(d)(2)(A): Prevent Circumvention of an Exclusion Order Limited to Products of Named Persons

The RD did not recommend issuance of a GEO under section 337(d)(2)(A) because it found the "evidence does not demonstrate that conditions in the market for fiber optic equipment provide incentives for the named respondents to attempt to circumvent a limited exclusion order." RD at 424. In particular, the RD found, for example, the evidence suggests that barriers to entry are high and "[c]ustomer expectations [] provide a significant disincentive for the named respondents to attempt to circumvent a limited exclusion order by importing products under other, less-established brand names or distribution channels." *Id.* at 425.

Corning submits that the evidence in this case supports a finding that a GEO is necessary to prevent circumvention. *See* Compl. Sub. at 59-63. Having reviewed the record evidence, the Commission finds that Corning has established a GEO is also appropriate under section 337(d)(2)(A). The RD's analysis of circumvention focused extensively on the largest customers and did not account for smaller data center customers, which make up nearly half of the market. *Id.* at 63-64 (citing RD at 424-25). The evidence shows that the barrier to entry can be quite low because many established foreign manufacturers offer OEM and private-label services, resulting in easy market penetration and low production costs due to foreign manufacturers producing infringing articles under different labels that are lower in price. *See id.* at 60-61 (citing CX-0004C (Hicks WS) Q/A 65, 77, 79), 64. The evidence also shows that even if some of the

Active Respondents have long-standing positions in the fiber optics market, many, if not all, of the Defaulting Respondents and nonrespondents identified by Mr. Hicks are not established or reputable, making them more likely to attempt to evade an LEO. *Id.* at 64. For these reasons, the Commission finds that Corning has satisfied the criteria for issuing a GEO under section 337(d)(2)(A).

c. Scope of the Order

The Active Respondents seek certain exceptions to any exclusion order. First, they request that any exclusion order not extend to domestically-manufactured, non-imported products, such as Leviton's U.S.-made modules and Panduit's and Siemon's U.S.-made chassis. *See* Leviton Sub. at 65-66; Joint Sub. at 36-37. However, it is unnecessary to tailor the orders to carve out domestically-manufactured products because the Commission's GEO and CDOs apply only to imported products. Respondents do not dispute this in their replies. *See* Leviton Reply at 43; Joint Reply at 28-29.

Second, the Active Respondents argue that "the ALJ declined to recommend the statutorily mandated exemption under 19 U.S.C. § 1337(l) that any remedial order shall not apply to any articles imported by and for use of the United States." Joint Sub. at 37 (citing ID at 421); *see* Leviton Sub. at 66. Again, such tailoring is unnecessary because the Commission's standard GEO language already encompasses this exemption by providing that articles found to be in violation "are excluded from entry for consumption into the United States . . . except . . . as provided by law" and that the order "shall not apply to covered articles that are imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government." Respondents do not dispute this in their replies. *See* Leviton Reply at 43; Joint Reply at 28-29.

Third, the Joint Respondents argue that "any remedy . . . should not extend to products with substantial non-infringing uses[.]" Joint Sub. at 36; *see* Leviton Sub. at 69-70. As discussed in more detail below, the definition of "covered articles" in the orders do not include "cable assemblies for use with the covered chassis and modules or noninfringing products such as adapter plates, splice panels, or patch panels." In addition, the covered "modules have simplex/duplex components (*e.g.*, LC adapters) on the front and multi-fiber components (*e.g.*, MPO/MTP adapters) on the rear, and are configured to support at least 98 connections per standard rack unit (or "U space"))." Thus, the Commission believes the orders appropriately identify the high-density fiber optic equipment and components thereof that are subject to the orders. To the extent the Respondents urge the Commission to exclude their accused products because they have substantial non-infringing uses, such a request is contrary to Commission practice. Leviton, Panduit, Siemon, and FS have been found to have induced infringement even though their imported accused products were also found to have substantial noninfringing uses. ID at 108-110. Moreover, Siemon's and FS' imported modules have also been found to directly infringe the asserted claims of the '206 patent, which is specifically directed to the accused modules and does not claim a combination of chassis and modules. Any Respondent seeking to import any of the accused products for a non-infringing use can seek a determination as to the importation of those products for those purposes.[45] *See* 19 U.S.C. § 1337(k) (modification proceeding); 19 C.F.R. § 210.76 (same); *id*. § 210.79 (advisory opinions).

[45] The Commission also notes that the RD recommended, and no party disputes, the inclusion of a standard certification provision in the exclusion order. The standard certification provision authorizes U.S. Customs and Border Protection ("CBP") to require an importer to certify that "the products being imported are not excluded from entry under" the terms of the exclusion order. The standard certification provision in exclusion orders "does not allow an importer simply to certify that it is not violating the exclusion order." *Certain Network Devices, Related Software and Components Thereof (II)*, Inv. No. 337-TA-945, Comm'n Op. at 123 n.73

Fourth, the Joint Respondents argue that the scope of the ID's exception for service and repair requires clarification because it does not "confirm Respondents' request . . . that the service and repair exception allow Respondents to continue to supply current third-party customers with specific parts for servicing existing products." Joint Sub. at 37; *see* RD at 419-20. For example, Panduit and Siemon submit that under the service and repair exception, they should be allowed to continue to supply the imported modules that are used to induce infringement to any customer who possesses an accused chassis when the exclusion order takes effect. Joint Sub. at 37-38; *see* Joint Reply at 29. Corning submits that the Commission has denied a service and repair exception in similar circumstances where "Respondents do not identify any specific end users or other customers whose operations will allegedly be disrupted." Compl. Reply at 44. OUII believes the service and repair exception in the GEO should track the Commission's standard language and recommends that the Commission deny the "clarification" that the Joint Respondents request because the modules that Panduit and Siemon would like to continue to import have been used to induce infringement in violation of section 337. OUII Reply at 40.

The Commission has determined to deny the Joint Respondents' request for a service and repair exception. As Corning argues, the Commission finds that "[c]ontinuing to import infringing modules to be used with infringing chassis would not be 'service and repair' – it would be circumvention of the exclusion order." Compl. Sub. at 70. The Commission also finds that Respondents have not come forward with any evidentiary support and do not cite to any evidence in support of a service and repair exception. Under similar circumstances, the

(June 1, 2017). Rather, CBP "only accept a certification that the goods have been previously determined by CBP or the Commission not to violate the exclusion order." *Id.*

Commission has refused to include such an exception. *See, e.g.*, *Gas Spring Nailer*, Comm'n Op. at 85-86 ("[T]he Commission has granted [service and repair] exemptions when unopposed, in view of the public interest, or upon some showing of a need for service and repair."); *Non-Volatile Memory Devices*, Recommended Det. at 4 (May 10, 2018) (finding respondent's "conclusory arguments do not support any service and repair exception"), *affirmed by* Comm'n Op. at 51 (Oct. 26, 2018). Because the Joint Respondents have made no showing as to why such an exemption is necessary and due to the potential for circumvention of the orders, the Commission denies the request for a service and repair exception.

Finally, Corning notes that OUII's proposed remedial orders omit the '206 patent. Since the Commission finds a violation as to claims 22 and 23 of the '206 patent by Respondents FS, Siemon, and Wirewerks, the Commission's GEO includes the '206 patent.

i. Definition of "Covered Articles"

After consulting with CBP, OUII submits that the products and components at issue are as follows:

> (a) chassis (or "enclosures") with sliding trays that fit within the standardized racks used in data centers; (b) removable modules (or "cassettes") that are inserted into the sliding trays of the chassis, wherein the chassis and modules are used to terminate large numbers of fiber-optic cables using standardized connectors (at least 98 connections per standard rack unit (or "U space")); (c) combinations of such chassis and modules; and (d) subassemblies (such as tray subassemblies) that are components of such chassis and modules.

OUII Sub. at 65-66. Parts (a) and (b) of OUII's definition for "covered articles" are nearly identical to the plain language description of the accused products or category of accused

products.[46] *See* 85 FR 16653 (Mar. 24, 2020). Parts (c) and (d), which are not part of the plain language description, have been added to address CBP's "suggest[ion] that any remedial order issued in this investigation should specify which high-density fiber optic equipment and components thereof are subject to the order." OUII Sub. at 65-66. OUII also submits that the "order should further specify that it does not cover cable assemblies for use with the covered chassis and modules or noninfringing [products] such as adapter plates, splice panels, or patch panels." *Id.* at 66.

Corning, Leviton, and the Joint Respondents suggest several modifications to OUII's definition for "covered articles" in the proposed remedial orders. *See* Compl. Reply at 45-46; Leviton Reply at 47-48; Joint Reply at 29-30. With the exception of one modification, the Commission adopts the modifications suggested by Corning because they clarify the features of the accused modules that are covered by the order. As for the one exception, the Commission replaces the language "(in a chassis fully loaded with such modules) support at least 98 connections" with the language "are configured to support at least 98 connections" because it mirrors the language used in the asserted apparatus claims. The Commission finds the Joint Respondents' modification is unnecessary in view of Corning's modifications. Leviton's modifications reflect Leviton's position that the order should not cover its domestically-produced modules. However, as discussed above, the GEO covers only imported articles and is not directed to a specific respondent.

[46] OUII's proposed definition adds "enclosures" and "cassettes" as alternative names for chassis and modules, respectively.

2. Cease and Desist Orders

Section 337(f)(1) provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a CDO as a remedy for violation of section 337. *See* 19 U.S.C. § 1337(f)(1). CDOs are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order. *See, e.g.*, *Certain Table Saws Incorporating Active Injury Mitigation Technology & Components Thereof* ("*Table Saws*"), Inv. No. 337-TA-965, Comm'n Op. at 4-6 (Feb. 1, 2017); *Certain Protective Cases & Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405, Comm'n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners & Scan Engines, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-551, Comm'n Op. at 22 (June 24, 2007)). Complainants bear the burden on this issue. "A complainant seeking a cease and desist order must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order." *Table Saws*, Comm'n Op. at 5 (citing *Certain Integrated Repeaters, Switches, Transceivers, & Prods. Containing Same*, Inv. No. 337-TA-435, USITC Pub. No. 3547 (Oct. 2002), Comm'n Op. at 27 (Aug. 16, 2002); *see also* H.R. REP. No. 100-40, at 160 (1987)).

a. Active Respondents

The Commission finds the evidence is sufficient to support the issuance of CDOs against Leviton, Panduit, and FS.[47] Apart from FS, the Respondents admit that they each hold inventory of their accused, have imported products, and have U.S. operations, but they submit that their

[47] As to the Active Respondents, Corning requests CDOs against Leviton, Panduit, and FS. It does not request a CDO against Siemon or Wirewerks.

inventory is not commercially significant to warrant issuance of a CDO. *See* Joint Sub. at 38; Joint Reply at 30; Leviton Reply at 44. Leviton argues that its inventory of imported enclosures "is not commercially significant at less than [redacted] of Complainant's yearly sales of its chassis."[48] Leviton Reply at 44 (citing CX-1820C). The Joint Respondents argue that the methodology used by Corning's expert, Mr. Schoettelkotte, to calculate the amount of their inventory is flawed and overstated. *See* Joint Sub. at 38; Joint Reply at 30.

Corning submits that its expert analyzed the available evidence of Respondents' inventory and commercial significance of their sales, as well as evidence of Respondents' domestic business operations. Regarding commercially significant inventory, Mr. Schoettelkotte analyzed the available data to determine the average sales of Accused Products per month for each Respondent, separated by accused chassis and accused modules. CX-0003C (Schoettelkotte WS) Q/A 195-97 (FS.com); 204 (Leviton); 212-13 (Panduit). He used this information to calculate the number of months of inventory held by FS.com, Leviton, and Panduit, which he found commercially significant. *Id*.

Mr. Schoettelkotte also examined additional evidence showing that these Respondents' business operations in the U.S. relating to the accused products are commercially significant. *Id*. Q/A 192, 198 (FS.com); 200-01, 205 (Leviton); 207-08, 214 (Panduit).

With respect to Leviton, the evidence shows it has significant domestic commercial business operations and maintains commercially significant domestic inventory of its accused chassis. Leviton keeps domestic inventory of the accused chassis at facilities in Bothell, Washington, and Bloomingdale, Illinois, and at distribution centers in Nevada and Tennessee.

[48] Leviton's submissions repeatedly discuss the lack of inventory of its accused modules. This is irrelevant, however, because, as discussed above, any remedial order would not reach Leviton's domestically-produced modules.

Id. Q/A 201. Leviton maintained approximately [redacted] of inventory of its accused chassis at those domestic facilities. OUII Sub. at 68 (citing JX-0013C (Byquist Dep. Tr.) at 55:15-56:18, 90:5-91:10); CX-0003C (Schoettelkotte WS) Q/A 204 (As of March 23, 2020, Leviton maintained a U.S. inventory of [redacted] chassis valued at approximately [redacted]; and, as of May 31, 2020, Leviton had a U.S. inventory of [redacted] chassis valued at approximately [redacted], which represents approximately [redacted] of sales of chassis). Thus, the Commission finds that a CDO is warranted against Leviton.

Regarding Panduit, the evidence shows that it had a U.S. inventory of 8,353 modules valued at approximately $1,733,665 as of June 2, 2020, which represents approximately two months of sales of modules. CX-0003C (Schoettelkotte WS) Q/A 212-13; CX-1839C. Panduit also maintains a warehouse in DeKalb, Illinois. CX-0003C (Schoettelkotte WS) Q/A 209 (citing JX-0028C (Wagner Dep. Tr.) at 104:19-105:9). Based on Mr. Schoettelkotte's analysis of Panduit's inventory and its domestic operations, the Commission finds that a CDO is warranted against Panduit.

As for FS, the evidence shows that it has significant domestic commercial business operations and maintained a commercially significant inventory of accused products just before filing of the complaint. The RD found FS' "sales and inventory data relating to the accused products indicate that its domestic inventory is sufficient to satisfy approximately 15-19 months of sales of chassis and modules." RD at 435 (citing CX-0003C (Schoettelkotte WS) Q/A 197; CX-1838C). Although FS claims that it had no inventory as of May 2020, the RD noted that "this is inconsistent with FS data showing that it had an inventory of nearly 800 chassis worth over $100,000 just days before the complaint was filed" and Mr. Schoettelkotte therefore considered the data from just before the complaint in his analysis of months of chassis sales for

FS. *Id.* at 435-36 (citing CX-0003C at Q/A 195). Mr. Schoettelkotte also testified that FS maintains a 44,000 square foot warehouse in Delaware built to ensure fast same-day shipping for most in-stock orders of more than 2,000 different products. CX-0003C (Schoettelkotte WS) Q/A 192; CX-1478 (FS.com About Us) at 2. For these reasons, the Commission finds that a CDO is warranted against FS.[49]

As with the GEO, the Active Respondents request that any CDO not apply to domestically-manufactured, non-imported products nor extend to products with substantial non-infringing uses. *See* Joint Reply at 30; Leviton Sub. at 67-68. As discussed above, the Commission has determined to deny these requests because the Commission's remedial orders apply to imported articles only and the accused, imported products have been found to have induced infringement.

b. Defaulting Respondents

In the case of named respondents in the United States who have been found in default or who have not participated in the investigation, the Commission has inferred commercially significant domestic inventories or significant domestic operations with respect to the infringing articles. *See*, *e.g.*, *Certain Earpiece Devices and Components Thereof* ("*Earpiece Devices*"),

[49] Commissioner Schmidtlein supports issuance of the CDOs against Leviton, Panduit, and FS and agrees that the governing authority for CDO relief as to those respondents is section 337(f)(1). Section 337(f)(1) is the operative provision for requested CDO relief against participating respondents that do not satisfy the requirements of subsection 337(g)(1)(A)-(E). There is no dispute that Leviton, Panduit and FS do not satisfy the requirement of subsection 337(g)(1)(A)-(E). When the presence of infringing domestic inventory or domestic operations is asserted as the basis for a CDO under section 337(f)(1), Commissioner Schmidtlein does not adopt the view that the inventory or domestic operations needs to be "commercially significant" in order to issue the CDO. *See, e.g.*, *Certain Magnetic Tape Cartridges and Components Thereof*, Inv. No. 337-TA-1058, Comm'n Op. at 65, n.24 (Apr. 9, 2019); *Table Saws*, Comm'n Op. at 6-7, n.2 (Feb. 1, 2017). In Commissioner Schmidtlein's view, the presence of some infringing domestic inventory or domestic operations maintained by Leviton, Panduit, and FS, regardless of commercial significance, provides a basis to issue CDOs against those respondents.

Inv. No. 337-TA-1121, Comm'n Op. at 41-42 (Nov. 8, 2019); *Certain Hand Dryers and Housing for Hand Dryers*, Inv. No. 337-TA-1015, Comm'n Op. at 24 (Oct. 30, 2017); *Certain Mobile Device Holders and Components Thereof* ("*Mobile Device Holders*"), Inv. No. 337-TA-1028, Comm'n Op. at 27 (Mar. 22, 2018); *Certain Agricultural Tractors, Lawn Tractors, Riding Lawnmowers, and Components Thereof*, Inv. No. 337-TA-486, Comm'n Op. at 18 (Aug. 19, 2003); *Certain Rare-Earth Magnets and Magnetic Materials and Articles Containing Same* ("*Rare-Earth Magnets*"), Inv. No. 337-TA-413, USITC Pub. No. 3307, Comm'n Op. at 17-18 (May 2000).

The RD recommends that CDOs issue to each of the Defaulting Respondents Huber+Suhner Inc. Huber+Suhner AG, TARLUZ, Anfkom, and Wulei Bonelinks, under "[s]ection 337(g)(1) [which] authorizes the Commission to issue cease and desist orders against defaulted respondents." RD at 437 (citing 19 U.S.C. § 1337(g)(l)). Because Corning requests a GEO and the Active Respondents participated in the investigation, the Commission evaluates the violation and exclusion of articles from entry for Defaulting Respondents under section 337(d)(2) rather than section (g)(2). *See Certain Water Filters and Components Thereof*, Inv. No. 337-TA-1126, Comm'n Op. at 13-14 n.2 (Nov. 15, 2019). Moreover, Corning's requested CDOs are "[i]n addition to . . . taking action under subsection (d)," and such request is evaluated under section 337(f)(1) rather than 337(g)(1). *Id.* In this case, the ALJ did not find the Defaulting Respondents in violation (nor did Corning request a violation to be found with respect to the Defaulting Respondents). Accordingly, because the Defaulting Respondents have not

been found to "violat[e] this section," Corning's request for CDOs to be issued against the Defaulting Respondents must be denied. 19 U.S.C. § 1337(f)(1).[50]

[50] Commissioner Karpel and Commissioner Schmidtlein would issue CDOs directed to the Defaulting Respondents. They consider section 337(g)(1) to be the appropriate authority for the issuance of CDOs as to these Defaulting Respondents because the criteria for issuance of CDOs under subsection 337(g)(1)(A)-(E) are met as to these respondents. 19 U.S.C. § 1337(g)(1)(A)-(E). *See also* RD at 437. Each Defaulting Respondent was named in the complaint and each was served or refused service of the complaint and notice of investigation. *See* Order Nos. 7 & 8 (June 9, 2020), *unreviewed by* Comm'n Notice (June 22, 2020); Order No. 13 (Aug. 21, 2020), *unreviewed by* Comm'n Notice (Sept. 15, 2020). Each Defaulting Respondent failed to show good cause why they should not be held in default for failing to respond to the complaint and notice of investigation. *See id*. These findings satisfy subsections 337(g)(1)(A)-(D). Corning requested CDOs limited to each Defaulting Respondent in its initial submission on remedy, bonding, and the public interest thus satisfying subsection 337(g)(1)(E). Given that subsections 337(g)(1)(A)-(E) are satisfied, the statute directs the Commission to issue the requested CDOs, subject to consideration of the public interest. The public interest factors as detailed in Section V.B *infra* do not support a finding that CDOs directed to the Defaulting Respondents in this investigation would be contrary to the public interest. Accordingly, Commissioner Karpel and Commissioner Schmidtlein would issue CDOs against the Defaulting Respondents under section 337(g)(1).

Commissioner Karpel and Commissioner Schmidtlein find that Corning's request for CDOs against the Defaulting Respondents in its initial remedy submission accords with the Commission's notice, 86 Fed. Reg. 28890, 28892 (May 28, 2021), and its CDO request is consistent with the remedies requested in its Complaint. *See* DN 3436, Complaint ¶ 438(e) (EDIS Doc. ID 703129). Moreover, neither section 337(g)(1) nor Commission Rule 210.50 require Corning's CDO request directed to Defaulting Respondents to be denied "because the Defaulting Respondents have not been found to 'violat[e] this section [§ 337(d)].'" Further, section 337(g)(1) does not require the ALJ to make explicit findings with respect to whether Defaulting Respondents violated section 337, nor does it require the complainant to request the ALJ to make such findings. Thus, the facts that "the ALJ did not find the Defaulting Respondents in violation (nor did Corning request a violation to be found with respect to the Defaulting Respondents)" are not relevant to whether CDOs directed to the Defaulting Respondents should issue. To the contrary, where, as here, the requirements of section 337(g)(1) are satisfied as discussed above, the Commission "shall presume" the factual allegations to support a violation by each Defaulting Respondent "to be true" and must issue the complainant's requested remedy, here a CDO, limited to that Defaulting Respondent, upon consideration of the public interest. 19 U.S.C. § 1337(g)(1).

B. Public Interest

Section 337 requires the Commission, upon finding a violation of section 337, to issue an LEO "unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry." 19 U.S.C. § 1337(d)(l). Similarly, the Commission must consider these public interest factors before issuing a GEO or CDO. 19 U.S.C. § 1337(d)(2), (f)(1), (g)(1).[51]

1. Public Health and Welfare

No party argues that the public health and welfare would be adversely impacted by the exclusion of Respondents' infringing products and other infringing high-density fiber optic equipment and components thereof of other suppliers. Corning submits that "excluding all infringing products will not adversely affect the public health and welfare" as high-density fiber optic equipment does not involve products necessary for some important health or welfare need. Compl. Stmt at 3; *see also* OUII Sub. at 74 ("There is no evidence that high-density fiber optic equipment has any public health or welfare implications."). Respondents do not argue to the contrary. Accordingly, based on the record, the Commission finds the remedial orders will not adversely affect the public health and welfare.

[51] Defaulting Respondent Huber+Suhner AG submitted a public interest statement. Huber+Suhner seeks similar carveouts to the remedial orders as the Active Respondents, including an exception for equipment "which is imported for non-infringing use." H+S Stmt at 3. The Commission notes that Huber+Suhner's defaulted and waived its opportunity to contest the infringement alleged in the complaint, including the allegation that Huber+Suhner's products have no substantial noninfringing uses. Compl. Reply at 49-50 (citing Compl. ¶ 150). Accordingly, the Commission denies Huber+Suhner's request for carveouts.

2. Competitive Conditions in the United States Economy

With respect to competitive conditions in the United States, Corning submits that it and its two licensees, AFL and CommScope, could serve the entire market and "ensur[e] direct (and legal) competition for products practicing the patented EDGE design." Compl. Stmt at 3-4. Corning contends that it and its licensees already hold a large majority of the U.S. market and can easily supply the rest with lawful products. *Id.* at 5 (citing RX-0731C (Data Center Market: Revenues by Segment Worldwide and Americas); RX-0733C (Fiber Optics Market Shares by Region as of Approximately June 2020) (same); RDX-0007C.020 (Mulhern Rebuttal) (same)). Corning notes that the "market for high-density fiber optic equipment is highly competitive, and will remain so even after infringing products are excluded." Compl. Sub. at 74. Corning also argues that since two of Corning's major competitors, CommScope and AFL, are now licensed, this legal competition for products practicing the patented EDGE design ensures that the exclusion order will not adversely impact competitive conditions. *Id.* (citing *Certain EPROM, EEPROM, Flash Memory, & Flash Microcontroller Semiconductor Devices & Prods. Containing Same*, Inv. No. 337-TA-395 (Reconsideration) ("*EPROM*"), Comm'n Op. at 86-87 (Dec. 11, 2000) (finding that no public interest considerations precluded a limited exclusion order because numerous non-infringing products guaranteed continued competition and adequate supply)). Corning also points out that, as the ALJ found, the "recent influx of cheap knock-offs is supplied by a large number of 'rapidly appearing and disappearing manufacturers and distributors' that are difficult to identify" thereby threatening legitimate competition. *Id.* (quoting ID at 431). Thus, Corning argues that "excluding these competitors and other infringing products will benefit competition in the United States by reinforcing the value of intellectual property rights." *Id.* at 74-75.

OUII submits that the evidence of record shows that "with regard to competitive conditions, Corning and its licensees CommScope and AFL supply a sufficiently large portion of the U.S. fiber optics market that the effect of the proposed remedy on competitive conditions in that market would be relatively small." OUII Sub. at 74 (citing RX-0733C at 1-2 (market shares by region) (Corning, CommScope, and AFL have a combined 88% market share for sales of fiber optic equipment to "Hyper4" data center customers in the U.S./Canada market, and a "Global" combined market share of 71% in the U.S./Canada market)).

Respondents do not dispute the evidence submitted by Corning and OUII indicating that the remedial orders would have a relatively small impact on competitive conditions in the United States or that Corning and its licensees have the capacity to supply the market demand for high-density optical equipment and components thereof. Joint Sub. at 40-41; Joint Reply at 31; Leviton Sub. at 68-70; Leviton Stmt at 4-5. Instead, they argue that because "Complainant and Respondents comprise a substantial majority of the North American market in each of the largest market segments," the remedial orders "would significantly reduce consumer choice and severely affect competitive conditions, to the benefit of entirely foreign-made products." Joint Sub. at 41 (citing RX-0007C (Mulhern WS) Q/A 198-200); Leviton Sub. at 70. Apart from pointing out market share statistics for the North American market, Respondents and their expert, Ms. Mulhern, offer no explanation as to how these statistics support their assertion that exclusion of imported infringing articles would have any particular effect on competitive conditions in the United States. Joint Sub. at 41; Leviton Sub. at 70.

Based on the record evidence and submissions of the parties, the Commission finds that the remedial orders will not adversely affect competitive conditions in the United States economy.

3. The Production of Like or Directly Competitive Articles in the United States

As to domestic production of like or directly competitive products, OUII submits that "Leviton's recent actions in transferring manufacturing activities for its accused chassis from Mexico to the United States in response to this investigation suggests that, if anything, the effect of the proposed remedy would be to increase production of like articles in the United States." OUII Sub. at 74 (citing RX-0005.1C (Errata to Kim WS)). Corning argues that "mere domestic activity [of the Respondents] does not warrant a public interest exception." Corning Sub. at 76.

Respondents do not challenge OUII's argument. Rather, Respondents make note of the extent of their own domestic production of fiber optic equipment and components. For example, Respondents state that Panduit's chassis are developed and manufactured in Illinois; Siemon's LightStack enclosures are developed and manufactured by Siemon in Connecticut; and Leviton manufactures all of its HDX Enterprise Cassettes in Bloomingdale, Illinois and final assembly, and now all manufacture, of the Leviton enclosures occurs in Bothell, Washington. Joint Sub. at 40 (citing ID at 52, 417); Leviton Sub. at 68; Leviton Stmt. at 3. Apart from stating their policy views on the purpose of section 337, however, Respondents offer no argument or evidence that their domestic production of fiber optic equipment identified above would be adversely affected by the remedial orders here.

The Commission finds that the evidence of record and arguments of the parties indicate no adverse impact of the remedial orders on the production of like or directly competitive articles in the United States.

4. United States Consumers

With respect to U.S. consumers, OUII submits that there is no evidence that U.S. consumers of fiber optic equipment, who are "sophisticated and demanding," would be adversely

affected by the proposed remedy. OUII Sub. at 74 (citing RX-0007C (Mulhern RWS) Q/A 179; *accord* Schoettelkotte Tr. at 177:2-7). Corning argues that it is "the market leader, supplying more than 50% of the general data-center demand, and a larger share of the demand for high density solutions at issue here." Corning Sub. at 73 (citing CX-0004C (Hicks WS) Q/A 23). Corning also asserted that its "witnesses have testified that Corning could and would sell its products to customers who now purchase from Respondents." *Id.* (citing ID at 434). In addition, Corning states that together Corning and its two licensees can supply non-infringing high-density fiber optic equipment to meet U.S. demand. *Id.* at 74. Corning notes that the products covered by the asserted patents fit into standard data center racks. Once the remedial orders take effect, former customers of excluded competitors can easily buy chassis and modules from Corning (or the other two licensed companies) for data center growth. *Id.* at 75. Competing, non-infringing products will also ensure that data centers can be adequately served with high-density fiber optic equipment, and that consumers will continue to enjoy the same services that rely on data centers that they receive today. *Id.* (citing *EPROM*, Comm'n Op. at 86-87).

Respondents do not dispute OUII's evidence that purchasers of these products would not be adversely impacted by the remedial orders nor do they challenge Corning's assertion that it and its licensees are willing and able to supply the market demand in place of the infringing imports. The only evidence Respondents offer is the same North American market statistics discussed above. Joint Sub. 41; Joint Reply at 31; Leviton Sub. at 70; Leviton Stmt at 4-5. Apart from submitting such statistics, Respondents offer no explanation as to how these statistics support the assertion that U.S. consumers would be adversely impacted by the remedial orders here.

Leviton also argues that "[a]ny injunction against [its] enclosures would deprive the public of thousands of critical non-infringing uses" and "[s]uch an injunction would result in an exaggerated detrimental impact on legitimate domestic manufacture and use, disproportionate to the accused infringement and importation." Leviton Stmt at 4; *see also* Joint Sub. at 40-41. Other than attorney argument, however, Leviton provides no evidence substantiating its claim of thousands of "critical noninfringing uses" and identifies no specific customers that would be harmed by the proposed remedial orders.

Moreover, Leviton has been found to have induced infringement even though its imported enclosures were also found to have substantial noninfringing uses. The proposed remedial orders, here, are consistent with the Commission's issuance of exclusion orders in cases involving induced infringement based on the importation of an infringing component having substantial noninfringing uses. *See Suprema*, 796 F.3d at 1342-43 (affirming the Commission's orders excluding imported scanners that induced the direct infringement only after being combined with domestically made software); *Comcast*, 951 F.3d at 1305, 1307-08 (affirming the Commission's orders excluding imported set-top boxes that induced direct infringement only when used with domestic servers). In addition, as discussed above, the orders appropriately identify the high-density fiber optic equipment and components thereof that are subject to the orders and do not include noninfringing products such as adapter plates, splice panels, or patch panels.[52]

[52] As discussed above, any Respondent seeking to import any of the accused products for a non-infringing use can seek a determination as to the importation of those products for those purposes. *See* 19 U.S.C. § 1337(k) (modification proceeding); 19 C.F.R. § 210.76 (same); *id.* § 210.79 (advisory opinions).

On this record, the Commission concludes that its remedial orders will not impact U.S. consumers of fiber optic equipment.

5. Respondents' Policy Arguments

Leviton argues that "[f]avoring and protecting Complainant's exclusively *foreign* products to the detriment of Leviton and other Respondents' *domestic* products negatively impacts competitive conditions in the U.S. economy, the production of like or directly competitive articles in the United States, and U.S. consumers." Leviton Stmt at 3. Leviton argues that doing so also "flies in the face of the Commission's purpose." *Id.* (citing H. Rep. No. 100-40, pt. 1 at 157). The Joint Respondents make similar arguments. *See* Joint Sub. at 40-41. According to Leviton, "[b]ringing back U.S. manufacturing is essential to benefit the U.S. economy, U.S. consumers and U.S. jobs." Leviton Stmt at 3-4 (citing Remarks by President Biden at Signing of Executive Order on Strengthening American Manufacturing available at https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/01/25/remarks-by-president-biden-at-signing-of-executive-order-on-strengthening-american-manufacturing/ (Jan. 25, 2021)).

The Commission has considered Respondents' policy argument that "bringing back U.S. manufacturing is essential to benefit the U.S. economy, U.S. consumers and U.S. jobs," but Respondents' submissions provide no explanation as to how this argument pertains to the question of whether the remedial orders here would adversely impact the statutory public interest considerations. The Commission's orders are not directed to domestically-produced goods; they are directed to infringing imports, which are not produced in the United States. Moreover, the thrust of Respondents' argument appears to be that because Corning has manufacturing operations outside the United States, Corning is not entitled to relief under Section 337. That assertion, however, is inconsistent with the statutory domestic industry requirement, which does not require a manufacturing industry in the United States. *See Solid State Storage Drives*,

Comm'n Op. at 6-10; S. Rep. No. 100-71, at 127-129 (1987); H. Rep. No. 99-581, at 112 (1986). Here, as discussed above, Corning has established a domestic industry based on its investments in engineering, R&D, warranty, field engineering service, and technical support.[53]

Accordingly, based on the submissions that the Commission received and the evidence in the record, the Commission finds that the public interest does not preclude the issuance of a GEO and CDOs against Leviton, Panduit, and FS.

C. Bonding

If the Commission enters a GEO or a CDO, a respondent may continue to import and sell its products during the 60-day period of Presidential review under a bond in an amount determined by the Commission to be "sufficient to protect the complainant from any injury." 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). When reliable price information is available in the record, the Commission has often set the bond in an amount that would eliminate the price differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making Same, & Prods. Containing Same, Including Self-stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. No. 2949, Comm'n Op. at 24 (Jan. 16, 1996). The complainant bears the burden of establishing the need for a bond. *Certain Rubber Antidegradants, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-533, USITC Pub. No. 3975, Comm'n Op. at 40 (July 21, 2006).

In this case, the Active Respondents provided information on their pricing of the accused products. Using this information, Corning's expert calculated bond rates based on the price differential between each Respondents' accused chassis and modules and the domestic industry

[53] As discussed earlier, Chair Kearns does not rely on field engineering services or Pioneer Technical Support in finding that Corning has established a domestic industry.

chassis and modules. *See* CX-1840C (Summary of Price Differential Amended Ex. 8.1). Corning submits the Commission should set two separate bond rates for each Respondent, one for chassis and one for modules, as shown below.

Complainant's Suggested Bond Rates

Respondent	Chassis Rate	Module Rate
FS	262.5%	239.9%
Leviton	72.5%	N/A
Panduit	43.9%	20.7%
Siemon	N/A	82.4%
Wirewerks	N/A	4.4%
All Other Imports	100%	100%

ID at 446.

The Commission has set different bond amounts for different infringing products where warranted by the record evidence. *See, e.g.*, *Certain Protective Cases and Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405, Comm'n Op. at 31-33 (Nov. 19, 2012) (setting bonds for various products at zero percent to 331.80 percent of entered value based on price differential between complainant's and respondent's products); *Certain Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets*, Inv. No. 337-TA-543, Comm'n Op. at 159-60 (June 19, 2007) (setting bond at 100 percent of entered value of chips and 5 percent of entered value of handheld devices incorporating chips). OUII agrees with Complainant's proposed bond rates. OUII Reply at 36 n.16. Respondents did not provide any comments on the bonding issue. The Commission finds Corning's proposed rates are appropriate for the Active Respondents.

Regarding the Defaulting Respondents, where "there is no reliable pricing information because the respondents have defaulted and failed to participate in discovery," the Commission typically sets the bond at 100% of the value of the infringing products. *See, e.g., Certain Ink*

Cartridges and Components Thereof, Inv. No. 337-TA-946, Comm'n Op. at 18 (June 29, 2016); *Certain Pocket Lighters*, Inv. No. 337-TA-1142, Comm'n Op. at 23-24 (July 13, 2020). Therefore, the Commission finds a bond of 100% is appropriate against the Defaulting Respondents and all other imports.

VI. CONCLUSION

For the reasons set forth herein, the Commission determines that Complainant has established a violation of section 337 with respect to claims 1 and 3 of the '320 patent; claims 11, 12, 14-16, 19, 21, 27, and 28 of the '456 patent; claims 9, 16, 23, and 26 of the '153 patent; and claims 22 and 23 of the '206 patent. The Commission determines that the appropriate remedy is a GEO prohibiting the entry of infringing high-density fiber optic equipment and components thereof, and CDOs directed to Respondents Leviton, Panduit, and FS. The Commission also determines that the public interest does not preclude that remedy, and that a bond as set forth in the orders is required during the period of Presidential review.

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: August 23, 2021

Additional Views of Chair Kearns Regarding "Articles that Infringe"

This investigation again raises the issue of what are "articles that infringe" under 19 U.S.C. § 1337(a)(1)(B) and (a)(1)(B)(i). This issue can arise when the imported articles at issue are components of a device or object that infringes an apparatus claim, or articles that, after importation, are used, either alone or in combination with other articles, to infringe a claimed method. The question in this investigation is whether the articles imported by Leviton are "articles that infringe" for purposes of finding a violation of section 337 by that Respondent's direct infringement. The parties were asked to brief questions related to this issue, and their input has been very helpful to my consideration of this issue.

Like my colleagues, I have determined to take no position on that question here, as the Commission finds induced infringement by Leviton, and resolution of the "articles that infringe" issue under the framework I set forth below would likely delay completion of this investigation without changing the result or the remedy provided to the complainant. However, because this issue has arisen more frequently in our investigations, I below set forth a framework that I expect to apply in future investigations and that I believe is most consistent with the statute and its purpose, case law, and Commission precedent, and which takes into account the parties' briefing on the issue. This framework will hopefully provide useful guidance to parties in future investigations in which the issue arises.

To resolve the question of whether such articles constitute "articles that infringe," I look first to *Suprema, Inc. v. International Trade Commission*, 796 F.3d 1338 (Fed. Cir. 2015) (*en banc*). In *Suprema*, the Federal Circuit, sitting *en banc*, was asked "to decide whether goods qualify as 'articles that infringe' when the Commission has found that such goods were used, after importation, to directly infringe [a patented method] by the importer at the inducement of

the goods' seller." *Suprema*, 796 F.3d at 1345. The Federal Circuit held in the affirmative that such goods are "articles that infringe." *Id.* at 1352-53. To arrive at its conclusion, the Federal Circuit determined that the phrase "articles that infringe" in section 337 has "textual uncertainty" because 35 U.S.C. § 271, which defines the term "infringe," refers to *actions* that infringe, while section 337 refers to *articles* that infringe. *Suprema*, 796 F.3d at 1346-47; *see also Chevron, U.S.A. Inc. v. Nat'l Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984). The Federal Circuit found that Congress had not provided an unambiguous resolution to that uncertainty. *Suprema*, 796 F.3d at 1347-9.

The Federal Circuit concluded in *Suprema* that the Commission's interpretation of the phrase "articles that infringe" in section 337 to cover articles that were used by the goods seller to induce the importer to directly infringe the claimed method was reasonable and consistent with the statutory text, the text of section 337 as a whole, the legislative history, and the statutory policy, and as such, should not be overturned. *Suprema*, 796 F.3d at 1349-52. The Court reasoned that "[i]nduced infringement is one kind of infringement, and when it is accomplished by supplying an article, the article supplied can be an 'article that infringes' if the other requirements of inducement are met." *Suprema*, 796 F.3d at 1349. The Court also stated that the Commission properly recognized "that the acts necessary for induced infringement, including acts of direct infringement, may not occur simultaneously at the time of importation," and indeed, "[i]n many cases, such acts cannot occur at the time of importation." *Suprema*, 796 F.3d at 1349. The Court in *Comcast Corp. v. International Trade Commission*, 951 F.3d 1301 (Fed. Cir. 2020), again held that section 337 covers violation determinations based on respondent's induced infringement in connection with the importation of articles even if the imported articles do not satisfy all the claim limitations at the time of importation.

The Commission is "a creature of statute, and must find authority for its actions in its enabling statute." *Kyocera v. Int'l Trade Comm'n*, 545 F.3d 1340, 1355 (Fed. Cir. 2008). The Commission's enabling statute, section 337(a)(1)(B)(i), defines unlawful acts with regard to "articles that infringe" as follows:

> **(a) Unlawful Activities; covered industries; definitions**
> (1) [T]he following are unlawful. . .:
>
> (B) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of *articles that* —
>
> (i) *infringe* a valid and enforceable United States patent. . .

19 U.S.C. § 1337(a)(1)(B)(i) (emphasis added). Infringement, on the other hand, is defined by section 271. That section sets forth different types of acts that constitute infringement by the actor. Section 271(a) defines direct infringement as making, using, offering to sell, or selling any patented invention, within the United States, or importing into the United States any patented invention. 35 U.S.C. § 271(a). Section 271(c) defines contributory infringement as follows:

> Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.[54]

The Commission is increasingly faced with situations in which an imported article is a component of an apparatus, or is used to perform only part or all of a claimed method after importation. Often, imported articles are components of an infringing system – whether in an attempt to circumvent section 337 liability or by virtue of an increasingly global supply chain.

[54] Section 271(b) states that whoever actively induces infringement is liable as an infringer.

Upon importation, these component articles are physically modified or combined by the owner, importer, or consignee, and then used, sold, or offered for sale in a manner that directly infringes a U.S. patent.

I initially note that the Federal Circuit has recognized that liability under section 337 cannot be circumvented "by importing articles in a state requiring post-importation combination or modification before direct infringement could be shown." *Suprema*, 796 F.3d at 1352. The fact that section 337 covers articles requiring combination or modification after importation means that, consistent with Congressional intent, section 337 does not permit an importer to escape liability by importing a component of an infringing invention. The question becomes which components, if imported, violate section 337 and which are articles of commerce that do not infringe?

I also note that there is textual uncertainty in the statute with respect to this issue. In the past, the Commission used a "nexus" test to determine if the imported article was sufficiently related to the infringement to qualify as an "article that – infringes." As OUII points out in its brief on the issues under review, a nexus approach was used by the Commission as long ago as 1984, in *Certain Cardiac Pacemakers and Components Thereof*, Inv. No. 337-TA-162, 1984 WL 273827, Order No. 37 (Mar. 21, 1984) (granting summary det. of no violation).[55] In the investigation underlying the appeal that led to the *Suprema* decision, *Certain Biometric Scanning Devices, Components Thereof, Associated Software, and Products Containing the* Same, Inv. No. 337-TA-720 (2011) ("*Biometric Scanning Devices*"), the Commission stated the test as

[55] *See* Brief of the Office of Unfair Import Investigations on the Issues Under Review and on Remedy, the Public Interest, and Bonding (June 7, 2021) at 3-5.

"whether there is a sufficient nexus between the infringer's unfair acts and importation to find a violation of section 337." *Biometric Scanning Devices,* Comm. Op. at 5.

A nexus test has never been rejected by our reviewing court, and I do not believe that we are foreclosed from applying such a test. However, I also recognize that a more explicit framework with more predictability is preferable. In addressing this issue, I find guidance in the provisions of section 271, which express Congressional intent regarding what is deemed to constitute various forms of infringement. In particular, section 271(c), addressing contributory infringement, is the only relevant part of the section that speaks to the standard for infringement by components of an invention.[56] I therefore find it appropriate to use the concepts in this subsection to guide my interpretation of "articles that infringe" in section 337.

I also interpret the statute in a manner that avoids the absurd result under which an article would be an "article that – infringes" based on an importer's indirect infringement (through supply of an imported article to an infringing third party that directly infringes an asserted claim), but the same article would not be an "article that – infringes" based on the importer's direct infringement, a situation arguably involving greater culpability. The wording of the statute, and Congress' intent in enacting it, does not require such a result. Moreover, an interpretation that avoids this result reduces the risk of circumvention of the Commission's exclusion orders.

Thus, in considering whether there is a violation of section 337 when an imported article is a component of an apparatus or is used to perform part of a method claim, and a respondent combines and/or modifies that component to be used, sold, or offered for sale in a manner that

[56] Section 271(f) relates to indirect infringement through the export of components of a patented invention, and contains similar language as section 271(c). Section 271(g) relates to products made by a patented process outside the United States.

directly infringes an asserted patent claim in the United States (whatever form the claim takes, *e.g.*, apparatus or method), I intend to consider the following factors: (a) whether the article is a material part of the invention, (b) whether it is especially designed and/or configured for use in an infringing manner, (c) whether it is a staple article and the extent to which it has non-infringing uses, and (d) the extent to which it is modified or combined with other articles after importation.[57]

I believe that this approach is consistent with the Federal Circuit's *en banc* decision in *Suprema* and its decision in *Comcast*, as well as with Congress's consistent intent, evidenced by the legislative history, for the Commission to have broad authority to remedy unfair trade practices. *See Suprema*, 796 F.3d at 1350 (stating that the legislative history and statutory policy have "consistently evidence[d] Congressional intent to vest the Commission with broad enforcement authority to remedy unfair trade acts").This approach is also consistent with the Commission's broad remedial authority once a violation has been shown, because a violation of section 337 as to an imported article may include a remedy that applies to the components thereof, *Cisco Sys., Inc. v. International Trade Commission*, 873 F.3d 1354, 1363 (Fed. Cir. 2017), in order to avoid circumvention of Commission orders, in which an adjudged infringer modifies its supply chain (sometimes trivially) to evade the trade laws, *see, e.g.*, *Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Products Containing the Same, and Components Thereof*, Inv. No. 337-TA-921 (Modification), Comm'n Op., 2016 WL 11603660, at *6 (Aug. 29, 2019) (discussing an importer's unsuccessful attempt to evade an exclusion order by importing two components separately, and then "kitting" them together in the

[57] I previously indicated the likelihood that I would take an approach along these lines in *Blood Cholesterol Testing Strips*, Comm'n Op. at 33 n.26.

United States for combined sale to consumers). The Federal Circuit has recognized that Commission authority extends to "articles in a state requiring post-importation combination or modification before direct infringement could be shown." *Suprema*, 796 F.3d at 1352.

CERTAIN HIGH-DENSITY FIBER OPTIC EQUIPMENT AND COMPONENTS THEREOF **Inv. No. 337-TA-1194**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER, COMMISSION** has been served via EDIS upon the Commission Investigative Attorney, **Lisa J. Murray, Esq.**, and the following parties as indicated, on **August 23, 2021.**

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