## 502891919 07/15/2014

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2938516

SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT		
CONVEYING PARTY DA	ТА	·		
		Name	Execution Date	
TIMOTHY REYNOLDS			06/13/2014	
DENNIS HWANG			06/05/2014	
WALTER KIM			06/02/2014	
THOMAS ROWAN			06/12/2014	
ALLEGRO MICROSYSTE	EMS BU	SINESS DEVELOPMENT, INC.	05/02/2014	
RECEIVING PARTY DAT	Γ <b>Α</b>			
lame: ALLEGRO MICROSYSTEMS, LLC				
Street Address:	115 NORTHEAST CUTOFF			
City:	WORCESTER			
State/Country:	MASSACHUSETTS			
Postal Code:	01606			
Property Type		Number		
Application Number:		4307207		
CORRESPONDENCE DA	ATA			
Fax Number:		781)401-9966		
		the e-mail address first; if that is uns ; if that is unsuccessful, it will be sen		
Phone:		7814019988		
Email: sms0		sms@dc-m.com		
•				
•		DALY, CROWLEY, MOFFORD, & DUR	KEE, LLP	
Address Line 1:	3	354 TURNPIKE STREET	KEE, LLP	
Address Line 1: Address Line 2:	3	354 TURNPIKE STREET SUITE 301A	KEE, LLP	
Address Line 1:	3	354 TURNPIKE STREET	KEE, LLP	
Address Line 1: Address Line 2: Address Line 4:	3 9 0	354 TURNPIKE STREET SUITE 301A	KEE, LLP	
Address Line 1: Address Line 2:	3 9 0	354 TURNPIKE STREET SUITE 301A CANTON, MASSACHUSETTS 02021	KEE, LLP	
Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER:	3 9 0	354 TURNPIKE STREET SUITE 301A CANTON, MASSACHUSETTS 02021 ALLEG-433PUS	KEE, LLP	
Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU	3 9 0	354 TURNPIKE STREET SUITE 301A CANTON, MASSACHUSETTS 02021 ALLEG-433PUS KRISTOFFER W. LANGE	KEE, LLP	
Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER: SIGNATURE:	3 9 0	354 TURNPIKE STREET SUITE 301A CANTON, MASSACHUSETTS 02021 ALLEG-433PUS KRISTOFFER W. LANGE /Kristoffer W. Lange/	KEE, LLP	

source=TO_PTO_ASSIGNMENT#page2.tif
source=TO_PTO_ASSIGNMENT#page3.tif
source=TO_PTO_ASSIGNMENT#page4.tif
source=TO_PTO_ASSIGNMENT#page5.tif
source=TO_PTO_ASSIGNMENT#page6.tif
source=TO_PTO_ASSIGNMENT#page7.tif

## ASSIGNMENT

Whereas we, Timothy Reynolds, Dennis Hwang, Walter Kim and Thomas Rowan have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled: MOTOR CONTROL SYSTEM AND INTERFACE, identified as Attorney Docket No. ALLEG-433PUS, and Client Case No. A-2330, which application was executed on  $\frac{1}{12014}$ ,  $\frac{1}{6}314$ ,  $\frac{$ 

Whereas Allegro MicroSystems Business Development, Inc., a Delaware corporation having a place of business at 115 Northeast Cutoff, Worcester, MA 01606, may have certain rights in the above identified inventions or discoveries;

Whereas, Allegro MicroSystems, LLC, a Delaware limited liability company having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01606, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we, Timothy Reynolds, Dennis Hwang, Walter Kim and Thomas Rowan, and Allegro MicroSystems Business Development, Inc. by signature of Daniel Demingware hereby acknowledge, we each hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters

PATENT Atty. Dckt. No.: ALLEG-433PUS Client Case No.: A-2330

Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries;

6. Warrant that Daniel Demingware, President of Allegro MicroSystems Business Development, Inc., is authorized to act on behalf of, and to bind Allegro MicroSystems Business Development, Inc.

In testimony of which we have each executed this Assignment on the date indicated next to our name(s).

PATENT Alty, Dekt. No.: ALLEG-433PUS Client Case No.: A-2330

Dated: \_\_\_\_\_ Ure 13,2014

Timothy Revnolds

On this  $13_{Day}$  day of  $JUNE_{Year}$ , 2014, before me appeared Timothy Reynolds, to me known and known to me to be the person described in and who executed the foregoing

instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature Rebort O. Pickett First Witness Printed Name

On this  $\frac{13}{D_{ay}}$  day of  $\frac{J \nu Re}{Month}$ ,  $\frac{1014}{Y_{eat}}$ , before me appeared Timothy Reynolds,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature

Second Witness/Printed Name

PATENT Atty. Dekt. No.: ALLEG-433PUS Client Case No.: A-2330

Dated: June 3. 2014

Dennis Hwang

On this  $\underbrace{J^{74}}_{\text{Day}}$  day of  $\underbrace{J\mathcal{U}}_{\text{Month}}$ ,  $\underbrace{\mathcal{P}}_{\text{Vear}}$ , before me appeared Dennis Hwang,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature <u>Symplong</u> (Chr.'s U) First Witness Printed Name

On this  $\frac{\int \mathcal{H}}{Day}$  day of  $\frac{\int \mathcal{U}h e}{Month}$ ,  $\frac{20/\mathcal{U}}{Y_{ear}}$ , before me appeared Dennis Hwang, to me known and known to me to be the person described in and why executed the foregoing

instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature <u>Tao Boney Kinn</u> (<u>78</u> Kinn) Second Witness Printed Name

PATENT Atty, Dokt. No.: ALLEG-433PUS Client Case No.: A-2330

Dated: \_\_\_\_\_\_ 2014\_\_\_\_

On this  $\int_{Doy} \frac{f}{day} of \frac{J}{Month} = \frac{2014}{Y_{Eas}}$  before me appeared Walter Kim,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature Anny Yong Yu Chris Yu) First Witness Printed Name

On this  $5^{\text{H}}_{\text{Day}}$  day of  $\underline{June}_{\text{Month}}, \underbrace{\mathcal{N}}_{\text{Year}},$  before me appeared Walter Kim, to me known and known to me to be the person described in and whopexecuted the foregoing

instrument, and he acknowledged the same to be his free act and deed

Second Witness Signature <u>7ae Bong KTW1 (TB</u> (CTM) Second Witness Printed Name

PATENT Afty. Dekt. No.: ALLEG-433PUS Client Case No.: A-2330

Dated: JUNE 12, 2014

On this  $\frac{12}{D_{ay}}$  day of  $\frac{JUNE}{Month i}$ ,  $\frac{J014}{Y_{ear}}$ , before me appeared Thomas Rowan,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature Robert O. Prckett First Witness Printed Name

On this 12 day of  $J_{WE}$ ,  $3M_{Vear}$  before me appeared Thomas Rowan, to me known and known to me to be the person described in and who executed the foregoing

instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature Angeny - Angeny Second Witness Printed Name

PATENT REEL: 033313 FRAME: 0075

PATENT Atty. Dckt. No.: ALLEG-433PUS Client Case No.: A-2330

Dated: 11/4/2

Allegro MicroSystems Business Development, Inc. By: Daniel Demingware In his capacity as President of Allegro MicroSystems Business Development, Inc.

On this 2 day of 2117 2014, before me appeared Daniel Demingware,

to me known and known to me to be the person described in and who executed the foregoing instrument, and she acknowledged the same to be her free act and deed.

First Witness Signature TUCHERS KHEE

First Witness Printed Name

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_, before me appeared Daniel Demingware, The to me known and known to me to be the person described in and who executed the foregoing instrument, and she acknowledged the same to be her free act and deed.

Second Witness Signature

Second Witness Printed Name

363507.doc

7