IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

MOSAID TECHNOLOGIES INC., *Plaintiff*, v. INFINEON TECHNOLOGIES AG and INFINEON TECHNOLOGIES AMERICAS CORP., *Defendants*.	Civil No. 1:25-cv-00358 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff MOSAID Technologies Inc. ("Plaintiff" or "MOSAID") files this Complaint for Patent Infringement against Defendants Infineon Technologies AG ("Infineon AG") and Infineon Technologies Americas Corp. ("Infineon Americas") (collectively, "Defendants" or "Infineon") alleging as follows:

NATURE OF SUIT

1. This is a claim for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

PARTIES, JURISDICTION, AND VENUE

2. This action arises under the patent laws of the United States, 35 U.S.C. § 101, *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

I. MOSAID

3. MOSAID (f/k/a Conversant Intellectual Property Management, Inc.) is a Canadian company having a principal place of business at 515 Legget Drive, Suite 100, Ottawa, ON, Canada.

4. MOSAID was founded in 1975 by engineers Richard Foss and Robert Harland. MOSAID focused its early efforts on inventing ways to improve Dynamic Random Access

INFINEON 1114
Infineon v. Mosaid
IPR2025-01456

Memory (DRAM) semiconductor chips. MOSAID's engineers also designed and built test equipment for debugging prototype memory chips.

5. MOSAID is now a leading patent management company with a world-class licensing team and an enviable record of success. MOSAID's success is defined by the numerous licenses it has signed with industry leaders. MOSAID prides itself on its patent expertise, a determination to engage in meaningful negotiation, and a commitment to transparency and the principled enforcement of high-quality patents.

6. MOSAID owns approximately 800 active patents as of February 2025. A large portion of the portfolio was developed in-house from research and development efforts focusing on flash memory technologies. MOSAID's microcomponents patents also include marquee patents relating to power management, based on various inventions derived from MOSAID's own R&D and product development businesses.

7. MOSAID is the assignee and owns all right, title, and interest to United States Patent No. 7,111,179 ("the '179 Patent"), United States Patent No. 7,051,306 ("the '306 Patent"), and United States Patent No. 7,349,448 ("the '448 Patent"). The '179 Patent, '306 Patent, and '448 Patent are collectively referred to herein as the "Asserted Patents."

II. INFINEON

8. Defendant Infineon Technologies AG ("Infineon AG") is a corporation organized and existing under the laws of the Federal Republic of Germany, and is located at Am Campeon 1-15, 85579 Neubiberg, Germany.

9. Infineon AG is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY).

10. On information and belief, with a global presence, Infineon AG operates through its subsidiaries in the U.S.

11. Defendant Infineon Technologies Americas Corp. ("Infineon Americas") is a corporation duly organized and existing under the laws of the state of Delaware and may be served with process through its Texas registered agent, Corporation Service Company d/b/a CSC – Lawyers Incorporating Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701. Infineon Americas has a regular and established place of business in the Western District of Texas, including at 5204 E. Ben White Blvd, Austin, Texas 78741. On information and belief, Infineon Americas also maintains other offices in the State of Texas, including in Houston, Texas.

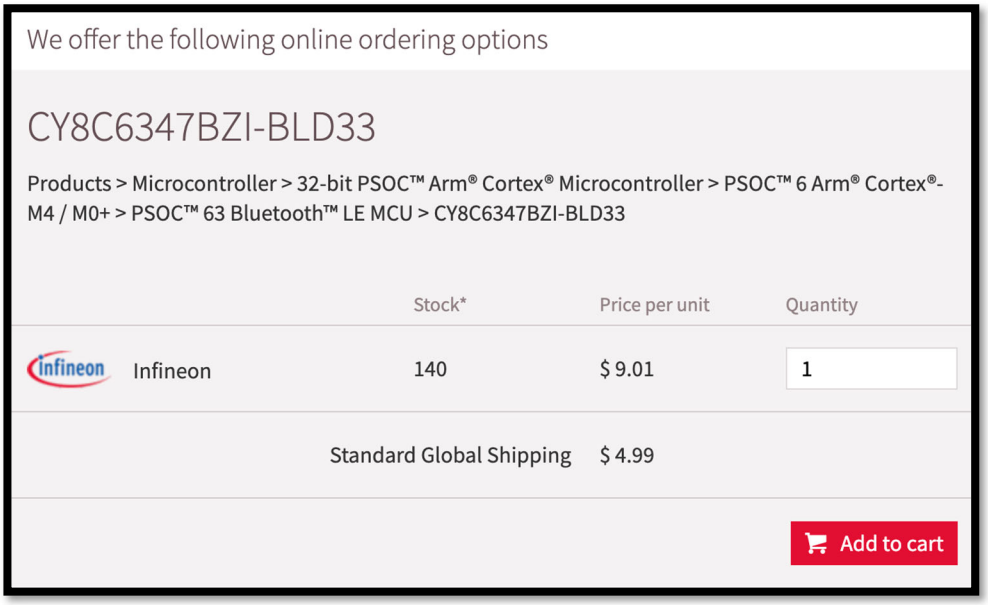
12. On information and belief, Infineon Americas is a wholly owned subsidiary of Infineon AG.

13. Cypress Semiconductor Corporation ("Cypress") was an American semiconductor design and manufacturing company offering products such as NOR flash memories, F-RAM and SRAM Traveo microcontrollers, PSoCs, and others. On or around April 16, 2020, Infineon AG acquired 100% ownership of Cypress. On information and belief, at the time of the acquisition, Cypress was registered to do business in Texas, was transacting business in Texas and in this District, and maintained a regular and established place of business in this District at 5204 E. Ben White Blvd, Austin, Texas 78741. On information and belief, at least Infineon Americas took over Cypress's operations at 5204 E. Ben White Blvd, Austin, Texas 78741 following Infineon AG's acquisition of Cypress.

14. On information and belief, each Defendant, Infineon AG and Infineon Americas (collectively, "Infineon"), is a semiconductor company that designs, develops, makes, uses, offers for sale, sells in the United States, and/or imports into the United States, a variety of semiconductor products for the communications, Internet of Things ("IoT"), automotive, computer, and/or consumer electronics industries.

15. On information and belief, Infineon designs, develops, makes, uses, offers for sale, sells in the United States, and/or imports into the United States, certain processor products such as programmable system on a chip ("PSoC") products including at least the PSoC 3, PSoC 4, PSoC 5, and PSoC 6 families, and wireless connectivity SoCs including at least the AIROC Wi-Fi and Bluetooth Combo products, among other substantially similar processor products (hereinafter, the "Accused Products").

16. On information and belief, Infineon offers for sale and sells its products, including the Accused Products, directly to consumers in the United States, including in this District. For example, Infineon AG offers for sale and sells its products, including the Accused Products, in the United States via its website https://www.infineon.com:



(Exemplary PSoC 6 product available for purchase on Infineon's website.)

We offer the following online ordering options

CY8C5266FNI-LP205T

Products > Microcontroller > 32-bit PSOC™ Arm® Cortex® Microcontroller > PSOC™ 5 LP Arm® Cortex®-M3 > CY8C52LPxxx > CY8C5266FNI-LP205T

	Stock*	Price per unit	Quantity
Infineon	898	$ 12.93	1
Standard Global Shipping		$ 4.99	

Add to cart

(Exemplary PSoC 5 product available for purchase on Infineon's website.)

We offer the following online ordering options

CY8C4013LQI-411

Products > Microcontroller > 32-bit PSOC™ Arm® Cortex® Microcontroller > PSOC™ 4 Arm® Cortex®-M0/M0+ > CY8C4013LQI-411

	Stock*	Price per unit	Quantity
Infineon	2442	$ 1.63	1
Standard Global Shipping		$ 4.99	

Add to cart

(Exemplary PSoC 4 product available for purchase on Infineon's website.)

We offer the following online ordering options

CY8C3244AXI-153

Products > Microcontroller > Legacy Microcontroller > Legacy 8-bit / 16-bit Microcontroller > PSOC™ 3 > CY8C32xxx > CY8C3244AXI-153

	Stock*	Price per unit	Quantity
Infineon	99	$ 7.39	1
Standard Global Shipping		$ 4.99	

Add to cart

(Exemplary PSoC 3 product available for purchase on Infineon's website.)

We offer the following online ordering options

CYW43439KUBGT

Products > Wireless Connectivity > AIROC™ Wi-Fi and Wi-Fi+Bluetooth® Combo > Wi-Fi 4 (802.11n) > CYW43439

	Stock*	Price per unit	Quantity
Infineon	2459	$ 5.72	1
Standard Global Shipping		$ 4.99	

Add to cart

(Exemplary AIROC Wi-Fi and Bluetooth Combo product available for purchase on Infineon's website.)

17. Infineon AG operates https://www.infineon.com, as stated in the website's footer and linked Terms of Use:

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› Usage of this website is subject to our Usage Terms

› Imprint › Contact › Privacy Policy › Glossary

(https://www.infineon.com.)

Terms of Use

1. Scope
Any use of this web site provided by Infineon Technologies AG (hereinafter "Infineon") under the URL › **http://www.infineon.de** and/or › **http://www.infineon.com** (hereinafter "Web Site") is subject to these Terms of Use.

(https://www.infineon.com/cms/en/about-infineon/usage-terms.)

18. Infineon AG is also the Registrant Contact in the domain registration record for https://www.infineon.com.

19. Infineon also sells its Accused Products in the United States through Infineon Distribution Partners, including eCommerce Partners, Franchised Distributors, and Specialty Distributors.

20. On information and belief, Infineon sells its Accused Products to numerous companies in the United States, including companies in this District, for use in consumer end products.

21. On information and belief, Infineon AG has substantial connections to the State of Texas. For example, Infineon AG has sold products to companies in Texas, including in this District, for use in consumer end products. For example, Infineon's NOR Flash memory products

are used in Tesla vehicles, including at least the display system for the Tesla Model Y, which are manufactured in Austin, Texas at Tesla, Inc.'s global headquarters.

22. As another example, Infineon AG has partnered with Texas companies to provide products to customers in the United States, including in this District. For example, in 2023, Infineon AG announced its partnership with Spark Connected to provide a 500W wireless charging solution named Yeti. On information and belief, Spark Connected is a company organized under the laws of Texas and headquartered in Dallas, Texas. The Yeti 500W is a ready-to-integrate wireless charging module intended for the powering and charging of industrial machinery, autonomous mobile robots, automated guided vehicles, light electric vehicles, e-Mobility and other power-intensive applications. The module integrates at least Infineon's dual-core PSoC 63 Bluetooth Low Energy MCU, a microcontroller unit within Infineon's PSoC 6 product family, which infringes at least the '306 Patent.

23. In addition, on information and belief, Infineon AG has been collaborating with Siemens Industry Software Inc. (d/b/a Siemens Digital Industries Software) since at least November 19, 2024, to integrate Siemens' automotive embedded software platform with Infineon's AURIX microcontroller. Siemens Digital Industries Software is headquartered in Plano, Texas.

24. On information and belief, Infineon AG has showcased its products at trade shows in Texas, including at the Applied Power Electronics Conference ("APEC"). For example, Infineon AG showed several new products, including new packaging for its MOSFET family of products, at APEC 2022 held in Houston, Texas, and played a large role as a contributor to the conference program, participating in over 20 sessions. Infineon AG also had an exhibit at the APEC 2018 conference in San Antonio, Texas, where Infineon AG showcased its power

semiconductor technologies and participated in 15 sessions and seminars. In addition, Infineon AG attended the APEC 2011 conference in Fort Worth, Texas, where Infineon AG highlighted its OptiMOS 60-150V in CanPAK product. Infineon AG also showed its families of OptiMOS 3 power semiconductors and other products at the APEC 2008 conference held in Austin, Texas. At the APEC 2006 conference held in Dallas, Texas, Infineon AG introduced its OptiMOS 2 100V family of MOSFET devices and its second-generation silicon carbide Schottky diodes. In addition, at APEC 2005 held in Austin, Texas, Infineon AG introduced its CoolMOS CS Server series of high-performance power transistors.

25. Infineon AG is subject to specific and general personal jurisdiction in this Court. This Court has personal jurisdiction over Infineon AG because, on information and belief, Infineon AG has engaged in continuous, systematic, and substantial activities within this State, including substantial marketing and sales of products and services within this State and District. Furthermore, on information and belief, this Court has personal jurisdiction over Infineon AG because Infineon AG has committed acts of infringement giving rise to MOSAID's claims for patent infringement within and directed to this District.

26. On information and belief, Infineon AG has conducted, and does conduct, substantial business in this District, directly and/or through subsidiaries, agents, representatives, or intermediaries, including, but not limited to: (i) at least a portion of the acts of infringement alleged herein; (ii) purposefully and voluntarily placing one or more Accused Products into the stream of commerce with the expectation that they will be purchased by consumers in this District; and/or (iii) regularly doing or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to individuals in this State and

in this District. Thus, Infineon AG is subject to this Court's specific and general personal jurisdiction pursuant to due process and the Texas Long-Arm Statute.

27. To the extent Infineon AG is not subject to jurisdiction in any state's courts of general jurisdiction, this Court has personal jurisdiction over Infineon AG pursuant to Federal Rule of Civil Procedure 4(k)(2) because MOSAID's claims arise under federal law and exercising jurisdiction is consistent with the United States Constitution and laws.

28. The exercise of personal jurisdiction over Infineon AG would not offend traditional notions of fair play and substantial justice.

29. Infineon AG has acknowledged that this Court has personal jurisdiction over it. *See, e.g.*, *Staktek Group, L.P. v. Infineon Technologies AG*, No. 1:03-cv-00219-LY (W.D. Tex.) (Dkt. No. 3). Infineon AG has also admitted that personal jurisdiction existed over it in cases filed in other Texas district courts. *See, e.g.*, *Third Dimension Semiconductor, Inc. v. Infineon Technologies North America Corp. & Infineon Technologies AG*, No. 6:08-cv-00129-LED (E.D. Tex.) (Dkt. No. 24).

30. Infineon AG has also previously filed suit in this District. *See, e.g.*, *Infineon Technologies AG v. Harthcock*, No. 1:10-cv-00316-LY (W.D. Tex.) (Dkt. No. 1); *Infineon Technologies AG v. Infixeon, L.L.C.*, No. 1:07-cv-00039-SS (W.D. Tex.) (Dkt. No. 1).

31. Under 28 U.S.C. §§ 1391(b)-(d) and 1400(b), venue is proper in this District as to Infineon AG at least because Infineon AG is a foreign corporation subject to personal jurisdiction in this District and has committed acts of infringement within this District giving rise to this action.

32. To the extent that there is no district in which an action may otherwise be brought against Infineon AG, venue is proper in this District as to Infineon AG under 28 U.S.C. § 1391(b)(3) because Infineon AG is subject to personal jurisdiction in this Court.

33. On information and belief, Infineon Americas has substantial connections to the State of Texas, including this District. For example, Infineon Americas has a regular and established place of business in this District at 5204 E. Ben White Blvd, Austin, Texas 78741. This Austin location is a Production site for Infineon products.

34. Infineon operates its largest North American semiconductor factory, also known as "Fab25," in Austin, Texas. Infineon's Fab25 employs more than 1,000 people and plays a critical role in the global semiconductor supply chain, producing up to one billion semiconductor chips per year for major automotive, industrial, and communications companies throughout the world. On information and belief, the Infineon products manufactured at Fab25 include high-speed NOR Flash memory products and custom microcontrollers that include one or more of the Accused Products.

35. On information and belief, a number of Infineon's Austin employees are former Cypress employees who joined Infineon through the Cypress acquisition in 2020. On information and belief, these Austin employees include engineers, managers, technicians, and/or other personnel who work on research, development, design, manufacturing, testing, support, marketing, and/or sales of Accused Products.

36. On information and belief, Infineon Americas operates Fab25.

37. On information and belief, Infineon AG plays a role in the operation of Fab25, including because Infineon AG represents itself to the public as having a semiconductor manufacturing facility in Austin, Texas. For example, in March 2021, Infineon AG issued a press release from Munich stating that "Infineon Technologies (FSE: IFX / OTCQX: IFNNY) continues ramping up its manufacturing facility in Austin, Texas." In addition, in May 2022, Infineon AG issued a press release stating "Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY), today

announced that it has switched the operation of its Austin, Texas semiconductor factory, also known as 'Fab25,' to 100 percent renewable power."

38. Infineon Americas is subject to specific and general personal jurisdiction in this Court. This Court has personal jurisdiction over Infineon Americas because it has engaged in continuous, systematic, and substantial activities within this State, including substantial research, development, production, marketing, and/or sales of products and services within this State and District. Furthermore, on information and belief, this Court has personal jurisdiction over Infineon Americas because Infineon Americas has committed acts of infringement giving rise to MOSAID's claims for patent infringement within and directed to this District.

39. On information and belief, Infineon Americas has conducted and does conduct substantial business in this District, directly and/or through subsidiaries, agents, representatives, or intermediaries, such substantial business including, but not limited to: (i) at least a portion of the acts of infringement alleged herein; (ii) purposefully and voluntarily placing one or more Accused Products into the stream of commerce with the expectation that they will be purchased by consumers in this forum; and/or (iii) regularly doing or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to individuals in Texas and in this District. Thus, Infineon Americas is subject to this Court's specific and general personal jurisdiction pursuant to due process and the Texas Long-Arm Statute.

40. The exercise of personal jurisdiction over Infineon Americas would not offend traditional notions of fair play and substantial justice.

41. On information and belief, Infineon Americas has committed acts of infringement in this District and has regular and established places of business within this District under

28 U.S.C. § 1400(b). Thus, venue is proper in this District as to Infineon Americas under 28 U.S.C. § 1400(b).

42. Infineon maintains a permanent physical presence within this District. For example, Infineon maintains regular and established places of business at 5204 E. Ben White Blvd, Austin, Texas 78741.

43. On information and belief, Infineon's location(s) in this District are regular and established places of business under 28 U.S.C. § 1391, 28 U.S.C. § 1400(b), and *In re Cray, Inc.*, 871 F.3d 1355, 1360 (Fed. Cir. 2017).

a. On information and belief, Infineon's location(s) in this District are physical, geographical locations in this District. Each office location comprises one or more buildings or office spaces from which the business of Infineon is carried out. On information and belief, the location(s) are set apart for the purpose of carrying out Infineon's business, including, but not limited to, making, using, selling, offering for sale, and/or supporting Accused Products. On information and belief, Infineon advertises its physical location(s) in this District as places of its business.

b. On information and belief, Infineon's location(s) in this District are regular and established. Infineon identifies on its website (https://www.infineon.com/cms/en/about-infineon/company/find-a-location/) its address in this District as a regular and established place of Infineon's business.

c. On information and belief, Infineon's location(s) in this District are places of business of Infineon. On information and belief, Infineon conducts business from its location(s) in this District, including but not limited to, making, using, selling, offering for sale, and/or supporting Accused Products.

d. On information and belief, Infineon's location(s) in this District are physical, geographical location(s) in this District from which Infineon carries out its business.

e. On information and belief, Infineon employees work at Infineon's location(s) in this District. On information and belief, these Infineon employees are regularly and physically present at Infineon's location(s) during business hours and conduct Infineon's business while working there.

FACTUAL ALLEGATIONS

I. ASSERTED PATENTS

A. THE '179 PATENT

44. United States Patent No. 7,111,179 ("the '179 Patent") is entitled "Method and Apparatus for Optimizing Performance and Battery Life of Electronic Devices Based on System and Application Parameters." The United States Patent and Trademark Office duly and legally issued the '179 Patent on September 19, 2006, from U.S. Patent Application No. 10/268,914, filed on October 11, 2002.

45. The '179 Patent claims the priority benefit of U.S. Provisional Application No. 60/333,535, filed October 11, 2001.

46. MOSAID is the current owner of all rights, title, and interest in and to the '179 Patent, including the right to sue for past damages.

47. A true and correct copy of the '179 Patent is attached hereto as **Exhibit A** and is incorporated by reference herein.

48. The '179 Patent generally relates to an electronic device that adjusts power consumption in accordance with an analysis of parameters and events occurring over one or more time-periods. The electronic device monitors microprocessor, operating system, peripheral, and/or

device-level events and adjusts run-time parameters, such as microprocessor clock frequency and voltage, to reduce power consumption with minimal perceived degradation in performance.

49. Claim 1 of the ’179 Patent is directed to:

> 1. A system for dynamically managing power within an electronic device comprising:
>
> a power management device including:
>
> a sampling module to ascertain and store a plurality of parameter values associated with said electronic device during at least one sampling interval;
>
> an analysis module to combine said plurality of parameter values to produce an overall parameter value and to evaluate said overall parameter value to determine at least one control value to adjust power consumption of said electronic device in response to said parameter evaluation, wherein said plurality of parameters are arranged into a series of successive stages with each stage including at least one parameter, and said analysis module includes:
>
> a normalization module to normalize said parameter values relative to a numeric range; and
>
> a combination module to mathematically combine said normalized parameters of each subordinate stage with a succeeding stage to produce an overall value to determine said at least one control value to adjust said power consumption of said electronic device; and
>
> an adjustment module to adjust power consumption of said electronic device in accordance with said at least one control value to control electronic device power consumption.

50. The ’179 Patent solves a technological problem relating to power management for processing systems or devices. For example, the ’179 Patent explains that portable and autonomously powered electronic devices (*e.g.*, computer systems, telephones, PDAs, etc.) are becoming more and more sophisticated, while at the same time, becoming smaller. However, while

the technology for portable electronic devices has progressed rapidly, improvements in battery capacity and energy density have not been as rapid. As a result, a gap has developed between the processing capabilities of portable electronic devices and the battery life of those devices. This gap has constrained the "autonomy" of portable electronic devices, reducing the amount of time between battery recharge or replacement, and thus limiting the true portability of these devices. Often, designers of portable electronic devices must delicately balance battery parameters such as size, weight, and cost against the portability and operational characteristics of the device.

51. In an attempt to overcome these problems, computer electronics manufacturers have incorporated many features into their hardware and software designs to extend battery life. A feature that has been introduced is frequency and voltage adjustment for microprocessors. Since power consumption is related to the clock frequency of the microprocessor and to the corresponding applied voltage, reductions in both parameters can have an effect on overall power consumption of the device. However, reducing clock frequency may also reduce instruction-processing performance. The prior art attempted to overcome this problem through practices such as: shutting off or deactivating hardware components of the computer system when activity fell below a threshold for a certain period of time, reducing or increasing the clock frequency of a microprocessor depending on the level of computer system activity, or monitoring the types of activities that a computer system performs to determine whether clock frequency and voltage are to be reduced or increased. However, as the '179 Patent notes, such techniques suffered from several disadvantages, including limited power savings and/or power conversation states that occurred at inopportune times and consequently adversely affected performance.

52. The inventions of the '179 Patent overcome the aforementioned problems and provide several advantages. In particular, the inventions significantly reduce power consumption

(effectively increasing battery life by a factor of two or more), while not appreciably affecting electronic device performance. These power consumption reductions are achieved through a combination of optimizations, aggregated together and analyzed over plural time-periods. The optimizations are based on very low-level system parameters related to the microprocessor hardware and operating system software, and high-level parameters related to the application and end-user operating environment.

53. Infineon is not licensed to the ’179 Patent and was not licensed during the six years preceding this action.

B. THE ’306 PATENT

54. United States Patent No. 7,051,306 (“the ’306 Patent”) is entitled “Managing Power on Integrated Circuits Using Power Islands.” The United States Patent and Trademark Office duly and legally issued the ’306 Patent on May 23, 2006, from U.S. Patent Application No. 10/840,893, filed on May 7, 2004.

55. The ’306 Patent claims the priority benefit of U.S. Provisional Application No. 60/468,742, filed May 7, 2003.

56. MOSAID is the current owner of all rights, title, and interest in and to the ’306 Patent, including the right to sue for past damages.

57. A true and correct copy of the ’306 Patent is attached hereto as **Exhibit B** and is incorporated by reference herein.

58. The ’306 Patent generally relates to managing power in an integrated circuit using power islands. For example, the integrated circuit includes a plurality of power islands where power consumption is independently controlled within each of the power islands. A power manager determines a target power level for one of the power islands. The power manager then determines an action to change a consumption power level of the one of the power islands to the

target power level. The power manager performs the action to change the consumption power level of the one of the power islands to the target power level. Power control circuitry controls the power of the one of the power islands. The power islands may be delineated based on geographic factors or functional circuitry of the integrated circuit. The action performed may be selecting a clock frequency for one of the power islands or selecting a clock for one of the power islands, modifying voltage for one of the power islands, or powering on or off one of the power islands.

59. Claim 16 of the ’306 Patent is directed to:

> 16. A system for an integrated circuit comprising a plurality of power islands where power consumption is independently controlled within each of the power islands, the system comprising:
>
> power control circuitry configured to control power for one of the power islands; and
>
> a power manager configured to determine a target power level for the one of the power islands based on needs and operation of the integrated circuit, determine at least one of actions to change a power consumption level of the one of the power islands to the target power level, and perform the at least one of the actions to change the power consumption level of the one of the power islands to the target power level where one of the actions comprises selecting a frequency for the one of the power islands.

60. The ’306 Patent solves a technological problem relating to managing power on an integrated circuit. As the ’306 Patent explains, one design goal for integrated circuits is to reduce power consumption. Devices with batteries such as cell phones and laptops especially need a reduction in power consumption in the integrated circuit to extend the charge of the battery, as well as prevent overheating and lower heat dissipation. However, as the ’306 Patent notes, one problem with many integrated circuits in the prior art was that power consumption was not efficiently utilized. For example, the entire integrated circuit may operate at a maximum frequency just to support an application needing that maximum frequency, while other portions of the

integrated circuit can operate at a lower frequency. In another example, inactive circuitry within the integrated circuit consumes power and increases the likelihood of leakage. Inefficient power consumption may also adversely affect performance of the integrated circuit. With the growing complexity of integrated circuits, the reduction of power consumption is even more important when the integrated circuit employs more functionality. Systems-on-a-chip, for example, employ many different types of functionalities within a single chip and consume even more power than single function integrated circuits.

61. Some prior integrated circuits have employed voltage islands or multiple clocks to lower power consumption. One problem with these integrated circuits is that the voltages in the power island and the frequencies of the multiple clocks are static. The voltages and the frequencies do not dynamically change based on the needs and operation of the integrated circuit. The invention addresses the above problems by managing power in an integrated circuit using power islands, where power consumption is independently controlled within each of the power islands.

62. Infineon is not licensed to the ’306 Patent and was not licensed during the six years preceding this action.

C. THE ’448 PATENT

63. United States Patent No. 7,349,448 (“the ’448 Patent”) is entitled “Distributed Multiplexing Circuit with Built-In Repeater.” The United States Patent and Trademark Office duly and legally issued the ’448 Patent on March 25, 2008, from U.S. Patent Application No. 10/632,885, filed on August 1, 2003.

64. MOSAID is the current owner of all rights, title, and interest in and to the ’448 Patent, including the right to sue for past damages.

65. A true and correct copy of the ’448 Patent is attached hereto as **Exhibit C** and is incorporated by reference herein.

66. The ’448 Patent generally relates to systems and methods for distributing multiplexor (“MUX”) functionality. For example, generally, a distributed multiplexor circuit can select between multiple data connections, each of which is separated from multiplexor logic by some distance on an integrated circuit (“IC”). In such a system, each data connection transmits its data word to an associated distributed multiplexor logic stage. For example, a first stage logic is configured to receive a first data word from one of the connections and to transmit the first data word received. A second stage logic is configured to receive the first data word from the first stage logic and to select a selected data word between the first data word and a second data word received from another of the plurality of data connections based upon a set of select signals. The second stage logic is further configured to transmit the selected data word.

67. Claim 4 of the ’448 Patent is directed to:

> 4. A multiplexor circuit, comprising:
>
> a plurality of data connections;
>
> first stage logic configured to receive a first data word from one of the connections and to transmit the first data word received based on a set of select signals; and
>
> second stage logic configured to receive the first data word from the first stage logic and to select a selected data word between the first data word and a second data word received from another of the plurality of data connections based upon a set of select signals, the second stage logic configured to transmit the selected data word to a third stage logic and to increase a signal strength of the first data word when the first data word is transmitted, if the first data word is selected.

68. The ’448 Patent solves a technological problem relating to routing congestion in MUX circuits such as those implemented on an IC and used to select a particular data connection from multiple connections. For example, a MUX circuit within an IC may comprise eight data connections that transmit 128-bit data words. Typically, each of the 128-bit data words may be

routed to multiplexor logic on the IC via a connection that comprises 128 routing wires, *e.g.*, a wire for each bit that is transmitted. Therefore, in this particular example, 1,024 routing wires on the IC would be used to route eight data words from eight data connections to the multiplexor logic. Such a MUX circuit was prone to routing congestion and the inherent problems associated therewith, *e.g.*, difficulty in designing and fabricating. Making matters worse, the number of routing wires increased as the number of data connections increased.

69. In the past, dynamic MUXs and tristate MUXs have been employed in an attempt to address routing congestion caused by large numbers of routing wires. However, a dynamic MUX typically requires more power, has smaller noise margins, and takes more time to design correctly. Further, usage of tristate MUXs could be acceptable when the distances between the data connections and the MUX logic are small, but speed and noise degradation typically increases as the distances between the data connections increase.

70. The ’448 Patent discloses and claims staged multiplexer circuitry to improve MUX design and address the above problems. For example, as the ’448 Patent explains, the distributed multiplexor circuitry includes distributed multiplexor logic (“DML”) stages associated with each data connection as well as select logic. A DML stage receives a data word from an associated data connection as well as a data word from a previous DML stage. Select logic indicates which data word from the multiple data connections is outputted by transmitting a set of select signals to each DML stage. The select signals are indicative of which data word is to be selected for further transmission. In accordance with these select signals, each DML stage selects either the data word it receives from a previous DML stage, if any, or another data word it receives from another data connection. In the final stage of the plurality of consecutive stages, the distributed multiplexor

circuit drives the resulting selected data word indicated by the select logic onto a system bus or some other type of conductive connection.

71. Infineon is not licensed to the ’448 Patent and was not licensed during the six years preceding this action.

II. DEFENDANTS’ KNOWLEDGE OF THE ASSERTED PATENTS

72. Infineon had knowledge of the Asserted Patents prior to the filing of this suit.

73. Between at least November 2017 and August 26, 2024, MOSAID (f/k/a Conversant Intellectual Property Management) engaged in many discussions, including through emails, letters, and business and technical meetings, with Cypress and/or Infineon regarding their infringement of MOSAID’s patents, including the Asserted Patents.

74. On or about November 3, 2017, MOSAID sent a letter and exemplary claim charts to Cypress exhibiting Cypress’s infringement of several patents, including the ’179, ’306, and ’448 Patents. MOSAID’s November 3, 2017 exemplary claim charts included infringement assertions for at least Claim 1 of the ’179 Patent, Claim 1 of the ’306 Patent, and Claim 8 of the ’448 Patent. Receipt was confirmed by Terence Woodsome, Cypress’s then-Deputy General Counsel.

75. On January 24, 2018, MOSAID followed up with Cypress regarding Cypress’s response to MOSAID’s letter and with a request to schedule a face-to-face meeting to further discussions.

76. On April 17, 2018, MOSAID sent Cypress additional information and updated exemplary claim charts regarding Cypress’s infringement of the ’179, ’306, and ’448 Patents. MOSAID’s updated exemplary claim chart for the ’306 Patent included infringement assertions for at least Claim 16.

77. On June 29 and July 30, 2018, MOSAID followed up with Cypress regarding MOSAID’s infringement allegations and again requested a face-to-face meeting.

78. On August 2 and August 22, 2018, MOSAID again contacted Cypress to request a face-to-face meeting to occur sometime in September 2018.

79. On September 26, 2018, MOSAID met with Cypress for further discussion. During the meeting, MOSAID shared additional information and updated exemplary claim charts regarding Cypress's infringement of at least the '179 and '306 Patents. MOSAID sent copies of the updated exemplary claim charts for the '179, '306, and '448 Patents to Cypress by email on October 2, 2018.

80. On February 27, 2019, MOSAID followed up with Cypress after having received no further responses from Cypress following the September 2018 meeting. In that February 27 correspondence, MOSAID also provided new exemplary claim charts for new infringement assertions and asked to continue discussions. The new exemplary claim charts included charts for the '306 Patent (which identified additional products accused of infringing the '306 Patent).

81. Between February 2019 and February 2020, MOSAID and Cypress exchanged numerous communications and materials regarding Cypress's infringement. MOSAID also requested another meeting to discuss any outstanding technical matters and present its thoughts on business terms for a license to MOSAID's patent portfolio.

82. The parties engaged in another year of back and forth between February 2020 and February 2021. By then, Infineon had completed its acquisition of Cypress, and Cypress's personnel, including Mr. Woodsome, became employees of Infineon and transitioned to using Infineon email addresses.

83. MOSAID and Infineon held meetings on February 24 and March 10, 2021. MOSAID indicated its desire to work on a formal license proposal based on the active patents still in discussion, which included the Asserted Patents.

84. On February 28, 2023, MOSAID reconnected with Infineon on the parties' outstanding discussions, and for the next year the parties exchanged further communications regarding Infineon's infringement of the Asserted Patents.

85. In February and April 2024, MOSAID noted that technical discussions between MOSAID and Infineon (including Cypress) had been going on for many years, so MOSAID was now at a point where it would appreciate knowing whether Infineon was ready and willing to take a license or provide feedback on MOSAID's business proposal.

86. On May 23, 2024, MOSAID again reached out to Infineon in an effort to license Infineon to the Asserted Patents, and requested "business discussions to finally resolve these issues." However, Infineon ignored MOSAID's request and did not respond.

87. Ultimately, since at least November 3, 2017, MOSAID and Infineon (including Cypress) have engaged in numerous technical and business discussions relating to a license for MOSAID's patent portfolio, including each of the Asserted Patents. During those discussions, MOSAID offered to provide a license to the Asserted Patents. But to date, Infineon has not made any offer to license MOSAID's patent portfolio, including the Asserted Patents. Nor has Infineon ceased its infringing conduct.

88. Before filing this lawsuit, on August 26, 2024, MOSAID attempted one last time to resolve this dispute and suggested "a call so that we don't misunderstand your position on this matter." MOSAID again offered to license its patent portfolio, including the Asserted Patents, to Infineon on reasonable terms. But again, Infineon ignore MOSAID's correspondence.

III. THE ACCUSED PRODUCTS

89. Infineon manufactures, uses, offers for sale, and/or sells in the United States, and/or imports into the United States, PSoCs and wireless connectivity SoCs, including the Accused Products, for use in a variety of end-products in the communications, IoT, automotive, computer,

and/or consumer electronics industries. Both the Accused Products and the consumer end-products incorporating the Accused Products have been, and continue to be, widely available for sale in the United States.

90. Infineon's Accused Products include at least the Accused Products, and substantially similar products, made, used, sold, or offered for sale in the United States, and/or imported into the United States.

91. Infineon has advertised, offered for sale, and sold—and continues to advertise, offer for sale, and sell—the Accused Products on Infineon's website.

92. Infineon advertises, offers for sale, and sells the accused PSoC 3 product family on its website, including for example at https://www.infineon.com/cms/en/product/microcontroller/legacy-microcontroller/legacy-8-bit-16-bit-microcontroller/psoc-3/, and as shown above in paragraph 16.

93. Infineon advertises, offers for sale, and sells the accused PSoC 4, PSoC 5, and PSoC 6 product families on its website, including for example at https://www.infineon.com/cms/en/product/microcontroller/32-bit-psoc-arm-cortex-microcontroller/, and as shown above in paragraph 16.

94. Infineon advertises, offers for sale, and sells accused wireless connectivity products on its website, including for example at https://www.infineon.com/cms/en/product/wireless-connectivity/airoc-wi-fi-plus-bluetooth-combos/, and as shown above in paragraph 16.

COUNT I: INFRINGEMENT OF THE '179 PATENT

95. MOSAID incorporates by reference and realleges paragraphs 1 through 94 as if specifically set forth herein.

96. In violation of 35 U.S.C. § 271(a), Infineon has directly infringed one or more of the claims of the '179 Patent, including at least Claim 1, either literally and/or under the doctrine

of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, without authority, at least one of the Accused Products.

97. Claim 1 of the ’179 Patent recites:

> 1. A system for dynamically managing power within an electronic device comprising:
>
> a power management device including:
>
> a sampling module to ascertain and store a plurality of parameter values associated with said electronic device during at least one sampling interval;
>
> an analysis module to combine said plurality of parameter values to produce an overall parameter value and to evaluate said overall parameter value to determine at least one control value to adjust power consumption of said electronic device in response to said parameter evaluation, wherein said plurality of parameters are arranged into a series of successive stages with each stage including at least one parameter, and said analysis module includes:
>
> a normalization module to normalize said parameter values relative to a numeric range; and
>
> a combination module to mathematically combine said normalized parameters of each subordinate stage with a succeeding stage to produce an overall value to determine said at least one control value to adjust said power consumption of said electronic device; and
>
> an adjustment module to adjust power consumption of said electronic device in accordance with said at least one control value to control electronic device power consumption.

98. The Accused Products, including at least the PSoC 3, PSoC 4, and PSoC 5 families, practice each element of Claim 1 of the ’179 Patent.

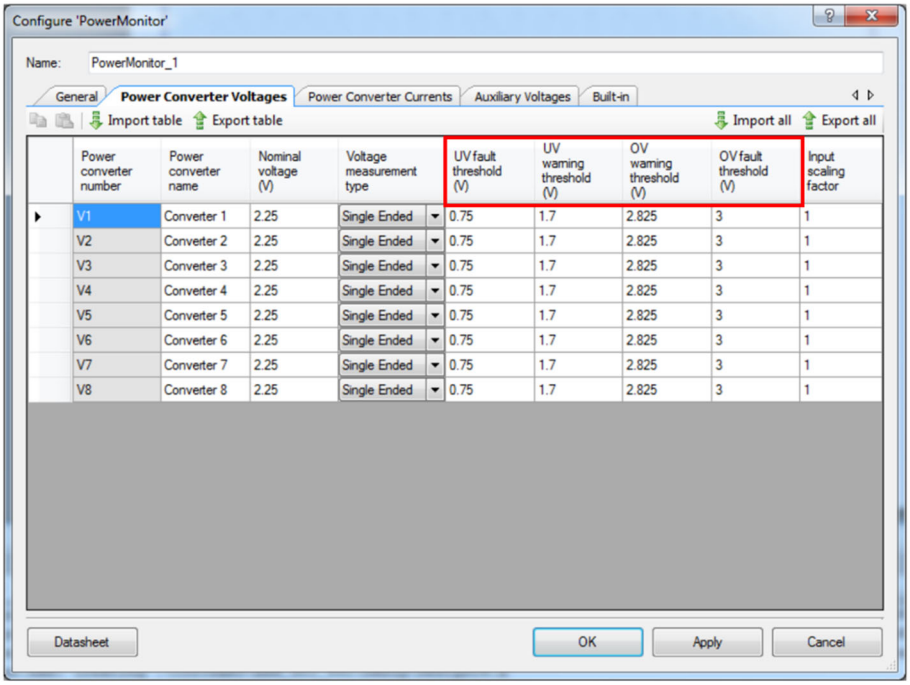
99. The Accused Products include a power management device. For example, at least the PSoC 3, 4, and 5 include a Power Monitor component that monitors the health of power converters and is capable of generating warnings and faults based on user-defined thresholds.

100. The power management device includes a sampling module to ascertain and store a plurality of parameter values associated with said electronic device during at least one sampling interval. For example, the Power Monitor is configured to measure power converter output voltages and supports averaging of both voltage and current measurements. The average value is calculated as a running average, which produces a new average with each scan that is the average of the previous *N* scans.

101. The power management device also includes an analysis module to combine said plurality of parameter values to produce an overall parameter value and to evaluate said overall parameter value to determine at least one control value to adjust power consumption of said electronic device in response to said parameter evaluation, wherein said plurality of parameters are arranged into a series of successive stages with each stage including at least one parameter. For example, the Power Monitor is capable of combining the sampled voltage parameter values into an overall running average. The average value is calculated as a running average, which produces a new average with each scan. The analysis module uses the average overall voltage value to evaluate fault and warning thresholds.

Power Converter Voltages Tab

This enables the user to describe the power converter voltages in the system. The figure below shows the voltage tab when Number of Converters is set to **8** in the General Tab.



Power converter number	Power converter name	Nominal voltage (V)	Voltage measurement type	UV fault threshold (V)	UV warning threshold (V)	OV warning threshold (V)	OV fault threshold (V)	Input scaling factor
V1	Converter 1	2.25	Single Ended	0.75	1.7	2.825	3	1
V2	Converter 2	2.25	Single Ended	0.75	1.7	2.825	3	1
V3	Converter 3	2.25	Single Ended	0.75	1.7	2.825	3	1
V4	Converter 4	2.25	Single Ended	0.75	1.7	2.825	3	1
V5	Converter 5	2.25	Single Ended	0.75	1.7	2.825	3	1
V6	Converter 6	2.25	Single Ended	0.75	1.7	2.825	3	1
V7	Converter 7	2.25	Single Ended	0.75	1.7	2.825	3	1
V8	Converter 8	2.25	Single Ended	0.75	1.7	2.825	3	1

(Power Monitor 1.20 PSoC® Creator Component Datasheet, at 12.)
(annotation in red added)

102. The analysis module includes a normalization module to normalize said parameter values relative to a numeric range. For example, at least the PSoC 3, 4, and 5 can be configured with a voltage scaling factor (*e.g.*, between 0.001 and 1) for a specified power converter that controls the amount of attenuation applied to the converter output voltage external to the PSoC.

103. The analysis module also includes a combination module to mathematically combine said normalized parameters of each subordinate stage with a succeeding stage to produce an overall value to determine said at least one control value to adjust said power consumption of said electronic device. For instance, on information and belief, at least the PSoC 3, 4, and 5 mathematically combine the normalized voltage values as a running average for use when evaluating faults or warning conditions.

104. In addition, the Accused Products include an adjustment module to adjust power consumption of said electronic device in accordance with said at least one control value to control electronic device power consumption. For example, at least the PSoC 3, 4, and 5 include a voltage sequencer connectable to the Power Monitor that supports sequencing and monitoring of up to 32 power converter rails.

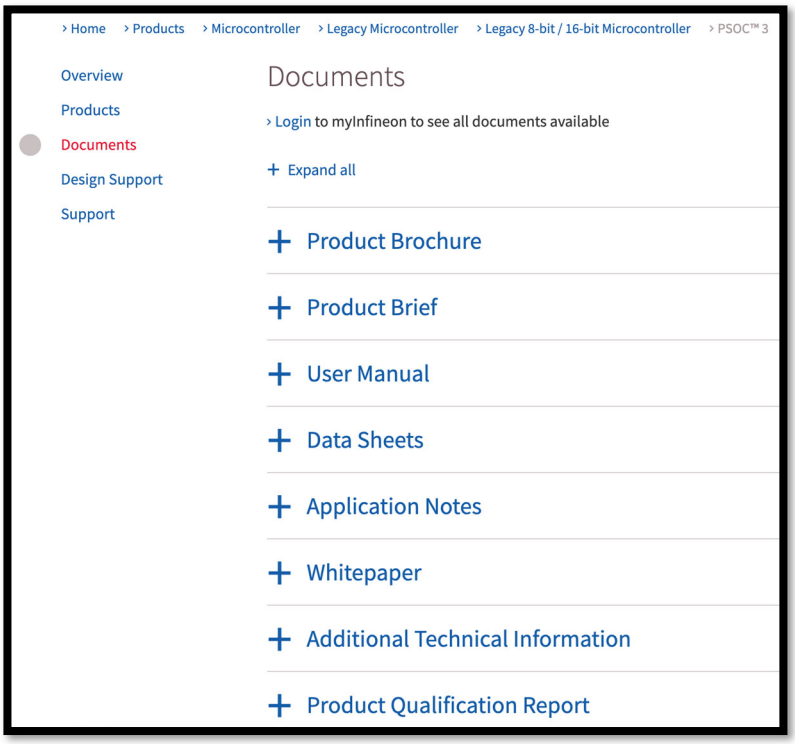
105. During license discussions, MOSAID provided Infineon with exemplary claim charts explaining in detail Infineon's infringement of the '179 Patent, including at least Claim 1.

106. In violation of 35 U.S.C. § 271(b), Infineon has infringed one or more of the claims of the '179 Patent, including at least Claim 1, indirectly by inducing infringement by third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 3, 4, and 5, in this District and elsewhere in the United States. For example, on information and belief, at least the PSoC 3, 4, and 5 have been used by Infineon's customers and/or end-users in consumer products including at least wearables, hearables, fitness products, mobile devices, automotives, IoT devices, home automation, home appliances, small kitchen appliances, coffee machines, washing machines, and industrial control systems. Direct infringement by Infineon's customers and/or end-users occurred at least by the use of the Accused Products, including at least the PSoC 3, 4, and 5, including use of consumer products incorporating them.

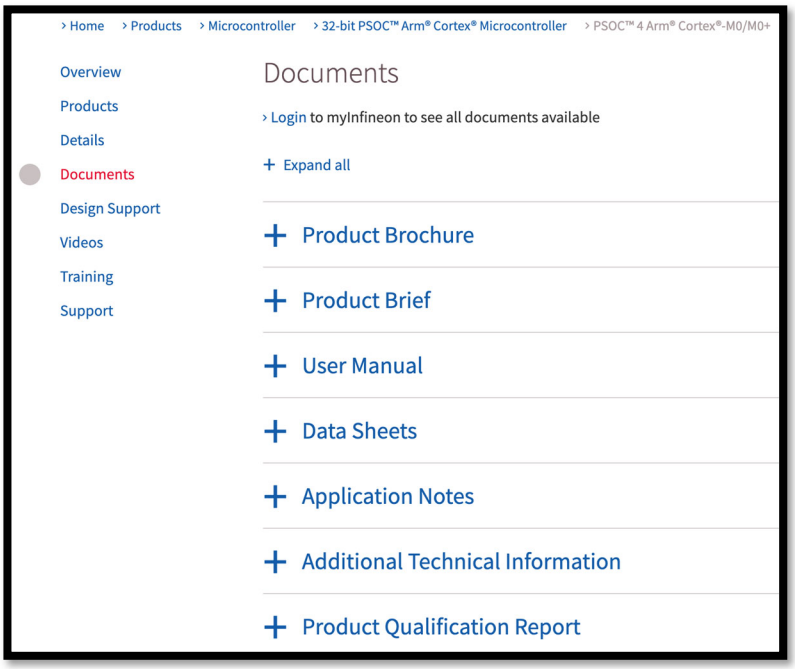
107. On information and belief, Infineon supplied hardware, firmware, and/or software that were especially made or especially adapted to practice the inventions claimed in the '179 Patent, including at least Claim 1, to induce third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 3, 4, and 5, to use such products in a manner that would infringe one or more claims of the '179 Patent, including at least Claim 1.

108. On information and belief, Infineon marketed and advertised the Accused Products, including at least the PSoC 3, 4, and 5, including on its website, to induce third parties, including Infineon's customers and/or end-users, to use the products in a manner that would infringe one or more claims of the '179 Patent, including at least Claim 1. *See, e.g.*, https://www.infineon.com/cms/en/product/microcontroller/legacy-microcontroller/legacy-8-bit-16-bit-microcontroller/psoc-3; https://www.infineon.com/cms/en/product/microcontroller/32-bit-psoc-arm-cortex-microcontroller/psoc-4-32-bit-arm-cortex-m0-mcu; https://www.infineon.com/cms/en/product/microcontroller/32-bit-psoc-arm-cortex-microcontroller/32-bit-psoc-5-lp-arm-cortex-m3; https://www.infineon.com/cms/en/design-support/tools/sdk/psoc-software/psoc-3-5-components/power-monitor; https://www.infineon.com/cms/en/design-support/tools/sdk/psoc-software/psoc-4-components/psoc-4-power-monitor.

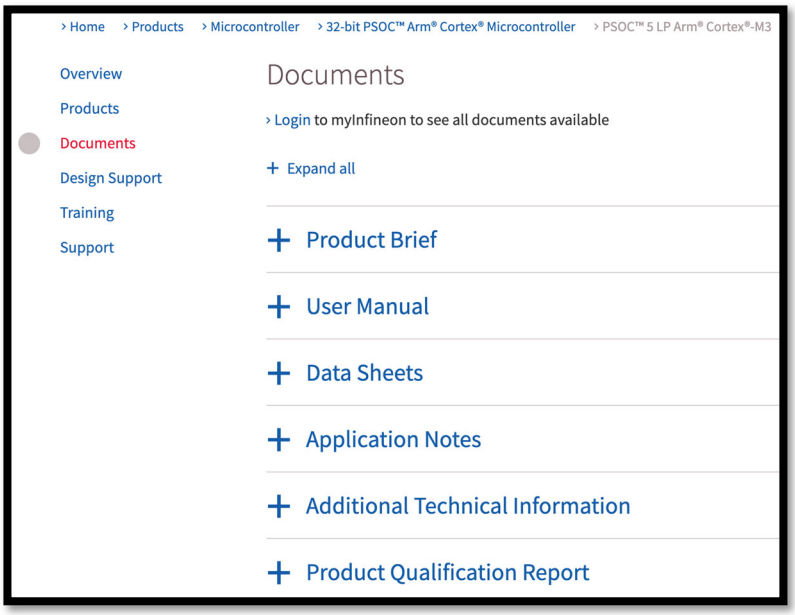
109. On information and belief, Infineon furnished instructive materials, technical support, and information concerning the operation and use of the Accused Products, including at least the PSoC 3, 4, and 5, to induce third parties, including Infineon's customers and/or end-users, to use the products in a manner that would infringe one or more claims of the '179 Patent, including at least Claim 1. For example, on its website, Infineon furnishes at least product brochures, product briefs, user manuals, data sheets, application notes, whitepapers, product qualification reports, and additional technical information such as architecture technical reference manuals:



(Exemplary categories of instructive materials provided for the PSoC 3, with additional materials provided for each product subcategory under their respective web subpages.)

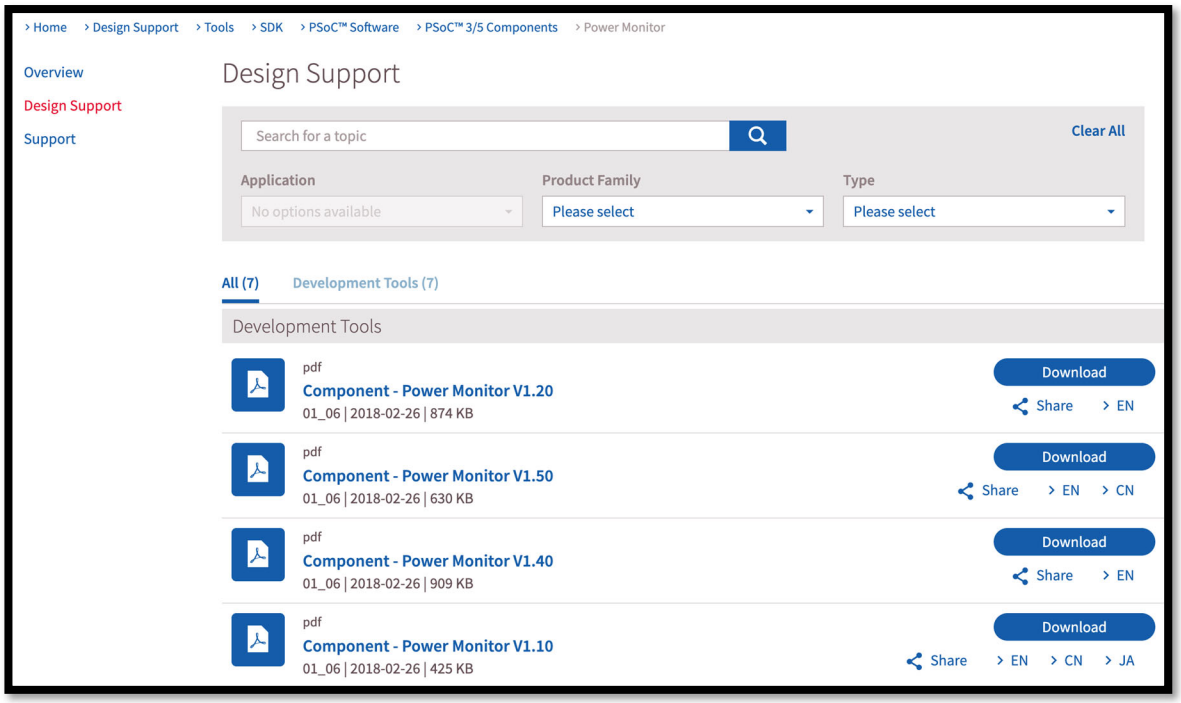


(Exemplary categories of instructive materials provided for the PSoC 4, with additional materials provided for each product subcategory under their respective web subpages.)

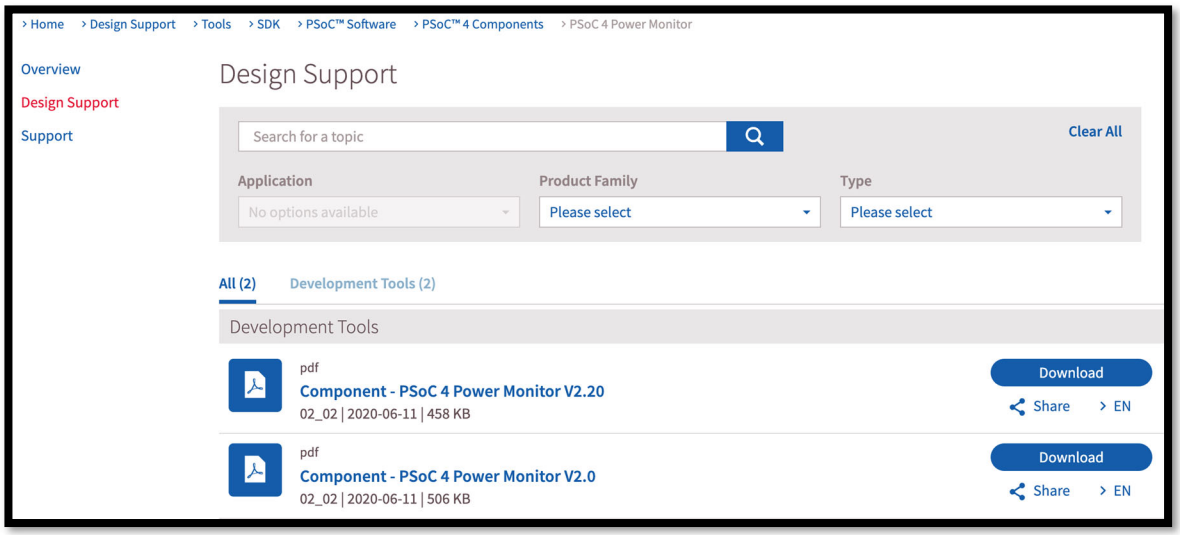


(Exemplary categories of instructive materials provided for the PSoC 5, with additional materials provided for each product subcategory under their respective web subpages.)

110. On its website, Infineon also furnishes development tools and design support materials for the Accused Products, including at least the PSoC 3, 4, and 5:



(Exemplary design support materials for the Power Monitor component for PSoC 3/5.)



(Exemplary design support materials for the Power Monitor component for PSoC 4.)

111. Further, Infineon provides APIs and sample firmware source code:

Application Programming Interface

Application Programming Interface (API) routines allow you to configure the component using software. The following table lists and describes the interface to each function. The subsequent sections cover each function in more detail.

By default, PSoC Creator assigns the instance name "PowerMonitor_1" to the first instance of a component in a given design. You can rename it to any unique value that follows the syntactic rules for identifiers. The instance name becomes the prefix of every global function name, variable, and constant symbol. For readability, the instance name used in the following table is "PowerMonitor."

Note: When using PSoC3 silicon, the user should create a Keil .cyre reentrancy file and should add the CyIntSetVector(), CyIntSetPriority(), PowerMonitor_PM_AMux_Current_Unset() and PowerMonitor_PM_AMux_Voltage_Unset() APIs in this file to avoid reentrancy related warnings during project compilation.

(Power Monitor 1.20 PSoC® Creator Component Datasheet, at 16.)

Sample Firmware Source Code

PSoC Creator provides numerous example projects that include schematics and example code in the Find Example Project dialog. For component-specific examples, open the dialog from the Component Catalog or an instance of the component in a schematic. For general examples, open the dialog from the Start Page or **File** menu. As needed, use the **Filter Options** in the dialog to narrow the list of projects available to select.

Refer to the "Find Example Project" topic in the PSoC Creator Help for more information.

(Power Monitor 1.20 PSoC® Creator Component Datasheet, at 36.)

Application Programming Interface

Application Programming Interface (API) routines allow you to configure the Component using software. The following sections list and describe each function and dependencies.

API functions allow configuration of the Component using the CPU.

By default, PSoC Creator assigns the instance name **PowerMonitor_P4_1** to the first instance of a Component in a given design. You can rename it to any unique value that follows the syntactic rules for identifiers. The instance name becomes the prefix of every global function name, variable, and constant symbol. For readability, the instance name used in the following table is **PowerMonitor_P4**.

Modules

- Initialization
  General APIs are used for initialization of the Component with defaults taken from the Component customizer parameters.
- General
  General APIs are used for run-time configuration of the Component during active power mode.
- Interrupts
  Interrupt accessors.

(PSoC 4 Power Monitor 2.20 PSoC® Creator Component Datasheet, at 6.)

112. In addition, on its website, Infineon provides training materials and help from Infineon support engineers:

Training

Steering wheel hands-on detection with Infineon's CAPSENSE™ technology

- Outline the basics of Infineon's CAPSENSE™ technology, as well as some application widgets and use cases
- Describe steering wheel hands-on detection implementation using PSOC™ 4 and CAPSENSE™ technology

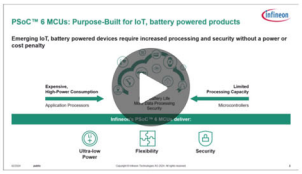
Watch eLearning

PSOC™ 4 MCU Overview (E1) Share

PSOC™ 4 is a scalable and reconfigurable platform architecture for a family of mixed-signal programmable embedded system controllers with an Arm® Cortex®-M0+ CPU. It is a combination of a microcontroller with digital programmable logic, high-performance analog-to-digital conversion, opamps, comparators, a capacitive touch-sensing system (CAPSENSE™) and standard communication and timing peripherals.

PSOC™ 6 MCU Portfolio Overview (E1)

Share



This short introductory training provides a high level overview to our PSOC™ 6 microcontroller.

(Exemplary Training Materials.)

(Link to the Infineon Developer Community for the PSoC 4.)

(Link to the Infineon Developer Community for the PSoC 5.)

113. Infineon knew or should have known of the ’179 Patent and its infringement through a series of correspondence and meetings expressly notifying Infineon of the ’179 Patent and Infineon’s infringement thereof. As a result, Infineon knew or should have known it infringed one or more claims of the ’179 Patent, including at least Claim 1, at least as early as November 3, 2017, when MOSAID began discussions with Cypress regarding the ’179 Patent and provided actual notice of infringement.

114. At a minimum, Infineon knew or should have known of the ’179 Patent and its infringement no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID regarding the ’179 Patent and Infineon’s infringement thereof.

115. Despite this knowledge, Infineon continued to induce third parties, including Infineon’s customers and/or end-users of the Accused Products, including at least the PSoC 3, 4, and 5, to infringe one or more claims of the ’179 Patent, including at least Claim 1, with the specific intent to cause infringement. Infineon knew or should have known that those acts would

induce actual infringement by third parties, including Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 3, 4, and 5, of one or more of the claims of the '179 Patent, including at least Claim 1.

116. Therefore, Infineon has induced infringement by others of one or more of the claims of the '179 Patent, including at least Claim 1, with the specific intent to induce acts that constitute infringement of the '179 Patent and with knowledge that such acts infringed one or more claims of the '179 Patent, including at least Claim 1.

117. In violation of 35 U.S.C. § 271(c), Infineon has infringed one or more of the claims of the '179 Patent, including at least Claim 1, indirectly by contributing to infringement by third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 3, 4, and 5, in this District and elsewhere in the United States. Direct infringement by Infineon's customers and/or end-users occurred at least by the use of the Accused Products, including at least the PSoC 3, 4, and 5, including use of consumer products incorporating them.

118. On information and belief, Infineon made and sold hardware, firmware, and/or software components (*e.g.*, processors and/or software drivers) especially made or especially adapted to practice the invention claimed in the '179 Patent, including at least Claim 1. For example, as explained above, Infineon made and sold PSoC hardware, including the PSoC 3, 4, and 5 architectures, and accompanying APIs and firmware code. On information and belief, such hardware, firmware, and/or software components (i) are a material part of the invention and (ii) are not staple articles or commodities of commerce suitable for substantial non-infringing use at least because they are specifically designed to perform the claimed functionality. Any other use of such

hardware, firmware, and/or software would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.

119. Therefore, Infineon has contributed to the infringement by others of one or more of the claims of the ’179 Patent, including at least Claim 1.

120. Infineon’s infringement of one or more claims of the ’179 Patent, including at least Claim 1, was willful.

121. As explained above, Infineon had actual knowledge of the ’179 Patent and its infringement thereof at least as early as November 3, 2017, when MOSAID began discussions with Cypress regarding the ’179 Patent, and in any event no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID.

122. As explained above, on several occasions beginning at least as early as November 3, 2017, MOSAID notified Infineon (including Cypress) of the ’179 Patent and Infineon’s infringement thereof, including infringement of at least Claim 1.

123. Despite knowing of the ’179 Patent at least as early as November 3, 2017 (and no later than April 2020), Infineon did not cease its infringing activities. Infineon continued to infringe one or more claims of the ’179 Patent, including at least Claim 1, in disregard of MOSAID’s patent rights. As a result, Infineon deliberately and intentionally infringed the ’179 Patent, and continued to do so, after receiving express and actual knowledge of both the ’179 Patent and its infringement thereof.

124. Therefore, Infineon’s infringement of the ’179 Patent, including at least Claim 1, was willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate, entitling MOSAID to increased damages pursuant to 35 U.S.C. § 284 and to attorneys’ fees and costs incurred in prosecuting this action pursuant to 35 U.S.C. § 285.

COUNT II: INFRINGEMENT OF THE ’306 PATENT

125. MOSAID incorporates by reference and realleges paragraphs 1 through 124 as if specifically set forth herein.

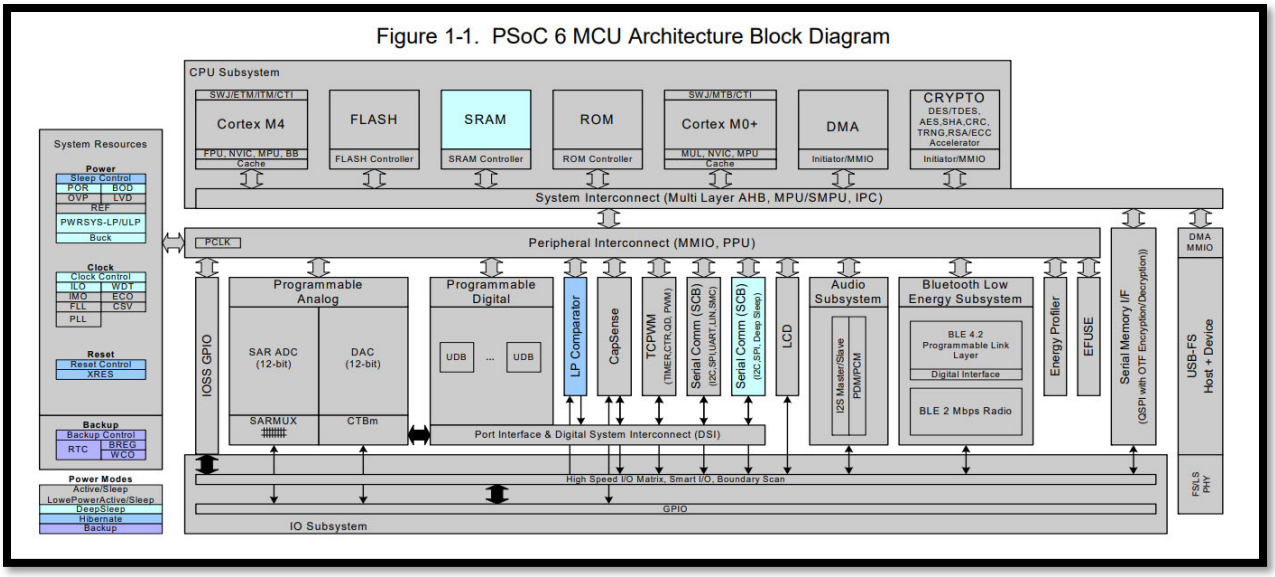
126. In violation of 35 U.S.C. § 271(a), Infineon has directly infringed one or more of the claims of the ’306 Patent, including at least Claim 16, either literally and/or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, without authority, at least one of the Accused Products.

127. Claim 16 of the ’306 Patent recites:

> 16. A system for an integrated circuit comprising a plurality of power islands where power consumption is independently controlled within each of the power islands, the system comprising:
>
> power control circuitry configured to control power for one of the power islands; and
>
> a power manager configured to determine a target power level for the one of the power islands based on needs and operation of the integrated circuit, determine at least one of actions to change a power consumption level of the one of the power islands to the target power level, and perform the at least one of the actions to change the power consumption level of the one of the power islands to the target power level where one of the actions comprises selecting a frequency for the one of the power islands.

128. The Accused Products, including at least the PSoC 6 and AIROC products, practice each element of Claim 16 of the ’306 Patent.

129. The Accused Products include a system for an integrated circuit comprising a plurality of power islands where power consumption is independently controlled within each of the power islands. For example, the PSoC 63 Bluetooth®LE Line of processors (in Infineon’s PSoC 6 family) include multiple power islands as illustrated in the following diagram.

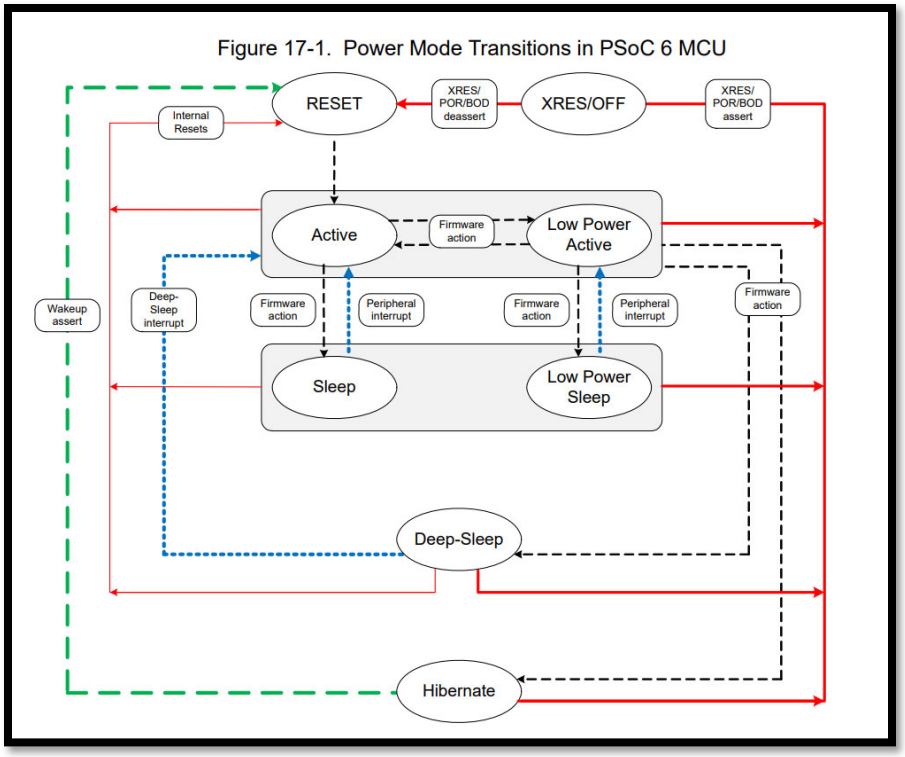


(PSoC 63 with BLE Architecture Technical Reference Manual (TRM), at 22.)

130. On the PSoC MCU, Cortex M-4 and Cortex-M0+ both support their own CPU sleep modes and each CPU can be in sleep independent of the state of the other CPU.

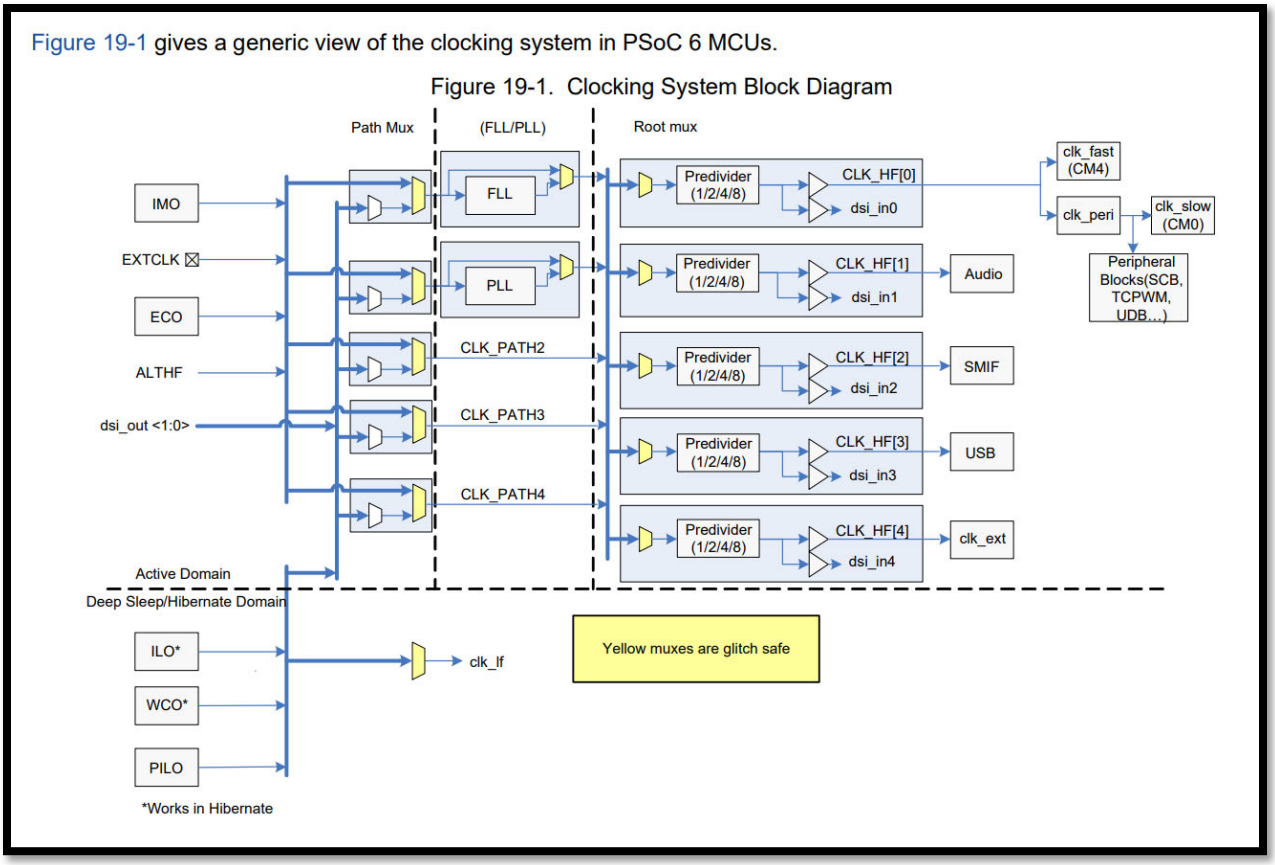
131. The Accused Products, including at least the PSoC 6 and AIROC products, include power control circuitry configured to control power for one of the power islands. For example, the PSoC 63 line includes circuitry for enabling and disabling clocks to peripherals, powering on and off clock sources, and powering on and off peripherals and parts inside the PSoC 6 MCU.

132. As illustrated in the below figure, the Accused Products, including at least the PSoC 6 and AIROC products, include a power manager configured to determine a target power level for the one of the power islands based on needs and operation of the integrated circuit. The firmware may decide to enable or disable specific peripherals and power domains depending on the application and power requirement.



(PSoC 63 with BLE Architecture Technical Reference Manual (TRM), at 137.)

133. The power manager is also configured to determine at least one of actions to change a power consumption level of the one of the power islands to the target power level and perform the at least one of the actions to change the power consumption level of the one of the power islands to the target power level where one of the actions comprises selecting a frequency for the one of the power islands. For example, the PSoC 6 MCU architecture supports dynamic voltage and frequency scaling. When the power manager transitions between power states, it will determine an action to change the power consumption level of a power island to the target power level, including by adjusting the frequency.



(PSoC 63 with BLE Architecture Technical Reference Manual (TRM), at 153.)

134. During license discussions, MOSAID provided Infineon with exemplary claim charts explaining in detail Infineon's infringement of the '306 Patent, including at least Claim 16.

135. In violation of 35 U.S.C. § 271(b), Infineon has infringed one or more of the claims of the '306 Patent, including at least Claim 16, indirectly by inducing infringement by third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 6 and AIROC products, in this District and elsewhere in the United States. For example, on information and belief, at least the PSoC 6 and AIROC products have been used by Infineon's customers and/or end-users in consumer products including at least IoT devices, such as wearables, smart rings, fitness trackers, eBikes, home appliances, home automation devices, smart home accessories, cordless power tools, industrial IoT devices, anomaly detection tags,

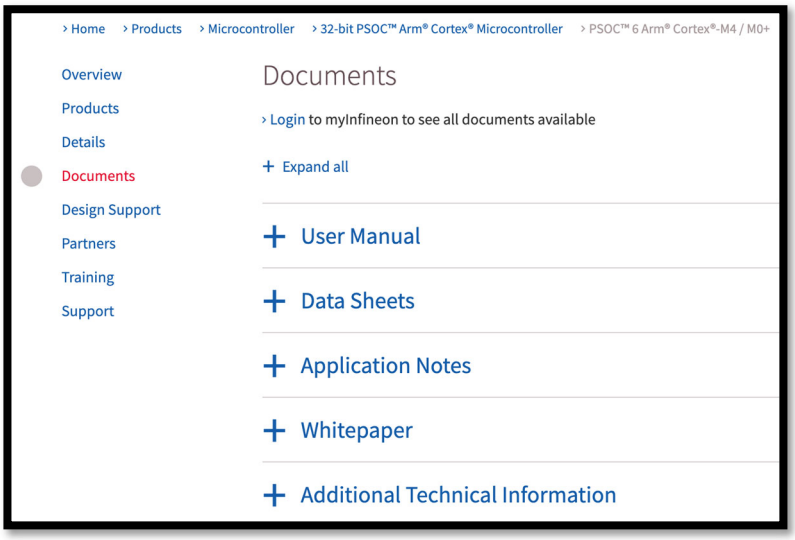
portable medical devices, and medical wearables such as vitals monitoring devices. Direct infringement by Infineon's customers and/or end-users occurred at least by the use of the Accused Products, including at least the PSoC 6 and AIROC products, including use of consumer products incorporating them.

136. On information and belief, Infineon supplied hardware, firmware, and/or software that were especially made or especially adapted to practice the inventions claimed in the '306 Patent, including at least Claim 16, to induce third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 6 and AIROC products, to use such products in a manner that would infringe one or more claims of the '306 Patent, including at least Claim 16.

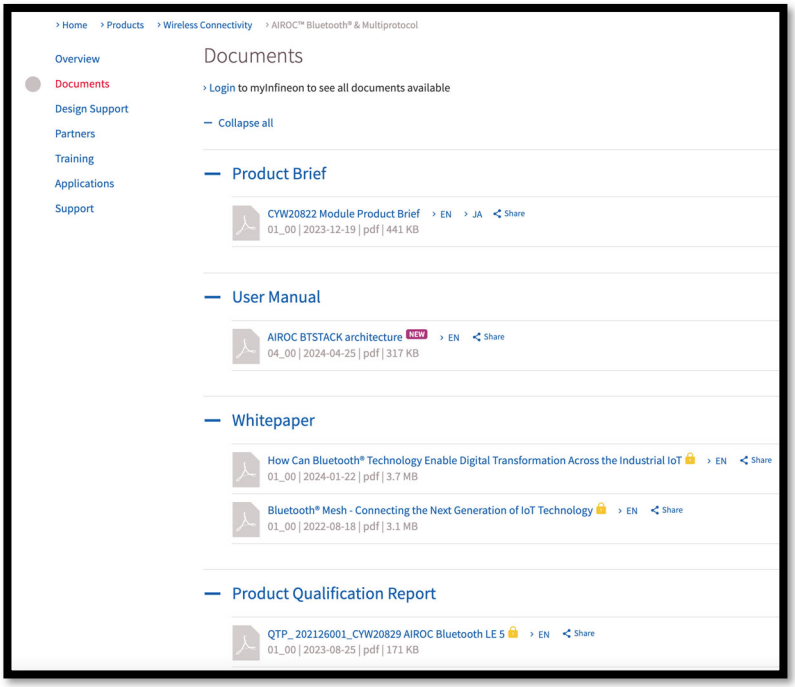
137. On information and belief, Infineon marketed and advertised the Accused Products, including at least the PSoC 6 and AIROC products, including on its website, to induce third parties, including Infineon's customers and/or end-users, to use the products in a manner that would infringe one or more claims of the '306 Patent, including at least Claim 16. *See, e.g.*, https://www.infineon.com/cms/en/product/microcontroller/32-bit-psoc-arm-cortex-microcontroller/psoc-6-32-bit-arm-cortex-m4-mcu; https://www.infineon.com/cms/en/product/wireless-connectivity/airoc-bluetooth-le-bluetooth-multiprotocol.

138. On information and belief, Infineon furnished instructive materials, technical support, and information concerning the operation and use of the Accused Products, including at least the PSoC 6 and AIROC products, to induce third parties, including Infineon's customers and/or end-users, to use the products in a manner that would infringe one or more claims of the '306 Patent, including at least Claim 16. For example, on its website, Infineon furnishes at least

product brochures, product briefs, user manuals, data sheets, application notes, whitepapers, product qualification reports, and additional technical information such as architecture technical reference manuals:

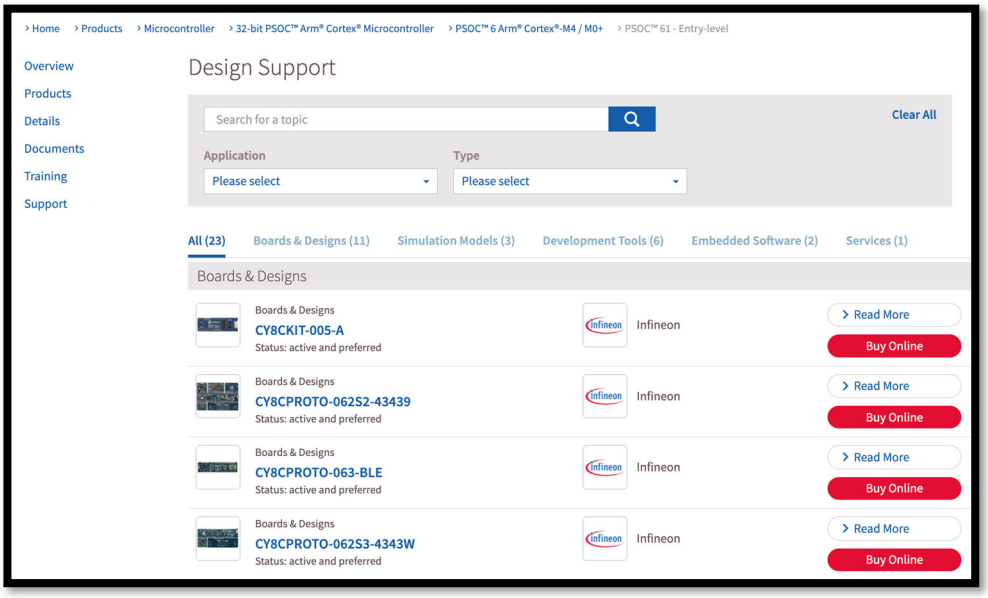


(Exemplary categories of instructive materials provided for the PSoC 6, with additional materials provided for each product subcategory under their respective web subpages.)

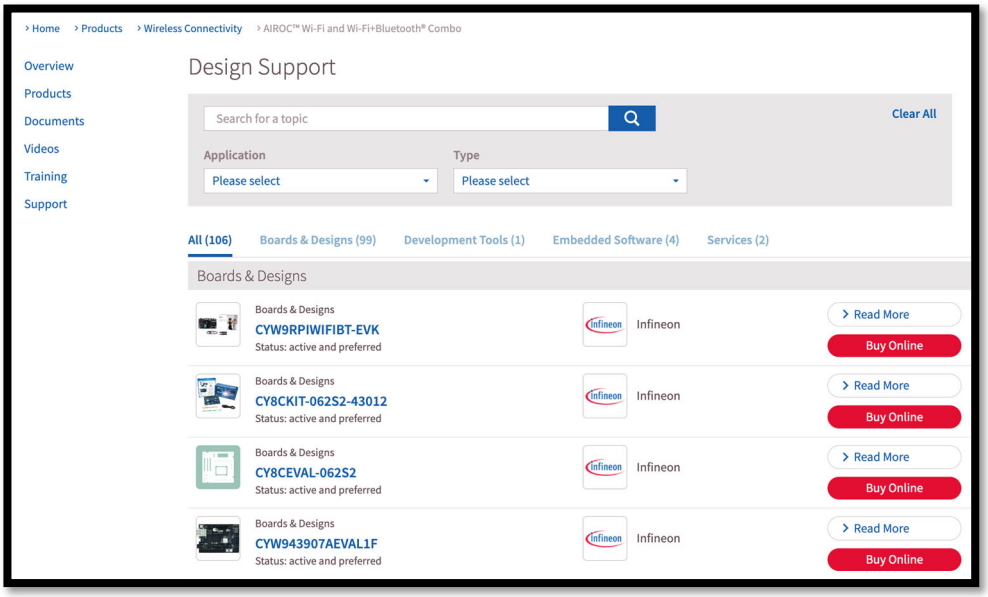


(Exemplary instructive materials provided for the AIROC products, with additional materials provided for each product subcategory under their respective web subpages.)

139. On its website, Infineon also furnishes development tools and design support materials for the Accused Products, including at least the PSoC 6 and AIROC products:

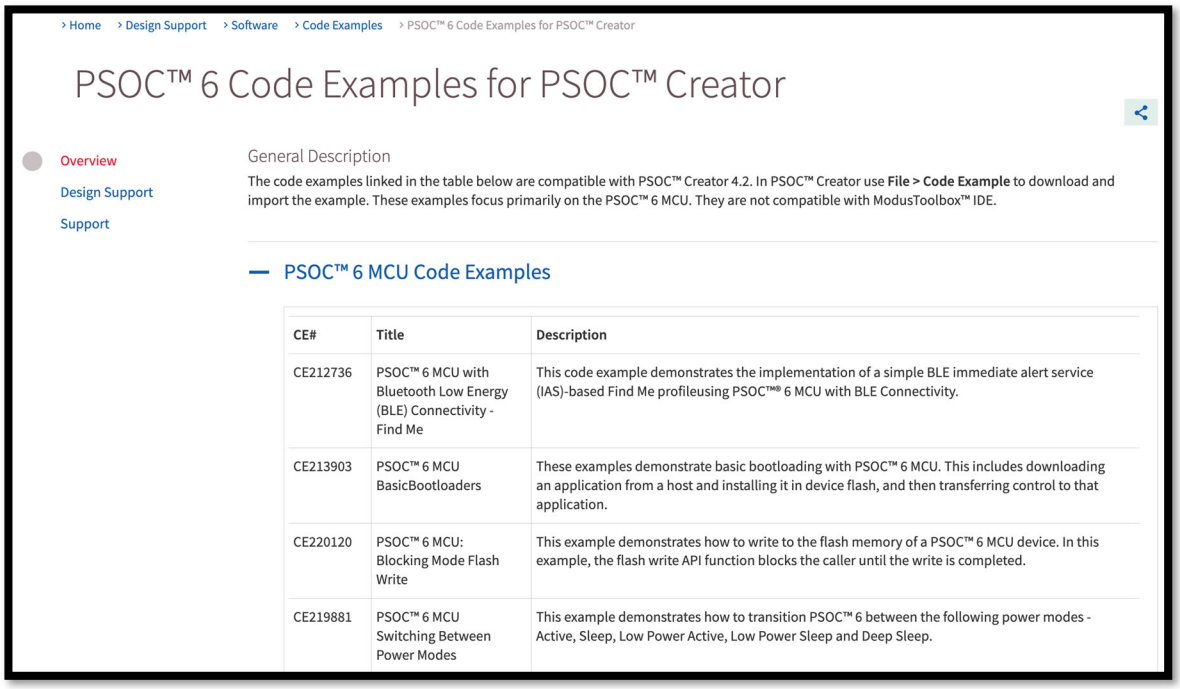


(Exemplary design support materials for PSoC 6.)



(Exemplary design support materials for AIROC products.)

140. Further, Infineon provides software, including code examples, drivers, and firmware:



› Home › Design Support › Software › Code Examples › PSOC™ 6 Code Examples for PSOC™ Creator

PSOC™ 6 Code Examples for PSOC™ Creator

Overview
Design Support
Support

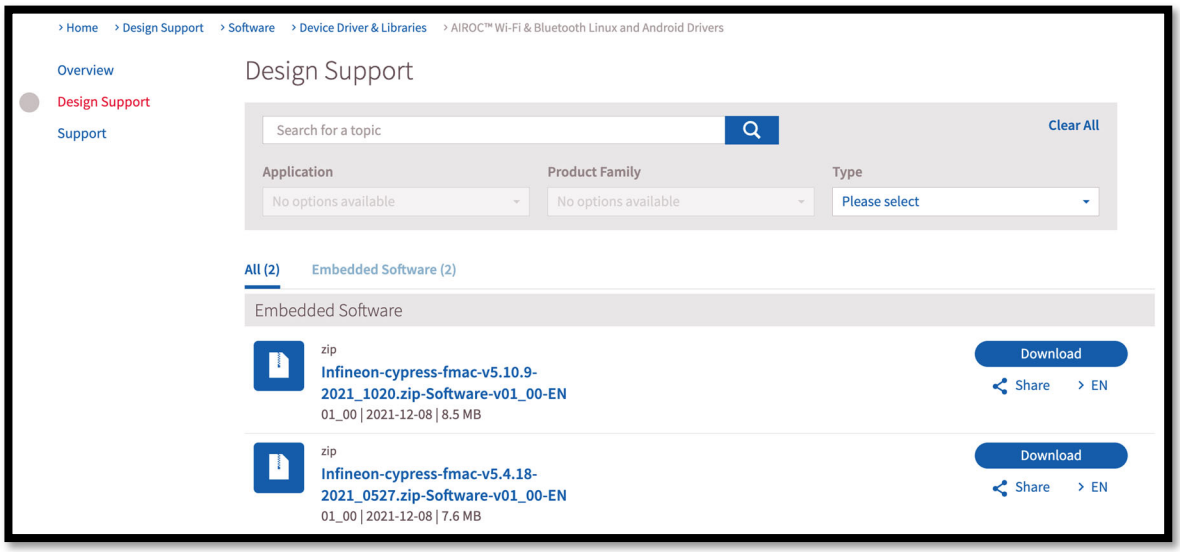
General Description

The code examples linked in the table below are compatible with PSOC™ Creator 4.2. In PSOC™ Creator use **File > Code Example** to download and import the example. These examples focus primarily on the PSOC™ 6 MCU. They are not compatible with ModusToolbox™ IDE.

PSOC™ 6 MCU Code Examples

CE#	Title	Description
CE212736	PSOC™ 6 MCU with Bluetooth Low Energy (BLE) Connectivity - Find Me	This code example demonstrates the implementation of a simple BLE immediate alert service (IAS)-based Find Me profileusing PSOC™® 6 MCU with BLE Connectivity.
CE213903	PSOC™ 6 MCU BasicBootloaders	These examples demonstrate basic bootloading with PSOC™ 6 MCU. This includes downloading an application from a host and installing it in device flash, and then transferring control to that application.
CE220120	PSOC™ 6 MCU: Blocking Mode Flash Write	This example demonstrates how to write to the flash memory of a PSOC™ 6 MCU device. In this example, the flash write API function blocks the caller until the write is completed.
CE219881	PSOC™ 6 MCU Switching Between Power Modes	This example demonstrates how to transition PSOC™ 6 between the following power modes - Active, Sleep, Low Power Active, Low Power Sleep and Deep Sleep.

(Exemplary code examples for PSoC 6.)



› Home › Design Support › Software › Device Driver & Libraries › AIROC™ Wi-Fi & Bluetooth Linux and Android Drivers

Overview
Design Support
Support

Design Support

Search for a topic

Clear All

Application: No options available
Product Family: No options available
Type: Please select

All (2) Embedded Software (2)

Embedded Software

zip
Infineon-cypress-fmac-v5.10.9-2021_1020.zip-Software-v01_00-EN
01_00 | 2021-12-08 | 8.5 MB
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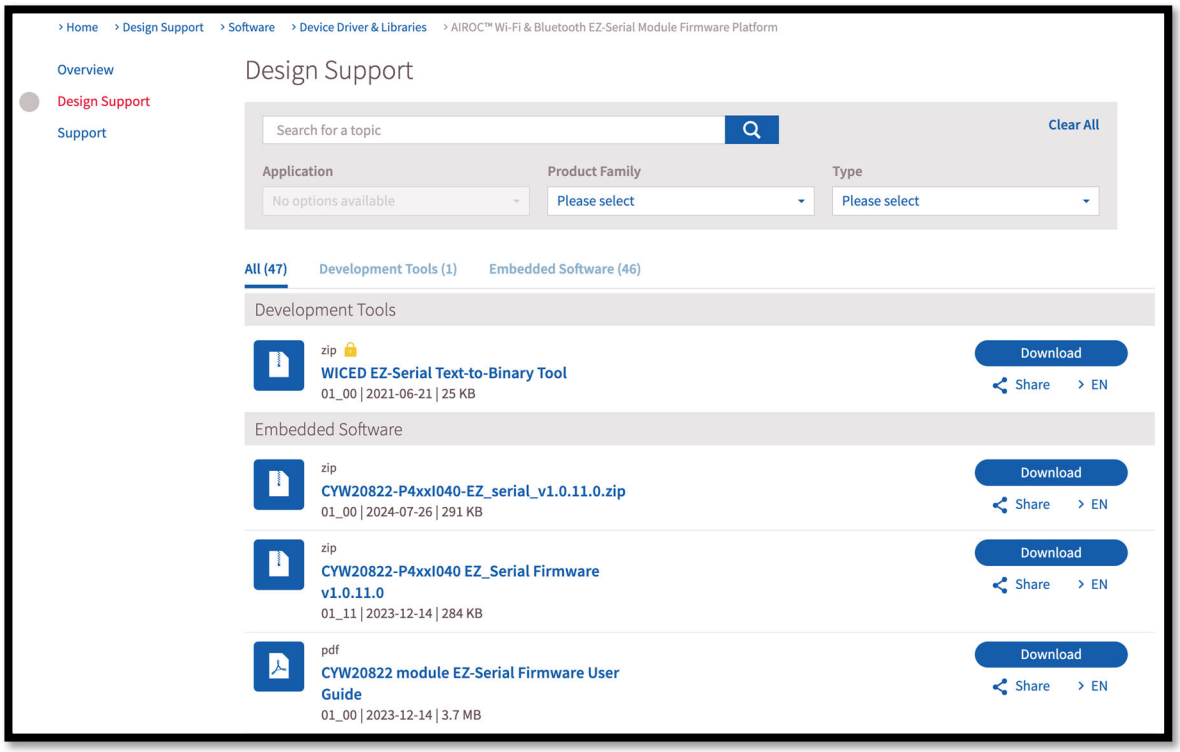
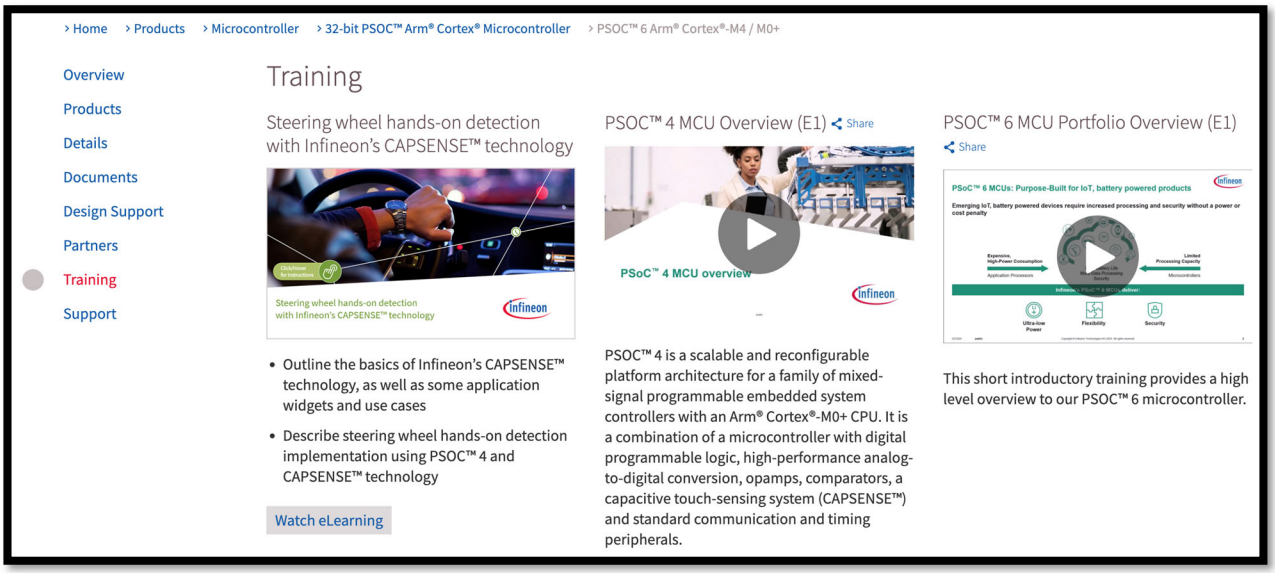
zip
Infineon-cypress-fmac-v5.4.18-2021_0527.zip-Software-v01_00-EN
01_00 | 2021-12-08 | 7.6 MB
Download
Share › EN

(AIROC™ Wi-Fi & Bluetooth Linux and Android Drivers.)

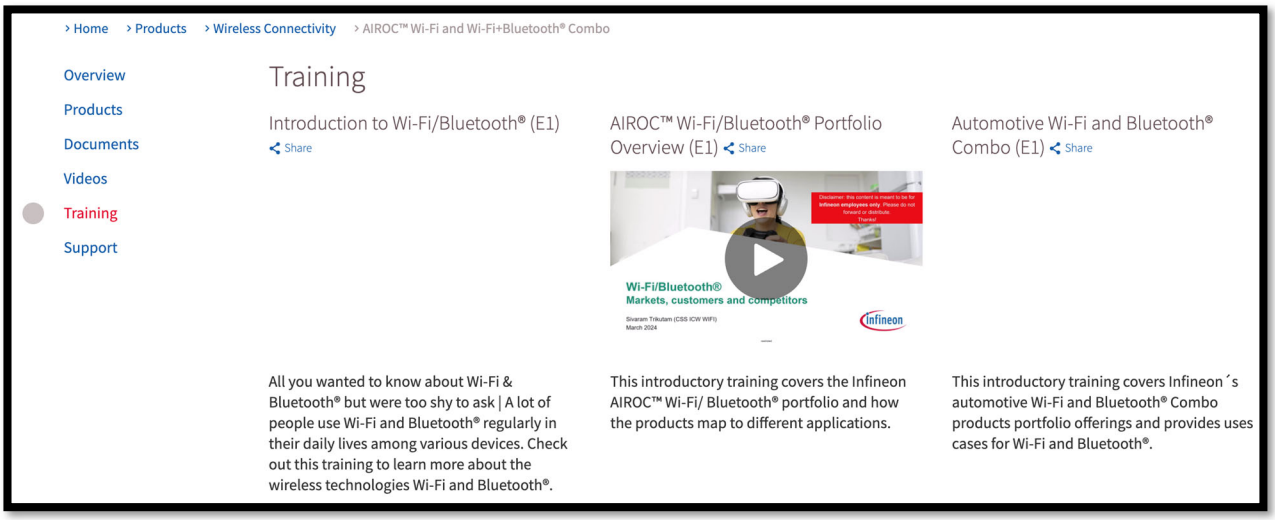


(AIROC™ Wi-Fi & Bluetooth EZ-Serial Module Firmware Platform.)

141. In addition, on its website, Infineon provides training materials and help from Infineon support engineers:



(Exemplary Training Materials for PSoC 6.)



(Exemplary Training Materials for AIROC products.)

(Link to the Infineon Developer Community for the PSoC 6.)

(Link to the Infineon Developer Community for the AIROC products.)

142. Infineon knew or should have known of the ’306 Patent and its infringement through a series of correspondence and meetings expressly notifying Infineon of the ’306 Patent

and Infineon's infringement thereof. As a result, Infineon knew or should have known it infringed one or more claims of the '306 Patent, including at least Claim 16, at least as early as November 3, 2017, when MOSAID began discussions with Cypress regarding the '306 Patent and provided actual notice of infringement.

143. Alternatively, Infineon knew or should have known it infringed one or more claims of the '306 Patent, including at least Claim 16, at least as early as April 17, 2018.

144. At a minimum, Infineon knew or should have known of the '306 Patent and its infringement no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID regarding the '306 Patent and Infineon's infringement thereof.

145. Despite this knowledge, Infineon continued to induce third parties, including Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 6 and AIROC products, to infringe one or more claims of the '306 Patent, including at least Claim 16, with the specific intent to cause infringement. Infineon knew or should have known that those acts would induce actual infringement by third parties, including Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 6 and AIROC products, of one or more of the claims of the '306 Patent, including at least Claim 16.

146. Therefore, Infineon has induced infringement by others of one or more of the claims of the '306 Patent, including at least Claim 16, with the specific intent to induce acts that constitute infringement of the '306 Patent and with knowledge that such acts infringed one or more claims of the '306 Patent, including at least Claim 16.

147. In violation of 35 U.S.C. § 271(c), Infineon has infringed one or more of the claims of the '306 Patent, including at least Claim 16, indirectly by contributing to infringement by third parties, including for example Infineon's customers and/or end-users of the Accused Products,

including at least the PSoC 6 and AIROC products, in this District and elsewhere in the United States. Direct infringement by Infineon's customers occurred at least by the use of the Accused Products, including at least the PSoC 6 and AIROC products, including use of consumer products incorporating them.

148. On information and belief, Infineon made and sold hardware, firmware, and/or software components (*e.g.*, processors and/or software drivers) especially made or especially adapted to practice the invention claimed in the '306 Patent, including at least Claim 16. For example, as explained above, Infineon made and sold PSoC and MCU hardware, including the PSoC 6 and AIROC product architectures, and accompanying software, firmware, and driver code. On information and belief, such hardware, firmware, and/or software components (i) are a material part of the invention and (ii) are not staple articles or commodities of commerce suitable for substantial non-infringing use at least because they are specifically designed to perform the claimed functionality. Any other use of such hardware, firmware, and/or software would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.

149. Therefore, Infineon has contributed to the infringement by others of one or more of the claims of the '306 Patent, including at least Claim 16.

150. Infineon's infringement of one or more claims of the '306 Patent, including at least Claim 16, was willful.

151. As explained above, Infineon had actual knowledge of the '306 Patent and its infringement thereof at least as early as November 3, 2017, when MOSAID began discussions with Cypress regarding the '306 Patent, and in any event no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID.

152. As explained above, on several occasions beginning at least as early as November 3, 2017, MOSAID notified Infineon (including Cypress) of the '306 Patent and Infineon's infringement thereof, including infringement of at least Claim 16.

153. Despite knowing of the '306 Patent at least as early as November 3, 2017 (and no later than April 2020), Infineon did not cease its infringing activities. Infineon continued to infringe one or more claims of the '306 Patent, including at least Claim 16, in disregard of MOSAID's patent rights. As a result, Infineon deliberately and intentionally infringed the '306 Patent, and continued to do so, after receiving express and actual knowledge of both the '306 Patent and its infringement thereof.

154. Therefore, Infineon's infringement of the '306 Patent, including at least Claim 16, was willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate, entitling MOSAID to increased damages pursuant to 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action pursuant to 35 U.S.C. § 285.

COUNT III: INFRINGEMENT OF THE '448 PATENT

155. MOSAID incorporates by reference and realleges paragraphs 1 through 154 as if specifically set forth herein.

156. In violation of 35 U.S.C. § 271(a), Infineon is and has been directly infringing one or more of the claims of the '448 Patent, including at least Claim 4, either literally and/or under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, without authority, at least one of the Accused Products.

157. Claim 4 of the '448 Patent recites:

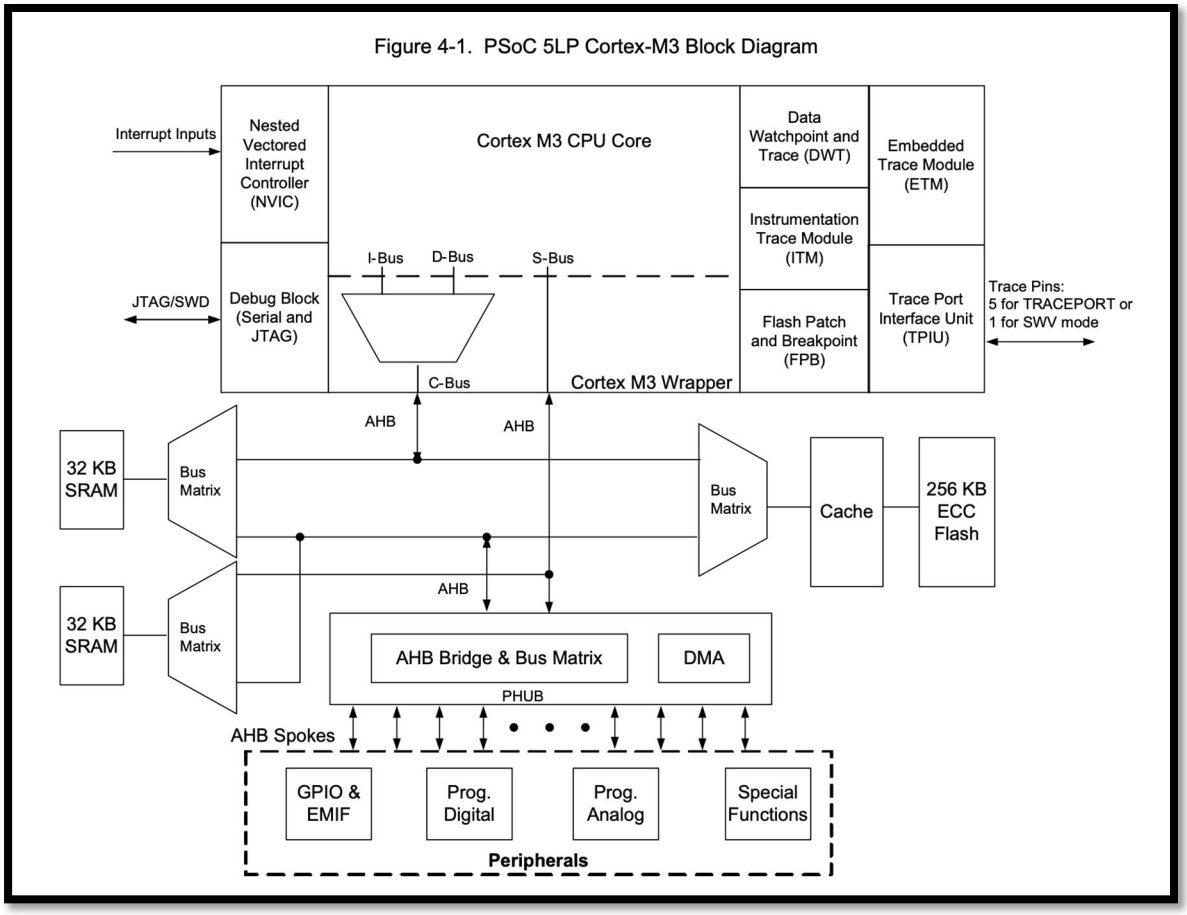
> 4. A multiplexor circuit, comprising:
>
> a plurality of data connections;

first stage logic configured to receive a first data word from one of the connections and to transmit the first data word received based on a set of select signals; and

second stage logic configured to receive the first data word from the first stage logic and to select a selected data word between the first data word and a second data word received from another of the plurality of data connections based upon a set of select signals, the second stage logic configured to transmit the selected data word to a third stage logic and to increase a signal strength of the first data word when the first data word is transmitted, if the first data word is selected.

158. The Accused Products, including at least the PSoC 5LP family of processors, practice each element of Claim 4 of the ’448 Patent.

159. The Accused Products include a multiplexor circuit comprising a plurality of data connections. For example, at least the PSoC 5LP includes circuitry allowing for signal multiplexing and logic operations. As shown below, the circuitry includes data connections to and from various system components including at least an ARM Cortex-M3 CPU, a peripheral hub (“PHUB”) with a direct memory access (“DMA”) controller, and memory components, among others.



(PSoC 5LP Architecture Technical Reference Manual, at 34.)

160. The Accused Products include a first stage logic configured to receive a first data word from one of the connections. For example, at least the PSoC 5LP includes multiplexer logic (e.g., a bus matrix) configured to receive a first data word via at least the D-Bus and/or S-Bus of the Cortex-M3 CPU.

161. Further, the first stage logic is configured to transmit the first data word received based on a set of select signals. For example, the bus matrix logic of the CPU can decode the access request and assert a select signal for transmission to the appropriate destination. If the bus matrix determines that the CPU wants to access the SRAM or a certain region of SRAM, for example, the bus matrix transmits the first data word to the SRAM/region. In addition, for simultaneous

accesses, the bus matrix logic can determine which access takes priority and transmit the data word accordingly.

162. The Accused Products include a second stage logic configured to receive the first data word from the first stage logic. For example, at least the PSoC 5LP contains additional bus matrix logic for various slave components, including at least SRAM and Flash memory modules. As shown in Figure 4-1, above, the PSoC 5LP uses bus interfaces based on ARM's Advanced High Performance Bus ("AHB") specification. As shown in the figure below, the AHB bus matrix module generally consists of an input stage, a decoder stage, and an output stage. On information and belief, the bus matrices of the Accused Products, including at least the PSoC 5LP, follow this configuration. In the example of an SRAM access by the CPU, the input/decoder stage of the SRAM bus matrix logic will receive the first data word from the first stage logic of the CPU.

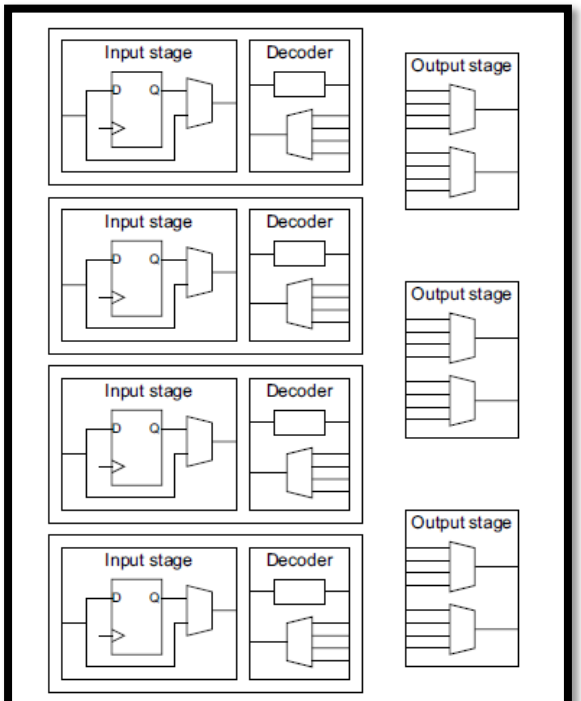


Figure 5-2 Example bus matrix design configuration

(ARM Cortex-M System Design Kit Technical Reference Manual, at 5-6.)

163. Further, the second stage logic is configured to select a selected data word between the first data word and a second data word received from another of the plurality of data connections based upon a set of select signals. For example, the input/decoder stage of the SRAM bus matrix can receive a second data word from another data connection, such as the DMA controller, because the CPU and DMA share bandwidth as dual bus masters. The decoder stage will generate and assert a select signal for the appropriate master-slave connection. In addition, when the CPU and DMA controller attempt to access the same region of SRAM simultaneously, the bus matrix logic can determine which access to permit first. For example, the priority decoder gives a higher priority to the CPU for certain SRAM accesses but gives a higher priority to the DMA controller for other SRAM accesses.

164. In addition, the second stage logic is configured to transmit the selected data word to a third stage logic and to increase a signal strength of the first data word when the first data word is transmitted, if the first data word is selected. For example, the selected data is transmitted to a third logic stage as it is further transmitted to the SRAM. On information and belief, when the first data word is selected and transmitted, there is an increase to its signal strength.

165. During license discussions, MOSAID provided Infineon with exemplary claim charts explaining in detail Infineon's infringement of the '448 Patent.

166. In violation of 35 U.S.C. § 271(b), Infineon is and has been infringing one or more of the claims of the '448 Patent, including at least Claim 4, indirectly by inducing infringement by third parties, including for example Infineon's customers and/or end-users of the Accused Products, in this District and elsewhere in the United States. For example, on information and belief, at least the PSoC 5LP has been and is being used by Infineon's customers and/or end-users in consumer products, including wearables, fitness products, and mobile devices. Direct

infringement by Infineon's customers and/or end-users occurs at least by the use of the Accused Products, including at least the PSoC 5LP, including use of consumer products incorporating them.

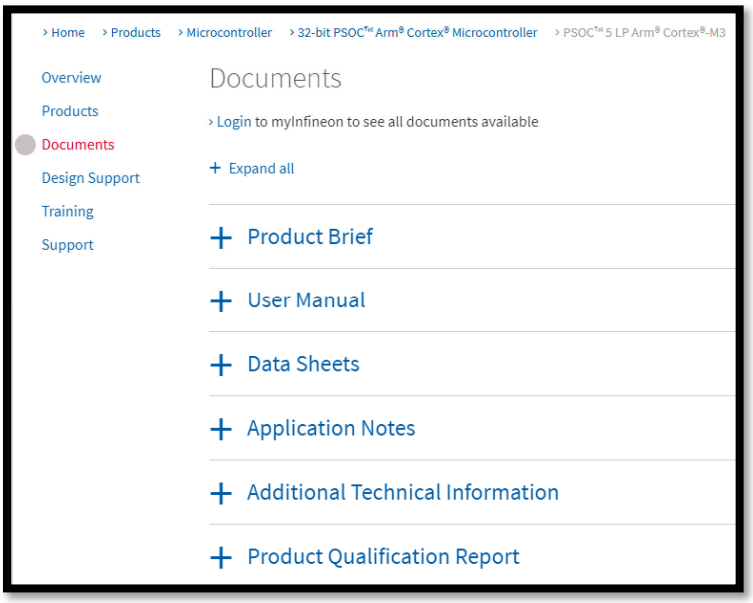
167. On information and belief, Infineon supplies hardware, firmware, and/or software, including software drivers, that are especially made or especially adapted to practice the inventions claimed in the '448 Patent, including at least Claim 4, to induce third parties, including for example Infineon's customers and/or end-users of at least one of the Accused Products, to use the Accused Products in a manner that would infringe one or more claims of the '448 Patent, including at least Claim 4.

168. On information and belief, Infineon supplies hardware, firmware, and/or software that are especially made or especially adapted to practice the inventions claimed in the '448 Patent, including at least Claim 4, to induce third parties, including for example Infineon's customers and/or end-users of the Accused Products, including at least the PSoC 5LP, to use such products in a manner that would infringe one or more of the claims of the '448 Patent, including at least Claim 4.

169. On information and belief, Infineon markets and advertises the Accused Products, including at least the PSoC 5LP, including on its website, to induce third parties, including Infineon's customers and/or end-users, to use the products in a manner that would infringe one or more claims of the '448 Patent, including at least Claim 4. *See, e.g.*, https://www.infineon.com/cms/en/product/microcontroller/32-bit-psoc-arm-cortex-microcontroller/32-bit-psoc-5-lp-arm-cortex-m3.

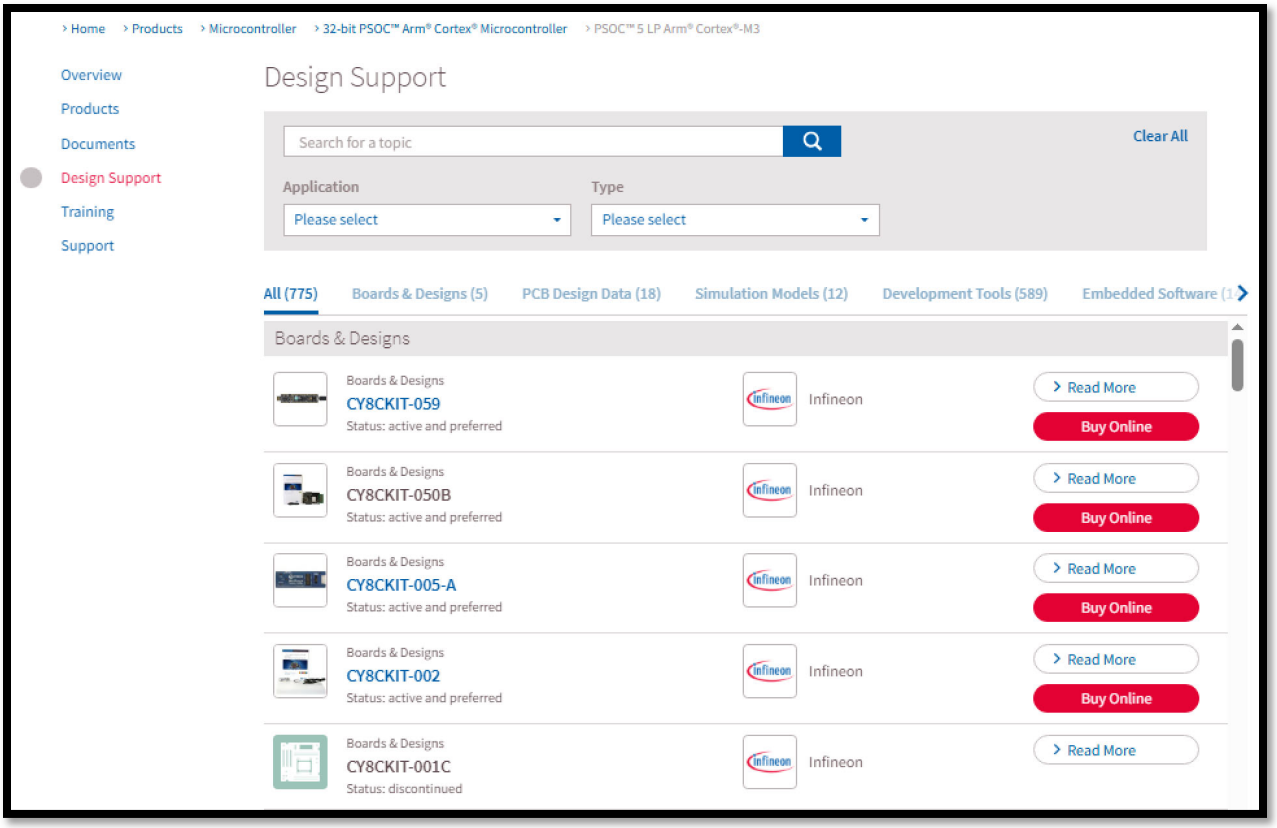
170. On information and belief, Infineon furnishes instructive materials, technical support, and information concerning the operation and use of the Accused Products, including at least the PSoC 5LP, to induce third parties, including Infineon's customers and/or end-users, to

use the products in a manner that would infringe one or more claims of the ’448 Patent, including at least Claim 4. For example, on its website, Infineon furnishes at least product briefs, user manuals, data sheets, application notes, additional product and technical information (such as architecture technical reference manuals), and product qualification reports:



(Exemplary categories of instructive materials provided for the PSoC 5LP, with additional materials provided for each product subcategory under their respective web subpages.)

171. On its website, Infineon also furnishes development tools and design support materials for the Accused Products, including at least the PSoC 5LP:



(Exemplary design support materials for PSoC 5LP.)

172. Further, Infineon provides software, including code examples and drivers:

› Home › Design Support › Software › Code Examples › PSOC™ 3/4/5 Code Examples for PSOC™ Creator

PSOC™ 3/4/5 Code Examples

Overview
Downloads
Design Support
Support

The code examples linked in the table below are compatible with PSOC™ Creator 3.0 SP2. To access the latest code examples, follow the path File -> Example Projects in PSOC™ Creator. To build with a different version of PSOC™ Creator, first update the project components in Creator by following the path Project -> Update Components.

+ Code examples compatible with PSOC™ Creator 3.0 SP2

+ Code Examples integrated with Application Notes

+ Code Examples integrated with Development Kits (CY8CKIT-050 PSOC™ 5LP Development Kit)

› Home › Design Support › Software › Code Examples › PSOC™ 3/4/5 Code Examples for PSOC™ Creator

Overview
Downloads
Design Support
Support

— Code Examples integrated with Development Kits (CY8CKIT-050 PSOC™ 5LP Development Kit)

The following Code Examples are integrated with **CY8CKIT-050 PSOC™ 5LP Development Kit.**

Title	Part #	Description
VoltageDisplay_SAR_ADC	PSOC™ 5LP	This example code measures an analog voltage controlled by the potentiometer. The code uses the internal SAR ADC configured for a 12-bit operation; the ADC range is 0 to Vdda. The results are displayed on the character LCD module.
VoltageDisplay_DelSigADC	PSOC™ 5LP	This example code measures a simple analog voltage controlled by the potentiometer. The code uses the internal Del-Sig ADC configured for a 20-bit operation; the ADC range is 0 to Vdda. The voltage measurement resolution is in microvolts. The results are displayed on the character LCD module.
IntensityLED	PSOC™ 5LP	This example code uses a pulse-width modulator (PWM) to illuminate an LED. When the pulse width of the PWM varies, the LED brightness changes. By continuously varying the pulse width of the PWM, the example code makes an LED go from low brightness to a high brightness and back.
LowPowerDemo	PSOC™ 5LP	This code example demonstrates the low-power functionality of PSOC™ 5LP. The project implements an RTC based code, which goes to sleep and wakes up on the basis of switch inputs. The RTC uses an accurate 32-kHz clock generated using the external crystal provided on the board. When there is a key press, the device is put to sleep while the RTC is kept active.
CAPSENSE™	PSOC™ 5LP	This code example provides a platform to build CAPSENSE™-based projects using PSOC™ 5LP. The example uses two CAPSENSE™ buttons and one five-element slider provided on the board. Each capacitive sensor on the board is scanned using the Infineon CSD algorithm. The buttons are pretuned in the example code to take care of factors such as board parasitic.
ADC_DAC	PSOC™ 5LP	This project demonstrates sine wave generation by using an 8-bit DAC and DMA. The sine wave period is based on the The firmware reads the voltage output by the board potentiometer and displays the raw counts on the LCD. An 8-bit DAC outputs a table generated sine wave to an LED using DMA at a frequency proportional to the ADC count.current value of the ADC value of the potentiometer.

(Infineon PSOC 3/4/5 Code Examples, including code examples integrated with PSoC 5LP Development Kit.)

4 Code Examples

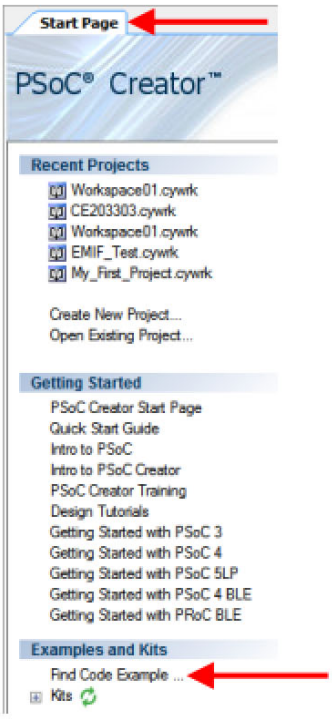
PSoC Creator includes a large number of code example projects. These code examples are available from the PSoC Creator Start Page, as Figure 2 shows.

Code examples can speed up your design process by starting you off with a complete design, instead of a blank page. The code examples also show how PSoC Creator Components are used in various applications. Code examples and datasheets are included, as Figure 3 shows.

In the Find Code Example dialog shown in Figure 3, you have several options:

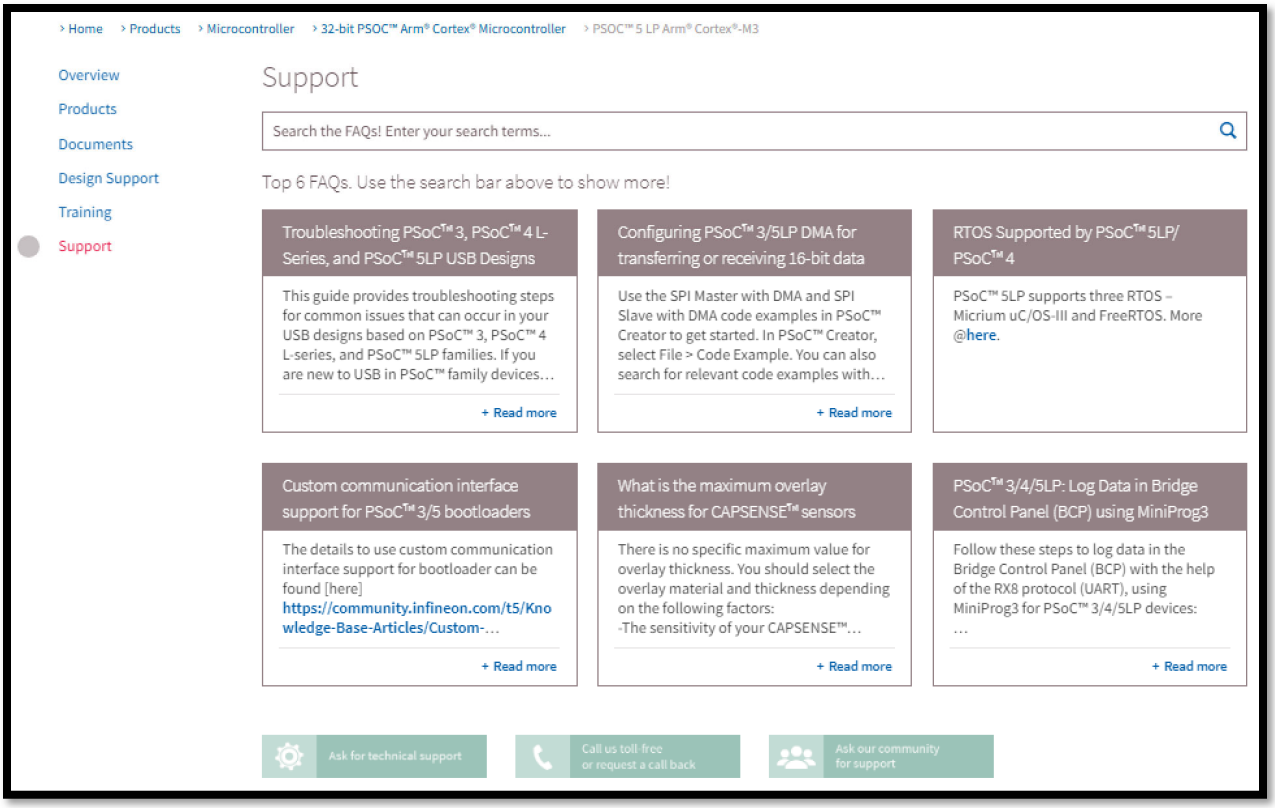
- Filter for examples based on architecture or device family, such as, PSoC 3, PSoC 4 or PSoC 5LP; category; or keyword
- Select from the menu of examples offered based on the Filter Options
- Review the datasheet for the selection (on the **Documentation** tab)
- Review the code example for the selection. You can copy and paste code from this window to your project, which can help speed up code development, or
- Create a new project (and a new workspace if needed) based on the selection. This can speed up your design process by starting you off with a complete, basic design. You can then adapt that design to your application.

Figure 2. Code Examples in PSoC Creator

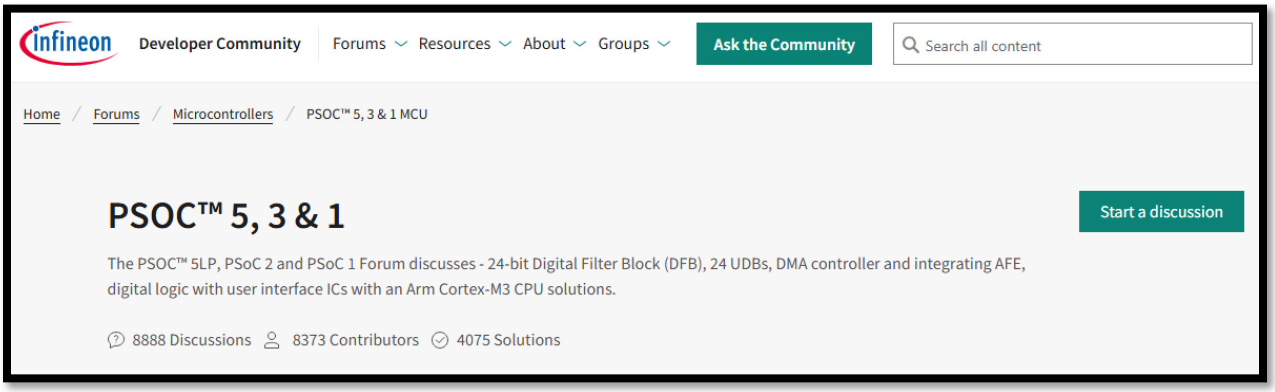


(Getting Started with PSoC 5LP, at 4.)

173. In addition, on its website, Infineon provides training materials and help from Infineon support engineers:



(Exemplary Training Materials for PSoC 5LP.)



(Infineon Developer Community for PSoC 5LP.)

174. Infineon knew or should have known of the ’448 Patent and its infringement through a series of correspondence and meetings expressly notifying Infineon of the ’448 Patent and Infineon’s infringement thereof. As a result, Infineon knew or should have known it infringed one or more claims of the ’448 Patent, including at least Claim 4, at least as early as November 3,

2017, when MOSAID began discussions with Cypress regarding the ’448 Patent and provided actual notice of infringement.

175. Alternatively, Infineon knew or should have known of the ’448 Patent and its infringement no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID regarding the ’448 Patent and Infineon’s infringement thereof.

176. At a minimum, both Infineon Defendants have had actual knowledge of the ’448 Patent, and their infringement thereof, at least as of the date of filing of this Complaint.

177. Despite this knowledge, Infineon has continued to induce third parties, including Infineon’s customers and/or end-users of at least one of the Accused Products, including at least the PSoC 5LP, to infringe one or more claims of the ’448 Patent, including at least Claim 4, with the specific intent to cause infringement. Infineon knew or should have known that those acts would induce actual infringement by third parties, including Infineon’s customers and/or end-users of the Accused Products, including at least the PSoC 5LP, of one or more of the claims of the ’448 Patent, including at least Claim 4.

178. Therefore, Infineon has induced infringement by others of one or more of the claims of the ’448 Patent, including at least Claim 4, with the specific intent to induce acts that constitute infringement of the ’448 Patent and with knowledge that such acts infringe one or more claims of the ’448 Patent, including at least Claim 4.

179. In violation of 35 U.S.C. § 271(c), Infineon is and has been infringing one or more of the claims of the ’448 Patent, including at least Claim 4, indirectly by contributing to infringement by third parties, including for example Infineon’s customers and/or end-users of the Accused Products, including at least the PSoC 5LP, in this District and elsewhere in the United States. Direct infringement by Infineon’s customers and/or end-users occurs at least by the use of

the Accused Products, including at least the PSoC 5LP, including use of consumer products incorporating them.

180. On information and belief, Infineon made and sold hardware, firmware, and/or software components (*e.g.*, processors and/or software drivers) especially made or especially adapted to practice the invention claimed in the ’448 Patent, including at least Claim 4. For example, as explained above, Infineon made and sold PSoC hardware, including the PSoC 5LP architecture, and accompanying code. On information and belief, such hardware, firmware, and/or software components (i) are a material part of the invention and (ii) are not staple articles or commodities of commerce suitable for substantial non-infringing use at least because they are specifically designed to perform the claimed functionality. Any other use of such hardware, firmware, and/or software would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.

181. Therefore, Infineon has contributed to the infringement by others of one or more of the claims of the ’448 Patent, including at least Claim 4.

182. Infineon’s infringement of one or more claims of the ’448 Patent, including at least Claim 4, has been, and continues to be, willful.

183. As explained above, Infineon had actual knowledge of the ’448 Patent and its infringement thereof at least as early as November 3, 2017, when MOSAID began discussions with Cypress regarding the ’448 Patent, and in any event no later than April 2020, when Infineon acquired Cypress and continued discussions with MOSAID.

184. As explained above, on several occasions beginning at least as early as November 3, 2017, MOSAID notified Infineon (including Cypress) of the ’448 Patent and Infineon’s infringement thereof.

185. Despite knowing of the ’448 Patent at least as early as November 3, 2017 (and no later than April 2020), Infineon did not cease its infringing activities. Infineon has continued to infringe one or more claims of the ’448 Patent, including at least Claim 4, in disregard of MOSAID’s patent rights. As a result, Infineon deliberately and intentionally infringed the ’448 Patent, and continues to do so, after receiving express and actual knowledge of both the ’448 Patent and its infringement thereof.

186. Therefore, Infineon’s infringement of the ’448 Patent, including at least Claim 4, has been and continues to be willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate, entitling MOSAID to increased damages pursuant to 35 U.S.C. § 284 and to attorneys’ fees and costs incurred in prosecuting this action pursuant to 35 U.S.C. § 285.

DAMAGES

187. Defendants’ acts of infringement have caused damages to MOSAID, and MOSAID is entitled to recover the damages it has sustained as a result of Defendants’ wrongful acts in an amount to be determined at trial.

188. MOSAID is entitled to, and now seeks to, recover damages in an amount not less than the maximum amount permitted by law caused by Defendants’ acts of infringement.

189. As a result of Defendants’ acts of infringement, MOSAID has suffered actual and consequential damages. To the fullest extent permitted by law, MOSAID seeks recovery of damages in an amount to compensate for Defendants’ infringement. MOSAID further seeks any other damages to which MOSAID would be entitled to in law or in equity.

INJUNCTIVE RELIEF

190. Defendants’ acts of infringement have caused—and unless restrained and enjoined, Defendants’ acts of infringement will continue to cause—irreparable injury and damage to

MOSAID for which MOSAID has no adequate remedy at law. Unless enjoined by this Court, Defendants will continue to infringe the claims of the Asserted Patents.

ATTORNEYS' FEES

191. MOSAID is entitled to recover reasonable and necessary attorneys' fees under applicable law.

DEMAND FOR JURY TRIAL

192. Pursuant to Rule 38 of the Federal Rules of Civil Procedure, MOSAID demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, MOSAID prays for judgment and requests that the Court find in its favor and against Defendants. MOSAID respectfully requests that the Court enter preliminary and final orders, declarations, and judgments against Defendants as are necessary to provide MOSAID with the following relief:

a. A judgment that Defendants have infringed and/or are infringing one or more claims of the Asserted Patents, literally or under the doctrine of equivalents, as alleged above;

b. A judgment that Defendants have infringed and/or are infringing one or more claims of the Asserted Patents, directly, as alleged above;

c. A judgment that Defendants have infringed and/or are infringing one or more claims of the Asserted Patents, indirectly, as alleged above;

d. A judgment that Defendants' infringement of the claims of the Asserted Patents has been willful;

e. An award for all damages and costs arising out of Defendants' infringement, to adequately compensate MOSAID for Defendants' infringement of the Asserted Patents,

but in no event less than a reasonable royalty, including supplemental damages for any continuing post-verdict infringement up until entry of the final judgment, with an accounting, as needed;

f. Pre-judgment and post-judgment interest, jointly and severally, in an amount according to proof;

g. Treble damages based on Defendants' willful infringement;

h. An accounting of damages and any future compensation due to MOSAID for Defendants' infringement (past, present, or future) not specifically accounted for in a damages award (or other relief), and/or permanent injunctive relief;

i. A judgment that this case is exceptional and an award of reasonable attorneys' fees as provided by 35 U.S.C. § 285 and enhanced damages as provided by 35 U.S.C. § 284;

j. An award of costs of suit;

k. The entry of an order enjoining and restraining Defendants and their parents, affiliates, subsidiaries, officers, agents, servants, employees, attorneys, successors, and assigns and all persons in active concert or participation therewith, from making, importing, using, offering for sale, selling, or causing to be sold any product falling within the scope of any claim of the Asserted Patents, or otherwise infringing or inducing infringement of any claim of the Asserted Patents; and

l. All further relief in law or in equity as the Court may deem just and proper.

Dated: March 10, 2025

Respectfully submitted,

/s/ Jamie H. McDole

Max Ciccarelli (SBN 00787242)
CICCARELLI LAW FIRM
100 N 6th Street, Suite 503
Waco, Texas 76701
Telephone: 214-444-8869
Email: max@ciccarellilawfirm.com

Jamie H. McDole (SBN 24082049)
Lead Counsel
Phillip B. Philbin (SBN 15909020)
Michael D. Karson (SBN 24090198)
Miranda Y. Jones (SBN 24065519)
David W. Higer (SBN 24127850)
David A. Neal (SBN 24144868)
Cody M. Carter (SBN 24131091)
Matthew L. Vitale (SBN 24137699)
WINSTEAD PC
2728 N. Harwood Street, Suite 500
Dallas, Texas 75201
Tel.: (214) 745-5400
Fax: (214) 745-5390
Email: jmcdole@winstead.com
pphilbin@winstead.com
mkarson@winstead.com
mjones@winstead.com
dhiger@winstead.com
dneal@winstead.com
ccarter@winstead.com
mvitale@winstead.com

Nadia E. Haghighatian (SBN 24087652)
Austin C. Teng (SBN 24093247)
Daniel S. Shuminer (SBN 24124688)
WINSTEAD PC
600 W. 5th Street, Suite 900
Austin, Texas 78701
Tel.: (512) 370-2800
Fax: (512) 370-2850
Email: nhaghighatian@winstead.com
ateng@winstead.com
dshuminer@winstead.com

Attorneys for Plaintiff
MOSAID Technologies Inc.