

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM772895

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
ANOKIWAVE, INC.		12/08/2022	Corporation: DELAWARE
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	CITIZENS BANK, N.A.		
<b>Street Address:</b>	296 Concord Road		
<b>City:</b>	Billerica		
<b>State/Country:</b>	MASSACHUSETTS		
<b>Postal Code:</b>	01821		
<b>Entity Type:</b>	National Banking Association: UNITED STATES		
<b>PROPERTY NUMBERS Total: 8</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Registration Number:</b>	5486259	ANOKIWAVE	
<b>Registration Number:</b>	5735855	INTELLIGENT GAIN BLOCK	
<b>Registration Number:</b>	6175823	ZERO-CAL	
<b>Registration Number:</b>	6396124	MMW SOLUTIONS. ENABLING A NEW WORLD	
<b>Registration Number:</b>	6756043	INTELLIGENT ARRAY IC SOLUTIONS	
<b>Registration Number:</b>	6654852	MMW ALGORITHMS TO ANTENNAS	
<b>Serial Number:</b>	90560441	HANDSET TECHNOLOGY FOR INFRASTRUCTURE	
<b>Serial Number:</b>	90874444	WIFI TECHNOLOGY FOR INFRASTRUCTURE	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	6507393900		
<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>			
<b>Phone:</b>	6507393939		
<b>Email:</b>	DebbieWu@JonesDay.com		
<b>Correspondent Name:</b>	JONES DAY		
<b>Address Line 1:</b>	250 Vesey Street		
<b>Address Line 4:</b>	New York, NEW YORK 10281-1047		
<b>ATTORNEY DOCKET NUMBER:</b>	741887-600339		
<b>NAME OF SUBMITTER:</b>	Debbie Wu		

CH \$215.00 5486259

<b>SIGNATURE:</b>	/Debbie Wu/
<b>DATE SIGNED:</b>	12/08/2022
<b>Total Attachments: 10</b> source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page1.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page2.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page3.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page4.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page5.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page6.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page7.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page8.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page9.tif source=Citizens_Anokiwave - Intellectual Property Security Agreement (MSNLF) [Executed](1534589316.1)#page10.tif	

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of December 8, 2022 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, this “Agreement”), is made by Anokiwave, Inc., a Delaware corporation (the “Grantor”) in favor of Citizens Bank, N.A., as lender (“Lender”).

WHEREAS, the Grantor has entered into that certain Credit Agreement, dated as of November 20, 2020 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), by and between the Grantor and Lender;

WHEREAS, in connection with the Credit Agreement, the Grantor has executed and delivered that certain Security Agreement, dated as of the date hereof (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”), in favor of Lender;

WHEREAS, under the terms of the Security Agreement, the Grantor has granted a security interest in certain Collateral, including, without limitation, certain Intellectual Property of the Grantor, to Lender, and have agreed to execute and deliver to Lender any document required to acknowledge, confirm, register, record or perfect Lender’s interest in any part of such Intellectual Property; and

WHEREAS, the Grantor has agreed, as a condition precedent to the effectiveness of the Sixth Amendment, to execute this Agreement for recording with the United States Patent and Trademark Office and the United States Copyright Office, as applicable.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor hereby agrees as follows:

SECTION 1. *Terms.* Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement and, if not defined therein, the meanings specified in the Credit Agreement. Sections 1.3, 1.4, 1.6 and 1.7 of the Credit Agreement shall apply to this Agreement *mutatis mutandis*.

SECTION 2. *Grant of Security Interest.* To secure the prompt payment in full when due, whether at stated maturity, by mandatory prepayment, declaration, acceleration, demand or otherwise (including payment of amounts that would become due but for filing of a petition under any Debtor Relief Law) and performance of the Secured Obligations, the Grantor hereby assigns and pledges to Lender all of its rights, title and interest in, and grants to Lender a continuing security interest in all of the following personal property and other assets, whether now owned or existing or hereafter arising or acquired (collectively, the “IP Collateral”):

(a) all Trademarks, including the Trademark registrations and registration applications in the United States Patent and Trademark Office listed on Schedule I hereto, and all of the goodwill of the business connected with the use of, and symbolized by, the items described in the foregoing; provided, however, the IP Collateral shall not include any “intent-to-use” trademark application, filed pursuant to Section 1(b) of the Lanham Act, 17 U.S.C. § 1051(b), prior to the filing of a “Statement of Use” or “Amendment to Allege Use” with respect thereto, to the extent, if any, that, and solely during the period, if any, in which, the grant of the security interest of Lender with respect thereto would impair the validity or enforceability of such intent-to-use trademark application or any registration that issues from such intent-to-use application under applicable federal law;

(b) all Patents, including the Patent registrations and pending applications in the United States Patent and Trademark Office listed on Schedule II hereto;

(c) all (i) Copyrights, including the Copyright registrations and pending applications for registration in the United States Copyright Office listed on Schedule III hereto and (ii) all exclusive Copyright Licenses over which such Grantor is a licensee, including those listed on Schedule III hereto; and

(d) all additions, substitutions, replacements and accessions of any of the foregoing; and all proceeds and products of the foregoing;

in each case to the extent the foregoing items constitute Collateral. Lender hereby acknowledges and agrees that the assignment, pledge and grant of security interest created hereby in the IP Collateral is not to be construed as a present assignment of any Trademark, Patent, Copyright or other Intellectual Property.

SECTION 3. *Security Agreement.* The security interests granted to Lender herein are granted in furtherance, and not in limitation of, the security interests granted to Lender pursuant to the Security Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of Lender with respect to the IP Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

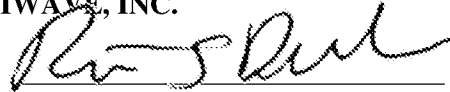
SECTION 4. *Governing Law.* This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 5. *Counterparts; Electronic Execution.* This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed signature page counterpart hereof by telecopy, emailed .pdf or any other electronic means that reproduces an image of the actual executed signature page shall be effective as delivery of a manually executed counterpart hereof. The words “execution,” “signed,” “signature,” “delivery,” and words of like import in or relating to any document to be signed in connection with this Agreement and the transactions contemplated hereby shall be deemed to include electronic signatures, the electronic association of signatures and records on electronic platforms, deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, any other similar state laws based on the Uniform Electronic Transactions Act or the Uniform Commercial Code, each as amended, and the parties hereto hereby waive any objection to the contrary.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

**ANOKIWAVE, INC.**

By: 

Name: Robert Donahue

Title: Chief Executive Officer

Accepted and agreed:

CITIZENS BANK, N.A.,  
as Lender

By: 

Name: Erin Kane

Title: Officer

*[Signature Page to Intellectual Property Security Agreement]*

**TRADEMARK**  
**REEL: 007912 FRAME: 0387**

SCHEDULE I

I. TRADEMARK REGISTRATIONS

Serial Number	Registration Number	Country	Filing/Registration Dates	Mark
87668317	5486259	US	Filed: 11/01/2017 Registered: 06/05/2018	ANOKIWAVE
88186606	5735855	US	Filed: 11/08/2018 Registered: 04/23/2019	INTELLIGENT GAIN BLOCK
88231866	6175823	US	Filed: 12/17/2018 Registered: 10/13/2020	ZERO-CAL
90235828	6396124	US	Filed: 10/05/2020 Registered: 06/22/2021	MMW SOLUTIONS. ENABLING A NEW WORLD
90235838	6756043	US	Filed: 10/05/2020 Registered: 06/07/2022	INTELLIGENT ARRAY IC SOLUTIONS
90235841	6654852	US	Filed: 10/05/2020 Registered: 02/22/2022	MMW ALGORITHMS TO ANTENNAS

II. TRADEMARK APPLICATIONS

Serial Number	Country	Filing Date	Mark
90560441	US	Filed: 03/04/2021	HANDSET TECHNOLOGY FOR INFRASTRUCTURE
90874444	US	Filed: 08/10/2021	WIFI TECHNOLOGY FOR INFRASTRUCTURE

SCHEDULE II

I. PATENT REGISTRATIONS

Filing Number	Patent No.	Country	Filing/Issuance Dates	Patent Title
10/458,538	6,903,623	US	Filed: 06/09/2003 Issued: 06/07/2005	High isolation switch in balanced lines
10/438,723	6,924,714	US	Filed: 05/14/2003 Issued: 08/02/2005	High power termination for radio frequency (RF) circuits
12/618,109	7,915,935	US	Filed: 11/13/2009 Issued: 03/29/2011	Communication Systems With Counter-Based Frequency Centering For Mm-Wave Frequency Bands
12/683,354	8,260,342	US	Filed: 01/06/2010 Issued: 09/04/2012	Communications systems management using MM-wave based motion sensing
14/066,634	9,154,217	US	Filed: 10/29/2013 Issued: 10/06/2015	Direct conversion remote satellite communications terminal
14/967,092	10,224,627	US	Filed: 12/11/2015 Issued: 03/05/2019	Electronically scanned antenna arrays with reconfigurable performance
14/846,092	9,455,157	US	Filed: 09/04/2015 Issued: 09/27/2016	Method and Apparatus for Mitigating Parasitic Coupling in a Packaged Integrated Circuit
15/253,426	10,320,093	US	Filed: 08/31/2016 Issued: 06/11/2019	Phased Array Control Circuit
16/436,116	10,862,222	US	Filed: 06/10/2019 Issued: 12/08/2020	Phased Array Control Circuit
17/099,238	11,133,603	US	Filed: 11/16/2020 Issued: 09/28/2021	Phased Array Control Circuit for Controlling the Effective Shape of a Beam-Formed Signal
15/267,704	11,011,853	US	Filed: 09/16/2016 Issued: 05/18/2021	Laminar Phased Array with Polarization-Isolated Transmit/Receive Interfaces
17/232,283	11,349,223	US	Filed: 04/16/2021 Issued: 05/31/2022	Laminar Phased Array with Polarization-Isolated Transmit/Receive Interfaces
15/669,339	10,290,951	US	Filed: 08/04/2017 Issued: 05/14/2019	Hybrid Laminated Phased Array
15/792,484	10,587,044	US	Filed: 10/24/2017 Issued: 03/10/2020	Flip-chip beamforming integrated circuit with integral thermal mass
15/475,246	10,382,010	US	Filed: 03/31/2017 Issued: 08/13/2019	Attenuation Circuit and Method of Controlling an Attenuation Circuit
15/253,384	9,876,514	US	Filed: 08/31/2016 Issued: 01/23/2018	Calibration of active electronically steered antennas using on-chip programming



Filing Number	Patent No.	Country	Filing/Issuance Dates	Patent Title
15/860,508	10,263,650	US	Filed: 01/02/2018 Issued: 04/16/2019	Calibration Of Active Electronically Steered Antennas Using On-Chip Programming
15/212,813	10,559,879	US	Filed: 07/18/2016 Issued: 02/11/2020	Phased Array Burst Sampler
15/389,675	10,200,098	US	Filed: 12/23/2016 Issued: 02/05/2019	Phased array with beamforming integrated circuit having two signal chains
16/221,057	10,742,288	US	Filed: 12/14/2018 Issued: 08/11/2020	Phased array with beamforming integrated circuit having two signal chains
15/938,647	10,826,195	US	Filed: 03/28/2018 Issued: 11/03/2020	Apparatus and method for RF Isolation in a packaged integrated circuit
16/153,528	10,763,226	US	Filed: 10/05/2018 Issued: 09/01/2020	Method and Apparatus for Heat Sinking High Frequency IC With Absorbing Material
16/886,370	11,177,227	US	Filed: 05/28/2020 Issued: 11/16/2021	Method and Apparatus for Heat Sinking High Frequency IC With Absorbing Material
16/153,556	10,833,391	US	Filed: 10/05/2018 Issued: 11/10/2020	Thermal Management Method and Apparatus for High Frequency IC With Apertured Heat Sink
15/669,575	10,355,370	US	Filed: 08/04/2017 Issued: 07/16/2019	Dual Phased Array With Single Polarity Beam Steering Integrated Circuits
15/792,479	10,777,888	US	Filed: 10/24/2017 Issued: 09/15/2020	Beamforming Integrated Circuit With RF Grounded Material Ring
16/501,456	11,081,792	US	Filed: 03/07/19 Issued: 08/03/2021	Phased Array With Low-Latency Control Interface
16/231,799	11,418,971	US	Filed: 12/24/2018 Issued: 08/16/2022	Beamforming Integrated Circuit, AESA System and Method
16/375,251	11,063,336	US	Filed: 04/04/2019 Issued: 07/13/2021	Phased Array Architecture with Distributed Temperature Compensation and Integrated Up/Down Conversion
16/413,355	10,998,640	US	Filed: 05/15/2019 Issued: 05/04/2021	Cross-polarized Time Division Duplexed Antenna
17/226,887	11,296,426	US	Filed: 04/09/2021 Issued: 04/05/2022	Cross-Polarized Time Division Duplexed Antenna
16/122,680	10,608,756	US	Filed: 09/05/2018 Issued: 03/31/2020	Power Detector Calibration In Integrated Circuits
16/653,334	10,985,819	US	Filed: 10/15/2019 Issued: 04/20/2021	Element-Level Self-Calculation of Phased Array Vectors Using Interpolation

SCHEDULE II TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

NAI-1534372838v4

**TRADEMARK**  
**REEL: 007912 FRAME: 0390**

Filing Number	Patent No.	Country	Filing/Issuance Dates	Patent Title
16/653,348	11,205,858	US	Filed: 10/15/2019 Issued: 12/21/2021	Element-Level Self-Calculation of Phased Array Vectors Using Direct Calculation
16/353,893	10,855,383	US	Filed: 03/14/2019 Issued: 12/01/2020	Calibration Of Active Electronically Steered Antennas Using Trim Bits And Non-Volatile Memory
16/986,846	11,205,846	US	Filed: 08/06/2020 Issued: 12/21/2021	Beamforming Integrated Circuit Having RF Signal Ports Using a Ground-Signal Transition for High Isolation in a Phased Antenna Array System and Related Methods
16/991,673	11,114,990	US	Filed: 08/12/2020 Issued: 09/07/2021	Apparatus And Method Of Power Management Using Envelope Stacking
16/932,187	11,296,860	US	Filed: 07/17/2020 Issued: 04/05/2022	Phase-Aligning Multiple Synthesizers
16/987,344	11,082,079	US	Filed: 08/06/2020 Issued: 08/03/2021	Spur Mitigation In A Heterodyne Upconversion System
17/230,531	11,356,167	US	Filed: 04/14/2021 Issued: 06/07/2022	Selective calibration of signal processing integrated circuits in a phased array system
17/502,426	11,411,307	US	Filed: 10/15/2021 Issued: 08/09/2022	Pinwheel Three-Way Wilkinson Power Divider for Millimeter Wave Applications
17/100,023	11,502,419	US	Filed: 11/20/2020 Issued: 11/15/2022	Standard Printed Circuit Board Patch Array

## II. PATENT APPLICATIONS

Filing Number	Country	Filing Date	Patent Title
17/483,230	US	Filed: 09/23/2021	Phased Array Control Circuit for Controlling Directivity of a Beam-Formed Signal
17/068,376	US	Filed: 10/12/2020	Thermal Management Method and Apparatus for High Frequency IC with Apertured Heat Sink
17/363,829	US	Filed: 06/30/2021	Phased Array with Low-Latency Control Interface
17/369,557	US	Filed: 07/07/2021	Phased Array Architecture with Distributed Temperature Compensation and Integrated Up/Down Conversion
17/688,318	US	Filed: 03/07/2022	Cross-Polarized Time Division Duplexed Antenna
17/233,074	US	Filed: 04/16/2021	Fast Beam Steering Using Interpolation
17/542,082	US	Filed: 12/03/2021	Fast Beam Steering Using Direct Calculation
17/556,195	US	Filed: 12/20/2021	Beamforming Integrated Circuit Having RF Signal Ports Using a Ground-Signal Transition for High Isolation in a Phased Antenna Array System and Related Methods

SCHEDULE II TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

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**TRADEMARK**  
**REEL: 007912 FRAME: 0391**

Filing Number	Country	Filing Date	Patent Title
17/339,677	US	Filed: 06/04/2021	Synthesizer with High-Q
17/466,632	US	Filed: 09/03/2021	Apparatus and Method Of Power Management Using Envelope-Stacking
17/682,700	US	Filed: 02/28/2022	Phase-Aligning Multiple Synthesizers
17/110,806	US	Filed: 12/03/2020	Method and Apparatus for Fast Coarse Tuning in Synthesizers
17/097,860	US	Filed: 11/13/2020	Integrated Circuit and System with Tracking
17/683,928	US	Filed: 03/01/2022	Time-To-Digital Converter Using Voltage as a Representation of Time Offset
17/683,916	US	Filed: 03/01/2022	Time-to-Digital Converter and Calibration
17/716,359	US	Filed: 04/08/2022	Antenna and PCB Layout Topology Designs for Frequency Scalability in PCB Technology for Antenna Arrays
17/716,625	US	Filed: 04/08/2022	Array Lattice Techniques for High Symmetry and High Scan Performance
63/338,714	US	Filed: 05/05/2022	High-Isolation Package for Mitigating Coupling in a MM-Wave Packaged IC
17/737,567	US	Filed: 05/05/2022	Integrated Circuit Chips for a Phased Array System Including Programmable On-Chip Element Swapping, Channel Swapping, and/or Phase Rotation Circuitry
17/741,907	US	Filed: 05/11/2022	Joint Transmit/Receive Image Compensation with Blind Adaptive Calibration in a Transceiver System
63/298,748	US	Filed: 01/12/2022	Flexible Online Loft Compensation in RF Communication Systems and Devices
63/298,753	US	Filed: 01/12/2022	Flexible Calibration of Time-Varying Operating Parameters in RF Communication Systems and Devices Such as for Error Vector Control in Phase Array Systems and Devices
63/298,756	US	Filed: 01/12/2022	Array Self-Calibration
63/298,758	US	Filed: 01/12/2022	Integrated Single-Chip Beamforming System
17/709,271	US	Filed: 03/30/2022	Correction of Systematic Error for Electronically Steered Antennas Using On-Chip Programming
17/902,219	US	Filed: 09/02/2022	Standard Printed Circuit Board Patch
63/173,120	US	Filed: 04/09/2022	Array Lattice Techniques for High Symmetry and High Scan Performance
63/428,976	US	Filed: 11/30/2022	Phase Tracking Integrated Circuit
63/428,890	US	Filed: 11/30/2022	Hybrid Cascode Low-Noise Amplifier

SCHEDULE II TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

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**TRADEMARK**  
**REEL: 007912 FRAME: 0392**

SCHEDULE III

I. COPYRIGHTS

Registration Number	Country	Registration Date	Title
MW0000019746	US	Registered: 02/28/2018	Laguna.
MW0000019812	US	Registered: 02/28/2018	Odin.

II. COPYRIGHT APPLICATIONS

Application No.	Country	Application Date	Title
None.			

III. EXCLUSIVE COPYRIGHT LICENSES

LICENSOR	LICENSEE	TITLE	REGISTRATION NUMBER AND DATE	EXPIRATION DATE
None.				