

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																						
NATURE OF CONVEYANCE:	ASSIGNMENT																						
CONVEYING PARTY DATA																							
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Avago Technologies General IP (Singapore) Pte. Ltd.</td> <td>02/22/2012</td> </tr> <tr> <td>Avago Technologies ECBU IP (Singapore) Pte. Ltd.</td> <td>02/22/2012</td> </tr> </tbody> </table>		Name	Execution Date	Avago Technologies General IP (Singapore) Pte. Ltd.	02/22/2012	Avago Technologies ECBU IP (Singapore) Pte. Ltd.	02/22/2012																
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<table border="1"> <tr> <td>Name:</td> <td>PixArt Imaging, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>No. 5, Innovation Road I</td> </tr> <tr> <td>Internal Address:</td> <td>HsinChu Science Park</td> </tr> <tr> <td>City:</td> <td>Hsin-Chu</td> </tr> <tr> <td>State/Country:</td> <td>TAIWAN</td> </tr> </table>		Name:	PixArt Imaging, Inc.	Street Address:	No. 5, Innovation Road I	Internal Address:	HsinChu Science Park	City:	Hsin-Chu	State/Country:	TAIWAN												
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PROPERTY NUMBERS Total: 10																							
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CORRESPONDENCE DATA																							
Fax Number:	(770)951-0933																						
Phone:	7709339500																						
Email:	gina.silverio@tkhr.com																						

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

Correspondent Name: Daniel R. McClure
Address Line 1: 400 Interstate North Pkwy SE
Address Line 2: Suite 1500
Address Line 4: Atlanta, GEORGIA 30339

ATTORNEY DOCKET NUMBER:	251632-9010
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NAME OF SUBMITTER:	Daniel R. McClure
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Total Attachments: 6
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PATENT ASSIGNMENT AGREEMENT

This **PATENT ASSIGNMENT AGREEMENT** (this "Assignment") is made as of **22** February 2012 by and between **AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.**, a company incorporated under the laws of Singapore, and **AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD.**, a company incorporated under the laws of Singapore (Collectively "Avago"), and PixArt Imaging, Inc., a Taiwan corporation, ("PixArt").

RECITALS

WHEREAS, Avago and PixArt have entered into an Asset Purchase Agreement dated as of 13 February 2012 ("APA Agreement"), pursuant to which PixArt acquired certain assets of Avago and Avago's subsidiaries;

WHEREAS, in furtherance of the parties desire to assign certain patents and patent applications with a grant-back license, Avago now desires to assign to PixArt all of Avago's right, title and interest in and to the patents and/or patent applications set forth in Exhibit A to this Assignment ("the Patents"), and PixArt desires to grant a license back to Avago of the Patents.

ASSIGNMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements contained in the APA Agreement and the covenants and agreements in this Assignment, Avago agrees as follows:

1. Avago does, subject to any pre-existing license grants identified specifically in this Assignment and APA Agreement, hereby transfer, convey, assign and deliver to PixArt all of Avago's right, title and interest in and to the Patents, the same to be held by PixArt for PixArt's own use and enjoyment, and for the use and enjoyment of PixArt's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Avago if this Assignment and sale had not been made, and all claims for damages and other remedies for past and future infringements of the Patents, along with the right to sue for and collect such damages and other remedies for the use and benefit of PixArt and its successors, assigns and other legal representatives.

2. Avago agrees to execute and deliver such other documents and to take all such other actions which PixArt, its successors and/or assigns may reasonably request to effect the terms of this Assignment, and to execute and deliver any and all affidavits, testimonies, declarations, oaths, samples, exhibits, specimens and other documentation as may be reasonably required to effect the terms of this Assignment and its recordation in relevant state, national or international patent offices.

LICENSE

1. PixArt grants to Avago, a fully paid-up, royalty free, non-exclusive, personal, non-transferable (except that Avago shall have the right to transfer this license to a successor in interest), worldwide right and license under the Patents, to make, have-made, import, export, use, lease, sell, offer for sale, transfer and/or

otherwise dispose of any and all products and methods that fall within the scope of the Retained Business (as that term is defined in the APA). For the avoidance of doubt, Avago has no right to sub license any right under the Patents or the Assignment to any third party.

2. Avago shall not Assert any patent claim of any sort, whether based upon patents currently existing, currently pending, or filed, acquired by Avago, or licensed with the right to assert, within five (5) years of 13 February 2012, against PixArt or against direct or indirect PixArt customers, distributors, suppliers, manufactures or resellers, for the manufacture, use, import, export, offer for sale, sale, or transfer of any of the PocoTouch Business products or methods (as the term is defined in the APA). Assert" means to bring an action of any nature before any legal, judicial, arbitration, administrative, executive or other type of body or tribunal that has or claims to have authority to adjudicate such action in whole or in part or threaten either orally or in writing. Examples of such body or tribunal, include without limitation, United States State and Federal Courts, the United States International Trade Commission and any foreign counterparts of any of the foregoing.

IN WITNESS WHEREOF, Avago and PixArt have executed this Assignment on the date first above written.

AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.

By: PE Wynn Kin
Name: PE WYNN KIN
Title: SECRETARY
AVAGO TECHNOLOGIES ECU IP (SINGAPORE) PTE. LTD.

By: PE Wynn Kin
Name: PE WYNN KIN
Title: SECRETARY

PIXART

PIXART IMAGING, INC.

By: _____
Name: _____
Title: _____

[Signature Page to Patent Assignment Agreement]

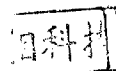
otherwise dispose of any and all products and methods that fall within the scope of the Retained Business (as that term is defined in the APA). For the avoidance of doubt, Avago has no right to sub license any right under the Patents or the Assignment to any third party.

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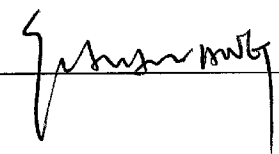


AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD.

By: _____
Name: _____
Title: _____

PIXART

PIXART IMAGING, INC.

By: X  _____
Name: _____
Title: _____

Touchpad Patents

PATENT NUMBER	FILE #	TITLE	ISSUE DATE	FILING DATE	APPLICATION NUMBER	PUBLICATION NUMBER	COUNTRY	STATUS	SUB MATTER TYPE DESCRIPTION	INVENTORS
7184026	10010189-01	Impedance Sensing Screen Pointing Device	27-Feb-07	19-Mar-01	981252	130273	US	Issued	ORG (Patent)	Hugh Wallace
7616197	10041233-01	Touch Device And Method For Providing Tactile Feedback	10-Nov-09	28-Jul-05	11193133	2007-0024593	US	Issued	ORG (Patent)	Dale W Schroeder
	10041233-02	Touch Device And Method For Providing Tactile Feedback		19-Jul-06	62537881	1748350	EP	Published	ORG (Patent)	Dale W Schroeder
	10041233-03	Touch Device And Method For Providing Tactile Feedback		16-Oct-09	12551013	2010-0039403	US	Published	CON (Patent)	Dale W Schroeder
7889176	10060037-01	Capacitive Sensing In Displacement Type Pointing Devices	5-Feb-11	18-Jul-06	11488559	2008-0018596	US	Issued	ORG (Patent)	Jonah Harley, Robert Wilson
4724157	10060037-02	Capacitive Sensing In Displacement Type Pointing Devices	15-Apr-11	18-Jul-07	2007186472		JP	Issued	ORG (Patent)	Jonah Harley, Robert Wilson
ZL 2007 1 0130369.4	10060037-03	Capacitive Sensing In Displacement Type Pointing Devices	15-Jul-09	18-Jul-07	2 0071E+12	CN101100002	CN	Issued	ORG (Patent)	Jonah Harley, Robert Wilson
	10060037-04	Capacitive Sensing In Displacement Type Pointing Devices		11-Jul-07	1 02007E+12	DE102007032260	DE	Pending	ORG (Patent)	Jonah Harley, Robert Wilson
10-0897694	10060037-05	Capacitive Sensing In Displacement Type Pointing Devices	7-May-09	18-Jul-07	20070071948		KR	Issued	ORG (Patent)	Jonah Harley, Robert Wilson
7639234	10060340-01	Mapping In Displacement Type Pointing Devices	29-Dec-09	4-Jan-07	11619683	2008-0164076	US	Issued	ORG (Patent)	Tim Orsley
200810000065	10060340-02	Capacitive Sensing And Absolute Position Mapping In Displacement Type Pointing Devices	25-Aug-10	3-Jan-08	2 0081E+12	CN101226449	CN	Issued	ORG (Patent)	Tim Orsley
	10060472-01	Touch Pad Device and Method for Determining a Position of an Input Object on the Device Using Capacitive Coupling		11-Dec-08	12332515	2010-0147600	US	Published	ORG (Patent)	Tim Orsley
	10060472-02	Touch Pad Device and Method for Determining a Position of an Input Object on the Device Using Capacitive Coupling		8-Dec-09	1 020091E+12		DE	Pending	ORG (Patent)	Tim Orsley
	10060472-03	Touch Pad Device and Method for Determining a Position of an Input Object on the Device Using Capacitive Coupling		10-Dec-09	20090122990		KR	Pending	ORG (Patent)	Tim Orsley
2008-0721PORG		Capacitive Touchscreen or Touchpad for Finger or Stylus	30-Jan-12	31-Jul-09	2009179131	2010-79882	JP	Issued	ORG (Patent)	Jonah Harley
2008-072USORG		Capacitive Touchscreen or Touchpad for Finger or Stylus		31-Jul-08	12183458	2010-0026655	US	Pending	ORG (Patent)	Jonah Harley
2008-102DEORG		Capacitive Touchscreen or Touchpad for Finger and Active Stylus		1-Apr-10	1 0201E+12		DE	Pending	ORG (Patent)	Tim Orsley
2008-102USORG		Capacitive Touchscreen or Touchpad for Finger and Active Stylus		3-Apr-09	12438183	2010-0252335	US	Published	ORG (Patent)	Tim Orsley
2009-047CNORG		Firmware Methods and Devices for a Mutual Capacitance Touch Sensing Device		25-Aug-10	201010260346X	103996032A	CN	Pending	ORG (Patent)	Tom Murphy, Kevin C Rathburn, Keen Hun Leong
2009-047USORG		Firmware Methods and Devices for a Mutual Capacitance Touch Sensing Device		25-Aug-09	12547408	2011-0050618	US	Published	ORG (Patent)	Tom Murphy, Kevin C Rathburn, Keen Hun Leong, Sarangan Narasimhan

2009-048USORG	Method and Apparatus for Detecting Defective Traces in a Mutual Capacitance Touch Sensing Device		25-Aug-09	12547354	2011-0050637	US	Published	ORG (Patent)	Tom Murphy, Kevin C Ratliff, Keen Hun Leong, Sarangan Narasimhan
2009-050CNORG	Sensor Patterns for Mutual Capacitance Touchscreens		2-Jun-10	201010197171X		CN	Pending	ORG (Patent)	Bob Ritter, Kenneth Brawer, Vitali Souchkov, Sarangan Narasimhan
2009-050DEORG	Sensor Patterns for Mutual Capacitance Touchscreens		28-May-10	1.0201E+12		DE	Pending	ORG (Patent)	Bob Ritter, Kenneth Brawer, Vitali Souchkov, Sarangan Narasimhan
2009-050KORG	Sensor Patterns for Mutual Capacitance Touchscreens		31-May-10	20100951189		KR	Pending	ORG (Patent)	Bob Ritter, Kenneth Brawer, Vitali Souchkov, Sarangan Narasimhan
2009-050USORG	Sensor Patterns for Mutual Capacitance Touchscreens		2-Jun-09	1247669	2010-0302201	US	Published	ORG (Patent)	Bob Ritter, Kenneth Brawer, Vitali Souchkov, Sarangan Narasimhan
2010-001TWORG	Capacitive Touchscreen System with Drive-Sense Circuits		29-Apr-11	100115199		TW	Pending	ORG (Patent)	Vitali Souchkov
2010-001USORG	Capacitive Touchscreen System with Drive-Sense Circuits		2-Jun-10	12792889		US	Published	ORG (Patent)	Vitali Souchkov
2010-003DEORG	Capacitive Touchscreen System with Multiplexers		2-Jun-11	1.02011E+12		DE	Pending	ORG (Patent)	Vitali Souchkov
2010-003USORG	Capacitive Touchscreen System with Multiplexers		2-Jun-10	12792570		US	Published	ORG (Patent)	Vitali Souchkov
2010-004DEORG	Capacitive Touchscreen System with Touch or Object Position Encoding during Analog-to-Digital Conversion		31-Oct-11	1.02011E+12		DE	Pending	ORG (Patent)	Vitali Souchkov
2010-004USORG	Capacitive Touchscreen System with Touch or Object Position Encoding during Analog-to-Digital Conversion		31-Oct-10	12916567		US	Pending	ORG (Patent)	Vitali Souchkov
2010-010USORG	DIFFERENTIAL CAPACITIVE TOUCHSCREEN OR TOUCH PANEL		17-Jan-11	13007995		US	Pending	ORG (Patent)	Mike Brosnan, Ken Crandall
2010-011USORG	Capacitive Coupling of a Capacitive Touchscreen to a Printed Circuit and Controller		31-Oct-10	12916571		US	Pending	ORG (Patent)	Mike Brosnan, Bob Ritter
2010-013CNORG	Reduction of Electromagnetic Interference in a Capacitive Touchscreen		21-Jun-11	2.0111E+12		CN	Published	ORG (Patent)	Vitali Souchkov
2010-013USORG	Reduction of Electromagnetic Interference in a Capacitive Touchscreen		21-Jun-10	12819459		US	Published	ORG (Patent)	Vitali Souchkov
2010-018GBORG	Capacitive Touchscreen System with Switchable Charge Acquisition Circuit		21-Jun-11	11106485	2481521	GB	Pending	ORG (Patent)	Vitali Souchkov
2010-018USORG	Capacitive Touchscreen System with Switchable Charge Acquisition Circuit		21-Jun-10	12819635		US	Published	ORG (Patent)	Vitali Souchkov
2010-026USORG	User Identification With Capacitive Touchscreen		31-Oct-10	12916559		US	Pending	ORG (Patent)	Mike Brosnan
2010-037USORG	CAPACITIVE TOUCHSCREEN OR TOUCH PANEL WITH FINGERPRINT READER		17-Jan-11	13008005		US	Pending	ORG (Patent)	Mike Brosnan
2010-038USORG	Tactile Feedback Cover Lens for a Capacitive Touchscreen System		31-Oct-10	12916559		US	Pending	ORG (Patent)	Sarangan Narasimhan
2010-041USORG	Method and Device for Reducing Noise Interference in a Capacitive Touchscreen System		31-Oct-10	12916559		US	Pending	ORG (Patent)	Mike Brosnan
2010-046USORG	Noise Blanketing for Capacitive Touch Displays		15-May-11	13108875		US	Pending	ORG (Patent)	Ken Crandall, Mike Brosnan, Sam Li
2010-048USORG	Automatic Gain Control for Capacitive Touch Panel Sensing System		16-May-11	13108969		US	Pending	ORG (Patent)	Ken Crandall, Mike Brosnan, Jeff Stone, Tom Murphy

2010-050USORG	Detection of Predetermined Objects with Capacitive Touchscreens or Touch Panels	17-Jan-11	13008009	US	Pending	ORG (Patent)	Mike Brosnan
2010-051USORG	Capacitive Touchscreen System with Reduced Power Consumption Using Modal Focused Scanning	31-Oct-10	12916577	US	Pending	ORG (Patent)	Sam Li, Zach Dietz, Jeffrey Doar, Jeff Stone
2010-083USORG	Capacitive Finger Navigation Input Device	27-Oct-10	12933359	US	Pending	ORG (Patent)	Mike Brosnan, Tom Murphy
2010-127CNORG	Capacitive Touchscreen Signal Acquisition without Panel Reset	1-Dec-11	2.0111E+12	CN	Pending	ORG (Patent)	Vitali Souchkov
2010-127DEORG	Capacitive Touchscreen Signal Acquisition without Panel Reset	28-Oct-11	1.02011E+12	DE	Pending	ORG (Patent)	Vitali Souchkov
2010-127USCIP	Capacitive Touchscreen Signal Acquisition without Panel Reset	1-Dec-10	12957489	US	Published	CIP (Patent)	Vitali Souchkov
2011-015USORG	Low Voltage Capacitive Touchscreen Charge Acquisition and Readout Systems, Circuits and Methods for High System Noise Immunity	15-Jul-11	13104132	US	Pending	ORG (Patent)	Vitali Souchkov
2011-035USORG	Method and Apparatus for Arbitrating Among Contiguous Buttons on a Capacitive Touchscreen	1-Jul-11	13174777	US	Pending	ORG (Patent)	David Townsley, Sarangan Narasimhan
2011-038USORG	Systems, Devices and Methods for Capacitor Mismatch Error Aversaging in Pipeline Analog-to-Digital Converters	11-Aug-11	13208219	US	Pending	ORG (Patent)	Vitali Souchkov
2011-040USORG	Charge Pump Frequency Selection in Touch Screen Sensor Interface System	31-May-11	13149865	US	Pending	ORG (Patent)	Abhay Kumar Rai, Vitali Souchkov, Jeff Stone
2011-044USORG	In-Situ Detection of Touchscreen Panel Shorts	22-Apr-11	13092642	US	Pending	ORG (Patent)	Mercedes E Gil, Sarangan Narasimhan
2011-062USCIP	Capacitor Mismatch Error Correction in Pipeline Analog-to-Digital Converters	31-Aug-11	13222885	US	Pending	CIP (Patent)	Vitali Souchkov
2011-063USORG	Controller and ADC for Low Power Operation of Touchscreen Device	16-May-11	13108709	US	Pending	ORG (Patent)	Jerry Wong, Mercedes E Gil, Zhi Zhong Huang, Xu Zhang, Xiao Yan Zheng
2011-094USORG	On-Chip Power Down Generation For LDO-Based Touchscreen Controllers	29-Nov-11	13306954	US	Pending	ORG (Patent)	Abhay Kumar Rai, Mike Brosnan
37 results displayed.							