

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5301577

|                                                                                                                                                                                                 |                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                     |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                         |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                    |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>              |
| PETER W. EVANS                                                                                                                                                                                  | 02/22/2018                         |
| MINGZHI LU                                                                                                                                                                                      | 05/07/2018                         |
| FRED A. KISH JR.                                                                                                                                                                                | 06/21/2018                         |
| VIKRANT LAL                                                                                                                                                                                     | 05/07/2018                         |
| SCOTT CORZINE                                                                                                                                                                                   | 06/22/2018                         |
| JOHN W. OSENBACH                                                                                                                                                                                | 05/07/2018                         |
| JIN YAN                                                                                                                                                                                         | 05/07/2018                         |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                    |
| <b>Name:</b>                                                                                                                                                                                    | INFINERA CORPORATION               |
| <b>Street Address:</b>                                                                                                                                                                          | 140 CASPIAN COURT                  |
| <b>City:</b>                                                                                                                                                                                    | SUNNYVALE                          |
| <b>State/Country:</b>                                                                                                                                                                           | CALIFORNIA                         |
| <b>Postal Code:</b>                                                                                                                                                                             | 94089                              |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                    |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                      |
| <b>Application Number:</b>                                                                                                                                                                      | 15866148                           |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                    |
| <b>Fax Number:</b>                                                                                                                                                                              | (240)264-5501                      |
| <i>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.</i> |                                    |
| <b>Phone:</b>                                                                                                                                                                                   | 240-264-5458                       |
| <b>Email:</b>                                                                                                                                                                                   | patents@infinera.com               |
| <b>Correspondent Name:</b>                                                                                                                                                                      | INFINERA CORPORATION DAVID SOLTZ   |
| <b>Address Line 1:</b>                                                                                                                                                                          | 9005 JUNCTION DRIVE                |
| <b>Address Line 4:</b>                                                                                                                                                                          | ANNAPOLIS JUNCTION, MARYLAND 20701 |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | P590B5-6                           |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | DAVID L. SOLTZ                     |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /David Soltz/                      |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 12/27/2018                         |

**Total Attachments: 2**

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### ASSIGNMENT

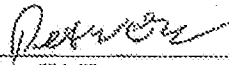
For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, PETER W. EVANS, MINGZHI LU, FRED A. KISH, JR., VIKRANT LAL, SCOTT CORZINE, JOHN W. OSENBACH, and JIN YAN, each individually assign to INFINERA CORPORATION, a corporation formed under the laws of Delaware and having a principal place of business at 140 Caspian Court, Sunnyvale, CA 94089, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a patent application that names us as inventors, is titled "TUNABLE WAVEGUIDE DEVICES," and was filed in the United States Patent and Trademark Office on January 4, 2017, as application 15/398,690 (the "Application"), a provisional patent application that is titled "WIDELY TUNABLE LASER STRUCTURES," and was filed in the United States Patent and Trademark Office on January 4, 2016, as application 62/274,377, and a provisional patent application that is titled "TUNABLE LASER STRUCTURES," and was filed in the United States Patent and Trademark Office on August 25, 2016, as application 62/379,682.

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

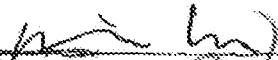
We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

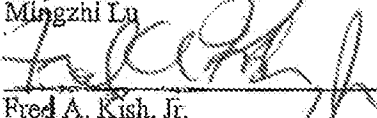
We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

  
Peter W. Evans

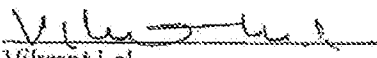
Date: 2/23/2018

  
Mingzhi Lu

Date: 3/8/18

  
Fred A. Kish, Jr.

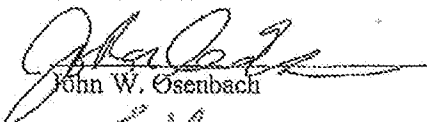
Date: 6/21/18

  
Vikrant Lal

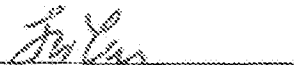
Date: 5/7/18

  
Scott Corzine

Date: 6/22/2018

  
John W. Osenbach

Date: 5/7/18

  
Jin Yan

Date: 5/7/2018

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