PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3753304

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|---------------------------|
| NATURE OF CONVEYANCE: | PATENT SECURITY AGREEMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------------|----------------|
| MELLANOX TECHNOLOGIES, LTD. | 02/22/2016 |

RECEIVING PARTY DATA

| Name: | JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT |
|-------------------|--|
| Street Address: | 10 S. DEARBORN, 7TH FLOOR |
| Internal Address: | IL1-1625 |
| City: | CHICAGO |
| State/Country: | ILLINOIS |
| Postal Code: | 60603 |

PROPERTY NUMBERS Total: 211

| Property Type | Number |
|----------------|---------|
| Patent Number: | 9111602 |
| Patent Number: | 8419444 |
| Patent Number: | 7934959 |
| Patent Number: | 9014006 |
| Patent Number: | 7801027 |
| Patent Number: | 8903683 |
| Patent Number: | 8989011 |
| Patent Number: | 7730214 |
| Patent Number: | 8671236 |
| Patent Number: | D737777 |
| Patent Number: | 8407478 |
| Patent Number: | 8867356 |
| Patent Number: | 8811417 |
| Patent Number: | 7518164 |
| Patent Number: | 7620749 |
| Patent Number: | 8705349 |
| Patent Number: | 8949486 |
| Patent Number: | 9031063 |
| Patent Number: | 6735642 |
| | |

PATENT REEL: 037900 FRAME: 0720

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| Property Type | Number |
|----------------|---------|
| Patent Number: | 8375145 |
| Patent Number: | 8213315 |
| Patent Number: | 9111466 |
| Patent Number: | 8924605 |
| Patent Number: | 8043877 |
| Patent Number: | 7538358 |
| Patent Number: | 9130885 |
| Patent Number: | 7512717 |
| Patent Number: | 7493416 |
| Patent Number: | 7617333 |
| Patent Number: | 8948199 |
| Patent Number: | 8750657 |
| Patent Number: | 7676597 |
| Patent Number: | 8751701 |
| Patent Number: | 7177941 |
| Patent Number: | 9032010 |
| Patent Number: | 8750660 |
| Patent Number: | 8871570 |
| Patent Number: | 8949498 |
| Patent Number: | 7089587 |
| Patent Number: | 7243284 |
| Patent Number: | 8817473 |
| Patent Number: | 8879258 |
| Patent Number: | 8914458 |
| Patent Number: | 8869171 |
| Patent Number: | 9197586 |
| Patent Number: | 8032659 |
| Patent Number: | 8346884 |
| Patent Number: | 9015350 |
| Patent Number: | 9106487 |
| Patent Number: | 8913615 |
| Patent Number: | 7664909 |
| Patent Number: | 7103064 |
| Patent Number: | 7620066 |
| Patent Number: | 7620064 |
| Patent Number: | 7782893 |
| Patent Number: | 7457906 |
| Patent Number: | 7046668 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 7706372 |
| Patent Number: | 7653754 |
| Patent Number: | 9088368 |
| Patent Number: | 8990472 |
| Patent Number: | 6728743 |
| Patent Number: | 7543290 |
| Patent Number: | 7929539 |
| Patent Number: | 7760741 |
| Patent Number: | 6631422 |
| Patent Number: | 7603429 |
| Patent Number: | 7930437 |
| Patent Number: | 8019902 |
| Patent Number: | 8671138 |
| Patent Number: | 7502370 |
| Patent Number: | 8051212 |
| Patent Number: | 9008097 |
| Patent Number: | 9143467 |
| Patent Number: | 8645663 |
| Patent Number: | 8255475 |
| Patent Number: | 8870467 |
| Patent Number: | 8867870 |
| Patent Number: | 6922408 |
| Patent Number: | 9016957 |
| Patent Number: | 8690455 |
| Patent Number: | 8370675 |
| Patent Number: | 7631106 |
| Patent Number: | 8225182 |
| Patent Number: | 8751909 |
| Patent Number: | 8365057 |
| Patent Number: | 7152122 |
| Patent Number: | 7263103 |
| Patent Number: | 8694701 |
| Patent Number: | 7343527 |
| Patent Number: | 9106387 |
| Patent Number: | 8959265 |
| Patent Number: | 7013419 |
| Patent Number: | 8761189 |
| Patent Number: | 9031086 |

| Property Type | Number |
|---------------------|----------|
| Patent Number: | 7149227 |
| Patent Number: | 6667918 |
| Patent Number: | 9256545 |
| Patent Number: | 7245627 |
| Patent Number: | 6668299 |
| Patent Number: | 7224669 |
| Patent Number: | 8908704 |
| Patent Number: | 6243787 |
| Patent Number: | 6978331 |
| Patent Number: | 9003418 |
| Patent Number: | 8645964 |
| Patent Number: | 8196144 |
| Patent Number: | 8595741 |
| Patent Number: | 6338078 |
| Patent Number: | 7514978 |
| Patent Number: | 9225628 |
| Patent Number: | 9112314 |
| Patent Number: | 8944704 |
| Patent Number: | 7733875 |
| Patent Number: | 8745276 |
| Patent Number: | 8886862 |
| Patent Number: | D744957 |
| Patent Number: | D734728 |
| Application Number: | 14753159 |
| Application Number: | 14215097 |
| Application Number: | 14222887 |
| Application Number: | 14673892 |
| Application Number: | 14662259 |
| Application Number: | 14953462 |
| Application Number: | 62211885 |
| Application Number: | 13628155 |
| Application Number: | 14207680 |
| Application Number: | 14445079 |
| Application Number: | 14527928 |
| Application Number: | 62246066 |
| Application Number: | 14918599 |
| Application Number: | 13851178 |
| Application Number: | 14534207 |

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14338488 |
| Application Number: | 13905149 |
| Application Number: | 14662258 |
| Application Number: | 14335962 |
| Application Number: | 13763676 |
| Application Number: | 14324246 |
| Application Number: | 14937907 |
| Application Number: | 14732853 |
| Application Number: | 14052743 |
| Application Number: | 14628256 |
| Application Number: | 14700206 |
| Application Number: | 14721009 |
| Application Number: | 14608252 |
| Application Number: | 62162854 |
| Application Number: | 14337334 |
| Application Number: | 62239990 |
| Application Number: | 14665005 |
| Application Number: | 14608265 |
| Application Number: | 62183213 |
| Application Number: | 62192582 |
| Application Number: | 62163995 |
| Application Number: | 14813142 |
| Application Number: | 14729127 |
| Application Number: | 14132014 |
| Application Number: | 62234046 |
| Application Number: | 14458273 |
| Application Number: | 13481874 |
| Application Number: | 14834443 |
| Application Number: | 14172969 |
| Application Number: | 14667941 |
| Application Number: | 13935511 |
| Application Number: | 14247255 |
| Application Number: | 14265397 |
| Application Number: | 14730257 |
| Application Number: | 14672397 |
| Application Number: | 12785499 |
| Application Number: | 13671475 |
| Application Number: | 13839193 |

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13803144 |
| Application Number: | 14690428 |
| Application Number: | 13109031 |
| Application Number: | 14634842 |
| Application Number: | 14583124 |
| Application Number: | 14963266 |
| Application Number: | 14637414 |
| Application Number: | 13792083 |
| Application Number: | 14033470 |
| Application Number: | 14847021 |
| Application Number: | 14745488 |
| Application Number: | 14644400 |
| Application Number: | 14658260 |
| Application Number: | 13925868 |
| Application Number: | 14354759 |
| Application Number: | 13291143 |
| Application Number: | 13972968 |
| Application Number: | 14846870 |
| Application Number: | 14836988 |
| Application Number: | 14745549 |
| Application Number: | 13935515 |
| Application Number: | 13481890 |
| Application Number: | 14224272 |
| Application Number: | 14665043 |
| Application Number: | 13665946 |
| Application Number: | 14046976 |
| Application Number: | 14547160 |
| Application Number: | 14215099 |
| Application Number: | 15041038 |
| Application Number: | 13731030 |
| Application Number: | 14616760 |
| Application Number: | 14664988 |
| Application Number: | 14684527 |
| Application Number: | 14666342 |
| Application Number: | 14860166 |
| Application Number: | 13845182 |
| Application Number: | 62139843 |
| Application Number: | 13958561 |

| Property Type | Number |
|---------------------|----------|
| Application Number: | 29519274 |
| Application Number: | 29531312 |

CORRESPONDENCE DATA

Fax Number: (213)891-8763

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.

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Address Line 4: LOS ANGELES, CALIFORNIA 90071-1560

| ATTORNEY DOCKET NUMBER: | 030188-0029 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | RHONDA DELEON |
| SIGNATURE: | /Rhonda DeLeon/ |
| DATE SIGNED: | 02/24/2016 |

Total Attachments: 28

source=Project Carmel - Patent Security Agreement#page1.tif source=Project Carmel - Patent Security Agreement#page2.tif source=Project Carmel - Patent Security Agreement#page3.tif source=Project Carmel - Patent Security Agreement#page4.tif source=Project Carmel - Patent Security Agreement#page5.tif source=Project Carmel - Patent Security Agreement#page6.tif source=Project Carmel - Patent Security Agreement#page7.tif source=Project Carmel - Patent Security Agreement#page8.tif source=Project Carmel - Patent Security Agreement#page9.tif source=Project Carmel - Patent Security Agreement#page10.tif source=Project Carmel - Patent Security Agreement#page11.tif source=Project Carmel - Patent Security Agreement#page12.tif source=Project Carmel - Patent Security Agreement#page13.tif source=Project Carmel - Patent Security Agreement#page14.tif source=Project Carmel - Patent Security Agreement#page15.tif source=Project Carmel - Patent Security Agreement#page16.tif source=Project Carmel - Patent Security Agreement#page17.tif source=Project Carmel - Patent Security Agreement#page18.tif source=Project Carmel - Patent Security Agreement#page19.tif source=Project Carmel - Patent Security Agreement#page20.tif source=Project Carmel - Patent Security Agreement#page21.tif source=Project Carmel - Patent Security Agreement#page22.tif source=Project Carmel - Patent Security Agreement#page23.tif source=Project Carmel - Patent Security Agreement#page24.tif source=Project Carmel - Patent Security Agreement#page25.tif source=Project Carmel - Patent Security Agreement#page26.tif source=Project Carmel - Patent Security Agreement#page27.tif source=Project Carmel - Patent Security Agreement#page28.tif

PATENT SECURITY AGREEMENT dated as of February 22, 2016 (this "<u>Agreement</u>"), among Mellanox Technologies, Ltd., Mellanox Technologies TLV Ltd., Integrity Project Ltd., and Mellanox Technologies Silicon Photonics Inc. (each a "<u>Grantor</u>" and collectively, the "<u>Grantors</u>") and JPMorgan Chase Bank, N.A. ("<u>JPMCB</u>"), as Administrative Agent.

Reference is made to (a) the Credit Agreement dated as of February 22, 2016, (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), among Mellanox Technologies, Ltd. and Mellanox Technologies, Inc. (the "Borrowers"), the Lenders from time to time party thereto and JPMCB, as Administrative Agent, and (b) the Collateral Agreement dated as of February 22, 2016 (as amended, restated, supplemented or otherwise modified from time to time, the "Collateral Agreement"), among the Borrowers, the Subsidiary Loan Parties from time to time party thereto and JPMCB, as Administrative Agent. The Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement. The obligations of the Lenders to extend such credit are conditioned upon, among other things, the execution and delivery of this Agreement. The Subsidiary Loan Parties party hereto are Affiliates of the Borrowers, will derive substantial benefits from the extension of credit to the Borrowers pursuant to the Credit Agreement and are willing to execute and deliver this Agreement in order to induce the Lenders to extend such credit. Accordingly, the parties hereto agree as follows:

SECTION 1. Terms. Each capitalized term used but not otherwise defined herein shall have the meaning specified in the Credit Agreement or the Collateral Agreement, as applicable. The rules of construction specified in Section 1.03 of the Credit Agreement also apply to this Agreement, *mutatis mutandis*. Notwithstanding anything contained in this Agreement to the contrary: (a) with respect to the security interests granted by the Israeli Grantors hereunder, this Agreement and each of the terms hereof relating to Patent Collateral shall be limited solely to Patent Collateral located in the United States of America or governed by the laws of the United States of America (including, for the avoidance of doubt, federal laws and state laws); and (b) in respect of Patent Collateral constituting OCS-Funded Know-How, the creation of any security interest over such Patent Collateral and any realization in respect thereof shall be: (i) subject to the OCS Provision (including the Research Law and the OCS approvals dated January 26, 2016 as may be amended from time to time); and (ii) governed by the laws of the State of Israel and subject to the exclusive jurisdiction of the Israeli courts.

SECTION 2. <u>Grant of Security Interest.</u> As security for the payment in full of the Obligations, each Grantor pursuant to the Collateral Agreement did, and hereby does, grant to the Administrative Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest in all right, title and interest in, to and under any and all of the following assets now owned or at any time hereafter acquired by such Grantor or in, to or under which such Grantor now has or at any time hereafter may acquire any right, title or interest (collectively, the "Patent Collateral"):

(a) all letters patent of the United States of America or the equivalent thereof in any other country, all registrations and recordings thereof and all applications for letters patent of the United States of America or the equivalent thereof in any other country or any political subdivision thereof, including registrations, recordings and pending applications in the United

States Patent and Trademark Office, including, in the case of any Grantor, any of the foregoing set forth under its name on <u>Schedule I</u> (as limited by Section 1 above with respect to the security interests granted by the Israeli Grantors hereunder); and

(b) all reissues, continuations, divisionals, continuations-in-part, reexaminations, supplemental examinations, inter partes reviews, renewals, adjustments or extensions thereof, and the inventions disclosed or claimed therein, including the right to make, have made, use, sell, offer to sell, import or export the inventions disclosed or claimed therein.

SECTION 3. <u>Collateral Agreement</u>. The security interests granted to the Administrative Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Administrative Agent pursuant to the Collateral Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Patent Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Collateral Agreement, the terms of the Collateral Agreement shall govern.

SECTION 4. <u>Counterparts</u>. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or other electronic imaging shall be effective as delivery of a manually executed counterpart of this Agreement.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

| MELLANOX TECHNOLOGIES, LITD. |
|--|
| by |
| Name: Title: |
| MELLANOX TECHNOLOGIES TLV LTD. |
| by |
| Name: Title: |
| MELLANOX TECHNOLOGIES SILICON PHOTONICS INC. |
| Name: Title: |
| INTEGRITY PROJECT LTD. by Name: |
| Title: |

[Signature Page to Patent Security Agreement]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

| by | |
|-------|---|
| | Name: Title: |
| MELL. | ANOX TECHNOLOGIES TLV LTD. |
| by | |
| | Name: Title: |
| | |
| | ANOX TECHNOLOGIES SILICON ONICS INC. Washe: Jacob Shulman Title: Chief Financial Officer |
| PHOT(| Name: Jacob Shulman |
| PHOT(| Name: Jacob Shulman Title: Chief Financial Officer |

[Signature Page to Patent Security Agreement]

JPMORGAN CHASE BANK, N.A., as Administrative Agent

by

Name:

Bruce S. Borden Executive Director

Title:

SCHEDULE I

| <u>Loan Party</u> | <u>Title</u> | Application Number | Grant Number |
|---|---|-----------------------|--------------|
| Mellanox Technologies Silicon Photonics Inc. | An electro-optic device | 09/083,395 | 5908305 |
| Mellanox Technologies Silicon Photonics Inc. | Application of electrical field power to Light-Transmitting Medium | 13/136,828 | 8410566 |
| Mellanox Technologies Silicon Photonics Inc. | Assembly of an optical component and optical waveguide | 09/264,441 | 5991484 |
| Mellanox Technologies Silicon Photonics Inc. | Assembly of an optical component and optical waveguide | 08/853,104 | 5881190 |
| Mellanox Technologies Silicon Photonics Inc. | Attenuator Having Reduced Optical Loss in the Pass Mode | 10/371,642 | 6853793 |
| Mellanox Technologies Silicon Photonics Inc. | Compact optical equalizer | 09/991,893 | 6853797 |
| Mellanox Technologies Silicon Photonics Inc. | Connection between an integrated optical waveguide and an optical fiber | 08/643,476 | 5787214 |
| Mellanox Technologies Silicon Photonics Inc. | Controlled Selectivity Etch for Use with Optical Component Fabrication | 10/345,709 | 7005247 |
| Mellanox Technologies Silicon Photonics Inc. | Coupling a Light Sensor Array with an Optical Component | 10/267,812 | 7308166 |
| Mellanox Technologies Silicon Photonics Inc. | Coupling a Light Sensor Array with an Optical Component | 11/980,205 | 7769254 |
| Mellanox Technologies Silicon Photonics Inc. | Detector having tuned resistors | 11/899,402 | 8053722 |
| Mellanox Technologies Silicon Photonics Inc. | Device for re-directing light from an optical waveguide | 09/019,729 | 6108472 |
| Mellanox Technologies Silicon Photonics Inc. | Device with Multiple light sensors receiving light signals from a waveguide | 13/066,542 | 8989540 |
| Mellanox Technologies Silicon Photonics Inc. | Edge coupling of optical devices | 13/694,070 | 9217836 |
| Mellanox Technologies Silicon Photonics Inc. | Efficient Coupling of an optical fiber to optical Component | 09/854,425 | 6614965 |

| Mellanox Technologies Silicon Photonics Inc. | Efficient transfer of light signals between optical devices | 11/881,745 | 7646949 |
|---|---|------------|---------|
| Mellanox Technologies Silicon Photonics Inc. | Electro-optic device | 09/874,999 | 6801702 |
| Mellanox Technologies Silicon Photonics Inc. | Electro-optic modulator | 10/468,938 | 7684655 |
| Mellanox Technologies Silicon Photonics Inc. | End user optical Transceiver with Transmit signal attenuation | 11/985,062 | 7917035 |
| Mellanox Technologies Silicon Photonics Inc. | Enhancing uniformity of slab region thickness in optical components | 13/506,910 | 8728837 |
| Mellanox Technologies Silicon Photonics Inc. | Extension of steps in reflective optical gratings | 12/800,600 | 8463093 |
| Mellanox Technologies Silicon Photonics Inc. | External cavity laser | 09/144,075 | 6101210 |
| Mellanox Technologies Silicon Photonics Inc. | Formation of a surface on an Optical Component | 09/723,757 | 6563997 |
| Mellanox Technologies Silicon Photonics Inc. | Formation of facets on an Optical Component | 10/455,865 | 7267780 |
| Mellanox Technologies Silicon Photonics Inc. | Formation of optical components on a Substrate | 09/785,565 | 6596185 |
| Mellanox Technologies Silicon Photonics Inc. | Forming optical device using multiple mask formation techniques | 12/384,094 | 8571362 |
| Mellanox Technologies Silicon Photonics Inc. | Gain medium providing laser and amplification functionality to optical device | 13/317,340 | 9025241 |
| Mellanox Technologies Silicon Photonics Inc. | Grating having reduced mode dispersion | 11/807,219 | 7409123 |
| Mellanox Technologies Silicon Photonics Inc. | High speed optical intensity modulator | 11/147,403 | 7394949 |
| Mellanox Technologies Silicon Photonics Inc. | High speed optical phase modulator | 11/146,898 | 7394948 |
| Mellanox Technologies Silicon Photonics Inc. | High speed optical phase modulator | 12/154,435 | 7542630 |
| Mellanox Technologies Silicon Photonics Inc. | High speed optical transmitter producing modulated light signals | 13/385,780 | 8526769 |
| Mellanox Technologies Silicon Photonics Inc. | In-line light sensor | 10/500,318 | 7386207 |
| Mellanox Technologies Silicon Photonics Inc. | In-line light sensor | 12/080,824 | 7826700 |

| Mellanox Technologies Silicon Photonics Inc. | In-line light sensor | 12/807,973 | 8326094 |
|---|---|------------|---------|
| Mellanox Technologies Silicon Photonics Inc. | Integrated light absorber | 09/095,817 | 6002514 |
| Mellanox Technologies Silicon Photonics Inc. | Integrated optical device | 09/864,393 | 6556759 |
| Mellanox Technologies Silicon Photonics Inc. | Integrated silicon PIN diode electro-optic device | 08/617,810 | 5757986 |
| Mellanox Technologies Silicon Photonics Inc. | Integration of components on optical device | 13/385,774 | 8638485 |
| Mellanox Technologies Silicon Photonics Inc. | Interface between light source and optical component | 12/215,693 | 7658552 |
| Mellanox Technologies Silicon Photonics Inc. | Isolation device | 09/850,060 | 6628852 |
| Mellanox Technologies Silicon Photonics Inc. | Isolation of components on optical device | 13/506,705 | 8989522 |
| Mellanox Technologies Silicon Photonics Inc. | Light monitor configured to tap portion of light signal from mid-waveguide | 12/804,769 | 8411260 |
| Mellanox Technologies Silicon Photonics Inc. | Light sensor with reduced dark current | 13/506,071 | 8842946 |
| Mellanox Technologies Silicon Photonics Inc. | Method of fabricating an integrated optical component | 09/686,906 | 6509139 |
| Mellanox Technologies Silicon Photonics Inc. | Multi-channel optical device | 11/998,846 | 7542641 |
| Mellanox Technologies Silicon Photonics Inc. | Multi-channel optical device | 13/136,601 | 8463088 |
| Mellanox Technologies Silicon Photonics Inc. | Multi-channel optical device | 12/800,047 | 8965208 |
| Mellanox Technologies Silicon Photonics Inc. | Multiplexer having improved efficiency | 10/644,395 | 7805037 |
| Mellanox Technologies Silicon Photonics Inc. | Optic system for light attenuation | 10/485,970 | 7065264 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having a flat top output | 09/924,398 | 6614951 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having features extending different depths into a light transmitting medium | 12/321,368 | 8021561 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having flat top output | 10/101,481 | 6792180 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having reduced dependency on | 13/385,099 | 8542954 |

| | etch depth | | |
|---|---|------------|---------|
| Mellanox Technologies Silicon Photonics Inc. | Optical component having reduced dependency on etch depth | 13/385,372 | 8515214 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having reduced interference from radiation modes | 10/649,044 | 6970611 |
| Mellanox Technologies Silicon Photonics Inc. | Optical component having selected bandwidth | 09/998,381 | 6714704 |
| Mellanox Technologies Silicon Photonics Inc. | Optical Component Having Waveguides Extending from a Common Region | 10/236,505 | 6921490 |
| Mellanox Technologies Silicon Photonics Inc. | Optical coupler at interface between light sensor and waveguide | 12/291,003 | 7769259 |
| Mellanox Technologies Silicon Photonics Inc. | Optical device having light sensor employing horzontal electric field | 12/380,016 | 8053790 |
| Mellanox Technologies Silicon Photonics Inc. | Optical device having light sensor employing horzontal electric field | 12/584,476 | 8093080 |
| Mellanox Technologies Silicon Photonics Inc. | Optical device having modulator employing horizontal electrical field | 12/653,547 | 8346028 |
| Mellanox Technologies Silicon Photonics Inc. | Optical device having partially butt coupled light sensor | 12/799,633 | 8476576 |
| Mellanox Technologies Silicon Photonics Inc. | Optical device having reduced optical leakage | 13/374,784 | 8817354 |
| Mellanox Technologies Silicon Photonics Inc. | Optical Modulator with Three Dimensional Waveguide Tapers | 12/816,935 | 8401345 |
| Mellanox Technologies Silicon Photonics Inc. | Optical receiver for use with a range of signal strengths | 12/077,068 | 7599596 |
| Mellanox Technologies Silicon Photonics Inc. | Optical system having dynamic waveguide alignment | 12/928,077 | 9217831 |
| Mellanox Technologies Silicon Photonics Inc. | Optical waveguide attenuation | 09/116,082 | 6021248 |
| Mellanox Technologies Silicon Photonics Inc. | Phase Modulator for Semiconductor Waveguide | 09/533,942 | 6298177 |
| Mellanox Technologies Silicon Photonics Inc. | Production of an integrated optical device | 09/578,513 | 6517997 |

| Mellanox Technologies Silicon Photonics Inc. | Reducing optical loss in an optical modulator using depletion region | 12/660,149 | 8737772 |
|---|---|------------|---------|
| Mellanox Technologies Silicon Photonics Inc. | Reducing optical loss in reflective optical grating | 12/927,412 | 8300999 |
| Mellanox Technologies Silicon Photonics Inc. | Rib Waveguide Device With Mode Filter | 09/731,843 | 6516120 |
| Mellanox Technologies Silicon Photonics Inc. | Ring resonator with wavelength selectivity | 12/928,076 | 8897606 |
| Mellanox Technologies Silicon Photonics Inc. | Sensing system having wavelength reflectors that receive modulated light signals | 11/292,317 | 7697121 |
| Mellanox Technologies Silicon Photonics Inc. | Stray light absorption | 09/076,743 | 6298178 |
| Mellanox Technologies Silicon Photonics Inc. | System for managing thermal conduction of optical devices | 13/507,491 | 8731345 |
| Mellanox Technologies Silicon Photonics Inc. | System having light sensor with enhanced sensitivity | 12/803,136 | 8639065 |
| Mellanox Technologies Silicon Photonics Inc. | System having light sensor with enhanced sensitivity including a multiplication layer for generating additional electrons | 12/589,501 | 8242432 |
| Mellanox Technologies Silicon Photonics Inc. | System having optical amplifier incorporated into stacked optical devices | 12/008,717 | 7945131 |
| Mellanox Technologies Silicon Photonics Inc. | System having reduced distance between scintillator and Light Sensor Array | 12/156,784 | 7659519 |
| Mellanox Technologies Silicon Photonics Inc. | Transfer of light signals between optical devices | 13/888,229 | 9052464 |
| Mellanox Technologies Silicon Photonics Inc. | Transfer of light signals between optical fibers and system using optical devices with optical vias | 12/148,784 | 8090231 |
| Mellanox Technologies Silicon Photonics Inc. | Tunable add/drop node | 10/158,399 | 6810168 |
| Mellanox Technologies Silicon Photonics Inc. | Tunable add/drop node for optical network | 09/724,179 | 7113704 |
| Mellanox Technologies Silicon Photonics Inc. | Tunable Filter | 09/845,685 | 6853773 |
| Mellanox Technologies | Tunable optical filter | 09/872,472 | 6674929 |

| Silicon Photonics Inc. | | | |
|---|-------------------------------|----------------|---------|
| Mellanox Technologies | Wafer level testing of | 10/186,187 | 6947622 |
| Silicon Photonics Inc. | optical components | | |
| Mellanox Technologies | Wafer level testing of | 13/694,047 | 8724100 |
| Silicon Photonics Inc. | optical devices | | |
| Mellanox Technologies | Waveguide end face | 09/118,739 | 6266468 |
| Silicon Photonics Inc. | | | |
| Mellanox Technologies | Waveguide tap monitor | 10/161,208 | 6885795 |
| Silicon Photonics Inc. | | 12/207 257 | D 11 |
| Mellanox Technologies | Combining light signals | 13/385,275 | Pending |
| Silicon Photonics Inc. | from multiple laser cavities | | |
| Mellanox Technologies | Control of thermal energy | 14/670,292 | Pending |
| Silicon Photonics Inc. | in optical devices | | |
| Mellanox Technologies | Controlling the | PCT/US/2014/04 | Pending |
| Silicon Photonics Inc. | composition of electro- | 5302 | |
| | absorption media in optical | | |
| | devices | | |
| Mellanox Technologies | Controlling the | 14/322,672 | Pending |
| Silicon Photonics Inc. | composition of electro- | | |
| | absorption media in optical | | |
| | devices | | |
| Mellanox Technologies | Coupling between optical | 13/385,339 | Pending |
| Silicon Photonics Inc. | devices | 14/074 515 | D 11 |
| Mellanox Technologies | Edge construction on | 14/974,515 | Pending |
| Silicon Photonics Inc. | optical devices | | |
| (currently recorded as owned by Kotura, Inc.; | | | |
| Company in process of | | | |
| recording name change) | | | |
| Mellanox Technologies | Electrooptic silicon | 14/282,975 | Pending |
| Silicon Photonics Inc. | modulator with enhanced | 1 11202,573 | Tename |
| | bandwidth | | |
| Mellanox Technologies | Enhancing planarization | 13/694,048 | Pending |
| Silicon Photonics Inc. | uniformity in optical | , | |
| Mellanox Technologies | Enhancing the bandwidth | 14/853,602 | Pending |
| Silicon Photonics Inc. | of light sensors on planar | , | |
| | optical devices | | |
| Mellanox Technologies | Enhancing the performance | 13/889,890 | Pending |
| Silicon Photonics Inc. | of light sensors that receive | | |
| | light signals from an | | |
| | integrated waveguide | | |
| Mellanox Technologies | Integration of laser into | 13/506,629 | Pending |
| Silicon Photonics Inc. | optical platform | | |
| Mellanox Technologies | Optical Device Having | 13/507,468 | Pending |
| Silicon Photonics Inc. | Light Sensor with Doped | | |

| | Regions | | |
|---|--|-----------------------|---------|
| Mellanox Technologies Silicon Photonics Inc. | Reducing power requirements for optical links | 14/280,067 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Reduction of Mode Hopping in a Laser Cavity | 13/573,892 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Resolution of mode hopping in optical links | 14/741,391 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Resolution of mode hopping in the output of laser cavities | 14/869,002 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Temperature control of components on an optical device | 14/231,383 | Pending |
| Mellanox Technologies Silicon Photonics Inc. (currently recorded as owned by Kotura, Inc.; Company in process of recording name change) | Temperature control of components on an optical device | PCT/US2015/023 418 | Pending |
| Mellanox Technologies Silicon Photonics Inc. (currently recorded as owned by Kotura, Inc.; Company in process of recording name change) | Temperature control of a component on an optical device | 14/337,822 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Temperature control of components on an optical device | 14/671,348 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Use of Common Active Materials in Optical Components | 14/048,685 | Pending |
| Mellanox Technologies Silicon Photonics Inc. | Wafer level testing of optical devices | 14/675,256 | Pending |
| Mellanox Technologies TLV Ltd. | Communication link with intra-packet flow control | 13/426,748 | 8908510 |
| Mellanox Technologies TLV Ltd. | Configurable Access Control Lists Using TCAM | 13/310,758 | 8861347 |
| Mellanox Technologies TLV Ltd. | Data Integrity Verification In A Switching Network | 09/614,629 | 6601210 |
| Mellanox Technologies TLV Ltd. | Data Switch with Shared Port Buffers | 12/876,265 | 8644140 |

| Mellanox Technologies TLV Ltd. | Device, System and Method of Accessing Storage | 12/328,140 | 7921178 |
|-----------------------------------|--|------------|---------|
| Mellanox Technologies TLV Ltd. | Device, system and method of multicast communication | 11/727,222 | 7864787 |
| Mellanox Technologies TLV Ltd. | Device, System and Method for Distributing Messages | 12/195,805 | 8108538 |
| Mellanox Technologies TLV Ltd. | Device, System and Method for Distributing Messages | 13/334,216 | 8244902 |
| Mellanox Technologies TLV Ltd. | Device, system and method of publishing information to multiple subscribers | 11/778,109 | 7802071 |
| Mellanox Technologies TLV Ltd. | Device, system and method of UDP communication | 11/727,221 | 7848322 |
| Mellanox Technologies TLV Ltd. | Filtered application-to- application communication | 09/863,423 | 7216225 |
| Mellanox Technologies TLV Ltd. | Forwarding Database Cache | 09/892,852 | 6438130 |
| Mellanox Technologies TLV Ltd. | High-Performance Adaptive Routing | 12/910,900 | 8576715 |
| Mellanox Technologies TLV Ltd. | Memory system for mapping SCSI commands from client device to memory space of server via SSD | 13/064,126 | 8463866 |
| Mellanox Technologies TLV Ltd. | Network element with shared buffers | 13/189,593 | 8699491 |
| Mellanox Technologies TLV Ltd. | Packet switching based on global identifier | 13/154,458 | 8842671 |
| Mellanox Technologies TLV Ltd. | Reducing Power Consumption in a Fat-Tree Network | 13/026,309 | 8570865 |
| Mellanox Technologies TLV Ltd. | Routing support for lossless data traffic | 3/717,733 | 8982703 |
| Mellanox Technologies TLV Ltd. | Service-oriented infrastructure management | 11/635,119 | 7822594 |

| Mellanox Technologies TLV Ltd. | Service-oriented infrastructure management | 12/882,225 | 8280716 |
|-----------------------------------|---|------------|---------|
| | | | |
| Mellanox Technologies TLV Ltd. | Spanning tree root selection in a hierarchical network | 12/426,970 | 8000336 |
| Mellanox Technologies TLV Ltd. | System and Method for Highly Scalable High- Speed Content-base filtering and load balancing in interconnected fabrics | 09/934,535 | 7346702 |
| Mellanox Technologies TLV Ltd. | Topology-Aware Fabric- Based Offloading of Collective Functions | 12/616,152 | 9110860 |
| Mellanox Technologies TLV Ltd. | Virtual input-output connection for machine virtualization | 12/344,235 | 8201168 |
| Mellanox Technologies TLV Ltd. | Virtual input-output connection for machine virtualization | 13/431,995 | 9203645 |
| Mellanox Technologies TLV Ltd. | Adaptive allocation of headroom in network devices | 14/718,114 | Pending |
| Mellanox Technologies TLV Ltd. | Algorithmic Routing in Generalized Fat-Trees | 14/979,667 | Pending |
| Mellanox Technologies TLV Ltd. | Atomic update of packet classification rules | 14/868,405 | Pending |
| Mellanox Technologies TLV Ltd. | Cell-Based Link-Level Retry Scheme | 12/897,808 | Pending |
| Mellanox Technologies TLV Ltd. | Congestion estimation for multi-priority traffic | 14/967,403 | Pending |
| Mellanox Technologies TLV Ltd. | Dynamic thresholds for congestion control | 14/672,357 | Pending |
| Mellanox Technologies TLV Ltd. | EFFICIENT LOOKUP OF TCAM-LIKE RULES IN RAM | 14/827,373 | Pending |
| Mellanox Technologies TLV Ltd. | Error Correction on Demand | 14/870,031 | Pending |
| Mellanox Technologies TLV Ltd. | Flexible Allocation of Packet Buffers | 14/994,164 | Pending |
| Mellanox Technologies TLV Ltd. | High performance Bloom Filtering | 14/827,402 | Pending |
| Mellanox Technologies TLV Ltd. | Implementing MPLS short- pipe with PHP and pipe | 14/705,003 | Pending |

| | models in a lossless network | | |
|--------------------------------|---|------------|----------|
| Mellanox Technologies TLV Ltd. | Loopback-free adaptive routing | 14/970,608 | Pending |
| Mellanox Technologies TLV Ltd. | Memory-efficient handling of multicast traffic | 14/961,923 | Pending |
| Mellanox Technologies TLV Ltd. | Physical-layer signaling of flow control updates | 14/664,944 | Pending |
| Mellanox Technologies TLV Ltd. | Processing Enhanced Cuckoo Hashing | 14/846,777 | Pending |
| Mellanox Technologies TLV Ltd. | Routable Quantized Congestion Notification (R-QCN) | 62/200,669 | Pending |
| Mellanox Technologies TLV Ltd. | Routing controlled by subnet managers | 13/721,052 | Pending |
| Mellanox Technologies TLV Ltd. | Switch chassis with flexible topology | 14/975,788 | Pending |
| Mellanox Technologies, Ltd. | Accurate Global Reference Voltage Distribution System With Local Reference Voltages Referred To Local Ground And Locally Supplied Voltage | 12/726,366 | 9111602 |
| Mellanox Technologies, Ltd. | Adapter For High-Speed Ethernet | 13/225,584 | 8419444 |
| Mellanox Technologies, Ltd. | Adapter for pluggable module | 12/825,365 | 7934959 |
| Mellanox Technologies, Ltd. | Adaptive Routing Using Inter-Switch Notifications | 13/754,921 | 9014006 |
| Mellanox Technologies, Ltd. | Auto-negotiation by nodes on an infiniband fabric | 11/847,360 | 7801027 |
| Mellanox Technologies, Ltd. | Cable with field-writeable memory | 13/091,161 | 8903683 |
| Mellanox Technologies, Ltd. | Communication over Multiple Virtual Lanes Using a Shared Buffer | 13/802,926 | 8989011 |
| Mellanox Technologies, Ltd. | Communication paths from an InfiniBand host | 11/614,057 | 7730214 |
| Mellanox Technologies, Ltd. | Computer bus with enhanced functionality | 13/153,477 | 8671236 |
| Mellanox Technologies, Ltd. | Connector Receptacle Cage | 29/451,884 | D737,777 |

| Mellanox Technologies, Ltd. | Control Message Signature for Device Control | 12/498,381 | 8407478 |
|--------------------------------|--|------------|---------|
| Mellanox Technologies, | Credit-based flow control | 13/245,886 | 8867356 |
| Ltd. Mellanox Technologies, | for ethernet Cross-Channel Network | 12/945,904 | 8811417 |
| Ltd. | Operations Offloading for Collective Operations | | |
| Mellanox Technologies, Ltd. | Current-triggered low turn- on voltage SCR | 11/691,514 | 7518164 |
| Mellanox Technologies, Ltd. | Descriptor prefetch mechanism for high latency and out of order DMA device | 11/621,789 | 7620749 |
| Mellanox Technologies, Ltd. | Destination-Based Congestion Control | 13/304,654 | 8705349 |
| Mellanox Technologies, Ltd. | Direct Memory Access to Storage Devices | 13/943,809 | 8949486 |
| Mellanox Technologies, Ltd. | Direct Updating of Network Delay in Synchronization Packets | 13/778,180 | 9031063 |
| Mellanox Technologies, Ltd. | DMA Doorbell | 09/870,016 | 6735642 |
| Mellanox Technologies, Ltd. | Doorbell Handling with Priority Processing Function | 10/052,500 | 8375145 |
| Mellanox Technologies, Ltd. | Dynamically-connected transport services | 12/621,523 | 8213315 |
| Mellanox Technologies, Ltd. | Efficient Access to Connectivity Information Using Cable Identification | 13/743,364 | 9111466 |
| Mellanox Technologies, Ltd. | Efficient delivery of completion notifications | 13/682,773 | 8924605 |
| Mellanox Technologies, Ltd. | Electro-optic integrated circuits and methods for the production thereof | 12/198,867 | 8043877 |
| Mellanox Technologies, Ltd. | Electro-Optical Circuitry Having Integrated Connector and Methods for the Production thereof | 10/595,372 | 7538358 |
| Mellanox Technologies, Ltd. | End-to-end cache for network elements | 13/609,378 | 9130885 |
| Mellanox Technologies, Ltd. | Fibre Channel Controller Shareable by a Plurality of Operating System Domains within a Load-Store | 11/045,870 | 7512717 |

| | Architecture | | |
|--------------------------------|--|------------|---------|
| | | | |
| Mellanox Technologies, Ltd. | Fibre Channel Controller Shareable by a Plurality of Operating System Domains within a Load-Store Architecture | 11/046,537 | 7493416 |
| Mellanox Technologies, Ltd. | Fibre Channel Controller Shareable by a Plurality of Operating System Domains within a Load-Store Architecture | 11/046,564 | 7617333 |
| Mellanox Technologies, Ltd. | Fibre Channel Processing by a Host Channel Adapter | 12/398,194 | 8948199 |
| Mellanox Technologies, Ltd. | Flip-chip optical interface with micro-lens array | 13/677,374 | 8750657 |
| Mellanox Technologies, Ltd. | Handling Multiple Network Transport Service Levels With Hardware And Sotfware Arbitration | 10/052,435 | 7676597 |
| Mellanox Technologies, Ltd. | Host Channel Adapter With Pattern-type DMA | 13/337,178 | 8751701 |
| Mellanox Technologies, Ltd. | Increasing TCP retransmission process speed | 10/733,630 | 7177941 |
| Mellanox Technologies, Ltd. | Integer divider module | 13/664,428 | 9032010 |
| Mellanox Technologies, Ltd. | Integrated Optical Interconnect | 13/369,324 | 8750660 |
| Mellanox Technologies, Ltd. | Integrated optoelectronic interconnects with side-mounted transducers | 13/419,447 | 8871570 |
| Mellanox Technologies, Ltd. | Interrupt Handling in a Virtual Machine Environment | 13/652,493 | 8949498 |
| Mellanox Technologies, Ltd. | ISCSI target offload administrator | 10/116,523 | 7089587 |
| Mellanox Technologies, Ltd. | Limiting number of retransmission attempts for data transfer via network interface controller | 10/733,668 | 7243284 |
| Mellanox Technologies, Ltd. | Liquid cooling system for modular electronic systems | 13/245,078 | 8817473 |
| Mellanox Technologies, Ltd. | Liquid cooling system for modular electronic systems | 14/322,973 | 8879258 |

| Mellanox Technologies, Ltd. | Look-Ahead Handling of Page Faults in I/O Operations | 13/628,075 | 8914458 |
|--------------------------------|--|------------|---------|
| Mellanox Technologies, Ltd. | Low-latency communications | 13/329,342 | 8869171 |
| Mellanox Technologies, Ltd. | Maintaining consistent quality of service between subnets | 13/754,912 | 9197586 |
| Mellanox Technologies, Ltd. | Method and Apparatus for a Shared I/O Network Interface Controller | 11/050,420 | 8032659 |
| Mellanox Technologies, Ltd. | Method and apparatus for a shared I/O network interface controller | 10/909,254 | 8346884 |
| Mellanox Technologies, Ltd. | Method and apparatus for a shared I/O network interface controller | 13/467,143 | 9015350 |
| Mellanox Technologies, Ltd. | Method and apparatus for a shared I/O network interface controller | 13/467,161 | 9106487 |
| Mellanox Technologies, Ltd. | Method and apparatus for a shared I/O network interface controller | 13/467,174 | 8913615 |
| Mellanox Technologies, Ltd. | Method and apparatus for a shared I/O serial ATA controller | 10/864,766 | 7664909 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 10/757,711 | 7103064 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 11/235,513 | 7620066 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 11/235,514 | 7620064 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 11/381,561 | 7782893 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 10/757,713 | 7457906 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store fabric | 10/757,714 | 7046668 |
| Mellanox Technologies, Ltd. | Method and apparatus for shared I/O in a load/store | 11/379,264 | 7706372 |

| | fabric | | |
|--------------------------------|--|------------|---------|
| Mellanox Technologies, Ltd. | Method, System and Protocol that enable unrestricted user-level access to a network interface adapter | 10/750,762 | 7653754 |
| Mellanox Technologies, Ltd. | Methods and Devices for Active Optical Cable Calibration | 13/733,435 | 9088368 |
| Mellanox Technologies, Ltd. | Methods and Systems for Running Network Protocols Over Peripheral Component Interconnect Express | 13/658,976 | 8990472 |
| Mellanox Technologies, Ltd. | Modulo remainder generator | 09/754,479 | 6728743 |
| Mellanox Technologies, Ltd. | Multiple queue pair access with single doorbell | 09/991,692 | 7543290 |
| Mellanox Technologies, Ltd. | Multiple queue pair access with single doorbell | 12/360,119 | 7929539 |
| Mellanox Technologies, Ltd. | Network acceleration architecture | 11/132,100 | 7760741 |
| Mellanox Technologies, Ltd. | Network adapter utilizing a hashing function for distributing packets to multiple processors for parallel processing | 09/383,741 | 6631422 |
| Mellanox Technologies, Ltd. | Network adapter with shared database for message context information | 11/329,074 | 7603429 |
| Mellanox Technologies, Ltd. | Network adapter with shared database for message context information | 12/369,795 | 7930437 |
| Mellanox Technologies, Ltd. | Network Adapter with shared database for message context information | 12/208,355 | 8019902 |
| Mellanox Technologies, Ltd. | Network Adapter with shared database for message context information | 13/177,572 | 8671138 |

| Mellanox Technologies, | Network Controller for | 11/045,869 | 7502370 |
|--------------------------------|--|------------|---------|
| Ltd. | Obtaining a Plurality of | , , | |
| | Network Port Identifiers in | | |
| | Response to Load-Store | | |
| | Transactions from a | | |
| | Corresponding Plurality of | | |
| | Operatying System | | |
| | Domains Within a Load- | | |
| | Store Architecture | | |
| Mellanox Technologies, | Network interface adapter | 10/000,456 | 8051212 |
| Ltd. | with shared data send | | |
| | resources | | |
| Mellanox Technologies, | Network interface | 13/731,130 | 9008097 |
| Ltd. | controller supporting | | |
| | network virtualization | | |
| Mellanox Technologies, | Network interface | 13/280,457 | 9143467 |
| Ltd. | controller with circular | | |
| | receive buffer | | |
| Mellanox Technologies, | Network Interface | 13/229,772 | 8645663 |
| Ltd. | Controller with Flexible | | |
| | Memory Handling | | |
| Mellanox Technologies, | Network interface device | 12/430,912 | 8255475 |
| Ltd. | with memory management | | |
| | capabilities | | |
| Mellanox Technologies, | Optical interface and | 13/731,025 | 8870467 |
| Ltd. | splitter with micro-lens | | |
| 76.11 | array | 10/06/006 | 00/5050 |
| Mellanox Technologies, | Optical module fabricated | 13/366,326 | 8867870 |
| Ltd. | on folded printed circuit | | |
| M 11 TO 1 1 ' | board | 00/750 020 | (000400 |
| Mellanox Technologies, | Packet Communication | 09/758,029 | 6922408 |
| Ltd. | Buffering With Dynamic | | |
| Mallanay Tashnalasias | Flow Control | 14/204 167 | 0016057 |
| Mellanox Technologies, Ltd. | Parallel Optics Integrated | 14/294,167 | 9016957 |
| | Cooling Planar optical interface and | 13/532,829 | 8690455 |
| Mellanox Technologies, Ltd. | _ | 15/352,629 | 0090433 |
| Mellanox Technologies, | splitter Precise clock | 12/618,730 | 8370675 |
| Ltd. | synchronization | 12/010,/30 | 03/00/3 |
| Mellanox Technologies, | Prefetching of receive | 10/218,605 | 7631106 |
| Ltd. | queue descriptors | 10/210,003 | /031100 |
| Mellanox Technologies, | Processing of Block and | 12/573,119 | 8225182 |
| Ltd. | Transaction signatures | 121010,117 | 0223102 |
| | | 12/480 474 | 8751000 |
| Mellanox Technologies, Ltd. | Processing of Block and Transaction signatures | 13/489,474 | 8751909 |
| Liu. | Transaction signatures | | |

| Mellanox Technologies, Ltd. | Processing of data integrity field (DIF) | 12/512,026 | 8365057 |
|--------------------------------|---|------------|---------|
| Mellanox Technologies, Ltd. | Queue pair context cache | 10/052,413 | 7152122 |
| Mellanox Technologies, Ltd. | Receive Queue Descriptor Pool | 10/200,189 | 7263103 |
| Mellanox Technologies, Ltd. | Recovering dropped instructions in a network interface controller | 13/326,354 | 8694701 |
| Mellanox Technologies, Ltd. | Recovery from iSCSI corruption with RDMA ATP mechanism | 10/905,812 | 7343527 |
| Mellanox Technologies, Ltd. | Reducing Power Consumption in a Fat-Tree Network | 14/033,471 | 9106387 |
| Mellanox Technologies, Ltd. | Reducing size of completion notifications | 13/682,772 | 8959265 |
| Mellanox Technologies, Ltd. | Reliable Message Transmission With Packet- Level Resend | 10/119,808 | 7013419 |
| Mellanox Technologies, Ltd. | Responding to dynamically-connected transport requests | 13/535,382 | 8761189 |
| Mellanox Technologies, Ltd. | Responding to dynamically-connected transport requests | 14/277,793 | 9031086 |
| Mellanox Technologies, Ltd. | Round-robin arbiter with low jitter | 10/158,476 | 7149227 |
| Mellanox Technologies, Ltd. | Self-repair of embedded memory arrays | 10/135,361 | 6667918 |
| Mellanox Technologies, Ltd. | Shared memory access using independent memory maps | 13/471,558 | 9256545 |
| Mellanox Technologies, Ltd. | Sharing A Network Interface Card Among Multiple Hosts | 10/127,710 | 7245627 |
| Mellanox Technologies, Ltd. | Software Interface Between A Parallel Bus And A Packet Network | 09/655,919 | 6668299 |
| Mellanox Technologies, Ltd. | Static Rate Flow Control | 10/054,148 | 7224669 |
| Mellanox Technologies, Ltd. | Switch with Dual-Function Management Port | 13/755,137 | 8908704 |
| Mellanox Technologies, Ltd. | Synchronization Of Interrupts With Data Packets | 09/559,352 | 6243787 |

| Mellanox Technologies, Ltd. | Synchronization Of Interrupts With Data Pockets | 10/070,594 | 6978331 |
|--------------------------------|--|------------|---------|
| Mellanox Technologies, Ltd. | System and method for accelerating input/output access operation on a virtual machine | 14/011,767 | 9003418 |
| Mellanox Technologies, Ltd. | System and Method for Accelerating Input/Output Access Operation on a Virtual Machine | 11/208,528 | 8645964 |
| Mellanox Technologies, Ltd. | System And Method For Accelerating Input/Output Access Operation On A Virtual Machine | 12/699,894 | 8196144 |
| Mellanox Technologies, Ltd. | System And Method For Accelerating Input/Output Access Operation On A Virtual Machine | 13/420,641 | 8595741 |
| Mellanox Technologies, Ltd. | System and method for sequencing packets for multiprocessor parallelization in a computer network system | 09/213,920 | 6338078 |
| Mellanox Technologies, Ltd. | Terminated input buffer with an offset cancellation circuit | 11/744,891 | 7514978 |
| Mellanox Technologies, Ltd. | Topology-based consolidation of link state information | 13/114,071 | 9225628 |
| Mellanox Technologies, Ltd. | Transceiver Receptacle Cage | 14/191,550 | 9112314 |
| Mellanox Technologies, Ltd. | Transceiver Socket Adapter for Passive Optical Cable | 13/898,557 | 8944704 |
| Mellanox Technologies, Ltd. | Transmit flow for network acceleration architecture | 11/132,853 | 7733875 |
| Mellanox Technologies, Ltd. | Use of free pages in handling of page faults | 13/628,187 | 8745276 |
| Mellanox Technologies, Ltd. | Virtualization of Interrupts | 13/207,418 | 8886862 |
| Mellanox Technologies, Ltd. | Quad Small Form-factor Pluggable Connector: QSFP extraction Latch design for AOC | 29/481,151 | D744957 |
| Mellanox Technologies, | Connector Module | 29/464,186 | D734728 |

| Ltd. | | | |
|------------------------|----------------------------|--------------|-------------|
| Mellanox Technologies, | Accelerating and | 14/753,159 | Pending |
| Ltd. | Offloading Lock Access | 1 11 100,100 | 1 onums |
| | Over a Network | | |
| Mellanox Technologies, | Accessing Remote Storage | 14/215,097 | Pending |
| Ltd. | Device Using a Local BUS | 1 1/213,057 | Tenamg |
| Liu. | protocol | | |
| Mellanox Technologies, | Adaption of data center | 14/222,887 | Pending |
| Ltd. | performance using | 14/222,007 | rending |
| Liu. | VCSEL/PD control | | |
| Mallana Tarkania | | 14/672 202 | D. a. I' a |
| Mellanox Technologies, | Adaptive routing | 14/673,892 | Pending |
| Ltd. | controlled by source node | | |
| Mellanox Technologies, | Adaptive Routing Using | 14/662,259 | Pending |
| Ltd. | Inter-Switch Notifications | | |
| Mellanox Technologies, | Address translation | 14/953,462 | Pending |
| Ltd. | services for direct | | |
| | accessing of local memory | | |
| | over a network fabric | | |
| Mellanox Technologies, | Aggregation Protocol | 62/211,885 | Pending |
| Ltd. | | | |
| Mellanox Technologies, | Application-assisted | 13/628,155 | Pending |
| Ltd. | handling of page faults in | 10,020,100 | 1 January 5 |
| | I/O operations | | |
| Mellanox Technologies, | Buffering schemes for | 14/207,680 | Pending |
| Ltd. | communication over long | | 8 |
| Eta. | haul links | | |
| Mellanox Technologies, | Cable Backplane | 14/445,079 | Pending |
| Ltd. | Cable Backplane | 11/11/5,075 | renamg |
| Mellanox Technologies, | Cable with field-writeable | 14/527,928 | Pending |
| Ltd. | memory | 14/32/,720 | Tending |
| Liu. | memory | | |
| Mallanay Tashnalasias | Caharanayayar DCIa | 62/246 066 | Dandina |
| Mellanox Technologies, | Coherency over PCIe | 62/246,066 | Pending |
| Ltd. | Callaha nationa Handanana | 14/019 500 | Dan din a |
| Mellanox Technologies, | Collaborative Hardware | 14/918,599 | Pending |
| Ltd. | Interaction By Multiple | | |
| | Entities Using A Shared | | |
|) | Queue | 10/051 150 | D 11 |
| Mellanox Technologies, | Compact Optical Fiber | 13/851,178 | Pending |
| Ltd. | Splitters | 11/50100 | |
| Mellanox Technologies, | Configurable AEN | 14/534,207 | Pending |
| Ltd. | Notification | | |
| Mellanox Technologies, | Congestion Control | 14/338,488 | Pending |
| Ltd. | Enforcement in a | | |
| | Virtualized Environment | | |
| Mellanox Technologies, | Connector Extraction Tool | 13/905,149 | Pending |

| Ltd. | | | |
|--------------------------------|--|------------|---------|
| Mellanox Technologies, Ltd. | Connector module with internal wireless communication device | 14/662,258 | Pending |
| Mellanox Technologies, Ltd. | Credit-based flow control for long-haul links | 14/335,962 | Pending |
| Mellanox Technologies, Ltd. | Credit-Based Low-Latency Arbitration with Data Transfer | 13/763,676 | Pending |
| Mellanox Technologies, Ltd. | Cross-Channel Network Operations Offloading for Collective Operations | 14/324,246 | Pending |
| Mellanox Technologies, Ltd. | Cross-Channel Network Operations Offloading for Collective Operations | 14/937,907 | Pending |
| Mellanox Technologies, Ltd. | Decision Mechanisms for Adaptive Routing | 14/732,853 | Pending |
| Mellanox Technologies, Ltd. | Detection Of Root And Victim Network Congestion | 14/052,743 | Pending |
| Mellanox Technologies, Ltd. | Differentiating among multiple management control instances using IP addresses | 14/628,256 | Pending |
| Mellanox Technologies, Ltd. | Differentiating among multiple management control instances using IP addresses | 14/700,206 | Pending |
| Mellanox Technologies, Ltd. | Direct access to local memory in a PCI-e device | 14/721,009 | Pending |
| Mellanox Technologies, Ltd. | Direct IO access from a CPU's instruction stream | 14/608,252 | Pending |
| Mellanox Technologies, Ltd. | DMA, MMIO and PCIe emulation by a network device | 62/162,854 | Pending |
| Mellanox Technologies, Ltd. | Dragonfly Plus: Communication Over Bipartite Node Groups Connected by a Mesh Network | 14/337,334 | Pending |
| Mellanox Technologies, Ltd. | Dynamic optimization for IP forwarding performance | 62/239,990 | Pending |
| Mellanox Technologies, Ltd. | Efficient implementation of MPLS tables for multilevel and multi-path | 14/665,005 | Pending |

| | scenarios | | |
|--------------------------------|--|-----------------------|---------|
| Mellanox Technologies, Ltd. | Efficient Management of Network Traffic in a Multi- CPU Server | 14/608,265 | Pending |
| Mellanox Technologies, Ltd. | Efficient ordering and flushing mechanisms for peer or remote device | 62/183,213 | Pending |
| Mellanox Technologies, Ltd. | Efficient peer-to-peer entity ID-based access control | 62/192,582 | Pending |
| Mellanox Technologies, Ltd. | Efficient TCP flow processing on an accelerator | 62/163,995 | Pending |
| Mellanox Technologies, Ltd. | End-to-end cache for network elements | 14/813,142 | Pending |
| Mellanox Technologies, Ltd. | Flow-based packet modification | 14/729,127 | Pending |
| Mellanox Technologies, Ltd. | Handling transport layer operations received out of order | 14/132,014 | Pending |
| Mellanox Technologies, Ltd. | Hardware-based congestion control for TCP traffic | 62/234,046 | Pending |
| Mellanox Technologies, Ltd. | High-reliability AOC with redundant emitters | 14/458,273 | Pending |
| Mellanox Technologies, Ltd. | High-speed optical module with flexible printed circuit board | 13/481,874 | Pending |
| Mellanox Technologies, Ltd. | HYBRID TAG MATCHING | 14/834,443 | Pending |
| Mellanox Technologies, Ltd. | Integrated Circuit Inductor | 14/172,969 | Pending |
| Mellanox Technologies, Ltd. | Integrated optical cooling core for optoelectronic interconnect modules | 14/667,941 | Pending |
| Mellanox Technologies, Ltd. | Interconnection Between Silicon Photonics Devices and Optical Fibers | 13/935,511 | Pending |
| Mellanox Technologies, Ltd. | Interconnection Between Silicon Photonics Devices and Optical Fibers | PCT/IB2014/060 688 | Pending |
| Mellanox Technologies, Ltd. | Low-Latency Processing in a Network Node | 14/247,255 | Pending |

| Mellanox Technologies, Ltd. | Maintaining a system state cache | 14/265,397 | Pending |
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| Mellanox Technologies, Ltd. | Management of data transmission limits for congestion control | 14/730,257 | Pending |
| Mellanox Technologies, Ltd. | Memory sharing using RDMA | 14/672,397 | Pending |
| Mellanox Technologies, Ltd. | Method, apparatus and computer product for sending or receiving data over multiple networks | 12/785,499 | Pending |
| Mellanox Technologies, Ltd. | Methods and System for Polling Memory Outside a Processor Thread | 13/671,475 | Pending |
| Mellanox Technologies, Ltd. | Methods and Systems for Error-Correction Decoding | 13/839,193 | Pending |
| Mellanox Technologies, Ltd. | Methods and Systems for Network Congestion Management | 13/803,144 | Pending |
| Mellanox Technologies, Ltd. | Module compliance boards for quad small form-factor pluggable (QSFP) devices | 14/690,428 | Pending |
| Mellanox Technologies, Ltd. | Mounting rail with internal power cable | 13/109,031 | Pending |
| Mellanox Technologies, Ltd. | MPLS forwarding without label swapping | 14/634,842 | Pending |
| Mellanox Technologies, Ltd. | Multi-Host Network Interface Controller with Host Management | 14/583,124 | Pending |
| Mellanox Technologies, Ltd. | Multi-slot plug-in card | 14/963,266 | Pending |
| Mellanox Technologies, Ltd. | Network interface controller supporting network virtualization | 14/637,414 | Pending |
| Mellanox Technologies, Ltd. | Network Interface Controller with Compression | 13/792,083 | Pending |
| Mellanox Technologies, Ltd. | Network interface controller with direct connection to host memory | 14/033,470 | Pending |
| Mellanox Technologies, Ltd. | Network Memory | 14/847,021 | Pending |
| Mellanox Technologies, Ltd. | Network with Fallback Routing | 14/745,488 | Pending |
| Mellanox Technologies, Ltd. | Network-Attached Memory | 14/644,400 | Pending |

| Mellanox Technologies, Ltd. | NIC with switching functionality between its network ports | 14/658,260 | Pending |
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| Mellanox Technologies, Ltd. | Offloading Node CPU in Distributed Redundant Storage Systems | 13/925,868 | Pending |
| Mellanox Technologies, Ltd. | Optical Module | 14/354,759 | Pending |
| Mellanox Technologies, Ltd. | Optical Module | PCT/JP2012/0776 49 | Pending |
| Mellanox Technologies, Ltd. | Packet steering | 13/291,143 | Pending |
| Mellanox Technologies, Ltd. | Packet Switch with Reduced Latency | 13/972,968 | Pending |
| Mellanox Technologies, Ltd. | Page resolution status reporting | 14/846,870 | Pending |
| Mellanox Technologies, Ltd. | Passing power-related information from a host CPU to a peripheral device | 14/836,988 | Pending |
| Mellanox Technologies, Ltd. | Peripheral device assistance in reducing CPU power consumption | 14/745,549 | Pending |
| Mellanox Technologies, Ltd. | Polymer-Based Interconnection between Silicon Photonics Devices and Optical Fibers | 13/935,515 | Pending |
| Mellanox Technologies, Ltd. | Prioritized Handling of Incoming Packets by a Network Interface Controller | 13/481,890 | Pending |
| Mellanox Technologies, Ltd. | Reducing Processor Loading During Housekeeping Operations | 14/224,272 | Pending |
| Mellanox Technologies, Ltd. | Remote transactional memory | 14/665,043 | Pending |
| Mellanox Technologies, Ltd. | Sharing address translation between CPU and peripheral devices | 13/665,946 | Pending |
| Mellanox Technologies, Ltd. | Simplified packet routing | 14/046,976 | Pending |
| Mellanox Technologies, Ltd. | Simultaneous Operation of Remote Management and Link Aggregation | 14/547,160 | Pending |

| Mellanox Technologies, Ltd. | Storage System and Server | 14/215,099 | Pending |
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| Mellanox Technologies, Ltd. | Summing Multiple Floating Point Numbers in an Associative Manner | 15/041,038 | Pending |
| Mellanox Technologies, Ltd. | Switch fabric support for overlay network features | 13/731,030 | Pending |
| Mellanox Technologies, Ltd. | Time-Efficient Network Function Virtualization Architecture | 14/616,760 | Pending |
| Mellanox Technologies, Ltd. | Traffic-Dependent Adaptive Interrupt Moderation | 14/664,988 | Pending |
| Mellanox Technologies, Ltd. | Transceiver Receptacle Cage | 14/684,527 | Pending |
| Mellanox Technologies, Ltd. | Transport-Level Link Aggregation and High Availability for Stateful IO Devices | 14/666,342 | Pending |
| Mellanox Technologies, Ltd. | Twin Axial Cable structure for transmitting signals | 14/860/166 | Pending |
| Mellanox Technologies, Ltd. | Uniting FDB lookups for encapsulated packets | 13/845,182 | Pending |
| Mellanox Technologies, Ltd. | Using a single work item to send multiple messages | 62/139,843 | Pending |
| Mellanox Technologies, Ltd. | Wavelength Auto Negotiation | 13/958,561 | Pending |
| Mellanox Technologies, Ltd. | New Lens and New MT Spring | 29/519,274 | Pending |
| Mellanox Technologies, Ltd. | Quad Small Form-factor Pluggable back shell design for AOC | 29/531,312 | Pending |
| Integrity Project Ltd. | System and methods thereof for safe compilation of code into embedded processing systems | 14/436,090 | Pending |

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