

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4348461

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	INTELLECTUAL PROPERTY SECURITY AGREEMENT
<b>SEQUENCE:</b>	2

**CONVEYING PARTY DATA**

Name	Execution Date
ATIEVA, INC	03/31/2017

**RECEIVING PARTY DATA**

<b>Name:</b>	TRINITY CAPITAL FUND III, L. P.
<b>Street Address:</b>	2121 WEST CHANDLER BOULEVARD, SUITE 103
<b>City:</b>	CHANDLER
<b>State/Country:</b>	ARIZONA
<b>Postal Code:</b>	85224

**PROPERTY NUMBERS Total: 194**

Property Type	Number
Patent Number:	9584126
Patent Number:	9578788
Patent Number:	9543870
Patent Number:	9533544
Patent Number:	9527404
Patent Number:	9517705
Patent Number:	9517703
Patent Number:	9514086
Patent Number:	9511645
Patent Number:	9496727
Patent Number:	9495814
Patent Number:	9493082
Patent Number:	9490465
Patent Number:	9487237
Patent Number:	9487218
Patent Number:	9472968
Patent Number:	9469199
Patent Number:	9463715
Patent Number:	9463700

PATENT

<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	9463697
<b>Patent Number:</b>	9452692
<b>Patent Number:</b>	9446682
<b>Patent Number:</b>	9446643
<b>Patent Number:</b>	9444384
<b>Patent Number:</b>	9444125
<b>Patent Number:</b>	9442688
<b>Patent Number:</b>	9440604
<b>Patent Number:</b>	9440603
<b>Patent Number:</b>	9431951
<b>Patent Number:</b>	9431644
<b>Patent Number:</b>	9430438
<b>Patent Number:</b>	9428185
<b>Patent Number:</b>	9428126
<b>Patent Number:</b>	9428119
<b>Patent Number:</b>	9428118
<b>Patent Number:</b>	9419259
<b>Patent Number:</b>	9407189
<b>Patent Number:</b>	9406234
<b>Patent Number:</b>	9397376
<b>Patent Number:</b>	9397375
<b>Patent Number:</b>	9386335
<b>Patent Number:</b>	9385644
<b>Patent Number:</b>	9383414
<b>Patent Number:</b>	9381809
<b>Patent Number:</b>	9344026
<b>Patent Number:</b>	9337769
<b>Patent Number:</b>	9306247
<b>Patent Number:</b>	9306246
<b>Patent Number:</b>	9305463
<b>Patent Number:</b>	9296297
<b>Patent Number:</b>	9290094
<b>Patent Number:</b>	9283837
<b>Patent Number:</b>	9236593
<b>Patent Number:</b>	9229889
<b>Patent Number:</b>	9228641
<b>Patent Number:</b>	9227581
<b>Patent Number:</b>	9221409

<b>Property Type</b>	<b>Number</b>
Patent Number:	9221338
Patent Number:	9200697
Patent Number:	9193314
Patent Number:	9189009
Patent Number:	9184427
Patent Number:	9182293
Patent Number:	9176516
Patent Number:	9142977
Patent Number:	9120389
Patent Number:	9118266
Patent Number:	9109666
Patent Number:	9085210
Patent Number:	9084004
Patent Number:	9073397
Patent Number:	9061714
Patent Number:	9054402
Patent Number:	9052168
Patent Number:	9043086
Patent Number:	9041454
Patent Number:	9040185
Patent Number:	9033085
Patent Number:	9022402
Patent Number:	9022401
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Patent Number:	8989963
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Patent Number:	8872518
Patent Number:	8866441
Patent Number:	8846232
Patent Number:	8803485
Patent Number:	8685563
Patent Number:	8426063
Patent Number:	8278573
Patent Number:	8143855

<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13433017
<b>Application Number:</b>	13434678
<b>Application Number:</b>	13434692
<b>Application Number:</b>	13434707
<b>Application Number:</b>	13794535
<b>Application Number:</b>	14538644
<b>Application Number:</b>	14986029
<b>Application Number:</b>	13801936
<b>Application Number:</b>	13834983
<b>Application Number:</b>	13835170
<b>Application Number:</b>	13835595
<b>Application Number:</b>	13835760
<b>Application Number:</b>	13948307
<b>Application Number:</b>	14194527
<b>Application Number:</b>	14880866
<b>Application Number:</b>	15156183
<b>Application Number:</b>	14194533
<b>Application Number:</b>	13920224
<b>Application Number:</b>	13948330
<b>Application Number:</b>	13940170
<b>Application Number:</b>	13171442
<b>Application Number:</b>	12972518
<b>Application Number:</b>	14834310
<b>Application Number:</b>	14082495
<b>Application Number:</b>	14972701
<b>Application Number:</b>	14084198
<b>Application Number:</b>	14148933
<b>Application Number:</b>	14149116
<b>Application Number:</b>	14287696
<b>Application Number:</b>	14287801
<b>Application Number:</b>	14287925
<b>Application Number:</b>	14288007
<b>Application Number:</b>	14304512
<b>Application Number:</b>	15286409
<b>Application Number:</b>	14340606
<b>Application Number:</b>	14462104
<b>Application Number:</b>	15263672
<b>Application Number:</b>	14503683

<b>Property Type</b>	<b>Number</b>
Application Number:	14519256
Application Number:	14519448
Application Number:	14519708
Application Number:	14519943
Application Number:	14520046
Application Number:	14520171
Application Number:	14600031
Application Number:	14600081
Application Number:	14600115
Application Number:	14553506
Application Number:	14560680
Application Number:	14560950
Application Number:	14588526
Application Number:	14588630
Application Number:	14598019
Application Number:	14957667
Application Number:	14644273
Application Number:	15006202
Application Number:	14663517
Application Number:	14641335
Application Number:	14698394
Application Number:	14698539
Application Number:	14698630
Application Number:	14691932
Application Number:	14708966
Application Number:	14692557
Application Number:	14691694
Application Number:	15219425
Application Number:	14746881
Application Number:	14746916
Application Number:	14747050
Application Number:	14747271
Application Number:	14793959
Application Number:	14802207
Application Number:	14823844
Application Number:	14837345
Application Number:	14854748
Application Number:	14865023

Property Type	Number
Application Number:	14865252
Application Number:	14927757
Application Number:	14927826
Application Number:	14970658
Application Number:	14940468
Application Number:	14940578
Application Number:	14971064
Application Number:	15057169
Application Number:	15057183
Application Number:	15040204
Application Number:	15040259
Application Number:	15040417
Application Number:	15238807
Application Number:	15238845
Application Number:	15238954
Application Number:	15239002
Application Number:	15229498
Application Number:	15333390
Application Number:	15255587
Application Number:	15255675
Application Number:	15278266
Application Number:	15377205
Application Number:	15350610

**CORRESPONDENCE DATA**

**Fax Number:** (714)755-8290  
*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:** 714-540-1235  
**Email:** ipdocket@lw.com  
**Correspondent Name:** LATHAM & WATKINS LLP  
**Address Line 1:** 650 TOWN CENTER DRIVE, SUITE 2000  
**Address Line 4:** COSTA MESA, CALIFORNIA 92626

<b>ATTORNEY DOCKET NUMBER:</b>	058488-0021
<b>NAME OF SUBMITTER:</b>	ANNA T KWAN
<b>SIGNATURE:</b>	/atk/
<b>DATE SIGNED:</b>	03/31/2017

**Total Attachments: 23**  
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## INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT ("Agreement") dated as of March 31, 2017, is made by ATIEVA, INC., an exempted company incorporated under the laws of the Cayman Islands ("Parent"), ATIEVA USA, INC, a Delaware corporation (dba Lucid Motors USA, Inc.) ("Atieva USA"), and AVB METRICS, LLC, a Delaware limited liability company (together with Parent and Atieva USA, individually and collectively, jointly and severally, "Grantor"), in favor of TRINITY CAPITAL FUND III, L. P., a Delaware limited partnership ("Lender").

### RECITALS

A. Grantor has entered into a Loan and Security Agreement with Lender, dated as of the date hereof (as amended, restated, or otherwise modified from time to time, the "Loan Agreement"). All capitalized terms used but not defined herein shall have the respective meanings given to them in the Loan Agreement.

B. Pursuant to the terms of the Loan Agreement, Grantor has granted to Lender for its benefit a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Loan Agreement, Grantor hereby represents, warrants, covenants and agrees as follows:

### AGREEMENT

1. Grant of Security Interest. To secure its obligations under the Loan Agreement, Grantor grants and pledges to Lender for its benefit a security interest in all of Grantor's right, title and interest in, to and under its intellectual property (all of which shall collectively be called the "Intellectual Property Collateral"), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions, re-examination



certificates, utility models, and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the “Patents”);

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the “Trademarks”);

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the “Mask Works”);

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Recordation. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this Agreement upon request by Lender.

Grantor hereby authorizes Lender to (a) modify this Agreement unilaterally by amending the exhibits to this Agreement to include any Intellectual Property Collateral which Grantor obtains subsequent to the date of this Agreement and (b) file a duplicate original of this Agreement containing amended exhibits reflecting such new Intellectual Property Collateral.

3. Loan Documents. This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement, which is hereby incorporated by reference. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Lender with respect to the Intellectual Property Collateral are as provided by the Loan Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

4. Execution in Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument. Delivery of an executed counterpart of a signature page of this Agreement by facsimile, portable

document format (.pdf) or other electronic transmission will be as effective as delivery of a manually executed counterpart hereof.

5. Successors and Assigns. The provisions of this Agreement shall inure to the benefit of the parties hereto and their respective successors and assigns. Grantor shall not assign its obligations under this Agreement without Lender's express prior written consent, and any such attempted assignment shall be void and of no effect. Lender may assign, transfer, or endorse its rights hereunder pursuant to the terms of the Loan Agreement without prior notice to Grantor, and all of such rights shall inure to the benefit of Lender's successors and assigns.

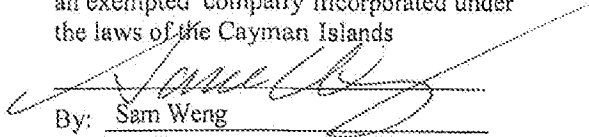
6. Governing Law. This Agreement has been negotiated and delivered to Lender in the State of Delaware, and shall have been accepted by Lender in the State of Delaware. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

*[Signature pages follow.]*

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

**GRANTOR:**

**ATIEVA, INC.,**  
an exempted company incorporated under  
the laws of the Cayman Islands

  
By: Sam Weng

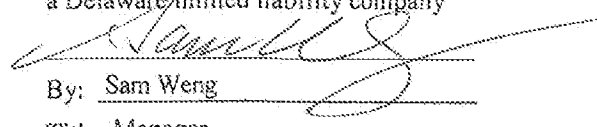
Title: Director and Chief Executive Officer

**ATIEVA USA, INC,**  
a Delaware corporation (dba Lucid Motors  
USA, Inc.)

By: Doug Haslam

Title: Vice President and Secretary

**AVB METRICS, LLC,**  
a Delaware limited liability company

  
By: Sam Weng

Title: Manager

*[Signature Page to Intellectual Property Security Agreement (Trinity/Lucid Motors)]*

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

**GRANTOR:**

**ATIEVA, INC.,**

an exempted company incorporated under  
the laws of the Cayman Islands

\_\_\_\_\_  
By: Sam Weng

Title: Director and Chief Executive Officer

**ATIEVA USA, INC,**

a Delaware corporation (dba Lucid Motors  
USA, Inc.)

\_\_\_\_\_  
By: Doug Haslam

Title: Vice President and Secretary

**AVB METRICS, LLC,**

a Delaware limited liability company

\_\_\_\_\_  
By: Sam Weng

Title: Manager

*[Signature Page to Intellectual Property Security Agreement (Trinity/Lucid Motors)]*

LENDER:

TRINITY CAPITAL FUND III, L.P., a Delaware  
limited partnership

By: TRINITY SBIC PARTNER II, LLC, a  
Delaware limited liability company

Its: General Partner

By: TRINITY SBIC MANAGEMENT, INC., a  
Delaware corporation

Its: Manager

By:           S L B          

Steven L. Brown

Its: President

*[Signature Page to Intellectual Property Security Agreement (Trinity/Lucid Motors)]*

**PATENT**  
**REEL: 042125 FRAME: 0909**

**EXHIBIT A**  
**COPYRIGHTS**

*N/A*

## EXHIBIT B

### PATENTS

Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
Method of Electrically Connecting Cell Terminals in a Battery Pack	9710323.8	8/26/2010	602009031639.7	6/10/2015	Non-US	Battery Lab & Algorithms	Issued
Battery System and Method for Cell Holding and Electrical Connection	9710323.8	8/26/2010	2253037	6/10/2015	Non-US	Battery Lab & Algorithms	Issued
Method of Electrically Connecting Cell Terminals in a Battery Pack	12/372,656	2/17/2009	8426063	4/23/2013	US	Battery Lab & Algorithms	Issued
Method of Electrically Connecting Cell Terminals in a Battery Pack	13/857,991	4/5/2013	8685563	4/1/2014	US	Battery Lab & Algorithms	Issued
Method of Cooling a Battery Pack Using Flat Heat Pipes	12/372,693	2/17/2009	8231996	7/31/2012	US	Battery Lab & Algorithms	Issued <sup>1</sup>
A Rechargeable Split Battery System	200980113518.3	10/15/2010	ZL200980113518.3	9/3/2014	Non-US	Battery Lab & Algorithms	Issued
Rechargeable Split Battery System	12/372,714	2/17/2009	8143855	3/27/2012	US	Battery Lab & Algorithms	Issued
Interlock Mechanism for a Multiple Battery Pack	201080045724.8	4/10/2010	ZL2010800457248	11/25/2015	Non-US	Battery Lab & Algorithms	Issued
Interlock Mechanism for a Multiple Battery Pack	12/943,849	11/10/2010	8866441	10/21/2014	US	Battery Lab & Algorithms	Issued
Flash Cooling System for Increased Battery Safety	2010105414664	11/11/2010	102064364	2/03/2016	Non-US	Battery Lab & Algorithms	Issued
Flash Cooling System for Increased Battery Safety	12/943,882	11/10/2010	8846232	9/30/2014	US	Battery Lab & Algorithms	Issued
High Efficiency Adaptive Power Conversion System and Method of Operation Thereof	12/732,162	3/25/2010	8803485	8/12/2014	US	Powertrain	Issued
Determining the State-of-Charge of Batteries via Selective Sampling of Extrapolated Open Vent Circuit Voltage	12/823,268	6/25/2010	8872518	10/28/2014	US	Battery Lab & Algorithms	Issued
Battery Charging Station	201210024627.1	2/3/2012	ZL2012100246271	3/02/2016	Non-US		Issued
Battery Charging Station	13/021,007	2/4/2011	8952656	2/10/2015	US	Battery Lab & Algorithms	Issued
Battery Charging Station	14/617,816	2/9/2015	9493082	11/15/2016	US	Battery Lab & Algorithms	Issued
Method and Apparatus for Determining the State-of-Charge of a Battery	201210094055.4	3/31/2012	ZL 2012100940554	8/3/2016	Non-US	Battery Lab & Algorithms	Issued
Method and Apparatus for Determining the State-of-Charge of a Battery	13/433,017	3/28/2012			US	Battery Lab & Algorithms	Pending
Margin-Based Battery Charge Balancing	13/434,678	3/29/2012			US	Battery Lab & Algorithms	Pending
Peak-Equalized Battery Charge Balancing	13/434,692	3/29/2012			US	Battery Lab & Algorithms	Pending
Characterizing a Rechargeable Battery Through Discontinuous Charging	13/686,808	11/27/2012	9496727	11/15/2016	US	Battery Lab & Algorithms	Issued
Method of Controlling Battery State Using Constant-Voltage Discharge	13/714,214	12/13/2012	9142977	9/22/2015	US	Battery Lab & Algorithms	Issued
METHOD OF	14/860,575	9/21/2015	9472968	10/18/2016	US	Battery Lab &	Issued

<sup>1</sup> Owner of record is Atieva USA Inc.  
US-DOCS\83325503.8

Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
CONTROLLING BATTERY STATE USING CONSTANT-VOLTAGE DISCHARGE						Algorithms	
Battery State-of-Charge Estimation	13/434,707	3/29/2012			US	Battery Lab & Algorithms	Pending
Battery Module with High Thermal Conductivity and Assembling Method Thereof	13/714,263	12/13/2012	8920955	12/30/2014	US	Battery Lab & Algorithms	Issued
BUS BAR FOR BATTERY PACKS	2014800287828	11/10/2015			Non-US	Battery Lab & Algorithms	Pending
Two Layer Busbar	14778606.5	10/09/2015			Non-US	Battery Lab & Algorithms	Pending
Two Layer Busbar	2016-501075	9/11/2015			Non-US	Battery Lab & Algorithms	Pending
Two Layer Busbar	103108255	3/10/2014			Non-US	Battery Lab & Algorithms	Pending
Bus Bar for Battery Packs	13/794,535	3/11/2013			US	Battery Lab & Algorithms	Pending
Bus Bar for Battery Packs	14/538,644	11/11/2014			US	Battery Lab & Algorithms	Pending
Dual Voltage Communication Bus	2014800151692	09/14/2015			Non-US	powertrain	Pending
Dual Voltage Communication Bus	112014000984.9	9/14/2015			Non-US	powertrain	Pending
Dual Voltage Communication Bus	2016-501880	9/10/2015			Non-US	powertrain	Pending
Dual Voltage Communication Bus	13/801,894	3/13/2013	9229889	01/05/2016	US	powertrain	Issued
Dual Voltage Communication Bus	14/986,029	12/31/2015			US	powertrain	Pending
Configuration Switch for a Broadcast Bus	13/801,913	3/13/2013	9514086	12/06/2016	US	powertrain	Issued
Fault-Tolerant Loop for a Communication Bus	2014800151692	09/14/2015			Non-US	powertrain	Pending
Fault-Tolerant Loop for a Communication Bus	112014001347.1	9/14/2015			Non-US	powertrain	Pending
Fault-Tolerant Loop for a Communication Bus	2016-501662	9/10/2015			Non-US	powertrain	Pending
Fault-Tolerant Loop for a Communication Bus	13/801,936	3/13/2013			US	powertrain	Pending
Balance Resistor and Low Pass Filter	2014101634428	3/14/2014			Non-US	Battery Lab & Algorithms	Pending
Balance Resistor and Low Pass Filter	13/834,983	3/15/2013			US	Battery Lab & Algorithms	Pending
Cell Balancing Through a Switched Capacitor Level Shifter	13/835,170	3/15/2013			US	Battery Lab & Algorithms	Pending
Bias Circuit for a Switched Capacitor Level Shifter	2014800155689	9/15/2015			Non-US	Powertrain	Pending
Bias Circuit for a Switched Capacitor Level Shifter	112014000980.6	9/15/2015			Non-US	Powertrain	Pending
Bias Circuit for a Switched Capacitor Level Shifter	2016-502855	9/14/2015			Non-US	Powertrain	Pending
Bias Circuit for a Switched Capacitor Level Shifter	13/835,377	3/15/2013	9041454	5/26/2015	US	Powertrain	Issued
Bias Circuit for a Switched Capacitor Level Shifter	14/710,515	5/12/2015	9584126	2/28/2017	US	Powertrain	Issued
Automatic Switchover from Cell Voltage to Interconnect Voltage Monitoring	13/835,595	3/15/2013			US	Battery Lab & Algorithms	Pending
Method of Connecting Cell Voltage Sensors	2014800155852	9/15/2015			Non-US	Battery Lab & Algorithms	Pending
Method of Connecting Cell Voltage Sensors	112014000982.2	9/15/2015			Non-US	Battery Lab & Algorithms	Pending
Method of Connecting Cell Voltage Sensors	2016-501869	9/14/2015			Non-US	Battery Lab & Algorithms	Pending
Method of Connecting Cell Voltage Sensors	13/835,760	3/15/2013			US	Battery Lab & Algorithms	Pending



Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
Electric Vehicle Motor Torque Safety Monitor	2014800485142	3/02/2016			Non-US	Powertrain	Pending
Electric Vehicle Motor Torque Safety Monitor	14829840.9	2/03/2016			Non-US	Powertrain	Pending
Electric Vehicle Motor Torque Safety Monitor	13/948,307	7/23/2013			US	powertrain	Pending
All-Wheel Drive Electric Vehicle Motor Torque Safety Monitor	14/194,527	2/28/2014			US	powertrain	Pending
Inverter IGBT Operating Temperature Monitor	103108253	3/10/2014			Non-US	Powertrain	Pending
Power Device Temperature Monitor	13/841,754	3/15/2013	9182293	11/10/2015	US	Powertrain	Issued
POWER DEVICE TEMPERATURE MONITOR	14/880,866	10/13/2015			US	powertrain	Pending
	201480052426.X	3/23/2016			Non-US		Pending
Induction Motor Flux and Torque Control	14829439.0	2/03/2016			Non-US	Powertrain	Pending
Induction Motor Flux and Torque Control	13/948,326	7/23/2013	9344026	5/17/2016	US	Powertrain	Issued
Induction Motor Flux and Torque Control	15/156,183	05/16/2016			US	Powertrain	Pending
Induction Motor Flux and Torque Control	14/194,533	2/28/2014			US	Powertrain	Pending
Inverter with Parallel IGBT	103108254	3/10/2014			Non-US	Powertrain	Pending
Inverter with Parallel Power Devices	13/842,458	3/15/2013	8884658	11/11/2014	US	Powertrain	Issued
Inverter Power Module Packaging with Cold Plate	103109716	3/14/2014			Non-US	Powertrain	Pending
Inverter Power Module Packaging with Cold Plate	14/198,329	3/5/2014	9578788	2/21/2017	US	Powertrain	Issued
Series Booster Pack for Battery System Capacity Recovery	13/920,224	6/18/2013			US	Battery Lab & Algorithms	Pending
	2014800524293	3/23/2016			Non-US		Pending
Induction Motor Flux and Torque Control with Rotor Flux Estimation	14828862.4	2/03/2016			Non-US	powertrain	Pending
Induction Motor Flux and Torque Control with Rotor Flux Estimation	13/948,330	7/23/2013			US	powertrain	Pending
Circuit Breaker for Use in High Power System and the Power System	12/972,516	12/19/2010	8278573	10/2/2012	US	powertrain	Issued
Synchronous Energy Source Switching Controller and Method of Operation Thereof	13/889,295	5/7/2013	9118266	8/25/15	US	powertrain	Issued
Battery Assembly with High Thermal Conductivity	13/371,426	2/11/2012	9184427	11/10/2015	US	Battery Lab & Algorithms	Issued
Battery Discharge System and Method of Operation Thereof	13/355,372	1/20/2012	9000731	4/7/2015	US	Battery Lab & Algorithms	Issued
Battery Assembly with Adhesive Stop Mechanism	13/896,155	5/16/2013	9040185	5/26/2015	US	Battery Lab & Algorithms	Issued
Battery Assembly with Adhesive Stop Mechanism	14/710,519	5/12/2015	9236593	01/12/2016	US	Battery Lab & Algorithms	Issued
Heat-Sink Base Provided with Heat-Sink Fin Portions, Method for Producing Same and Motor Provided with Same	13/940,170	7/11/2013			US	powertrain	Pending
High Thermal Conductivity Battery Assembly	13/452,908	4/22/2012	9419259	8/16/2016	US	Battery Lab & Algorithms	Issued
Battery cell, battery module incorporated with same and method for producing the battery module	13/171,442	6/29/2011			US	Battery Lab & Algorithms	Pending
Fuse element having damping	12/972,518	12/20/2010			US	Battery Lab &	Pending

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structure						Algorithms	
Side-By-Side Fuse Component and Battery Array with Same	201110207272.5	7/22/2011			Non-US	Battery Lab & Algorithms	Pending
High-Heat-Conduction Battery Module Having Battery Cores, and Assembling Method	201210145299	5/11/2012	103390762	11/13/2013	Non-US	Battery Lab & Algorithms	Issued
Battery Pack with Multiple Parallel Cells and Power Supply Assembly with Multiple Battery Packs Connected in Series	201210106728.3	4/12/2012			Non-US	Battery Lab & Algorithms	Pending
Battery Assembly Provided with Adhesive Stop Mechanism	201210326085.3	9/6/2012			Non-US	Battery Lab & Algorithms	Pending
Battery Assembly Provided with Adhesive Stop Mechanism	2016105765189	7/20/2016			Non-US	Battery Lab & Algorithms	Pending
Synchronous Energy Source Switching Controller and Method of Operation Thereof	14/834,310	8/24/2015			US	Powertrain	Pending
Synchronized Display System	14/082,241	11/18/2013	9,442,688	9/13/2016	US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	201410658892.4	11/18/2014			Non-US	Infotainment, Controls, and Integration	Pending
Display Positioning System	201420692983.5	11/18/2014	ZL201420692983.5	9/9/2015	Non-US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	14 193 270.7	11/14/2014	Granted		Non-US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	14 193 270.7	11/14/2014	60 2014 004 201.5	10/12/2016	Non-US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	14 193 270.7	11/14/2014	2 873 563		Non-US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	14 193 270.7	11/14/2014	2 873 563		Non-US	Infotainment, Controls, and Integration	Issued
Synchronized Display System	2014-224459	11/4/2014	5,984,124	8/12/2016	Non-US	Infotainment, Controls, and Integration	Issued
Adjustable Display System for Vehicular Use	14/082,495	11/18/2013			US	Infotainment, Controls, and Integration	Pending
Electric Vehicle Undercarriage Crumple Zone	14/083,476	11/19/2013	9,052,168	6/9/2015	US	Battery Lab & Algorithms	Issued
Electric Vehicle Battery Pack Protection System	14/132,179	12/18/2013	9,054,402	6/9/2015	US	Battery Lab & Algorithms	Issued
Electric Vehicle Battery Pack Protection System	US14/63038	10/30/2014			US	Battery Lab & Algorithms	Pending
A Battery Pack Protection System	201490001173.9	5/18/2016			Non-US	Battery Lab & Algorithms	Pending
Vehicle Display with Automatic Positioning System	14/083,572	11/19/2013	9,386,335	7/5/2016	US	Infotainment, Controls, and Integration	Issued
Method of Adjusting a Display Position Based on User Orientation	14/083,849	11/19/2013	9,084,004	7/14/2015	US	Infotainment, Controls, and Integration	Issued
Vehicle Display with Automatic Positioning System	14/972,701	12/17/2015			US	Infotainment, Controls, and Integration	Pending
System and Method of	201410662797.1	11/19/2014			Non-US	Infotainment,	Pending

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Adjusting a Vehicle Display Based on User Orientation						Controls, and Integration	
System and Method of Adjusting a Vehicle Display Based on User Orientation	201420698923.4	11/19/2014	ZL201420698923.4	7/3/2015	Non-US	Infotainment, Controls, and Integration	Issued
System and Method of Adjusting a Vehicle Display Based on User Orientation	14 193 672.4	11/18/2014	Granted		Non-US	Infotainment, Controls, and Integration	Issued
System and Method of Adjusting a Vehicle Display Based on User Orientation	14 193 672.4		60 2014 003 809.3	9/21/2016	Non-US	Infotainment, Controls, and Integration	Issued
System and Method of Adjusting a Vehicle Display Based on User Orientation	14 193 672.4		2 923 884		Non-US	Infotainment, Controls, and Integration	Issued
System and Method of Adjusting a Vehicle Display Based on User Orientation	14 193 672.4		2 923 884		Non-US	Infotainment, Controls, and Integration	Issued
System and Method of Adjusting a Vehicle Display Based on User Orientation	2014-223961	11/4/2014	5,994,179	9/2/2016	Non-US	Infotainment, Controls, and Integration	Issued
Vehicle Seat Ventilation System	14/084,198	11/19/2013			US	HVAC and Thermal	Pending
Vehicle Seat Ventilation System	201410663257.5	11/19/2014			Non-US	HVAC and Thermal	Pending
Vehicle Seat Ventilation System	201420699081.4	11/19/2014	ZL201420699081.4	5/20/2015	Non-US	HVAC and Thermal	Issued
Vehicle Seat Ventilation System	14 193 273.1	11/14/2014			Non-US	HVAC and Thermal	Pending
Vehicle Seat Ventilation System	2014-224855	11/5/2014			Non-US	HVAC and Thermal	Pending
Reactive Air Suspension System	14/091,792	11/27/2013	9,085,210	7/21/2015	US	Integrated Safety	Issued
Method of Operating a Reactive Air Suspension System	14/092,700	11/27/2013	8,989,963	3/24/2015	US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	201410699649.7	11/27/2014			Non-US	Integrated Safety	Pending
Obstacle Avoidance System	201420726250.9	11/27/2014	ZL201420726250.9	7/1/2015	Non-US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	14 193 674.0	11/18/2014	Granted		Non-US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	14 193 674.0	11/18/2014	2 878 461		Non-US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	14 193 674.0	11/18/2014	2 878 461		Non-US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	14 193 674.0	11/18/2014	2 878 461		Non-US	Integrated Safety	Issued
Reactive Air Suspension System and Method of Use	2014-223964	11/4/2014	6,051,475	12/9/2016	Non-US	Integrated Safety	Issued
Battery Pack Damage Monitor	14/132,560	12/18/2013	9,306,246	4/5/2016	US	Battery Lab & Algorithms	Issued
Method of Detecting Battery Pack Damage	14/133,354	12/18/2013	9,306,247	4/5/2016	US	Battery Lab & Algorithms	Issued
Method and Apparatus for Detecting Battery Pack Damage	201410790219.6				Non-US	Battery Lab & Algorithms	Pending
Battery Pack Damage Monitor	201420806852.5		ZL201420806852.5	5/27/2015	Non-US	Battery Lab & Algorithms	Issued
Method and Apparatus for Detecting Battery Pack Damage	14 193 678.1	11/18/2014	Granted		Non-US	Battery Lab & Algorithms	Issued
Method and Apparatus for Detecting Battery Pack Damage	14 193 678.1	11/18/2014	2 887 446		Non-US	Battery Lab & Algorithms	Issued
Method and Apparatus for Detecting Battery Pack Damage	14 193 678.1	11/18/2014	2 887 446		Non-US	Battery Lab & Algorithms	Issued
Method and Apparatus for Detecting Battery Pack	14 193 678.1	11/18/2014	2 887 446		Non-US	Battery Lab & Algorithms	Issued

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Damage							
Method and Apparatus for Detecting Battery Pack Damage	2014-224906	11/5/2014	5,858,123	12/25/2015	Non-US	Battery Lab & Algorithms	Issued
Readily Replaceable EV Battery Pack Ballistic Shield	14/134,151	12/19/2013	9,016,765	4/28/2015	US	Battery Lab & Algorithms	Issued
A Battery Pack Protection System	201420818967.612/19/2014		ZL201420818967.6	10/14/2015	Non-US	Battery Lab & Algorithms	Issued
EV Battery Pack Multi-Mode Cooling System	14/148,933	1/7/2014			US	Battery Lab & Algorithms	Pending
EV Battery Pack Multi-Mode Cooling System	14/149,116	1/7/2014			US	Battery Lab & Algorithms	Pending
EV Battery Pack Protection System Utilizing an Undercarriage Debris Trap	14/163,802	1/24/2014	9,061,714	6/23/2015	US	Battery Lab & Algorithms	Issued
EV Battery Pack Protection System Utilizing an Undercarriage Debris Trap	201520039024.8		ZL201520039024.8	8/26/2015	Non-US	Battery Lab & Algorithms	Issued
Compact Rear Suspension Damper-Spring Assembly	14/172,147	2/4/2014	8,905,416	12/9/2014	US	Chassis	Issued
Compact Rear Suspension Damper-Spring Assembly	14/177,412	2/11/2014	9,022,401	5/5/2015	US	Chassis	Issued
Compact Rear Suspension Damper-Spring Assembly	14/512,486	10/13/2014	9,073,397	7/7/2015	US	Chassis	Issued
Compact Rear Suspension Damper-Spring Assembly	14/512,511	10/13/2014	9,022,402	5/5/2015	US	Chassis	Issued
Compact Rear Suspension Damper-Spring Assembly	201410753649.0	12/10/2014			Non-US	Chassis	Pending
Wheel Suspension System	201420774820.1	12/10/2014	ZL201420774820.1	11/25/2015	Non-US	Chassis	Issued
Compact Rear Suspension Damper-Spring Assembly	14 193 265.7	11/14/2014			Non-US	Chassis	Pending
Compact Rear Suspension Damper-Spring Assembly	2014-223888	11/4/2014			Non-US	Chassis	Pending
Integrated Motor Assembly with Compliantly Mounted Power Inverter	14/176,053	2/8/2014	9,120,389	9/1/2015	US	Powertrain	Issued
Integrated Motor Assembly with Compliantly Mounted Power Inverter	201520086823.0		ZL201520086823.0	7/8/2015	Non-US	Powertrain	Issued
Segmented, Undercarriage Mounted EV Battery Pack	14/185,730	2/20/2014	9,033,085	5/19/2015	US	Body Structures	Issued
Segmented, Undercarriage Mounted EV Battery Pack	201520108417.X		ZL201520108417.X	12/9/2015	Non-US	Body Structures	Issued
Z-Shaped Bus Bar for a Battery Pack	14/203,874	3/11/2014	9,490,465	11/8/2016	US	Battery Lab & Algorithms	Issued
Communication Bus System	14/201,803	3/9/2014	9,430,438	8/30/2016	US	Powertrain	Issued
Bidirectional Bus with Zero Power Wake Function	201520130563.2		ZL201520130563.2	12/2/2015	Non-US	Powertrain	Issued
Accelerator Pedal Feedback System	14/231,811	4/1/2014	9,189,009	11/17/2015	US	Powertrain	Issued
Dual Stage Accelerator Assembly with Pedal Feedback System	14/231,938	4/1/2014	9,043,086	5/26/2015	US	Powertrain	Issued
Dual Stage Accelerator Assembly with Selectable Stroke Transition	14/242,067	4/1/2014	9,176,516	11/3/2015	US	Powertrain	Issued
Dual Stage Accelerator Assembly with Pedal Feedback System	14/242,345	4/1/2014	9,290,094	3/22/2016	US	Powertrain	Issued
Dual Stage Accelerator Assembly with Selectable Stroke Transition and Pedal Feedback System	14/242,515	4/1/2014	9,296,297	3/29/2016	US	Powertrain	Issued
Dual Stage Accelerator Assembly with Selectable Stroke Transition and Pedal Feedback System	14/242,663	4/1/2014	9,381,809	7/5/2016	US	Powertrain	Issued
Configurable Accelerator Pedal	14/242,727	4/1/2014	9,221,338	12/29/2015	US	Powertrain	Issued

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Dual Ratio Constant Mesh Gearbox	14/273,667	5/9/2014	9,109,666	8/18/2015	US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	14/273,822	5/9/2014	9,228,641	1/5/2015	US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	14/273,934	5/9/2014	9,200,697	12/1/2015	US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	15 166 028.9	4/30/2015	Granted		Non-US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	15 166 028.9	4/30/2015	602,015,000,507	10/19/2016	Non-US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	15 166 028.9	4/30/2015	2 942 546		Non-US	Powertrain	Issued
Dual Ratio Constant Mesh Gearbox	15 166 028.9	4/30/2015	2 942 546		Non-US	Powertrain	Issued
Automated Vehicle Route Scheduling System	14/287,696	5/27/2014			US	Infotainment, Controls, and Integration	Pending
Vehicle Navigation Route Optimized for EV Charging	14/287,801	5/27/2014			US	Infotainment, Controls, and Integration	Pending
Automated Vehicle Route Scheduling and Optimization System	14/287,925	5/27/2014			US	Infotainment, Controls, and Integration	Pending
Method of Controlling an Auxiliary Vehicle System	14/288,007	5/27/2014			US	Infotainment, Controls, and Integration	Pending
Location Sensitive Learning Interface	14/298,998	6/9/2014	9,440,603	9/13/2016	US	Infotainment, Controls, and Integration	Issued
Vehicle Learning Interface	201510312367.1	6/9/2015			Non-US	Infotainment, Controls, and Integration	Pending
Time Sensitive Learning Interface	14/299,191	6/9/2014	9,428,126	8/30/2016	US	Infotainment, Controls, and Integration	Issued
Time and Day Sensitive Learning Interface	14/299,718	6/9/2014	9,440,604	9/13/2016	US	Infotainment, Controls, and Integration	Issued
Vehicle Learning Interface	TBD	6/9/2015			US	Infotainment, Controls, and Integration	Pending
Event Sensitive Learning Interface	14/299,962	6/9/2014	9,193,314	11/24/2015	US	Infotainment, Controls, and Integration	Issued
Event Sensitive Learning Interface	14/875,017	10/5/2015	9,487,218	11/8/2016	US	Infotainment, Controls, and Integration	Issued
Vehicle Learning Interface	201510312166.1	6/9/2015			Non-US	Infotainment, Controls, and Integration	Pending
Vehicle Test System	14/304,512	6/13/2014			US	Infotainment, Controls, and Integration	Pending
Vehicle Fault Early Warning System	14/309,238	6/19/2014	9,495,814	11/15/2016	US	Infotainment, Controls, and Integration	Issued
Vehicle Fault Early Warning System	15/286,409	10/5/2016			US	Infotainment, Controls, and Integration	Pending
Direct Torque Control Motor Controller with Torque Ripple Reduction	14/332,433	7/16/2014	9,407,189	8/2/2016	US	Powertrain	Issued
Direct Torque Control Motor Controller with Transient Current Limiter	14/332,608	7/16/2014	9,444,384	9/13/2016	US	Powertrain	Issued
Direct Torque Control Motor Controller with Transient Current Limiter	14/333,123	7/16/2014	9,431,951	8/30/2016	US	Powertrain	Issued
Direct Torque Control Motor	201520416118.2	6/16/2015	ZL201520416118.2	5/4/2016	Non-US	Powertrain	Issued

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Controller							
Battery Pack with Non-Conductive Structural Support	14/331,300	7/15/2014	9,444,125	9/13/2016	US	Battery Lab & Algorithms	Issued
Electric Vehicle Battery Pack	201520464871.9	7/1/2015			Non-US	Battery Lab & Algorithms	Pending
EV Integrated Temperature Control System	14/340,606	7/25/2014			US	Battery Lab & Algorithms	Pending
Three Loop Temperature Control System	201520536414.6		ZL201520536414.6	1/20/2016	Non-US	Battery Lab & Algorithms	Issued
EV Integrated Temperature Control System	15173384.7	6/23/2015			Non-US	Battery Lab & Algorithms	Pending
Vehicle Power Distribution System	14/462,885	8/19/2014	9,221,409	12/29/2015	US	Battery Lab & Algorithms	Issued
Vehicle Power Distribution System with Extended Storage Capabilities	14/463,475	8/19/2014	9,227,581	1/5/2016	US	Battery Lab & Algorithms	Issued
Self-Cleaning Fan Assembly	14/462,104	8/18/2014			US	HVAC and Thermal	Pending
Method of Cleaning a Vehicle Heat Exchanger	15/263,672	9/13/2016			US	HVAC and Thermal	Pending
Sensorless DC Fan Speed Controller	14/472,719	8/29/2014	9,385,644	7/5/2016	US	HVAC and Thermal	Issued
Method of Diagnosing a Malfunctioning DC Fan Motor	14/472,865	8/29/2014	9,337,769	5/10/2016	US	HVAC and Thermal	Issued
Method of Diagnosing a Blocked Heat Exchanger	14/473,007	8/29/2014	9,383,414	7/5/2016	US	HVAC and Thermal	Issued
EV Adaptive Thermal Management System Optimized to Minimize Power Consumption	14/493,509	9/23/2014	9,527,404	12/27/2016	US	HVAC and Thermal	Issued
Battery Pack with Segmented, Electrically Isolated Heat Sinks	14/497,004	9/25/2014	9,397,375	7/19/2016	US	Battery Lab & Algorithms	Issued
Battery Pack with Segmented, Electrically Isolated Heat Sinks	14/497,142	9/25/2014	9,397,376	7/19/2016	US	Battery Lab & Algorithms	Issued
A Battery Assembly	201520742676.8	9/23/2015	ZL201520742676.8	3/23/2016	Non-US	Battery Lab & Algorithms	Issued
Motor Housing with Integral Gear Housing	14/503,683	10/1/2014			US	Powertrain	Pending
Motor Enclosure with Integral Gear Enclosure	201520758849.5	9/28/2015	ZL201520758849.5	1/13/2016	Non-US	Powertrain	Issued
EV Multi-Mode Thermal Management System	14/519,182	10/21/2014	9,533,544	1/3/2017	US	HVAC and Thermal	Issued
EV Multi-Mode Thermal Management System	14/519,256	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	14/519,345	10/21/2014	9,511,645	12/6/2016	US	HVAC and Thermal	Issued
EV Multi-Mode Thermal Management System	14/519,448	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	14/519,708	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	14/519,943	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	14/520,046	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	14/520,171	10/21/2014			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	201510686483.X	10/21/2015			Non-US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	201520817687.8	10/21/2015	ZL201520817687.8	6/1/2015	Non-US	HVAC and Thermal	Issued
EV Multi-Mode Thermal Management System	15 182 168.3	8/24/2015			Non-US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Management System	201510686224.7	10/21/2015			Non-US	HVAC and Thermal	Pending

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EV Multi-Mode Thermal Management System	201520818201.2	10/21/2015	ZL201520818201.2	10/21/2015	Non-US	HVAC and Thermal	Issued
EV Multi-Mode Thermal Management System	15 181 357.3	8/18/2015			Non-US	HVAC and Thermal	Pending
A Method of Operating a Preemptive EV Battery Pack Temperature Control System	14/600,031	1/20/2015			US	HVAC and Thermal	Pending
A Method of Operating a Preemptive Vehicle Temperature Control System	14/600,039	1/20/2015	9,446,682	9/20/2016	US	HVAC and Thermal	Issued
A Preemptive Vehicle Temperature Control System	14/600,081	1/20/2015			US	HVAC and Thermal	Pending
A Preemptive EV Battery Pack Temperature Control System	14/600,115	1/20/2015			US	HVAC and Thermal	Pending
Method of Selecting a Battery Pack Charging Protocol	14/553,305	11/25/2014	9,463,700	10/11/2016	US	Infotainment, Controls, and Integration	Issued
Battery Pack Charging Protocol Selection System	14/553,506	11/25/2014			US	Infotainment, Controls, and Integration	Pending
Battery Pack Charging Protocol Selection System	201510831281.X	11/25/2015			Non-US	Infotainment, Controls, and Integration	Pending
Battery Pack Charging Protocol Selection System	15 187 628.1	9/30/2015			Non-US	Infotainment, Controls, and Integration	Pending
Battery Pack Charging Protocol Selection System	2015-199286	10/7/2015			Non-US	Infotainment, Controls, and Integration	Pending
Motor Cooling System	14/560,680	12/4/2014			US	Powertrain	Pending
Motor Cooling System	14/560,950	12/4/2014			US	Powertrain	Pending
Motor Cooling System	201510862013.4	12/1/2015			Non-US	Powertrain	Pending
Motor Cooling System	201520979333.3	12/1/2015	ZL201520979333.3	8/3/2016	Non-US	Powertrain	Issued
Motor Cooling System	15 194 448.5	11/13/2015			Non-US	Powertrain	Pending
Motor Cooling System	2015-212826	10/29/2015			Non-US	Powertrain	Pending
Automatically Activated Blind Spot Camera System	14/588,463	1/2/2015	9,406,234	8/2/2016	US	Infotainment, Controls, and Integration	Issued
Automatically Activated Cross Traffic Camera System	14/588,484	1/2/2015	9,428,185	8/30/2016	US	Infotainment, Controls, and Integration	Issued
Automatically Activated Vehicle Obstacle Viewing System	14/588,526	1/2/2015			US	Infotainment, Controls, and Integration	Pending
Automatically Activated In-Cabin Vehicle Camera System	14/588,562	1/2/2015	9,305,463	4/5/2016	US	Infotainment, Controls, and Integration	Issued
Voice Command Activated Vehicle Camera System	14/588,630	1/2/2015			US	Infotainment, Controls, and Integration	Pending
Location Based Activation of a Vehicle Camera System	14/588,697	1/2/2015	9,428,119	8/30/2016	US	Infotainment, Controls, and Integration	Issued
Method of Manufacturing the Rotor Assembly for an Electric Motor	14/598,019	1/15/2015			US	Powertrain	Pending
Method of Manufacturing the Rotor Assembly for an Electric Motor	201610020725.6	1/13/2016			Non-US	Powertrain	Pending
Method of Manufacturing the Rotor Assembly for an Electric Motor	15 199 780.6	12/14/2015			Non-US	Powertrain	Pending
Method of Manufacturing the Rotor Assembly for an Electric Motor	2015-246600	12/17/2015			Non-US	Powertrain	Pending
Compliantly Mounted Motor	14/607,194	1/28/2015	9,283,837	3/15/2016	US	Powertrain	Issued

Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
Assembly Utilizing Dual Levels of Vibration Isolation							
Compliantly Mounted Motor Assembly Utilizing Dual Levels of Vibration Isolation	14/957,667	12/3/2015			US	Powertrain	Pending
Compliantly Mounted Motor Assembly Utilizing Dual Levels of Vibration Isolation	201521062228.X	12/17/2015	ZL201521062228.X	5/25/2016	Non-US	Powertrain	Issued
Positionable User Interface for Vehicular Use	14/644,273	3/11/2015			US	Infotainment, Controls, and Integration	Pending
Positionable User Interface for Vehicular Use	15/006,202	1/26/2016			US	Infotainment, Controls, and Integration	Pending
Positionable User Interface for Vehicular Use	201610134422.7	3/10/2016			Non-US	Infotainment, Controls, and Integration	Pending
Positionable User Interface for Vehicular Use	201620181646.9	3/10/2016	ZL201620181646.9	7/27/2016	Non-US	Infotainment, Controls, and Integration	Issued
Positionable User Interface for Vehicular Use	16 155 854.9	2/16/2016			Non-US	Infotainment, Controls, and Integration	Pending
Retractable Workstation Integrated Into the Passenger Cabin of a Vehicle	14/641,325	3/7/2015	9,428,118	8/30/2016	US	Infotainment, Controls, and Integration	Issued
Rear Seat Accessible Vehicle Storage Compartment	14/663,517	3/20/2015			US	Infotainment, Controls, and Integration	Pending
Motor Rotor Cooling System	14/641,335	3/7/2015			US	Powertrain	Pending
EV Multi-Mode Thermal Control System	14/698,394	4/28/2015			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Control System	201620354584.7	4/25/2016	ZL201620354584.7	10/12/2016	Non-US	HVAC and Thermal	Issued
EV Multi-Mode Thermal Control System	14/698,539	4/28/2015			US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Control System	201610262325.6	4/25/2016			Non-US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Control System	16160386.5	3/15/2016			Non-US	HVAC and Thermal	Pending
EV Multi-Mode Thermal Control System	14/698,630	4/28/2015			US	HVAC and Thermal	Pending
Preconditioned Bus Bar Interconnect System	14/691,932	4/21/2015			US	Battery Lab & Algorithms	Pending
Preconditioned Bus Bar Interconnect System	14/692,285	4/21/2015	9,431,644	8/30/2016	US	Battery Lab & Algorithms	Issued
Preconditioned Bus Bar Interconnect System	14/708,966	5/11/2015			US	Battery Lab & Algorithms	Pending
Encapsulated Fusible Interconnect	14/692,557	4/21/2015			US	Powertrain	Pending
Encapsulated Fusible Interconnect	201620250236.5	3/29/2016	ZL201620250236.5	9/7/2016	Non-US	Powertrain	Issued
Method of Providing Constant Driving Range in an Electric Vehicle	14/691,694	4/21/2015			US	Infotainment, Controls, and Integration	Pending
Method of Providing Constant Driving Range in an Electric Vehicle	201610247412.4	4/20/2016			Non-US	Infotainment, Controls, and Integration	Pending
Method of Providing Constant Driving Range in an Electric Vehicle	16159015.3	3/7/2016			Non-US	Infotainment, Controls, and Integration	Pending
Method of Providing Constant Driving Range in an Electric Vehicle	2016-038366	2/29/2016			Non-US	Infotainment, Controls, and Integration	Pending
Multi-Position Vehicle Seat	14/706,008	5/7/2015	9,452,692	9/27/2016	US	Body Structures	Issued
Method of Operating a Multi-Position Vehicle Seat	14/706,014	5/7/2015	9,463,715	10/11/2016	US	Body Structures	Issued



Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
Method of Operating a Multi-Position Vehicle Seat	15/219,425	7/26/2015			US	Body Structures	Pending
Multi-Position Vehicle Seat	201620410919.2	5/9/2016			Non-US	Body Structures	Pending
Dual Data Rate Traction Control System for a Two Wheel Drive Electric Vehicle	14/723,533	5/28/2015	9,463,697	10/11/2016	US	Powertrain	Issued
Dual Data Rate Traction Control System for a Four Wheel Drive Electric Vehicle	14/723,679	5/28/2015	9,469,199	10/18/2016	US	Powertrain	Issued
Electric Vehicle Dynamic Feedback System	14/746,881	6/23/2015			US	Infotainment, Controls, and Integration	Pending
Electric Vehicle Driving Range Optimization System with Dynamic Feedback	14/746,916	6/23/2015			US	Infotainment, Controls, and Integration	Pending
Electric Vehicle Driving Range Optimization System with Dynamic Feedback	14/747,050	6/23/2015			US	Infotainment, Controls, and Integration	Pending
Electric Vehicle Driving Range Optimization System with Dynamic Feedback	14/747,271	6/23/2015			US	Infotainment, Controls, and Integration	Pending
Electric Vehicle Driving Range Optimization System with Dynamic Feedback	14/747,772	6/23/2015	9,517,705	12/13/2016	US	Infotainment, Controls, and Integration	Issued
Electric Vehicle Driving Range Optimization System with Dynamic Feedback	14/748,028	6/23/2015	9,517,703	12/13/2016	US	Infotainment, Controls, and Integration	Issued
Electric Vehicle Dynamic Feedback System	201610465570.7	6/23/2016			Non-US	Infotainment, Controls, and Integration	Pending
Method and Apparatus for Selectively Heating Individual Battery Modules Within a Battery Pack	14/793,959	7/8/2015			US	Battery Lab & Algorithms	Pending
Battery Assembly with Linear Bus Bar Configuration	14/802,207	7/17/2015			US	Battery Lab & Algorithms	Pending
Battery Assembly with Linear Bus Bar Configuration	201620713289.6	7/7/2016			Non-US	Battery Lab & Algorithms	Pending
Battery Pack Fuse Monitoring and Current Limiting System	14/814,840	7/31/2015	9,543,870	1/10/2017	US	Battery Lab & Algorithms	Issued
Current Distribution System for a Battery Assembly Utilizing Non-Overlapping Bus Bars	14/823,844	8/11/2015			US	Powertrain	Pending
Current Distribution System for a Battery Assembly Utilizing Non-Overlapping Bus Bars	201610656729.3	8/11/2016			Non-US	Powertrain	Pending
Current Distribution System for a Battery Assembly Utilizing Non-Overlapping Bus Bars	201620868468.7	8/11/2016			Non-US	Powertrain	Pending
Current Distribution System for a Battery Assembly Utilizing Non-Overlapping Bus Bars	16181567.5	7/27/2016			Non-US	Powertrain	Pending
Swiveling Front Suspension Subframe	14/837,172	8/27/2015	9,487,237	11/8/2016	US	Body Structures	Issued
Bumper Assembly for an Undercarriage Mounted Battery Pack	14/837,345	8/27/2015			US	Body Structures	Pending
Swiveling Front Suspension Subframe	14/837,727	8/27/2015	9,446,643	9/20/2016	US	Body Structures	Issued
Small Overlap Impact Management System	201620926105.4	8/23/2016			Non-US	Body Structures	Pending
Vehicle Control System	14/854,748	9/15/2015			US	Body Structures	Pending

Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
External Auxiliary Thermal Management System for an Electric Vehicle	14/865,023	9/25/2015			US	HVAC and Thermal	Pending
External Auxiliary Thermal Management System for an Electric Vehicle	14/865,252	9/25/2015			US	HVAC and Thermal	Pending
Battery Packaging System	14/927,757	10/30/2015			US	Battery Lab & Algorithms	Pending
Battery Interconnect System	14/927,826	10/30/2015			US	Battery Lab & Algorithms	Pending
Battery Interconnect System	201621077779.8	9/22/2016			Non-US	Battery Lab & Algorithms	Pending
Parallel Axis Epicyclic Gear Differential	14/970,658	12/16/2015			US	Powertrain	Pending
Parallel Axis Epicyclic Gear Differential	TBD				Non-US	Powertrain	Pending
Parallel Axis Epicyclic Gear Differential	TBD				Non-US	Powertrain	Pending
Parallel Axis Epicyclic Gear Differential	16199842.2	11/21/2016			Non-US	Powertrain	Pending
Parallel Axis Epicyclic Gear Differential	2016-221048	11/11/2014			Non-US	Powertrain	Pending
High Current Battery Pack Fusing System	14/940,468	11/13/2015			US	Powertrain	Pending
High Current Battery Pack Fusing System	14/940,578	11/13/2015			US	Powertrain	Pending
Vehicle Heat Exchanger Air Flow Control System	14/971,064	12/16/2015			US	HVAC and Thermal	Pending
Vehicle Heat Exchanger Air Flow Control System	201620170159.2	3/7/2016	ZL201620170159.2	8/31/2016	Non-US	HVAC and Thermal	Issued
Battery Pack Bus Bar Assembly with Enlarged Interconnect Mounting Platforms	15/057,169	3/1/2016			US	Battery Lab & Algorithms	Pending
Battery Pack Bus Bar Assembly with Shaped Interconnect Mounting Platforms	15/057,183	3/1/2016			US	Battery Lab & Algorithms	Pending
EV Battery Pack Cooling System	15/040,204	2/10/2016			US	Battery Lab & Algorithms	Pending
EV Battery Pack Cooling System	15/040,259	2/10/2016			US	Battery Lab & Algorithms	Pending
EV Battery Pack Cooling System	15/040,417	2/10/2016			US	Battery Lab & Algorithms	Pending
Motor Cooling System Utilizing Axial Cooling Channels	15/238,807	8/17/2016			US	Powertrain	Pending
Motor Cooling System Utilizing Axial Cooling Channels	15/238,845	8/17/2016			US	Powertrain	Pending
Motor Cooling System Utilizing Axial Cooling Channels	15/238,954	8/17/2016			US	Powertrain	Pending
Motor Cooling System Utilizing Axial Cooling Channels	15/239,002	8/17/2016			US	Powertrain	Pending
High Efficiency, High Power Density Drive System Utilizing Complementary Motor Assemblies	15/229,498	8/5/2016			US	Powertrain	Pending
High Efficiency, High Power Density Drive System Utilizing Complementary Motor Assemblies	201621300046.6	11/30/2016			Non-US	Powertrain	Pending
Vehicle Assembly System	15/333,390	10/25/2016			US	Body Structures	Pending
Vehicle Child Detection and Response System	15/255,587	9/2/2016			US	Integrated Safety	Pending

Title	Application Number	Filing Date	Patent No.	Issue Date	Issue Country	Business Area	Issued / Pending
Vehicle Child Detection and Response System	15/255,675	9/2/2016			US	Integrated Safety	Pending
Automotive Air Intake Utilizing a Vortex Generating Airflow System	15/278,266	9/28/2016			US	HVAC and Thermal	Pending
Compact Dual Speed Gear Assembly	15/377,205	12/13/2016			US	Powertrain	Pending
EV Adaptive Thermal Management System Optimized to Minimize Power Consumption	15/350,610	11/14/2016			US	Thermal Management	Pending

**EXHIBIT C**  
**TRADEMARKS**

**Atieva Trademark Portfolio**  
**March 2017**

Client-Matter	Title/Mark	Country	Application No.	Application Date	Registration No.	Registration Date	International Classes	Case Status
310797-20020	AIR	United States of America	87/267,374 <sup>2</sup>	12/13/2016			12	Office Action Issued
310797-20019	AIR 1	United States of America	87/267,378 <sup>3</sup>	12/13/2016			12	Office Action Issued
310797-20018	AIR 9	United States of America	87/267,380 <sup>4</sup>	12/13/2016			12	Office Action Issued
310797-20004	LUCID	United States of America	87/075,028 <sup>5</sup>	6/17/2016			12	Published
310797-20013	LUCID	United States of America	87/227,550	11/5/2016			09, 12, 36, 37, 39, 40	Office Action Issued
310797-20005	PALOS	United States of America	87/075,035 <sup>6</sup>	6/17/2016			12	Office Action Issued
310797-20006	LUCID	Australia	1803368	10/18/2016	1803368	2/1/2017	12	Registered
310797-20008	LUCID	Canada	1805361	10/19/2016			12	Application Filed
310797-20010	LUCID	Cayman Islands	15559611	11/16/2016	15559611	11/28/2016	12	Registered
310797-20002	LUCID	China	20469899	6/29/2016			12	Application Filed
310797-20003	PALOS	China	20469898	6/29/2016			12	Response Filed
310797-TEMP09	LUCID	European Union Intellectual Property Office	015559611	6/17/2016	015559611	10/6/2016	12	Registered
310797-TEMP10	PALOS	European Union Intellectual Property Office	015553191	6/17/2016	015553191	10/6/2016	12	Registered
310797-20009	LUCID	Hong Kong	303934666	10/18/2016			12	Published
310797-20016	LUCID	Japan	A0063771	12/16/2016			12	Pending
310797-20015	LUCID	Madrid Protocol	A0063771	12/16/2016			12	Application Filed
310797-20011	LUCID	Norway	201612052	10/18/2016			12	Application Filed
310797-20007	LUCID	Switzerland	62796/2016	10/19/2016			12	Application Filed
310797-20012	LUCID	Taiwan	105061504	10/18/2016			12	Application Filed

<sup>2</sup> Intent to use

<sup>3</sup> Intent to use

<sup>4</sup> Intent to use

<sup>5</sup> Intent to use

<sup>6</sup> Intent to use

Client-Matter	Title/Mark	Country	Application No.	Application Date	Registration No.	Registration Date	International Classes	Case Status
310797-20017	LUCID	United Kingdom	A0063771	12/16/2016			12	Pending
	ATIEVA	China	UIT140285	4/8/2014			9	Reg/Application Filed
	ATIEVA	China	UIT140286	4/8/2014			12	Reg/Application Filed
	ATIEVA	China	UIT140287	4/8/2014			35	Reg/Application Filed
	ATIEVA	China	UIT140288	4/8/2014			37	Reg/Application Filed
	ATIEVA	China	UIT140289	4/8/2014			42	Reg/Application Filed
	ATIEVA	China	UIT140994	4/8/2014			7	Reg/Application Filed

**EXHIBIT D**  
**MASK WORKS**

N/A