

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4864712

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
ALTASENSE, INC		03/07/2018
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	JVC KENWOOD CORPORATION	
<b>Street Address:</b>	3-12, MORIYACHO, KANAGAWA-KU, YOKOHAMA-SHI	
<b>City:</b>	KANAGAWA	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	221-0022	
<b>PROPERTY NUMBERS Total: 57</b>		
<b>Property Type</b>	<b>Number</b>	
Patent Number:	RE43314	
Patent Number:	9609246	
Patent Number:	9368534	
Patent Number:	9368533	
Patent Number:	9264597	
Patent Number:	9263489	
Patent Number:	9191598	
Patent Number:	9124832	
Patent Number:	9124829	
Patent Number:	9064769	
Patent Number:	9049422	
Patent Number:	9019002	
Patent Number:	9006630	
Patent Number:	8902343	
Patent Number:	8902336	
Patent Number:	8885077	
Patent Number:	8823846	
Patent Number:	8665350	
Patent Number:	8645094	
Patent Number:	8637800	

PATENT

Property Type	Number
Patent Number:	8633845
Patent Number:	8610810
Patent Number:	8610790
Patent Number:	8605177
Patent Number:	8488025
Patent Number:	8436674
Patent Number:	8275213
Patent Number:	8164657
Patent Number:	8144226
Patent Number:	8139129
Patent Number:	8098314
Patent Number:	8094215
Patent Number:	8068152
Patent Number:	8063964
Patent Number:	7999340
Patent Number:	7994858
Patent Number:	7930580
Patent Number:	7834306
Patent Number:	7768569
Patent Number:	7760258
Patent Number:	7760250
Patent Number:	7755679
Patent Number:	7616243
Patent Number:	7525586
Patent Number:	7443435
Patent Number:	7417675
Patent Number:	7046284
Patent Number:	6965707
Patent Number:	6900839
Patent Number:	6888572
Patent Number:	6873359
Patent Number:	6759641
Patent Number:	6538245
Patent Number:	6504141
Patent Number:	6476374
Patent Number:	6417504
Patent Number:	9736405

**CORRESPONDENCE DATA****Fax Number:**

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<b>ATTORNEY DOCKET NUMBER:</b>	TMI-0014ALT/OT
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<b>NAME OF SUBMITTER:</b>	TOSHIKATSU IMAIZUMI
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<b>SIGNATURE:</b>	/Toshikatsu Imaizumi/
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<b>DATE SIGNED:</b>	03/13/2018
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**Total Attachments: 5**

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## ASSIGNMENT

This agreement (hereinafter referred to as "AGREEMENT"), entered into by and between ALTASENSE INC., a corporation of Delaware, United States of America (hereinafter referred to as "ASSIGNOR"), and JVC KENWOOD Corporation, a corporation of Japan, having a principal place of business at 3-12, Moriyacho, Kanagawa-ku, Yokohama-shi, Kanagawa, 221-0022, Japan, (hereinafter referred to as "ASSIGNEE"), witnesseth:

WHEREAS, said ASSIGNOR is the owner of fifty seven (57) patents including one reissue patent, which are listed in Appendix attached hereto (hereinafter referred to as "PATENTS"), and

WHEREAS, as of December 31, 2017, said ASSIGNEE is desirous of acquiring, and does hereby acquire, the entire right, title, and interest of ASSIGNOR in and to the PATENTS,

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, said ASSIGNOR hereby sells, assigns, and transfers to said ASSIGNEE, its entire right, title, and interest for the United States, in and to any and all said PATENTS and any reissue patents obtained or to be obtained thereon, and the inventions that are disclosed in said PATENTS,

AND said ASSIGNOR agrees that said ASSIGNEE may apply for and receive a reissue patent in its own name; that, when requested, without charge to, but at the expense of, said ASSIGNEE, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this ASSIGNMENT, said ASSIGNOR will have the inventor(s) of said PATENTS execute all reissue applications on any and all of the inventions; that, when requested, said ASSIGNOR will communicate to said ASSIGNEE, its successors, assigns, and representatives all facts known to said ASSIGNOR relating to the inventions and the history thereof; and that, when requested, said ASSIGNOR will generally assist said ASSIGNEE, its successors, assigns, or representatives in securing and maintaining proper patent protection for the inventions (including reexamination), and

AND said ASSIGNOR warrants that: said ASSIGNOR is the legal owner of the right, title and interest in and to any and all said PATENTS; that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the ASSIGNOR; and that full right to convey the same as herein expressed is possessed by the ASSIGNOR.

Date: 3/7/2018

Title:

CEO

Name (Print): Hi-daki Jinguji

Hi-daki Jinguji

(Assignor's Signature)

APPENDIX  
LIST OF ASSIGNED PATENTS

Application No.	Patent No.	Title	Application date	Issue date	Country
11/800,070	RE43,314	Compact active pixel with low-noise image formation	5/3/2007	4/17/2012	US
14/710,835	9,609,246	Data throttling to facilitate full frame readout of an optical sensor for wafer testing	5/13/2015	3/28/2017	US
14/965,225	9,368,534	Image sensor with hybrid heterostructure	12/10/2015	6/14/2016	US
14/965,133	9,368,533	Image sensor with hybrid heterostructure	12/10/2015	6/14/2016	US
13/293,593	9,264,597	Sensor state map for managing operational states of an image sensor	11/10/2011	2/16/2016	US
14/632,899	9,263,489	Image sensor with hybrid heterostructure	2/26/2015	2/16/2016	US
13/206,175	9,191,598	Front-end pixel fixed pattern noise correction in imaging arrays having wide dynamic range	8/9/2011	11/17/2015	US
14/512,726	9,124,832	Dynamic, local edge preserving defect pixel correction for image sensors	10/13/2014	9/1/2015	US
13/558,988	9,124,829	Optical black pixel readout for image sensor data correction	7/26/2012	9/1/2015	US
13/962,626	9,064,769	Image sensor with hybrid heterostructure	8/8/2013	6/23/2015	US
13/719,851	9,049,422	Data throttling to facilitate full frame readout of an optical sensor for wafer testing	12/19/2012	6/2/2015	US
13/795,095	9,019,002	Self-scaled voltage booster	3/12/2013	4/28/2015	US
13/349,791	9,006,630	Quality of optically black reference pixels in CMOS iSoCs	1/13/2012	4/14/2015	US
13/926,292	8,902,343	Charge pump for pixel floating diffusion gain control	6/25/2013	12/2/2014	US
13/754,844	8,902,336	Dynamic, local edge preserving defect pixel correction for image sensors with spatially arranged exposures	1/30/2013	12/2/2014	US

Application No.	Patent No.	Title	Application date	Issue date	Country
13/735,301	8,885,077	Dynamic, local edge preserving defect pixel correction for image sensors	1/7/2013	11/11/2014	US
13/109,231	8,823,846	Pausing digital readout of an optical sensor array	5/17/2011	9/2/2014	US
12/151,833	8,665,350	Method for fixed pattern noise (FPN) correction	5/8/2008	3/4/2014	US
11/765,898	8,645,094	Accurate gain implementation in CMOS sensor	6/20/2007	2/4/2014	US
13/066,629	8,637,800	Image sensor with hybrid heterostructure	4/19/2011	1/28/2014	US
13/409,380	8,633,845	Low power slope-based analog-to-digital converter	3/1/2012	1/21/2014	US
13/397,740	8,610,810	Two-by-two pixel structure in an imaging system-on-chip	2/16/2012	12/17/2013	US
13/217,797	8,610,790	Programmable data readout for an optical sensor	8/25/2011	12/17/2013	US
12/586,060	8,605,177	Image sensor with wide dynamic range	9/16/2009	12/10/2013	US
12/582,316	8,488,025	Sub-frame tapered reset	10/20/2009	7/16/2013	US
13/428,396	8,436,674	Self-scaled voltage booster	3/23/2012	5/7/2013	US
12/151,947	8,275,213	Apparatus and method for gain correction	5/8/2008	9/25/2012	US
12/163,211	8,164,657	Pixel or column fixed pattern noise mitigation using partial or full frame correction with uniform frame rates	6/27/2008	4/24/2012	US
11/969,302	8,144,226	Two-by-two pixel structure in an imaging system-on-chip	1/4/2008	3/27/2012	US
12/802,832	8,139,129	High sensitivity color filter array	6/14/2010	3/20/2012	US

Application No.	Patent No.	Title	Application date	Issue date	Country
12/401,808	8,098,314	Noise reduction for analog video applications	3/11/2009	1/17/2012	US
12/244,047	8,094,215	Digital column gain mismatch correction for 4T CMOS imaging systems-on-chip	10/2/2008	1/10/2012	US
12/163,159	8,068,152	Pixel or column fixed pattern noise mitigation using partial or full frame correction	6/27/2008	11/29/2011	US
11/986,238	8,063,964	Dual sensitivity image sensor	11/20/2007	11/22/2011	US
11/715,799	7,999,340	Apparatus and method for forming optical black pixels with uniformly low dark current	3/7/2007	8/16/2011	US
12/454,320	7,994,858	Operational trans-conductance amplifier with output clamp circuit	5/15/2009	8/9/2011	US
11/776,006	7,930,580	Controlling timing dependencies in a mixed signal system-on-a-chip (SOC)	7/11/2007	4/19/2011	US
12/053,670	7,834,306	Dark current and lag reduction	3/24/2008	11/16/2010	US
11/505,728	7,768,569	High sensitivity color filter array	8/17/2006	8/3/2010	US
11/715,808	7,760,258	Apparatus and method for stabilizing image sensor black level	3/7/2007	7/20/2010	US
11/820,880	7,760,250	Method and apparatus for minimizing noise pickup in image sensors	6/20/2007	7/20/2010	US
11/715,736	7,755,679	Apparatus and method for reducing edge effect in an image sensor	3/7/2007	7/13/2010	US
11/715,577	7,616,243	Method and apparatus for improving and controlling dynamic range in an image sensor	3/7/2007	11/10/2009	US
10/436,947	7,525,586	Image sensor and method with multiple scanning modes	5/12/2003	4/28/2009	US
10/886,319	7,443,435	Column amplifier with automatic gain selection for CMOS image sensors	7/7/2004	10/28/2008	US

Application No.	Patent No.	Title	Application date	Issue date	Country
10/436,945	7,417,675	On-chip black clamp system and method	5/12/2003	8/26/2008	US
10/776,952	7,046,284	CMOS imaging system with low fixed pattern noise	2/11/2004	5/16/2006	US
9/675,488	6,965,707	Compact active pixel with low-noise snapshot image formation	9/29/2000	11/15/2005	US
9/675,487	6,900,839	High gain detector amplifier with enhanced dynamic range for single photon read-out of photodetectors	9/29/2000	5/31/2005	US
9/697,203	6,888,572	Compact active pixel with low-noise image formation	10/26/2000	5/3/2005	US
9/675,278	6,873,359	Self-adjusting, adaptive, minimal noise input amplifier circuit	9/29/2000	3/29/2005	US
9/671,409	6,759,641	Imager with adjustable resolution	9/27/2000	7/6/2004	US
9/696,919	6,538,245	Amplified CMOS transducer for single photon read-out of photodetectors	10/26/2000	3/25/2003	US
9/675,483	6,504,141	Adaptive amplifier circuit with enhanced dynamic range	9/29/2000	1/7/2003	US
9/557,133	6,476,374	Room temperature, low-light-level visible imager	4/25/2000	11/5/2002	US
9/675,735	6,417,504	Compact ultra-low noise high-bandwidth pixel amplifier for single-photon readout of photodetectors	9/29/2000	7/9/2002	US
14/608,329	9,736,405	Global shutter image sensor having extremely fine pitch	1/29/2015	8/15/2017	US