

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4426137

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST RECORDED AT REEL/FRAME 29414/0963
CONVEYING PARTY DATA	
Name	Execution Date
ANTARES CAPITAL LP, AS SUCCESSOR TO GENERAL ELECTRIC CAPITAL CORPORATION, AS AGENT	05/16/2017
RECEIVING PARTY DATA	
Name:	AAVID LABORATORIES, INC.
Street Address:	70 COMMERCIAL STREET
City:	CONCORD
State/Country:	NEW HAMPSHIRE
Postal Code:	03301
PROPERTY NUMBERS Total: 4	
Property Type	Number
Patent Number:	5560423
Patent Number:	5720338
Patent Number:	5587880
Patent Number:	5634351
CORRESPONDENCE DATA	
Fax Number:	(214)981-3400
<i>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.</i>	
Phone:	214-981-3483
Email:	dclark@sidley.com
Correspondent Name:	DUSAN CLARK, ESQ.
Address Line 1:	SIDLEY AUSTIN LLP
Address Line 2:	2021 MCKINNEY AVE., SUITE 2000
Address Line 4:	DALLAS, TEXAS 75201
ATTORNEY DOCKET NUMBER:	65241/30330
NAME OF SUBMITTER:	DUSAN CLARK
SIGNATURE:	/Dusan Clark/
DATE SIGNED:	05/23/2017
Total Attachments: 44	

[illegible]

**RELEASE OF SECURITY INTEREST
IN INTELLECTUAL PROPERTY COLLATERAL**

This **RELEASE OF SECURITY INTEREST IN INTELLECTUAL PROPERTY COLLATERAL** (this “**Release**”), dated as of May 16, 2017, is made by **ANTARES CAPITAL LP**, as successor agent to General Electric Capital Corporation in its capacity as Agent for the Lenders (the “**Agent**”), under the Credit Agreement referred to below (terms used in this Release and not herein defined shall have the meanings set forth in the Credit Agreement).

WHEREAS, in connection with that certain Second Amended and Restated Credit Agreement, dated as of February 5, 2015 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), among Aavid Corporation (the “**Borrower**”), the other Credit Parties from time to time party thereto, the Lenders from time to time party thereto and Agent, and together with all general security agreements, trademark security agreements, patent security agreements and copyright security agreements entered into in connection therewith or in connection with prior versions thereof, the Lenders have severally agreed to make extensions of credit to the Borrower;

WHEREAS, pursuant to the Credit Agreement, that certain Guaranty and Security Agreement, dated as of December 3, 2012 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “**GSA**”), and those certain agreements described on Annex I attached hereto (collectively with the GSA, the “**Security Agreements**”), the Borrower and certain of the other Credit Parties (together with the Borrower, the “**Grantors**”) granted among other collateral as set forth therein, continuing security interests in the intellectual property owned by Grantors, including the intellectual property listed on Annex I attached hereto (together with the Patent Collateral (as defined in each Security Agreement), the Trademark Collateral (as defined in each Security Agreement), and the Copyright Collateral (as defined in each Security Agreement), the “**Intellectual Property Collateral**”); and

WHEREAS, the Security Agreements were recorded in the U.S. Patent and Trademark Office and the U.S. Copyright Office on the dates and on the reels and frames and volumes and documents set forth on Annex I hereto.

NOW THEREFORE, in consideration of the material covenants and agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agent hereby (i) terminates each Security Agreement, and (ii) **RELEASES**, terminates and discharges, without representation, recourse or warranty whatsoever, all of its rights in, to and under, including its Lien (as defined in the Security Agreements) on and security interest in the Intellectual Property Collateral, whether granted pursuant to the Security Agreements or any other agreement or document delivered in connection with the Credit Agreement, and the Agent hereby reassigns any and all such right, title and interest (if any) that the Agent may have in, to and under the Intellectual Property Collateral to the Grantors.

The Agent agrees, at Grantors' expense, to cooperate with Grantors and to provide Grantors with the information and additional authorization reasonably required or desirable to effect the release of the Agent's security interest in the released collateral described herein.

This Release and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York.

IN WITNESS WHEREOF, the Agent has executed this Release as of the date first above written.

ANTARES CAPITAL LP, as Agent

By: 

Name: Kyle Wilson

Title: Duly Authorized Signatory

ANNEX I

Patent Security Agreement recorded with the United States Patent and Trademark Office on December 6, 2012 at Reel 029414, Frame 0963.

Patents and Patent Applications

Title	Cty	Appln No.	Filing Date	Patent No.	Issue Date	Owner
FLEXIBLE HEAT PIPE FOR INTEGRATED CIRCUIT APPARATUS	US	08/282,068	7/28/1994	5,560,423	10/1/1996	Aavid Laboratories, Inc.
TWO-PHASE THERMAL BAG COMPONENT COOLER	US	08/397,644	3/2/1995	5,720,338	2/24/1998	Aavid Laboratories, Inc.
COMPUTER COOLING SYSTEM OPERABLE UNDER THE FORCE OF GRAVITY IN FIRST ORIENTATION AND AGAINST THE FORCE OF GRAVITY IN SECOND ORIENTATION	US	08/495,961	6/28/1995	5,587,880	12/24/1996	Aavid Laboratories, Inc.
TWO-PHASE COOLING SYSTEM FOR LAPTOP COMPUTERS	US	08/376,769	1/23/1995	5,634,351	6/3/1997	Aavid Laboratories, Inc.

Patent Security Agreement recorded with the United States Patent and Trademark Office on December 6, 2012 at Reel 029414, Frame 0913.

Patents and Patent Applications

Title	Cty	Appln No.	Filing Date	Patent No.	Issue Date	Owner
LIQUID COOLED HEAT SINK FOR COOLING ELECTRONIC COMPONENTS	US	08/547,196	10/24/1995	5,829,516	11/3/1998	Aavid Acquisition, Inc.

Patent Security Agreement recorded with the United States Patent and Trademark Office on December 6, 2012 at Reel 029414, Frame 0899.

Patents and Patent Applications

Title	Cty	Appln No.	Filing Date	Patent No.	Issue Date	Owner
HEAT SINK	US	08/439,875	5/12/1995	5,590,712	1/7/1997	Aavid Thermalloy, LLC
PROCESS AND AN APPARATUS FOR FORMING A PROFILED ELEMENT	US	08/425,608	4/20/1995	5,774,964	7/7/1998	Aavid Thermalloy, LLC
HEAT SINK ATTACHMENT ASSEMBLY	US	08/169,354	12/20/1993	5,386,338	1/31/1995	Aavid Thermalloy, LLC
HEAT SINK ATTACHMENT ASSEMBLY	US	08/314,673	9/29/1994	5,428,897	7/4/1995	Aavid Thermalloy, LLC
SPRING CLAMP AND HEAT SINK ASSEMBLY	US	08/283,535	8/1/1994	5,464,054	11/7/1995	Aavid Thermalloy, LLC
ANCHOR FOR SECURING A HEAT SINK TO A PRINTED CIRCUIT BOARD	US	08/663,600	6/14/1996	5,640,305	6/17/1997	Aavid Thermalloy, LLC
HEAT SINK FOR DIRECT ATTACHMENT TO SURFACE MOUNT ELECTRONIC DEVICE PACKAGES	US	08/955,481	10/22/1997	6,097,603	8/1/2000	Aavid Thermalloy, LLC
SPRING CLAMP ASSEMBLY WITH ELECTRICALLY INSULATING SHOE	US	08/223,011	4/5/1994	5,371,652	12/6/1994	Aavid Thermalloy, LLC
STRAP SPRING FOR HEAT SINK CLIP ASSEMBLY	US	08/643,079	5/2/1996	5,594,624	1/14/1997	Aavid Thermalloy, LLC
FAN ATTACHMENT CLIP FOR HEAT SINK	US	08/482,011	6/7/1995	5,590,025	12/31/1996	Aavid Thermalloy, LLC
FLUID-COOLED HEAT SINK FOR ELECTRONIC COMPONENTS	US	10/121,337	4/12/2002	6,661,658	12/9/2003	Aavid Thermalloy, LLC
HEAT SINK, IN PARTICULAR FOR ELECTRONIC COMPONENTS (MAX CLIP)	US	09/081,623	5/19/1998	5,991,151	11/23/1999	Aavid Thermalloy, LLC
CORRUGATED FIN HEAT EXCHANGER AND METHOD OF MANUFACTURE	US	10/185,652	6/28/2002	6,688,380	2/10/2004	Aavid Thermalloy, LLC

Title	Cty	Appln No.	Filing Date	Patent No.	Issue Date	Owner
CORRUGATED FIN HEAT EXCHANGER AND METHOD OF MANUFACTURE	CN	03815281.9	6/25/2003	ZL03815281.9	3/18/2009	Aavid Thermalloy, LLC
CORRUGATED FIN HEAT EXCHANGER AND METHOD OF MANUFACTURE	EP	03781282.3	6/25/2003			Aavid Thermalloy, LLC
CORRUGATED FIN HEAT EXCHANGER AND METHOD OF MANUFACTURE	TW	92117452	6/26/2003	276766	3/21/2007	Aavid Thermalloy, LLC
MULTIPLE EVAPORATOR HEAT PIPE ASSISTED HEAT SINK	US	11/100,819	4/7/2005	7,059,391	6/13/2006	Aavid Thermalloy, LLC
FLUID CONTAINING COOLING PLATE FOR AN ELECTRONIC COMPONENT	US	10/883,450	7/1/2004	7,306,027	12/11/2007	Aavid Thermalloy, LLC
FLUID CONTAINING COOLING PLATE FOR AN ELECTRONIC COMPONENT	TW	94121648	6/28/2005	I302820	11/1/2008	Aavid Thermalloy, LLC
HEAT-PIPE TYPE RADIATOR, AND METHOD FOR PRODUCING THE SAME	US	09/873,225	6/5/2001	6,435,266	8/20/2002	Aavid Thermalloy, LLC
HEAT SINK (THIN BLISTER PATENT)	WO	PCT/US07/23051	11/1/2007			Aavid Thermalloy, LLC
HEAT SINK (THIN BLISTER PATENT)	US	12/514,176	10/28/2009			Aavid Thermalloy, LLC
LIQUID COOLING OF PHOTOVOLTAIC SOLAR PANELS	EP	08724917.3	1/30/2008			Aavid Thermalloy, LLC
LIQUID COOLING OF PHOTOVOLTAIC SOLAR PANELS	TW	97103729	1/31/2008			Aavid Thermalloy, LLC
HEAT SINK BASE PLATE WITH HEAT PIPE	US	12/148,192	4/17/2008	8,826,693	10/16/2012	Aavid Thermalloy, LLC
HEATSINK MOUNT AND ASSEMBLY	US	13/014,506	1/26/2011			Aavid Thermalloy, LLC
THERMAL TRANSFER DEVICE WITH REDUCED VERTICAL PROFILE	WO	PCT/US11/38299	5/27/2011			Aavid Thermalloy, LLC
TWO-SIDED LIQUID PLATE HEAT SINK	WO	PCT/US11/27352	3/7/2011			Aavid Thermalloy, LLC
HEAT SINK MOUNT WITH POSITIONABLE HEAT SINKS	WO	PCT/US11/38615	5/31/2011			Aavid Thermalloy, LLC
METAL PUSH PIN FOR HEAT SINK MOUNTING	US	61/593,438	2/1/2012			Aavid Thermalloy, LLC

Title	Cty	Appln No.	Filing Date	Patent No.	Issue Date	Owner
HEAT SINK ASSEMBLY WITH OPENABLE FRAME CLIP	PCT	PCT/CN2012/077141	6/19/2012			Aavid Thermalloy, LLC
STRUCTURE FOR EFFICIENT HARVESTING OF GEOTHERMAL HEAT	US	61/728849	11/21/2012			Aavid Thermalloy, LLC
APPARATUS AND METHOD FOR DIRECT ATTACHMENT OF HEAT SINK TO SURFACE MOUNT	US	09/151,927	9/11/1998	6,178,628	1/30/2001	Aavid Thermalloy, LLC
STRAP SPRING FOR ATTACHING HEAT SINKS TO CIRCUIT BOARDS	US	09/332,615	6/14/1999	6,195,880	3/6/2001	Aavid Thermalloy, LLC
HEAT SINK AND ATTACHMENT PROCESS FOR ELECTRONIC COMPONENTS	US	08/932,815	9/16/1997	5,917,700	6/29/1999	Aavid Thermalloy, LLC and Lucent Technologies Inc.

Trademark Security Agreement recorded with the United States Patent and Trademark Office on December 5, 2012 at Reel 4913, Frame 0477.

Mark	Country	App No.	Filing Date	Reg. no.	Owner
COOLING BY AAVID & SUNRISE DESIGN	United States of America	85/432174	26-Sep-2011		Aavid Thermalloy, LLC
AAVID THERMALLOY	China	3882471	12-Jan-2004		Aavid Thermalloy, LLC
COOLING BY AAVID & SUNRISE DESIGN	China	1065080	21-Mar-2012		Aavid Thermalloy, LLC
AAVID	China	970055002	04-Jun-1997	1218921	Aavid Thermalloy, LLC
AAVID	China	970054999	04-Jun-1997	1197816	Aavid Thermalloy, LLC
AAVID	Taiwan	85033899	09-Jul-1996	757658	Aavid Thermalloy, LLC
AAVID AND DESIGN	Taiwan	8566835	16-Mar-1998	798478	Aavid Thermalloy, LLC
AAVID AND DESIGN	Taiwan	85066834	31-Dec-1996	97938	Aavid Thermalloy, LLC
AAVID IN CHINESE CHARACTERS	China	970055001	04-Jun-1997	1218922	Aavid Thermalloy, LLC
AAVID IN CHINESE CHARACTERS	China	970054998	04-Jun-1997	1197817	Aavid Thermalloy, LLC
AAVID IN CHINESE CHARACTERS	China	3480176	10-Mar-2003	3480176	Aavid Thermalloy, LLC
(SUN DEVICE)	China	970055003	04-Jun-1997	1218920	Aavid Thermalloy, LLC
(SUN DEVICE)	Taiwan	8533898	01-Jun-1997	763260	Aavid Thermalloy, LLC
AAVID THERMALLOY & SUNBURST DESIGN	United States of America	85/120664	01-Sep-2010	3954657	Aavid Thermalloy, LLC
EASY-PLY	United States of America	75/227937	20-Jan-1997	2101701	Aavid Thermalloy, LLC
T IN DESIGN	United States of America	73/019672	24-Apr-1974	1028661	Aavid Thermalloy, LLC
TAPERSINK	China	6971722	25-Sep-2008	6971722	Aavid Thermalloy, LLC
TAPERSINK	European Community	007095367	25-Jul-2008	007095367	Aavid Thermalloy, LLC

Copyright Security Agreement recorded with the United States Copyright Office on December 10, 2012 at Volume 3624, Document 286.

Copyright Registrations

Title	Copyright No.	Date	Record Owner
6085 series D I P package bond on extrusions : new product bulletin [no.] 77-6085/DS-10.	TX365594	7/23/1979	Aavid Thermalloy, LLC
Mica insulators : new product bulletin [no.] 77-MICA/DS-11.	TX365595	7/23/1979	Aavid Thermalloy, LLC
6109, 6110 timesaver solderable heat sinks for TO-220 cases : new product bulletin [no.] 79-6109/DS-1.	TX365596	7/23/1979	Aavid Thermalloy, LLC
6024 series TO-92 clip-on heat sink : new product bulletin [no.] 77-CHS/DS-2.	TX365597	7/23/1979	Aavid Thermalloy, LLC
6200 series TO-5 clip-on heat sinks : new product bulletin [no.] 77-6200/DS-12.	TX365598	7/23/1979	Aavid Thermalloy, LLC
6075 series universal heat sinks : new product bulletin [no.] 78-6075/DS-2.	TX365599	7/23/1979	Aavid Thermalloy, LLC
8909NB insulating TO-3 cover : new product bulletin [no.] 78-8909/DS-2.	TX365600	7/23/1979	Aavid Thermalloy, LLC
6098 series solderable pin heat sink : new product bulletin [no.] 78-6098/DS-6.	TX365601	7/23/1979	Aavid Thermalloy, LLC
New insulator shapes : new product bulletin [no.] 78-INS/DS-2.	TX365602	7/23/1979	Aavid Thermalloy, LLC
6108 series timesaver solderable heat sinks for TO-3 cases : new product bulletin [no.] 78-6108/DS-7.	TX365603	7/23/1979	Aavid Thermalloy, LLC
Thermalloy plastic products : P C card guides, P C card pullers & ejectors, component mounts, semiconductor insulating covers, shoulder washers : [no.] 78-PB-8.	TX365604	7/23/1979	Aavid Thermalloy, LLC
Insul-Cote pre-coated insulator and automated dispenser : save up to 8,000 dollars per year with Insul-Cote automated insulator application : new product bulletin [no.] 77-INS/DS-1.	TX365605	7/23/1979	Aavid Thermalloy, LLC
9644 series mounting clamp : new product bulletin [no.] 77-CLP/DS-1.	TX365606	7/23/1979	Aavid Thermalloy, LLC
6021/6022 series low cost solderable heat sinks for plastic power : new product bulletin [no.] 79-6021/DS-2.	TX365607	7/23/1979	Aavid Thermalloy, LLC
6041/6042 clip-on heat sinks : new product bulletin [no.] 76-CHS/DS-10.	TX365608	7/23/1979	Aavid Thermalloy, LLC
2270 series press-fit gear heat sinks : new product bulletin [no.] 76-GHS/DS-10.	TX365609	7/23/1979	Aavid Thermalloy, LLC
Interface thermal resistance data : technical bulletin : [no.] TB-1.	TX365610	7/23/1979	Aavid Thermalloy, LLC
4880 mounting kit for TO-220 plastic power : new product bulletin [no.] 77-MK/DS-1.	TX365611	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories : [no.] 77-HS-10.	TX370603	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories catalog : [no.] 77-IHS-9.	TX370604	7/23/1979	Aavid Thermalloy, LLC
Semiconductor mounting pads : catalog.	TX372644	7/23/1979	Aavid Thermalloy, LLC
Insulators & mounting kits for semiconductor devices : catalog.	TX372645	7/23/1979	Aavid Thermalloy, LLC

Title	Copyright No.	Date	Record Owner
Semiconductor accessories.	TX372646	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories.	TX372647	7/23/1979	Aavid Thermalloy, LLC
Semiconductor mounting pads : catalog.	TX372648	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories catalog.	TX372649	7/23/1979	Aavid Thermalloy, LLC
Heat sinks.	TX372650	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories.	TX372651	7/23/1979	Aavid Thermalloy, LLC
Semiconductor accessories short form catalog : 78-SF-8.	TX393668	7/23/1979	Aavid Thermalloy, LLC
5020 snap-on timesaver card ejector for .062" P C boards : new product bull. 79-5020/DS-9.	TX337025	9/28/1979	Aavid Thermalloy, LLC
Insul-cote pre-coated insulator and automated dispenser : new product bulletin 80-INS/DS-1.	TX432214	2/25/1980	Aavid Thermalloy, LLC
Semiconductor accessories.	TX525452	8/1/1980	Aavid Thermalloy, LLC
6351 series high performance heat sinks for TO-3 cases : new product bull. 79-6351/DS-12.	TX524518	8/8/1980	Aavid Thermalloy, LLC
Forced convection thermal performance.	TX524519	8/8/1980	Aavid Thermalloy, LLC
2280/2286 series heat sink for leadless chip carriers and flat paks : preliminary data sheet.	TX524520	8/8/1980	Aavid Thermalloy, LLC
Thermalloy solderable studs design guidelines for packaging under static and dynamic loadings : engineering information release no. 80-1004 / prepared by Charles L. Hudson.	TX524521	8/8/1980	Aavid Thermalloy, LLC
6044 dual TO-220 clip-on heat sink : new product bull. 80-6044-DS-1.	TX524522	8/8/1980	Aavid Thermalloy, LLC
Thermalsil silicon rubber insulators : preliminary data sheet 80-TSIL/DS-1.	TX524523	8/8/1980	Aavid Thermalloy, LLC
Semiconductor accessories catalog.	TX538595	9/2/1980	Aavid Thermalloy, LLC
Stay on top of the new technology, Solderable Stud heat sinks : 80-SS/DS-1.	TX569118	10/20/1980	Aavid Thermalloy, LLC
6208B "top" for TO-3 : new product bull. 80-6208B/DS-1.	TX583620	11/17/1980	Aavid Thermalloy, LLC
Thermalcote II synthetic base thermal grease : new product bull. 80-TII/DS-1.	TX583621	11/17/1980	Aavid Thermalloy, LLC
6074B MT wave solderable multiple mount TO-220 heat sink : new product bull. 81-6074/DS-1.	TX746172	8/10/1981	Aavid Thermalloy, LLC
Extruded heat sink profiles : [catalog]	TX746173	8/10/1981	Aavid Thermalloy, LLC
Semiconductor assessorries.	TX884229	4/5/1982	Aavid Thermalloy, LLC
Three ways to kill time.	TX928162	6/24/1982	Aavid Thermalloy, LLC
Semiconductor accessories.	TX1205810	10/11/1983	Aavid Thermalloy, LLC
New ways to kill time.	TX1205811	10/11/1983	Aavid Thermalloy, LLC
Extruded heat sink profiles.	TX1380717	7/2/1984	Aavid Thermalloy, LLC
Semiconductor accessories.	TX1380718	7/2/1984	Aavid Thermalloy, LLC
Alignment pads for heat sink assembly.	TX2069904	4/27/1987	Aavid Thermalloy, LLC
New products from Thermalloy.	TX2069905	4/27/1987	Aavid Thermalloy, LLC
Semiconductor accessories.	TX2069906	4/27/1987	Aavid Thermalloy, LLC
New Thermalsil.	TX2067188	5/5/1987	Aavid Thermalloy, LLC

Title	Copyright No.	Date	Record Owner
6214, 6216 high performance TO-3 heat sinks for limited PC board space.	TX2068485	5/5/1987	Aavid Thermalloy, LLC
6380 series cools single and zig-zag in-line packages 87-DS/6380-7.	TX2227844	1/5/1988	Aavid Thermalloy, LLC
Newest innovation from Thermalloy could cut your heat sink assembly time in half : 87-AP/DS-10.	TX2227845	1/5/1988	Aavid Thermalloy, LLC
6222 series bridge rectifier heat sinks 87-DS/6222-7.	TX2227846	1/5/1988	Aavid Thermalloy, LLC
Silicon rubber performance compared to various interface materials.	TX2423347	1/5/1988	Aavid Thermalloy, LLC
New Thermalsil thermally conductive, silicone rubber insulators.	TX2423348	1/5/1988	Aavid Thermalloy, LLC
Heat sinks for ECL and CMOS, ASIC's, gate arrays, microprocessors in PGA and LCC packages : new product catalog : 88-DS/GA-5.	TX2372993	7/6/1988	Aavid Thermalloy, LLC
Heat sink for Intel 80486 and 80860 : new product bulletin.	TX2716702	12/26/1989	Aavid Thermalloy, LLC
High performance aluminum nitride insulators.	TX3241789	2/11/1991	Aavid Thermalloy, LLC
Heat sinks for ECL and CMOS ASICs, gate arrays, microprocessors in PGA packages and the PGA E-Z Mount assembly method.	TX3241788	2/11/1992	Aavid Thermalloy, LLC
Thermalloy cooling modules.	TX3241790	2/11/1992	Aavid Thermalloy, LLC
Semiconductor accessories.	TX3241791	2/11/1992	Aavid Thermalloy, LLC
[Thermalfilm MT : TMT-DS4-9208]	TX3444343	11/19/1992	Aavid Thermalloy, LLC
Heat sinks for board mounted power modules.	TX3444344	11/19/1992	Aavid Thermalloy, LLC
New heat sink spring clips for use with AMP low insertion force PGA sockets SCA1-DS8-9304.	TX3738991	11/16/1993	Aavid Thermalloy, LLC
Pentium processor, thermal management solutions from Thermalloy PNTMI-DS6-9304.	TX3738992	11/16/1993	Aavid Thermalloy, LLC
Thermalloy THM1-DS7-9304.	TX3738993	11/16/1993	Aavid Thermalloy, LLC
Thermalloy cooling modules TCM2-DS3-9206.	TX3738994	11/16/1993	Aavid Thermalloy, LLC
Secondary heat sink clips CLP1-DS9-9304.	TX3738995	11/16/1993	Aavid Thermalloy, LLC
Heat sinks.	CSN0021190	1976	Aavid Thermalloy, LLC
Heat sinks.	CSN0021190	1979	Aavid Thermalloy, LLC
Insulators & mounting kits for semiconductor devices : catalog.	CSN0021384	1976	Aavid Thermalloy, LLC
Insulators & mounting kits for semiconductor devices : catalog.	CSN0021384	1979	Aavid Thermalloy, LLC
Semiconductor accessories.	CSN0022983	1977	Aavid Thermalloy, LLC
Semiconductor accessories.	CSN0022983	1978	Aavid Thermalloy, LLC
Semiconductor accessories.	CSN0022983	1979	Aavid Thermalloy, LLC
Semiconductor accessories.	CSN0022983	1980	Aavid Thermalloy, LLC
Semiconductor accessories catalog.	CSN0022984	1978	Aavid Thermalloy, LLC
Semiconductor accessories catalog.	CSN0022984	1979	Aavid Thermalloy, LLC
Semiconductor accessories catalog.	CSN0022984	1980	Aavid Thermalloy, LLC
Semiconductor mounting pads : catalog.	CSN0022985	1977	Aavid Thermalloy, LLC
Semiconductor mounting pads : catalog.	CSN0022985	1978	Aavid Thermalloy, LLC

Title	Copyright No.	Date	Record Owner
Semiconductor mounting pads : catalog.	CSN0022985	1979	Aavid Thermalloy, LLC

Patent Security Agreement (First Supplemental Filing) recorded with the United States Patent and Trademark Office on June 19, 2014 at Reel 033213, Frame 0974.

Patents and Patent Applications

Title	Country	Owner	App. Num.	Filing Date	Patent Num.	Issue Date
PLANAR COIL AND SUPPORT FOR ACTUATOR OF FLUID MOVER	US	Aavid Thermalloy, LLC	61/988429	5/5/2014		
FLUIDIC ENERGY TRANSFER DEVICES	US	Aavid Thermalloy, LLC	12/224783	1/22/2009	8272851	9/25/2012
SPLIT FLUIDIC DIAPHRAGM	US	Aavid Thermalloy, LLC	61/879298	9/18/2013		
FORCE-EQUALIZATION STATIONARY-COIL ACTUATOR FOR FLUID MOVERS	US	Aavid Thermalloy, LLC	13/877570	5/14/2013		
CANTILEVER FAN	US	Aavid Thermalloy, LLC	13/818513	3/22/2013		
ENERGY TRANSFER FLUID DIAPHRAGM AND DEVICE	US	Aavid Thermalloy, LLC	13/576836	10/29/2012		
SYSTEM AND METHOD FOR COOLING HEAT GENERATING COMPONENTS	US	Aavid Thermalloy, LLC	13/826450	3/14/2013		
THERMAL TRANSFER DEVICE WITH SPIRAL FLUID PATHWAYS	US	Aavid Thermalloy, LLC	14/003511	10/8/2013		
THERMAL TRANSFER DEVICE WITH REDUCED VERTICAL PROFILE	US	Aavid Thermalloy, LLC	14/119919	11/25/2013		

Patent Security Agreement recorded with the United States Patent and Trademark Office on June 19, 2014 at Reel 033202, Frame 0902.

Patent Registrations

REGISTERED PATENTS

Title	Patent No.	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
SYNTHETIC JET COOLING SYSTEM FOR LED MODULE	EP 1 943 687	Nuventix, Inc.	Nuventix, Inc.	European Regional: Germany Netherlands Great Britain	11/02/2006	01/22/2014
SYNTHETIC JET HEAT PIPE THERMAL MANAGEMENT SYSTEMS	7,607,470	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/13/2006	10/27/2009
THERMAL MANAGEMENT SYSTEM FOR DISTRIBUTED HEAT SOURCES	7,606,029	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/13/2006	10/20/2009
THERMAL MANAGEMENT OF BATTERIES USING SYNTHETIC JETS	8,030,886	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/19/2006	10/04/2011
SYNTHETIC JET EJECTOR FOR THE THERMAL MANAGEMENT OF PCI CARDS	8,430,644	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/17/2006	4/30/2013
SYSTEM AND METHOD FOR THERMAL MANAGEMENT USING DISTRIBUTED SYNTHETIC JET ACTUATORS	EP 2 419 644	Georgia Tech Research Corporation	Georgia Tech Research Corporation	Great Britain	07/07/2004	04/09/2008

Title	Patent No.	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
ELECTRONICS PACKAGE FOR SYNTHETIC JET EJECTORS	8,035,966	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/22/2007	10/11/2011
ELECTRONICS PACKAGE FOR SYNTHETIC JET EJECTORS	EP 1 989 051 B1	Nuventix, Inc.	Nuventix, Inc.	Germany	02/22/2007	01/25/2012
ELECTRONICS PACKAGE FOR SYNTHETIC JET EJECTORS	EP 1 989 051 B1	Nuventix, Inc.	Nuventix, Inc.	The Netherlands	02/22/2007	01/25/2012
METHODS FOR REDUCING THE NON-LINEAR BEHAVIOR OF ACTUATORS USED FOR SYNTHETIC JETS	8,672,648	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/21/2007	03/18/2014
APPARATUS AND METHOD FOR ENHANCED HEAT TRANSFER	7,252,140	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	09/01/2005	08/07/2007
VIBRATION ISOLATION SYSTEM FOR SYNTHETIC JET DEVICES	8,136,576	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/22/2007	03/20/2012
SYNTHETIC JET ACTUATORS FOR COOLING HEATED BODIES AND ENVIRONMENTS	EP 1 040 736	Georgia Tech Research Corporation	Georgia Tech Research Corporation	Great Britain	11/12/1998	02/07/2007
THERMAL MANAGEMENT OF VERY SMALL FORM FACTOR PROJECTORS WITH SYNTHETIC JETS	8,388,142	Nuventix, Inc.	Nuventix, Inc.	U.S.	04/10/2009	03/05/2013
THERMAL MANAGEMENT SYSTEM FOR LED ARRAY	7,784,972	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/22/2007	8/31/2010

Title	Patent No.	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
THERMAL MANAGEMENT SYSTEM FOR LED ARRAY	7,819,556	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/26/2008	10/26/2010
SYNTHETIC JET EJECTOR WITH VIEWING WINDOW AND TEMPORAL ALIASING	7,768,779	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	06/04/2008	08/03/2010
MOLDABLE HOUSING DESIGN FOR SYNTHETIC JET EJECTOR	8,646,701	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	07/03/2007	02/11/2014
LIGHT FIXTURE WITH MULTIPLE LEDS AND SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	8,066,410	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/16/2008	11/29/2011
METHOD AND APPARATUS FOR CONTROLLING DIAPHRAGM DISPLACEMENT IN SYNTHETIC JET ACTUATORS	8,290,724	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/06/2008	10/16/2012
THERMAL MANAGEMENT SYSTEM FOR CARD CAGES	7,760,499	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	05/14/2009	07/20/2010
THERMAL MANAGEMENT OF LED ILLUMINATION DEVICES WITH SYNTHETIC JET EJECTORS	8,579,476	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/12/2010	11/12/2013
ADVANCED SYNJET COOLER DESIGN FOR LED LIGHT MODULES	8,299,691	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/15/2009	10/30/2012

Title	Patent No.	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
ACOUSTIC RESONATOR FOR SYNTHETIC JET GENERATION FOR THERMAL MANAGEMENT	8,069,910	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/12/2005	12/06/2011
SYNTHETIC JET COOLING SYSTEM FOR LED MODULE	7,932,535	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/02/2005	04/26/2011

PATENTS LICENSED FROM GEORGIA TECH RESEARCH INSTITUTE

Title	Patent No.	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
SYNTHETIC JET ACTUATOR AND APPLICATIONS THEREOF	5,758,823	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	06/12/1995	06/02/1998
SYNTHETIC JET ACTUATORS FOR MODIFYING THE DIRECTION OF FLUID FLOWS	5,988,522	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	06/05/1997	11/23/1999
SYNTHETIC JET ACTUATOR AND APPLICATIONS THEREOF	5,894,990	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	10/09/1997	04/20/1999
SYNTHETIC JET ACTUATORS FOR COOLING HEATED BODIES AND ENVIRONMENTS	6,123,145	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	11/14/1997	09/26/2000
SYSTEM AND METHOD FOR THERMAL MANAGEMENT BY SYNTHETIC JET EJECTOR CHANNEL COOLING TECHNIQUES	6,588,497	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	04/19/2002	07/08/2003

PATENT APPLICATIONS

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET EJECTOR FOR AUGMENTATION OF PUMPED LIQUID LOOP COOLING AND ENHANCEMENT OF POOL AND FLOW BOILING	60/704,049	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/29/2005
SYNTHETIC JET EJECTOR FOR AUGMENTATION OF PUMPED LIQUID LOOP COOLING AND ENHANCEMENT OF POOL AND FLOW BOILING	12/829,808	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/02/2010
SYNTHETIC JET COOLING SYSTEM FOR LED MODULE	PCT/US06/043081	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/02/2006
SYNTHETIC JET EJECTOR FOR COOLING RUGGADIZED CARD	60/750,656	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/14/2005
SYNTHETIC JET HEAT PIPE THERMAL MANAGEMENT SYSTEM	60/736,412	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/14/2005
THERMAL MANAGEMENT SYSTEM FOR DISTRIBUTED HEAT SOURCES	60/736,444	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/14/2005
THERMAL MANAGEMENT OF BATTERIES USING SYNTHETIC JETS	60/753,074	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/21/2005
THERMAL MANAGEMENT OF BATTERIES USING SYNTHETIC JETS	12/904,444	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/14/2010
SMALL FORM FACTOR SYNTHETIC JET COOLING SOLUTIONS FOR PCI EXPRESS CARDS	60/737,920	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/18/2005

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET EJECTOR FOR THE THERMAL MANAGEMENT OF PCI CARDS	60/755,603	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/31/2005
SYNTHETIC JET EJECTOR FOR THE THERMAL MANAGEMENT OF PCI CARDS	13/791,197	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/08/2013
SYSTEM AND METHOD FOR THERMAL MANAGEMENT USING DISTRIBUTED SYNTHETIC JET ACTUATORS	PCT/US04/021706	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/07/2004
ELECTRONICS PACKAGE FOR SYNTHETIC JET EJECTORS	60/776,649	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/23/2006
ELECTRONICS PACKAGE FOR SYNTHETIC JET EJECTORS	PCT/US07/04697	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/22/2007
METHODS FOR REDUCING THE NON-LINEAR BEHAVIOR OF ACTUATORS USED FOR SYNTHETIC JETS	60/802,954	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/23/2006
APPARATUS AND METHOD FOR ENHANCED HEAT TRANSFER	12/966,446	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	12/13/2010
APPARATUS AND METHOD FOR ENHANCED HEAT TRANSFER	PCT/US05/029577	Georgia Tech Research Corporation	Georgia Tech Research Corporation	U.S.	08/19/2005
VIBRATION ISOLATION SYSTEM FOR SYNTHETIC JET DEVICES	60/816,149	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/22/2006

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
MOLDABLE HOUSING DESIGN FOR SYNTHETIC JET EJECTOR	60/818,717	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/05/2006
THERMAL MANAGEMENT OF VERY SMALL FORM FACTOR PROJECTORS WITH SYNTHETIC JETS	60/851,660	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/13/2006
THERMAL MANAGEMENT OF VERY SMALL FORM FACTOR PROJECTORS	PCT/US07/021821	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/11/2007
THERMAL MANAGEMENT OF VERY SMALL FORM FACTOR PROJECTORS WITH SYNTHETIC JETS	13/753,861	Nuventix, Inc.	Nuventix, Inc.	U.S.	01/30/2013
THERMAL MANAGEMENT SYSTEM FOR LED ARRAY	60/876,860	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/22/2006
SYNTHETIC JET EJECTOR WITH VIEWING WINDOW AND TEMPORAL ALIASING	60/933,185	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/04/2007
VIBRATION BALANCED SYNTHETIC JET EJECTOR	60/997,256	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/01/2007
VIBRATION BALANCED SYNTHETIC JET EJECTOR	12/286,794	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	10/01/2008

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
LIGHT FIXTURE WITH MULTIPLE LEDS AND SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	60/000,321	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/24/2007
LIGHT FIXTURE WITH MULTIPLE LEDS AND SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	13/251,626	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/03/2011
METHOD AND APPARATUS FOR CONTROLLING DIAPHRAGM DISPLACEMENT IN SYNTHETIC JET ACTUATORS	61/002,237	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/06/2007
THERMAL MANAGEMENT SYSTEM FOR CARD CAGES	61/127,445	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/13/2008
THERMAL MANAGEMENT SYSTEM FOR CARD CAGES	10 2009 020 817.8	Nuventix, Inc.	Nuventix, Inc.	Germany	05/11/2009
THERMAL MANAGEMENT OF LED ILLUMINATION DEVICES WITH SYNTHETIC JET EJECTORS	61/134,984	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/15/2008
THERMAL MANAGEMENT OF LED ILLUMINATION DEVICES WITH SYNTHETIC JET EJECTORS	13/470,523	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/14/2012

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
THERMAL MANAGEMENT OF LED ILLUMINATION DEVICES WITH SYNTHETIC JET EJECTORS	13/969,976	Nuventix, Inc.	Nuventix, Inc.	U.S.	08/19/2013
ADVANCED SYNJET COOLER DESIGN FOR LED LIGHT MODULES	61/134,966	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/15/2008
ADVANCED SYNJET COOLER DESIGN FOR LED LIGHT MODULES	13/647,123	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/08/2012
SYSTEMS AND METHODOLOGIES FOR PREVENTING DUST AND PARTICLE CONTAMINATION OF SYNTHETIC JET EJECTORS	13/332,923	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	12/21/2011
SYNTHETIC JET EJECTOR WITH SEALED MOTOR	13/442,445	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	04/09/2012
SYSTEMS AND METHODOLOGIES FOR PREVENTING DUST AND PARTICLE CONTAMINATION OF SYNTHETIC JET EJECTORS	13/450,072	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	04/18/2012
SYSTEMS AND METHODOLOGIES FOR PREVENTING DUST AND PARTICLE CONTAMINATION OF SYNTHETIC JET EJECTORS	61/425,385	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/21/2010
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	61/304,427	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/13/2010

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	13/026,220	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	02/12/2011
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	PCT/US11/024665	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/12/2011
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	2011215590	Nuventix, Inc.	Nuventix, Inc.	Australia	07/25/2012
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	2011 8000 9023.3	Nuventix, Inc.	Nuventix, Inc.	China	08/10/2012
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	11 2011 100 524.5	Nuventix, Inc.	Nuventix, Inc.	Germany	08/10/2012
LOW FORM FACTOR SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	61/355,308	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/16/2010
LOW FORM FACTOR SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	PCT/US11/040794	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/16/2011
LOW FORM FACTOR SYNTHETIC JET THERMAL MANAGEMENT SYSTEM	13/704,549	Nuventix, Inc.	Nuventix, Inc.	U.S.	01/16/2013
SYNTHETIC JET EJECTOR WITH SEALED MOTOR	61/486,985	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYSTEMS AND METHODOLOGIES FOR ACHIEVING ACOUSTIC CANCELLATION IN SYNTHETIC JET EJECTORS	61/411,654	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/09/2010
SYSTEMS AND METHODOLOGIES FOR ACHIEVING ACOUSTIC CANCELLATION IN SYNTHETIC JET EJECTORS	13/292,210	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/09/2011
SYSTEMS AND METHODOLOGIES FOR PREVENTING DUST AND PARTICLE CONTAMINATION OF SYNTHETIC JET EJECTORS	61/487,179	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
COOLING CONCEPTS	61/486,838	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
DRIVE AND CONTROL ELECTRONICS	61/487,260	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
POWER DELIVERY TO DIAPHRAGMS	61/487,277	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
POWER DELIVERY TO DIAPHRAGMS	13/473,535	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	05/16/2012
ENGINE CONCEPTS	61/487,278	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
SYSTEMS AND METHODOLOGIES FOR MECHANICALLY SECURING A DIAPHRAGM WITHIN A SYNTHETIC JET EJECTOR	61/486,874	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYSTEMS AND METHODOLOGIES FOR INTEGRATING COMPONENTS IN SYNTHETIC JET EJECTORS	61/486,913	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
PRESS-ON HEAT SINK MOUNT FOR SYNTHETIC JET EJECTORS	61/486,955	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2011
SYNTHETIC JET ACTUATORS AND EJECTORS AND METHODS FOR USING THE SAME	13/474,489	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/17/2012
SYNTHETIC JET EJECTOR WITH SELECTABLE AUDIO FOOTPRINT	61/564,930	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/30/2011
SYNTHETIC JET EJECTOR WITH SELECTABLE AUDIO FOOTPRINT	13/691,700	Nuventix, Inc.	Nuventix, Inc.	U.S.	11/30/2012
PELTIER COOLER EQUIPPED WITH SYNTHETIC JET EJECTORS	61/611,923	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/16/2012
PELTIER COOLER EQUIPPED WITH SYNTHETIC JET EJECTORS	13/846,915	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/18/2013
AUGMENTATION OF FANS WITH SYNTHETIC JET EJECTORS	61/611,863	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/16/2012
AUGMENTATION OF FANS WITH SYNTHETIC JET EJECTORS	13/846,646	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	03/18/2013

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET EJECTORS WITH IMPROVED MANUFACTURABILITY	61/614,512	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/23/2012
SYNTHETIC JET EJECTORS WITH IMPROVED MANUFACTURABILITY	PCT/US13/033770	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/25/2013
THERMAL MANAGEMENT SYSTEM COMPRISING A HEAT PIPE, HEAT FINS AND A SYNTHETIC JET EJECTOR	61/768,189	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/22/2013
THERMAL MANAGEMENT SYSTEM COMPRISING A HEAT PIPE, HEAT FINS AND A SYNTHETIC JET EJECTOR	14/179,812	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/13/2014
MODULAR SYNTHETIC JET EJECTOR AND SYSTEMS INCORPORATING THE SAME	61/768,090	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/22/2013
MODULAR SYNTHETIC JET EJECTOR AND SYSTEMS INCORPORATING THE SAME	14/185,601	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/20/2014
SYNTHETIC JET ACTUATOR EQUIPPED WITH A PIEZOELECTRIC ACTUATOR AND A VISCOUS SEAL	61/770,707	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/28/2013

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET ACTUATOR EQUIPPED WITH A PIEZOELECTRIC ACTUATOR AND A VISCOUS SEAL	14/193,149	Nuventix, Inc.	Nuventix, Inc.	U.S.	02/28/2014
SYNTHETIC JET ACTUATOR EQUIPPED WITH ENTRAINMENT FEATURES	61/771,271	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/01/2013
SYNTHETIC JET ACTUATOR EQUIPPED WITH ENTRAINMENT FEATURES	14/195,162	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/03/2014
SYNTHETIC JET ACTUATOR EQUIPPED WITH A PIEZOELECTRIC ACTUATOR AND A VISCOUS SEAL	61/771,289	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/01/2013
SYNTHETIC JET ACTUATOR EQUIPPED WITH A PIEZOELECTRIC ACTUATOR AND A VISCOUS SEAL	14/194,695	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/01/2014
SYNTHETIC JET ACTUATOR MOTOR EQUIPPED WITH MEANS FOR MAGNETIC FLUX PROFILING	61/772,064	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/04/2013
SYNTHETIC JET ACTUATOR MOTOR EQUIPPED WITH MEANS FOR MAGNETIC FLUX PROFILING	14/197,205	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/04/2014

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET ACTUATOR MOTOR EQUIPPED WITH MEANS FOR MAGNETIC FLUX PROFILING	61/774,974	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/18/2013
SMART LED CONTROLLER	61/787,032	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
SMART LED CONTROLLER	14/213,926	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/14/2014
LOW PROFILE SYNTHETIC JET ACTUATOR	61/776,011	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/11/2013
THERMAL MANAGEMENT DEVICE CONTAINING HEAT SPREADER EQUIPPED WITH HEAT PIPES AND INTEGRAL NOZZLES	61/787,831	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
SYNTHETIC JET EJECTOR EQUIPPED WITH COLD TEMPERATURE START CONTROL DELAY	61/789,757	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
SYNTHETIC JET EJECTOR EQUIPPED WITH COLD TEMPERATURE START CONTROL DELAY	14/211,836	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/14/2014
SYNTHETIC JET EJECTOR WITH CONTROLLER TO MATCH OPERATING LEVEL TO THERMAL REQUIREMENT	61/793,137	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
SYNTHETIC JET EJECTOR EQUIPPED WITH CONTROLLER TO MATCH OPERATING LEVEL TO THERMAL REQUIREMENT	61/800,053	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
METHOD FOR FORMING SYNTHETIC JET ACTUATOR AND COMPONENTS THEREOF THROUGH INSERT MOLDING	14/209,283	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	03/13/2014
MULTIPLE DIE PACKAGE FOR LED LIGHTING APPLICATIONS INVOLVING THERMAL MANAGEMENT WITH SYNTHETIC JET	61/800,998	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
SYSTEMS AND METHODOLOGIES FOR MITIGATING ACOUSTIC EMISSIONS IN SYNTHETIC JET EJECTORS	61/801,399	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
SINGLE PHASE ACTUATOR DRIVE CURRENT	61/801,702	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
THERMAL MANAGEMENT OF POWER SUPPLIES WITH SYNTHETIC JET EJECTORS	61/802,218	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
ACTUATOR CONTROL AND RESONANCE TRACKING USING ONLY BEMF MEASUREMENT	61/806,146	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/28/2013

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
METHOD OF ESTIMATING THE STROKE OF VARIABLE-RELUCTANCE SYNTHETIC JET ACTUATORS USING COIL IMPEDENCE	61/776,028	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/11/2013
NOZZLE CONFIGURATION FOR SYNTHETIC JET ACTUATOR FOR RE-INGESTION REDUCTION	61/776,011	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/11/2013
FLAT SPRING CONFIGURATIONS FOR SYNTHETIC JET ACTUATOR	61/777,185	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/12/2013
SYSTEM AND METHOD FOR CONTROLLING SYNTHETIC JET EJECTOR POWER DEMAND IN DIMMING APPLICATIONS	61/793,720	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/15/2013
MODULAR SYNTHETIC JET BASED THERMAL MANAGEMENT SYSTEM FOR SHROUDED OUTDOOR REMOTE RADIO HEAD UNITS	61/805,607	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/27/2013
SYNTHETIC JET ACTUATORS AS MULTIFUNCTIONAL DEVICES IN MOBILE TECHNOLOGY PLATFORMS	61/843,399	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/07/2013
MICRO SYNTHETIC JET EJECTOR	61/809,536	Nuventix, Inc.	Nuventix, Inc.	U.S.	04/08/2013
MICRO SYNTHETIC JET EJECTOR	14/200,574	Nuventix, Inc.	Nuventix, Inc.	U.S.	03/07/2014

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
DIAPHRAGMS FOR SYNTHETIC JET ACTUATORS AND METHODS FOR MANUFACTURING THE SAME	61/837,526	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/20/2013
METHOD FOR ESTIMATING THE STROKE OF A VARIABLE RESISTANCE SYNTHETIC JET ACTUATOR	61/838,670	Nuventix, Inc.	Nuventix, Inc.	U.S.	06/24/2013
MOVING ARMATURE SYNTHETIC JET ACTUATOR DESIGN	61/828,894	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/30/2013
MOVING ARMATURE SYNTHETIC JET ACTUATOR DESIGN WITH STACKABLE PLATES	61/829,318	Nuventix, Inc.	Nuventix, Inc.	U.S.	05/31/2013
LOW PROFILE SYNTHETIC JET ACTUATOR EQUIPPED WITH MOVING ARMATURES AND STACKABLE PLATES	61/857,737	Nuventix, Inc.	Nuventix, Inc.	U.S.	07/24/2013
LOW PROFILE SYNTHETIC JET ACTUATOR EQUIPPED WITH MOVING ARMATURES AND STACKABLE PLATES	14/203,549	Nuventix, Inc.	Nuventix, Inc. (confirmatory assignments in process)	U.S.	03/10/2014
SYNTHETIC JET ACTUATOR WITH VIBRATION CANCELLATION	61/894,685	Nuventix, Inc.	Nuventix, Inc.	U.S.	10/23/2013
NOZZLE CONFIGURATION FOR SYNTHETIC JET ACTUATOR FOR RE-INGESTION REDUCTION	61/776,066	Nuventix, Inc.	Nuventix, Inc.	U.S.	3/11/2013

Title	Application Number	Applicant	Current Owner	Jurisdiction	Application Date
THERMAL MANAGEMENT OF LED ILLUMINATION DEVICES WITH SYNTHETIC JET EJECTORS	12/503,181 (abandoned)	Nuventix, Inc.	Nuventix, Inc.	U.S.	7/15/2009
SYNTHETIC JET EJECTOR FOR AUGMENTATION OF PUMPED LIQUID LOOP COOLING AND ENHANCEMENT OF POOL AND FLOW BOILING	11/494,913 (abandoned)	Nuventix, Inc.	Nuventix, Inc.	U.S.	7/28/2006
SYNTHETIC JET EJECTOR AND DESIGN THEREOF TO FACILITATE MASS PRODUCTION	14/291,729	Nuventix, Inc.	Nuventix, Inc.	U.S.	5/30/2014

Trademark Security Agreement recorded with the United States Patent and Trademark Office on June 19, 2014 at Reel 5306, Frame 0193.

REGISTERED TRADEMARKS

Registered Trademarks

Trademark Name / Description	Registration Number	Registrant	Current Owner	Jurisdiction	Filing Date	Issue Date
SYNJET	3,428,167	Nuventix, Inc.	Nuventix, Inc.	U.S.	04/08/2005	05/13/2008
NUVENTIX	3,427,629	Nuventix, Inc.	Nuventix, Inc.	U.S.	12/20/2006	05/13/2008

TRADEMARK APPLICATIONS

None.

Patent Security Agreement (Second Supplemental Filing) recorded with the United States Patent and Trademark Office on February 27, 2015 at Reel 035045, Frame 0543.

Patents and Patent Applications

Title	Country	Owner	App. Num.	Filing Date	Patent Num.	Issue Date
FASTENER ASSEMBLY AND METHOD FOR HEAT SINK MOUNTING	US	Aavid Thermalloy, LLC	14/446506	7/30/2014	N/A	N/A
THERMOSIPHON WITH BENT TUBE SECTION	US	Aavid Thermalloy, LLC	62/050463	9/15/2014	N/A	N/A

Patent Security Agreement (First Supplemental Filing) recorded with the United States Patent and Trademark Office on February 27, 2015 at Reel 035045, Frame 0553.

Patents and Patent Applications

Title	Country	Owner	App. Num.	Filing Date	Patent Num.	Issue Date
SYNTHETIC JET EJECTORS WITH IMPROVED MANUFACTURABILITY	US	Nuventix, Inc.	14/4908804	9/19/2014	N/A	N/A

Trademark Security Agreement recorded with the United States Patent and Trademark Office on January 6, 2016 at Reel 5704, Frame 0109.

REGISTERED TRADEMARKS

Trademark	Registrant	Serial/Reg. No	Filing/Reg. Date	Country
REVOLUTION	Niagara Thermal Products LLC	App 85163277 Reg 4096930	App 28-OCT-2010 Reg 07-FEB-2012	U.S.
EVOLUTION	Niagara Thermal Products LLC	App 85163314 Reg 4099958	App 28-OCT-2010 Reg 14-FEB-2012	U.S.

TRADEMARK APPLICATIONS

None.

Trademark Security Agreement recorded with the United States Patent and Trademark Office on October 14, 2016 at Reel 5901, Frame 0344.

U.S. REGISTERED TRADEMARKS

Trademark Name	Registrant	App Number	Filing Date	Reg. Number	Reg. Date
BREAKING THERMAL BARRIERS	Thermal Corp.	85/747854	10/8/2012	4457494	12/31/2013
DESIGN	Thermal Corp.	76/178712	12/11/2000	2590953	7/9/2002
HX	Thermal Corp.	77/207052	6/15/2007	3491270	8/26/2008
HXC	Thermal Corp.	76/319202	9/28/2001	2722393	6/3/2003
HXI	Thermal Corp.	76/319201	9/28/2001	2795530	12/16/2003
K TECHNOLOGY A DIVISION OF THERMACORE & DESIGN	Thermal Corp.	86/173630	1/23/2014	4631354	11/4/2014
K-CORE	Thermal Corp.	78/680480	7/28/2005	3191888	1/2/2007
THERMA-BASE	Thermal Corp.	75/640893	2/16/1999	2432762	3/6/2001
THERMA-BUS	Thermal Corp.	76/147589	10/16/2000	2664151	12/17/2002
THERMA-CHARGE	Thermal Corp.	76/140142	10/2/2000	2605636	8/6/2002
THERMACORE	Thermal Corp.	73/425797	5/13/1983	1317936	2/5/1985
THERMA-HINGE	Thermal Corp.	78/075194	7/23/2001	2708039	4/15/2003
THERMA-LOOP	Thermal Corp.	76/041562	5/5/2000	2447899	5/1/2001
THERMA-SINK	Thermal Corp.	78/462593	8/5/2004	3101946	6/6/2006
THERMA-TOWER	Thermal Corp.	75/913094	2/3/2000	2450833	5/15/2001

U.S. TRADEMARK APPLICATIONS

N/A

Patent Security Agreement recorded with the United States Patent and Trademark Office on October 14, 2016 at Reel 040355, Frame 0672.

U.S. REGISTERED PATENTS

Title	Owner	App. No	Patent No.	Filing Date	Issue Date
HEAT PIPES INSERTED INTO FIRST AND SECOND PARALLEL HOLES IN A BLOCK FOR TRANSFERRING HEAT BETWEEN HINGED DEVICES	Thermal Corp.	08/735191	5822187	10/25/1996	10/13/1998
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	11/069260	7028760	3/1/2005	4/18/2006
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	10/841784	6896039	5/7/2004	5/24/2005
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	10/739709	7100679	12/18/2003	9/5/2006
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	09/852322	7066240	5/9/2001	6/27/2006
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	09/310397	6302192	5/12/1999	10/16/2001
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	Thermal Corp.	11/200349	7100680	8/9/2005	9/5/2006
FLEXIBLE HEAT PIPE	Thermal Corp.	09/625301	6446706	7/25/2000	9/10/2002
LIQUID COOLED HEAT EXCHANGER WITH ENHANCED FLOW	Thermal Corp.	09/717860	6578626	11/21/2000	6/17/2003
LIQUID COOLED HEAT EXCHANGER WITH ENHANCED FLOW	Thermal Corp.	10/199568	6719039	7/19/2002	4/13/2004
CHEMICALLY COMPATIBLE, LIGHTWEIGHT HEAT PIPE	Thermal Corp.	10/643435	7069978	8/19/2003	7/4/2006
CHEMICALLY COMPATIBLE, LIGHTWEIGHT HEAT PIPE	Thermal Corp.	12/825733	8286694	6/29/2010	10/16/2012
CHEMICALLY COMPATIBLE, LIGHTWEIGHT HEAT PIPE	Thermal Corp.	11/363806	7743502	2/28/2006	6/29/2010
SEMICONDUCTOR PACKAGE WITH INTERNAL HEAT SPREADER	Thermal Corp.	09/753893	6437437	1/3/2001	8/20/2002
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	Thermal Corp.	09/774475	6525420	1/30/2001	2/25/2003
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	Thermal Corp.	10/241947	6858929	9/12/2002	2/22/2005
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	Thermal Corp.	10/999261	7005738	11/30/2004	2/28/2006
CAPACITOR WITH HEAT PIPE COOLING	Thermal Corp.	09/775729	6430024	2/5/2001	8/6/2002
POROUS VAPOR VALVE FOR IMPROVED LOOP THERMOSIPHON PERFORMANCE	Thermal Corp.	09/885472	6615912	6/20/2001	9/9/2003

Title	Owner	App. No	Patent No.	Filing Date	Issue Date
THERMAL BUS FOR CABINETS HOUSING HIGH POWER ELECTRONICS EQUIPMENT	Thermal Corp.	09/902088	6536510	7/10/2001	3/25/2003
INTEGRATED THERMAL ARCHITECTURE FOR THERMAL MANAGEMENT OF HIGH POWER ELECTRONICS	Thermal Corp.	09/909360	6388882	7/19/2001	5/14/2002
HEAT SPREADER WITH OSCILLATING FLOW	Thermal Corp.	10/073537	6631077	2/11/2002	10/7/2003
METHOD OF MAKING ELECTRONICS PACKAGE WITH SPECIFIC AREAS HAVING LOW COEFFICIENT OF THERMAL EXPANSION	Thermal Corp.	10/219731	6579747	8/15/2002	6/17/2003
ELECTRONICS PACKAGE WITH SPECIFIC AREAS HAVING LOW COEFFICIENT OF THERMAL EXPANSION	Thermal Corp.	10/081470	6566743	2/21/2002	5/20/2003
THERMAL MANAGEMENT SYSTEM AND METHOD FOR ELECTRONICS SYSTEM	Thermal Corp.	10/658828	6972365	9/9/2003	12/6/2005
THERMAL MANAGEMENT SYSTEM AND METHOD FOR ELECTRONICS SYSTEM	Thermal Corp.	10/180166	6657121	6/26/2002	12/2/2003
THERMAL MANAGEMENT SYSTEM AND METHOD FOR ELECTRONICS SYSTEM	Thermal Corp.	11/218747	7071408	9/2/2005	7/4/2006
COOLING SYSTEM FOR HINGED PORTABLE COMPUTING DEVICE	Thermal Corp.	10/280726	6771498	10/25/2002	8/3/2004
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	Thermal Corp.	10/305608	6905499	11/26/2002	6/14/2005
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	Thermal Corp.	10/970030	8100894	10/21/2004	1/24/2012
COOLING ELEMENT FOR ELECTROSURGERY	Thermal Corp.	11/195454	7914529	8/2/2005	3/29/2011
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	Thermal Corp.	10/305609	6800077	11/26/2002	10/5/2004
HEAT DISSIPATION UNIT WITH DIRECT CONTACT HEAT PIPE	Thermal Corp.	10/413601	6717813	4/14/2003	4/6/2004
SINTERED GROOVED WICK WITH PARTICLE WEB	Thermal Corp.	10/422878	6945317	4/24/2003	9/20/2005
CTE-MATCHED HEAT PIPE	Thermal Corp.	10/458168	6793009	6/10/2003	9/21/2004
CTE-MATCHED HEAT PIPE	Thermal Corp.	10/924586	7048039	8/24/2004	5/23/2006
BRAZED WICK FOR A HEAT TRANSFER DEVICE	Thermal Corp.	10/607337	6994152	6/26/2003	2/7/2006
THERMAL BUS FOR ELECTRONICS SYSTEMS	Thermal Corp.	10/628645	6804117	7/28/2003	10/12/2004
FLEXIBLE LOOP THERMOSYPHON	Thermal Corp.	11/210548	7096928	8/23/2005	8/29/2006
FLUID CIRCUIT HEAT TRANSFER DEVICE FOR PLURAL HEAT SOURCES	Thermal Corp.	10/685954	7431071	10/15/2003	10/7/2008

Title	Owner	App. No	Patent No.	Filing Date	Issue Date
FLUID CIRCUIT HEAT TRANSFER DEVICE FOR PLURAL HEAT SOURCES	Thermal Corp.	12/247082	9273910	10/7/2008	3/1/2016
HYBRID LOOP HEAT PIPE	Thermal Corp.	10/987893	7111394	11/12/2004	9/26/2006
HEAT PIPE COMPONENT DEPLOYED FROM A COMPACT VOLUME	Thermal Corp.	10/792198	7080681	3/3/2004	7/25/2006
HEAT PIPE EVAPORATOR WITH POROUS VALVE	Thermal Corp.	10/930018	7013956	8/30/2004	3/21/2006
POROUS MEDIA COLD PLATE	Thermal Corp.	10/970404	7044199	10/20/2004	5/16/2006
POROUS MEDIA COLD PLATE	Thermal Corp.	11/381439	7690419	5/3/2006	4/6/2010
POROUS MEDIA COLD PLATE	Thermal Corp.	12/752910	8397796	4/1/2010	3/19/2013
MODULAR HEAT SINK	Thermal Corp.	11/159485	7306028	6/23/2005	12/11/2007
LIQUID COOLED HEAT SINK WITH COLD PLATE RETENTION MECHANISM	Thermal Corp.	11/220456	7149087	9/7/2005	12/12/2006
HEAT PIPE WITH AXIAL AND LATERAL FLEXIBILITY	Thermal Corp.	11/256708	7647961	10/24/2005	1/19/2010
HEAT PIPE WITH AXIAL AND LATERAL FLEXIBILITY	Thermal Corp.	12/689135	8230907	1/18/2010	7/31/2012
FLUID COOLED SINGLE PHASE HEAT SINK	Thermal Corp.	09/357226	6131650	7/20/1999	10/17/2000
HEAT PIPE COOLING FOR TURBINE STATORS	Thermal Corp.	08/943626	5975841	10/3/1997	11/2/1999
CAPILLARY ASSISTED LOOP THERMOSIPHON APPARATUS	Thermal Corp.	10/805142	7823629	3/19/2004	11/2/2010
CAPILLARY ASSISTED LOOP THERMOSIPHON APPARATUS	Thermal Corp.	12/917090	8627879	11/1/2010	1/14/2014
FORCED FLUID HEAT SINK	Thermal Corp.	10/739759	7017655	12/18/2003	3/28/2006
MODULAR COOLING SYSTEM AND THERMAL BUS FOR HIGH POWER ELECTRONICS CABINETS	Thermal Corp.	09/963899	6828675	9/26/2001	12/7/2004
COOLING SYSTEM FOR COMPUTER ELECTRONICS	Thermal Corp.	11/266812	7312995	11/4/2005	12/25/2007
HEAT EXCHANGER BACKING PLATE AND METHOD OF ASSEMBLING SAME	Thermal Corp.	13/772622	9417015	2/21/2013	8/16/2016
HEAT PIPE FIN STACK WITH EXTRUDED BASE	Thermal Corp.	10/457309	6830098	6/9/2003	12/14/2004
HEAT SPREADER WITH EXCESS SOLDER BASIN	Thermal Corp.	09/476813	6191946	1/3/2000	2/20/2001

U.S. PATENT APPLICATIONS

Title	Owner	App. No	Filing Date
HEAT TRANSFER APPARATUS AND METHOD	Thermal Corp.	13/828625	3/14/2013

Title	Owner	App. No	Filing Date
ENCAPSULATED NATURAL GRAPHITE	Thermal Corp.	62/267653	12/15/2015
TOOL BIT WITH INTEGRATED COOLING SYSTEM	Thermal Corp.	62/331027	5/3/2016
ELECTRONICS RACK WITH SELECTIVE ENGAGEMENT OF HEAT SINK	Thermal Corp.	62/299318	2/24/2016
ELECTRONICS RACK WITH COMPLIANT HEAT PIPE	Thermal Corp.	62/299336	2/24/2016
CTE-MATCHED HEAT PIPE	Thermal Corp.	13/074987	3/29/2011
HEAT PIPE HAVING A WICK WITH A HYBRID PROFILE	Thermal Corp.	13/654852	10/18/2012
ELECTRONICS CABINET AND RACK COOLING SYSTEM AND METHOD	Thermal Corp.	13/772606	2/21/2013
REINFORCED HEAT-TRANSFER DEVICE, HEAT-TRANSFER SYSTEM, AND METHOD OF REINFORCING A HEAT-TRANSFER DEVICE	Thermal Corp.	14/031685	9/19/2013
VARIABLE-CONDUCTANCE HEAT TRANSFER DEVICE	Thermal Corp.	13/473755	5/17/2012
HEAT EXCHANGE APPARATUS	Thermal Corp.	13/702659	12/7/2012
COOLING FRAME WITH INTEGRATED HEAT PIPES	Thermal Corp.	13/789751	3/8/2013
CAPILLARY DEVICE FOR USE IN HEAT PIPE AND METHOD OF MANUFACTURING SUCH CAPILLARY DEVICE	Thermal Corp.	14/119814	3/14/2014
VEHICLE THERMAL MANAGEMENT SYSTEM	Thermal Corp.	14/928650	10/30/2015

Copyright Security Agreement recorded with the United States Patent and Trademark Office on January 16, 2017

REGISTERED COPYRIGHTS

Title	Registration No.	Registration Date	Current Owner of Record
Proposed solution--integrated thermal architecture	VA0001094698	2001-04-17	Thermal Corporation

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None.

Copyright Security Agreement recorded with the United States Patent and Trademark Office on January 16, 2017

REGISTERED COPYRIGHTS

Title	Registration No.	Registration Date	Current Owner of Record
Assembled tenth segment heat pipe with integral calorimeter	VA0001315580	2005-07-28	Thermacore, Inc.
Completed assembly of the 1/10th segment life test heat pipe.	VA0001315579	2005-07-28	Thermacore, Inc.
Tenth segment heat pipe with top plate removed to show wick structure	VA0001315581	2005-07-28	Thermacore, Inc.
Pulsating heat pipe video clips	PA0001283978	2005-07-28	Thermacore, Inc.
Pressure relief device life test assembly	VA0001315577	2005-07-28	Thermacore, Inc.
Bench-top life test heat pipe	VA0001315578	2005-07-28	Thermacore, Inc.

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None.