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TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 ETAS ID: TM547172

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
Ciena Corporation		10/28/2019	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	Bank of America, N.A.
Street Address:	300 Galleria Parkway, Suite 800
Internal Address:	GA7-293-08-01
City:	Atlanta
State/Country:	GEORGIA
Postal Code:	30339
Entity Type:	National Banking Association: UNITED STATES

PROPERTY NUMBERS Total: 16

Property Type	Number	Word Mark
Serial Number:	86057222	THE MUX
Serial Number:	86057246	PACKETWAVE
Serial Number:	86300161	AGILITY
Registration Number:	2070330	CIENA
Registration Number:	2610130	COREDIRECTOR
Registration Number:	3080638	ON-CENTER
Registration Number:	3505281	FLEXSELECT
Registration Number:	2911314	CORESTREAM
Registration Number:	3026860	CIENA
Registration Number:	4522190	OPTERA
Registration Number:	4251724	CARRIER ETHERNET CERTIFIED ASSOCIATE
Registration Number:	4251726	CARRIER ETHERNET CERTIFIED PROFESSIONAL
Registration Number:	4251725	CARRIER ETHERNET CERTIFIED CONSULTANT
Registration Number:	4259388	CARRIER ETHERNET CERTIFIED EXPERT
Registration Number:	4225115	FASTMESH
Registration Number:	4515295	OPN

CORRESPONDENCE DATA

TRADEMARK REEL: 006782 FRAME: 0564

900521223

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 4155911000

Email:achan@winston.comCorrespondent Name:Laura M. Franco, Esq.Address Line 1:101 California St.

Address Line 2: Winston & Strawn LLP

Address Line 4: San Francisco, CALIFORNIA 94111

ATTORNEY DOCKET NUMBER:	150022.00017
NAME OF SUBMITTER:	Laura M. Franco
SIGNATURE:	/Laura M. Franco/
DATE SIGNED:	10/29/2019

Total Attachments: 6

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TRADEMARK SECURITY AGREEMENT

(Trademarks, Trademark Registrations, Trademark Applications and Trademark Licenses)

WHEREAS, Ciena Corporation, a Delaware corporation (herein referred to as the "Grantor") owns, or in the case of licenses is a party to, the Trademark Collateral (as defined below);

WHEREAS, Ciena Corporation, a Delaware corporation (the "Company", together with the Domestic Subsidiaries of the Company that are or become a U.S. Borrower pursuant to the terms of the Credit Agreement, the "U.S. Borrowers"), Ciena Canada, Inc., a corporation incorporated under the laws of Canada (together with the other Canadian Subsidiaries of the Company that are or become a Canadian Borrower pursuant to the terms of the Credit Agreement, the "Canadian Borrowers", and the Canadian Borrowers, together with the U.S. Borrowers, collectively, the "Borrowers"), the lenders from time to time party thereto (the "Lenders") and Bank of America, N.A., as administrative agent, are parties to that certain ABL Credit Agreement, dated as of October 28, 2019 (as amended from time to time, the "Credit Agreement"); and

WHEREAS, pursuant to (i) a U.S. Security Agreement dated as of October 28, 2019 (as amended and/or supplemented from time to time, the "Security Agreement") among the U.S. Borrowers, the other Grantors party thereto and Bank of America, N.A., as collateral agent for the Secured Parties referred to therein (in such capacity, together with its successors in such capacity, the "Grantee"), (ii) a U.S. Guaranty dated as of October 28, 2019 (as amended and/or supplemented from time to time, the "Guaranty") among the Guarantors party thereto and Bank of America, N.A., as administrative agent and collateral agent for the Secured Parties referred to therein, and (iii) certain other Collateral Documents (including this Trademark Security Agreement), the Grantor has secured certain of its obligations (the "Secured Obligations") by granting to the Grantee for the benefit of such Secured Parties a continuing security interest in personal property of the Grantor, including all right, title and interest of the Grantor in, to and under the Trademark Collateral (as defined below); and

WHEREAS, terms defined in the Security Agreement (or whose definitions are incorporated by reference in the recitals thereto) and not otherwise defined herein have, as used herein, the respective meanings provided for therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor grants to the Grantee, to secure the Secured Obligations, a continuing security interest in all of the Grantor's right, title and interest in, to and under the following (all of the following items or types of property being herein collectively referred to as the "**Trademark Collateral**"), whether now owned or existing or hereafter acquired or arising, but subject to Section 1.1(b) of the Security Agreement:

(i) each Trademark (as defined in the Security Agreement) owned by the Grantor, including, without limitation, each Trademark registration and application referred to in Schedule 1 hereto and all of the goodwill of the business connected with the use of, or symbolized by each Trademark;

- (ii) each License (as defined in the Security Agreement), related to any Trademark (each, a "**Trademark License**") to which the Grantor is a party, including, without limitation, each Trademark License identified in Schedule 1 hereto and all of the goodwill of the business connected with the use of, or symbolized by each Trademark licensed pursuant thereto; and
- (iii) all proceeds of and revenues from the foregoing, including, without limitation, all proceeds of and revenues from any claim by the Grantor against third parties for past, present or future unfair competition with, or violation of intellectual property rights in connection with or injury to, or infringement or dilution of any Trademark owned by the Grantor (including, without limitation, any Trademark identified in Schedule 1 hereto), and all rights and benefits of the Grantor under any Trademark License (including, without limitation, any Trademark License identified in Schedule 1 hereto), or for injury to the goodwill associated with any of the foregoing;

provided that no security interest shall be granted in any United States intent-to-use Trademark applications to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use Trademark applications under applicable federal law.

The Grantor irrevocably constitutes and appoints the Grantee and any officer or agent thereof, with full power of substitution, as its true and lawful attorney-in-fact with full power and authority in the name of the Grantor or in the Grantee's name, from time to time, in the Grantee's discretion, so long as any Event of Default shall have occurred and be continuing, to take with respect to the Trademark Collateral any and all appropriate action which the Grantor might take with respect to the Trademark Collateral and to execute any and all documents and instruments which may be necessary or desirable to carry out the terms of this Trademark Security Agreement and to accomplish the purposes hereof.

Except to the extent permitted in the Security Agreement or the Credit Agreement, the Grantor agrees not to sell, license, exchange, assign or otherwise transfer or dispose of, or grant any rights with respect to, or mortgage or otherwise encumber, any of the Trademark Collateral.

The foregoing security interest is granted in conjunction with the security interests granted by the Grantor to the Grantee pursuant to the Security Agreement. The Grantor acknowledges and affirms that the rights and remedies of the Grantee with respect to the security interest in the Trademark Collateral granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

This Trademark Security Agreement shall be construed in accordance with and governed by the laws of the State of New York.

IN WITNESS WHEREOF, the Grantor has caused this Trademark Security Agreement to be duly executed by its officer thereunto duly authorized as of the date first listed above.

CIENA CORPORATION

By:

Name: Jiong Liu

Title: Vice President and Treasurer

Acknowledged:

BANK OF AMERICA, N.A., as Collateral Agent,

By:

Name: John M. Olsen Title: Senior Vice President

[Signature Page to Trademark Security Agreement]

Schedule 1 to Trademark Security Agreement

Attached.

	86/057,222	9/5/2013	• .	Pending	THE MUX	S
	86/057,246	9/5/2013		Pending	PACKETWAVE	SU
	86/300,161	6/4/2014		Pending	AGILITY	S
2,070,330	74/641,237	3/2/1995	. 6/10/1937	Registered	CIENA	C.S.
2,610,130	75/703,302	5/12/1999	8/20/2002	Registered	COREDIRECTOR	GS .
3,080,638	78/428,393	3/30/2000	4/13/2006	Registered	ON-CENTER .	US
3,505,281	78/628,837	5/12/2005	9/23/2008	Registered	FLEXSELECT	S
2,911,314	75/720,971	6/3/1999	12/14/2004	Registered	CORESTREAM	SO
3,026,860	78/394,001	3/31/2004	12/13/2005	Registered	CIENA	Ç,
4,522,190	85/041,546	5/18/2010	4/29/2014	Registered	OPTERA	ß
4,251,724	85/332,002	5/27/2011	11/27/2012	Registered	CARRIER ETHERNET CERTIFIED ASSOCIATE	S
4,251,726	85/332,076	5/27/2011	11/27/2012	Registered .	CARRIER ETHERNET CERTIFIED PROFESSIONAL	S.
4,251,725	85/332,069	5/27/2011	11/27/2012	Registered	CARRIER ETHERNET CERTIFIED CONSULTANT	ĊS
4,259,388	85/332,066	5/27/2011	12/11/2012	Registered	CARRIER ETHERMET CERTIFIED EXPERT	S
4,225,115	85/550,476	2/23/2012	10/16/2012	Registered .	FASTMESH	ß
4,515,295	85/634,200	5/24/2012	4/15/2014	Registered	OPW	S

RECORDED: 10/29/2019