UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

ACQIS LLC, a Texas limited liability company, Plaintiff, v. GIGA-BYTE TECHNOLOGY CO., LTD., a Taiwanese corporation, Defendant.	Civil Action No. 6:24-cv-00249 JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff ACQIS LLC ("Plaintiff" or "ACQIS"), by its attorneys, hereby alleges patent infringement against Defendant GIGA-BYTE Technology Co., Ltd. ("Defendant" or "Gigabyte") as follows:

INTRODUCTION

1. This is an action for patent infringement under the United States Patent Laws, 35 U.S.C. § 1 *et seq*. Beginning in the late 1990s, Dr. William Chu founded ACQIS and invented a variety of pioneering computer technologies that employed serial transmission along low voltage differential signal (LVDS) channels to dramatically increase the speed at which data can be transmitted while also reducing power consumption and noise. Dr. Chu's inventions have become foundational in the computer industry, and are found in a variety of data transmission systems, including PCI Express (PCIe) and/or USB 3.x[1] transactions.

[1] As used herein, "USB 3.x" refers to USB 3.0 and subsequent versions, including USB 3.1, USB 3.2, and any other subsequent versions.

2. Gigabyte has infringed the following patents owned by ACQIS: U.S. Patent Nos. 8,977,797 ("'797 patent"), 9,529,769 ("'769 patent"), RE45,140 ("'140 patent"), and RE44,654 ("'654 patent"). Copies of the ACQIS Patents are attached to this Complaint as Exhibits 1-4.

3. Specifically, Gigabyte has infringed the ACQIS Patents through: (1) the manufacture, use, offering for sale, and/or sale in the United States, and/or the importation into the United States, of infringing computer products; (2) the practice of claimed methods of the ACQIS Patents by manufacturing, using and/or testing computer products in the United States; and (3) the importation into the United States of computer products made abroad using ACQIS's patented processes.

4. ACQIS seeks damages and other relief for Defendant's infringement of the ACQIS Patents.

THE PARTIES AND RELATED ENTITIES

5. Plaintiff ACQIS LLC, is a limited liability company organized and existing under the laws of the State of Texas, with offices at 411 Interchange Street, McKinney, Texas 75071. A related entity, ACQIS Technology, Inc., is a corporation organized under the laws of the State of Delaware, having its principal place of business at 1503 Grant Road, Suite 100, Mountain View, California 94040. ACQIS LLC is operated from California, where its President, Dr. William Chu, resides. Dr. Chu is also the Chief Executive Officer of ACQIS Technology, Inc.

6. Gigabyte is a Taiwanese company with its principal place of business at No. 6, Baoqiang Rd., Xindian Dist., New Taipei City 231, Taiwan.[2]

7. On information and belief, Gigabyte conducts business relating to the computer products accused of infringement in this Complaint directly or, in the alternative, by exerting such

[2]Giga-byte Technology Co., Ltd Annual Report, 2022 at p. 156.

direction and control over its directly and indirectly owned subsidiaries that its subsidiaries act as its agents and/or alter ego, such that the actions of its subsidiaries are attributable to Gigabyte.

8. On information and belief, Gigabyte has a history and culture of maintaining dominance and control over its subsidiaries by seeding management teams (including those in the United States) with individuals jointly affiliated with Gigabyte. For example, Gigabyte's 2018 Annual Report identifies Mr. Ming-Hsiung Liu as CEO and Executive Vice President of Gigabyte as well as Director of Gigabyte's U.S. subsidiaries G.B.T., Inc., Gigabyte Global Business Corporation, and Gigabyte Trading Inc.[3] As another example, the Annual Report identifies Mr. Pei-Chen Yeh as both President and Chairman of Gigabyte and Director of Gigabyte's U.S. subsidiaries G.B.T., Inc. and Gigabyte Global Business Corporation.[4]

9. Gigabyte's organizational structure shows that it directly manages and has control over its U.S. subsidiaries. According to its 2018 Annual Report, one of the "Major Functional Departments" of Gigabyte is the "Operations Management Center" which has an "Overseas Subsidiary Management Department."[5] Within that Department, Mr. Zheng-Wei Lu, a Manager employed by Gigabyte, serves as "Vice General Manager of the US Platform."[6] Mr. Lu also serves as Director of Gigabyte's U.S. subsidiaries G.B.T., Inc., Gigabyte Global Business Corporation, and Gigabyte Trading Inc.[7]

10. Gigabyte's "Statement of Internal Control" reflects Gigabyte's dominance and control over its subsidiaries and describes its Board of Directors' role in controlling and monitoring subsidiaries:

[3] Giga-byte Technology Co., Ltd Annual Report, 2018 at 6, 275-276.
[4] Giga-byte Technology Co., Ltd Annual Report, 2018 at 275.
[5] Annual Report 2018 at 14-15.
[6] *Id.* at 20, 30.
[7] *Id.* at 275.

"The Company acknowledges and understands that, the establishment, enforcement and preservation of internal control system is the responsibility of the Board and the managers, and that the Company has already established such system. The purpose is to reasonably ensure the effect and efficiency of operation (including profitability, performance and security of assets), the reliability of financial reporting and the compliance with relevant legal rules."

"There are five components of effective internal control as specified in the Criteria with which the procedure for effective internal control are composed by five elements, namely: 1. Control environment, 2. Risk Evaluation and feedback, 3. Control Operation, 4. Information and Communication, and 5. Monitoring. Each of the elements in turn contains certain audit items, and shall be referred to the Criteria for details."

"Based on the aforementioned audit findings, the Company holds that it has reasonably preserved the achievement of the aforementioned goals at December 31, 2018 (including the monitoring over the subsidiaries), including the effectiveness and efficiency in operation, reliability in financial reporting and compliance with relevant legal rules, and that the design and enforcement of internal control are effective."[8]

11. Gigabyte's consolidated financial statements also reflect Gigabyte's dominance and control over its U.S. subsidiaries. The financial statements read: "Subsidiaries are all entities controlled by the Company. The Company controls an entity when the Company is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect

[8] Annual Report 2018 at 62; *see also* Annual Report 2019 at 65.

those returns through its power over the entity."[9] Gigabyte's inclusion of is U.S. subsidiaries in the consolidated financial statements shows that Gigabyte "controls" and has "power over" these subsidiaries.

12. Gigabyte's subsidiaries' revenues are rolled up to, and included in Gigabyte' consolidated financial statements. Gigabyte derives substantial revenue and profits from its subsidiaries' activities, including its U.S. subsidiaries G.B.T., Inc., Gigabyte Global Business Corporation, and Gigabyte Trading Inc.

13. Gigabyte holds the Gigabyte conglomerate out publicly as a single entity or collective, such as consistently referring to it as "GIGABYTE" in press releases targeted to the U.S. market.[10]

14. Gigabyte owns and controls the website www.gigabyte.com, which contains corporate, contact, and other information for Gigabyte subsidiaries in the U.S., such as G.B.T., Inc.[11] Gigabtye's website has a US landing page at www.gigabyte.com/us, the term of use for which read: "This website ("Website") is established and owned by GIGA-BYTE Technology Co., Ltd."[12]

15. Gigabyte's website includes a "Where to Buy" page that directs consumers in the United States to Gigabyte retailers, distributors, and resellers, including Amazon, BestBuy, and Walmart.[13] Notably, one of the retailers listed on Gigabyte's website is Altex Computers &

[9] Giga-byte Technology Co., Ltd. Annual Report, 2019 at 139, 207-208.
[10] *See* Holding the Keys to Unlock the Future, GIGABYTE Is Ready to Upgrade Your Life at CES 2019 (Las Vegas, Jan. 2019), https://www.gigabyte.com/Press/News/1663
[11] *E.g.*, https://www.gigabyte.com/Contact
[12] *See* https://www.gigabyte.com/us; and https://profile.gigabyte.com/TermsOfUse.aspx?l=en-US
[13] *See* https://www.gigabyte.com/WheretoBuy/Consumer; *see also* https://web.archive.org/web/20150912180603/http://www.newegg.com/Product/ProductList.aspx?N=100008345%2050001314&IsNodeId=1&Submit=ENE (online retailer making Gigabyte PCs available for purchase, including to consumers in this District).

Electronics, located at 11342 IH35 North San Antonio, TX 78233.[14] Through at least these avenues, Gigabyte has offered to sell and has sold products accused of infringing the ACQIS Patents in the United States, the State of Texas, and within this District, during the times relevant to this Complaint.

16. Publicly available import data[15] indicates that Gigabyte has imported into the United States computer products, including into this District.[16] On information and belief, Gigabyte and/or other Gigabyte entities have imported in the United States products accused of infringement in this Complaint prior to the ACQIS Patents' expiration.

JURISDICTION AND VENUE

17. This is an action for patent infringement under the United States patent laws, 35 U.S.C. § 101 *et seq*.

18. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

19. This Court has personal jurisdiction over Gigabyte consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute.

20. As alleged above, Gigabyte has purposefully manufactured and/or distributed computer products that infringe the ACQIS Patents, or that were made abroad using patented processes claimed in the ACQIS Patents, through established distribution channels with the expectation that those products would be sold in the United States, State of Texas, and this District.

21. Further, Gigabyte has (itself and/or through the activities of subsidiaries, affiliates, or intermediaries) committed acts of patent infringement in the United States, State of Texas, and this District, including by making, using, offering to sell, and/or selling infringing computer

[14] *See* https://www.gigabyte.com/WheretoBuy/Consumer
[15] U.S. Import Records, available from Import Genius.
[16] *See, e.g.*, U.S. Import Bills of Lading Nos. CHSL266548146NGB; EXDO6810683309; SCNL5US1707030.

products in the United States, State of Texas and this District; and/or importing infringing computer products and/or computer products made abroad using ACQIS's patented processes into the United States for sale in the State of Texas and this District.

22. Accordingly, Gigabyte has established minimum contacts within Texas and purposefully availed itself of the benefits of Texas, and the exercise of personal jurisdiction over Gigabyte would not offend traditional notions of fair play and substantial justice. In addition, or in the alternative, this Court has personal jurisdiction over Gigabyte pursuant to Federal Rule of Civil Procedure 4(k)(2). *See, e.g., ACQIS LLC v. Lenovo Group Ltd. et al.*, 572 F. Supp. 3d 291, 302-307 (W.D. Tex. Nov. 16, 2021) (denying motion to dismiss for lack of personal jurisdiction as to served defendants).

23. Venue is proper in this District pursuant to 28 U.S.C. § 1391(c)(3) because Defendant does not reside in the United States and thus may be sued in any judicial district in the United States pursuant to 28 U.S.C. § 1391(c)(3).

24. Venue is also appropriate because the patents asserted in this case have been previously asserted in cases before this Court. *See, e.g.*, *ACQIS LLC v. Gigabyte Computer, Inc.*, 6:23-cv-265. Certain of these patents were the subject of a trial scheduled held in this District in March 2024, resulting in a jury verdict of infringement and award of damages to ACQIS. *ACQIS, LLC v. ASUSTeK*, No. 6:2020-cv-966. It would serve the interests of judicial efficiency for this case to be litigated in this District. *See ACQIS LLC v. MiTac Computing Tech. Corp.*, No. W-20-cv-00962-ADA, 2021 U.S. Dist. LEXIS 197938, 2021 WL 4805431 (W.D. Tex., Oct. 14, 2021) (describing four pending cases and denying motion to transfer venue).

FACTUAL BACKGROUND

Dr. Chu and the ACQIS Patents

25. Dr. William Chu has been a prolific innovator in the computing industry since the 1970s.

26. In 1976, Dr. Chu received his Ph.D. in Electrical Engineering from the University of California, Berkeley. Dr. Chu then began working in semiconductor design for American Microsystems, Inc. from 1976 to 1977, and then for Zilog, Inc. from 1977 to 1982.

27. In 1982, Dr. Chu founded Verticom, Inc., which developed innovative technologies relating to video transmission over telephone lines. Verticom also developed graphics products for the PC computer-aided design (CAD) market. Verticom's success resulted in its stock being listed on the NASDAQ exchange in 1987. In 1988, Verticom was acquired by Western Digital Imaging, Inc.

28. Dr. Chu served as Vice President of Engineering for Western Digital from 1988 to 1991, overseeing a development team in the desktop and portable graphics chip division. In the course of his work at Western Digital, Dr. Chu in 1988 started the company's portable graphics chip business, which became #1 in the portable graphics chip market by 1991. Dr. Chu also led Western Digital to achieve the #1 market share in the PC graphics market in 1990.

29. After Western Digital, Dr. Chu worked for Acumos, Inc. from 1991 to 1992 as a Vice President managing engineering for computer graphics chip development. Acumos was acquired by Cirrus Logic, Inc. in 1992.

30. Dr. Chu then worked for Cirrus Logic from 1992 to 1997, first as a General Manager in the Desktop Graphics Division and later as Co-President of the Graphics Chip Business Unit.

During Dr. Chu's time at Cirrus Logic, the company achieved #1 market share in the PC graphics chip market.

31. In 1998, Dr. Chu founded ACQIS Technology, Inc. to pursue his vision of developing a small, portable computer module that could be interchangeably connected with a variety of different peripheral consoles. In the course of this development effort, Dr. Chu recognized the need for a better interconnection between the core computing module and a peripheral console. Such interconnections traditionally conveyed peripheral component interconnect (PCI) bus transactions in parallel using a large number of signal channels and connector pins. This made it difficult to employ LVDS channels, which are more "cable friendly," consume less power, and generate less noise. Dr. Chu wanted to develop an interconnection system that was scalable, used connectors with low pin counts, was power-efficient, high performing, and easily extendible for future computing needs and technologies. This development work resulted in a large family of patents now owned by ACQIS, which disclose and claim a variety of pioneering inventions relating to improved, high-performance and low-power consuming interconnection technologies for computer modules.

32. After several decades in the industry, Dr. Chu is now a named inventor of over forty U.S. Patents.

33. Among the patent portfolio covering Dr. Chu's inventions and owned by ACQIS are the ACQIS Patents asserted in this case.

34. The '797 patent, entitled "Method of Improving Peripheral Component Interface Communications Utilizing a Low Voltage Differential Signal Channel," was duly and legally issued on March 10, 2015, from a patent application filed October 10, 2012, with William W.Y.

Chu as the sole named inventor. The '797 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

35. The '769 patent, entitled "Computer System Including CPU or Peripheral Bridge Directly Connected to a Low Voltage Differential Signal Channel that Communicates Serial Bits of a Peripheral Component Interconnect Bus Transaction In Opposite Directions," was duly and legally issued on December 27, 2016, from a patent application filed February 26, 2016, with William W.Y. Chu as the sole named inventor. The '769 patent claims priority to U.S. Patent Application No. 11/097,694, filed on March 31, 2005.

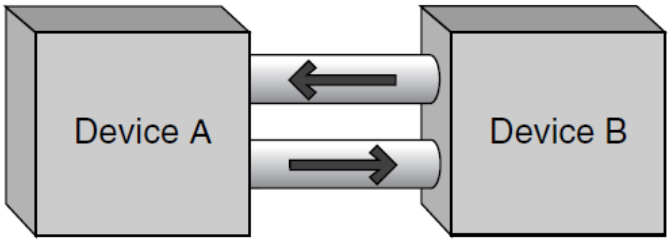
36. The '140 patent, entitled "Data Security Method and Device for Computer Modules," was duly and legally issued on September 16, 2014, from a reissue application filed December 17, 2013, with William W.Y. Chu as the sole named inventor. The '140 patent is a reissue of U.S. Patent No. 6,643,777, which issued on November 4, 2003, from a patent application filed May 14, 1999. The '140 patent claims priority to U.S. Patent Application No. 09/312,199, filed on May 14, 1999.

37. The '654 patent, entitled "Data Security Method and Device for Computer Modules," was duly and legally issued on December 17, 2013, from a reissue application filed October 10, 2012, with William W.Y. Chu as the sole named inventor. The '654 patent is a reissue of U.S. Patent No. 6,643,777, which issued on November 4, 2003, from a patent application filed May 14, 1999. The '654 patent claims priority to U.S. Patent Application No. 09/312,199, filed on May 14, 1999.

38. The inventions claimed in the ACQIS Patents enable computers to operate faster with better efficiency through faster interconnections including between the core computing power modules and any connected consoles.

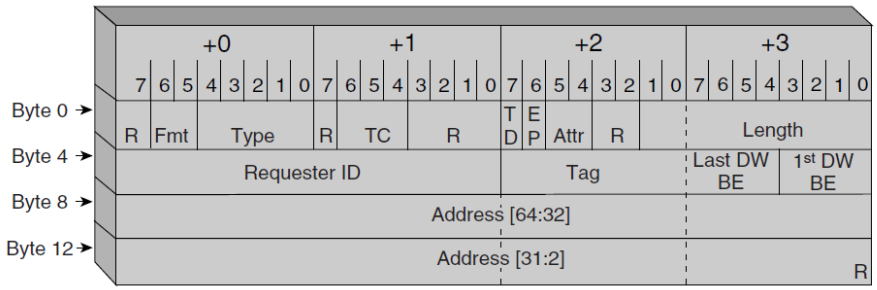
39. The claims in the ACQIS Patents generally relate to computers and computer systems that employ CPUs coupled to LVDS channels that convey various types of data (*e.g.*, PCI bus transactions, USB 3.x data, and/or digital video data) in a serial bit stream using pairs of unidirectional channels to convey the data in opposite directions.

40. Over the years, Dr. Chu's inventive developments have become more and more widely used in computing technologies. One prime example is the computing industry's adoption of PCI Express, which post-dates Dr. Chu's inventions but embodies Dr. Chu's patented interconnection invention by using "high speed, low voltage, differential serial pathway for two devices … to communicate simultaneously by implementing dual unidirectional paths between two devices[.]"



See Introduction to PCI Express – A Hardware and Software Developers Guide, Intel Press (2003), at 1-2 ("There are certain times in the evolution of technology that serve as inflection points that forever change the course of events. For the computing sector and communications, the adoption of PCI Express, a groundbreaking new general input/output architecture, will serve as one of these inflection points.").

41. PCI Express connections transmit data packets known as transaction layer packets (TLP) that include data bits, address bits, and byte enable (BE) information bits.



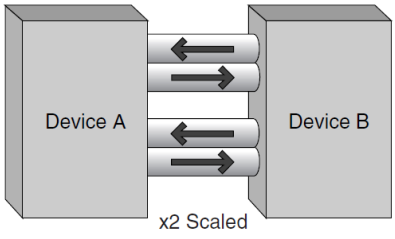
Id. at 93-114.

42. PCI Express "establishes a unique divergence from historical PCI evolutions through a layered architecture improving serviceability and scalability as well as easing software transitions through backward compatibility."[17] The compatibility of PCI Express with PCI can be further explained as follows: "PCI Express employs the same usage model and load-store communication model as PCI and PCI-X. It supports familiar transactions such as memory read/write, IO read/write and configuration read/write transactions. The memory, IO, and configuration address space model is the same as PCI and PCI-X address spaces. By maintaining the address space model, existing OS and driver software will run in a PCI Express system without any modifications. In other words, PCI Express is software backward compatible with PCI and PCI-X systems. In fact a PCI Express system will boot an existing OS with no changes to current drivers and application programs. Even PCI/ACPI power management software will still run."[18]

43. In sum, PCI Express connections are LVDS channels that convey data bits, address bits, and byte enable information bits of a PCI bus transaction in a serial bit stream using pairs of unidirectional, differential signal lanes to convey the information in opposite directions allowing the connection to be scalable and dramatically reducing the pin-count required for connectors, as

[17] Adam H. Wilen, Justin P. Schade, Ron Thornburg. INTRODUCTION TO PCI EXPRESS - A HARDWARE AND SOFTWARE DEVELOPER'S GUIDE, Intel Press, 2003, pages 51-52.
[18] Ravi Budruk, et al., PCI EXPRESS SYSTEM ARCHITECTURE, 400, (MindShare Inc., 2004) at 11.

well as other benefits. "Currently PCI Express defines the following configuration of serial links: x1, x2, x4, x8, x12, x16, and x32. … An x2 configuration indicates two serial paths to and from a device[.]"



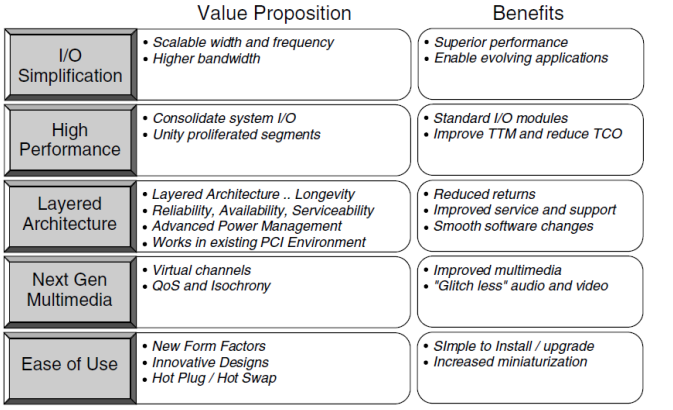


Figure 4.1 PCI Express Benefits

Id. at 3, 50.

44. Another example of a computer-to-peripheral interconnection that embodies Dr. Chu's patented invention is the USB 3.x connection. The "Super Speed" USB 3.0 architecture uses at least two pairs of unidirectional, point-to-point differential signal paths. Each pair includes a transmit path and a receiving path, thus transmitting the USB data packet information in opposite directions.

3.1.4 USB 3.0 Architecture Summary

USB 3.0 is a dual-bus architecture that incorporates USB 2.0 and a SuperSpeed bus. Table 3-1 summarizes the key architectural differences between SuperSpeed USB and USB 2.0.

Table 3-1. Comparing SuperSpeed to USB 2.0

Characteristic	SuperSpeed USB	USB 2.0
Data Rate	SuperSpeed (5.0 Gbps)	low-speed (1.5 Mbps), full-speed (12 Mbps), and high-speed (480 Mbps)
Data Interface	Dual-simplex, four-wire differential signaling separate from USB 2.0 signaling Simultaneous bi-directional data flows	Half-duplex two-wire differential signaling Unidirectional data flow with negotiated directional bus transitions
Cable signal count	Six: Four for SuperSpeed data path Two for non-SuperSpeed data path	Two: Two for low-speed/full-speed/high-speed data path
Bus transaction protocol	Host directed, asynchronous traffic flow Packet traffic is explicitly routed	Host directed, polled traffic flow Packet traffic is broadcast to all devices.

Universal Serial Bus 3.0 Specification, Rev. 1.0 (Nov. 12, 2008), at 3.1 to 3.5. USB 3.x ports operate in conformance with all USB protocols, including USB 2.0 protocols and USB 3.0 or

later protocols, which are backward compatible with the USB 2.0 protocol. In sum, USB 3.x connections are LVDS channels using two unidirectional, differential signal pairs that transmit USB protocol data packets in opposite directions.

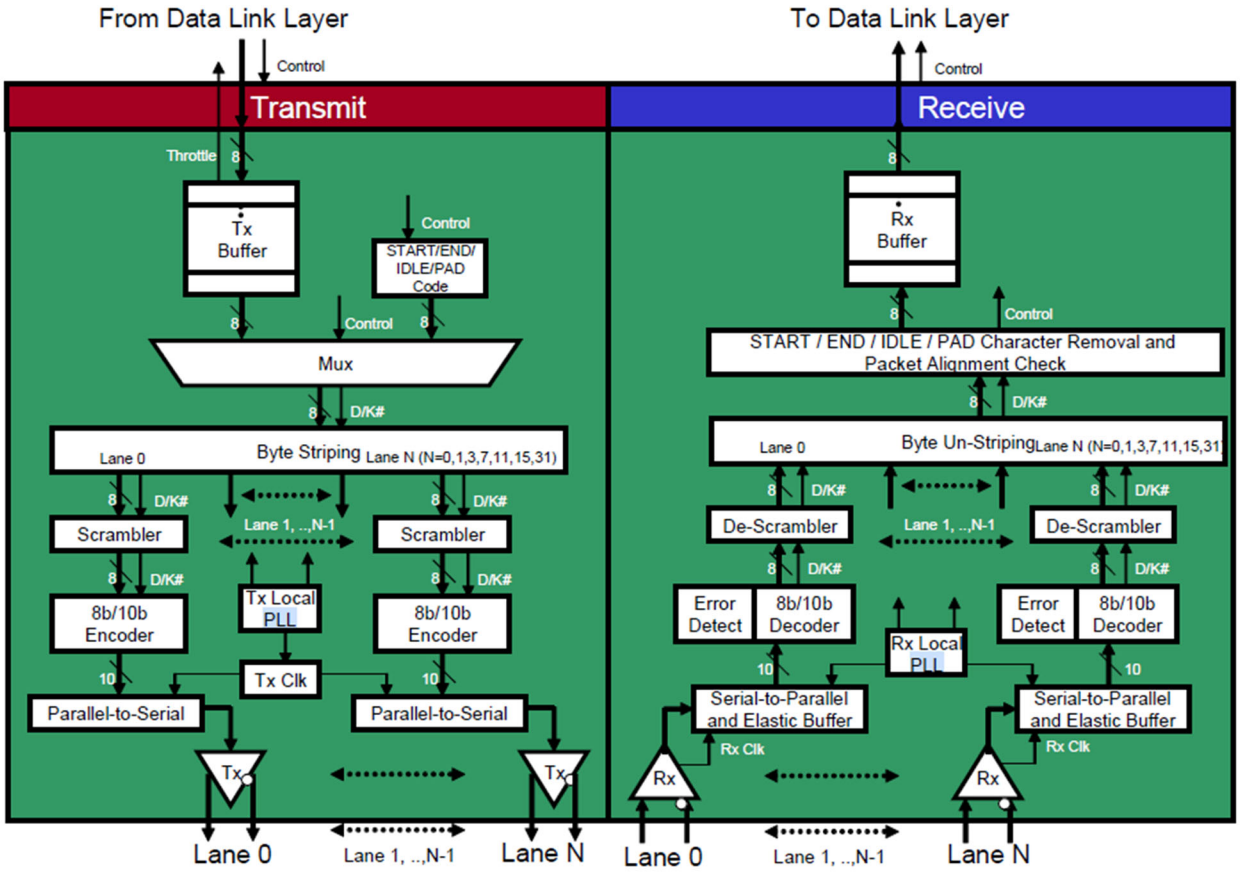
45. The Direct Media Interface ("DMI") is similar to PCIe and implements at least four serial lanes that all use differential signaling constituting 2 transmit lanes and 2 receive lanes and, therefore, transmitting data in opposite directions. *See* https://www.intel.com/content/dam/www/public/us/en/documents/white-papers/ia-introduction-basics-paper.pdf; *see also* https://en.wikipedia.org/wiki/Direct_Media_Interface ("DMI shares many characteristics with PCI Express, using multiple lanes and differential signaling to form a point-to-point link.").

46. The On-Package Interface (OPI) is like DMI but is used when a CPU and system controller are integrated into a single system-on-a-chip ("SoC"). *See, e.g.*, https://web.archive.org/web/20170106002415/https://www.anandtech.com/show/10959/intel-launches-7th-generation-kaby-lake-i7-7700k-i5-7600k-i3-7350k/5.

47. Additional interfaces that employ LVDS channels include, but are not limited to, DisplayPort[19], Embedded DisplayPort ("eDP")[20], Serial-Attached SCSI ("SAS")[21], and Serial ATA or Serial AT Attachment ("SATA")[22].

48. The physical layer of PCI Express includes PLL circuitry. *See* PCI Express Base Specification Revision 3.0, Section 1.5.3, page 49 (physical Layer "includes all circuitry for interface operation, including driver and input buffers, parallel-to-serial and serial-to-parallel conversion, PLL(s), impedance matching circuitry" as well as "logical functions related to interface initialization and maintenance"). The figure below also shows the use of PLL circuitry:

[19] Tektonix, THE BASICS OF SERIAL DATA COMPLIANCE AND VALIDATION MEASUREMENTS – PRIMER, page 9.
[20] eDP is a display panel interface standard that defines the signaling interface between CPUs/GPUs and integrated displays. It is based on the existing DisplayPort standard. Essentially, it is an embedded version of the DisplayPort standard oriented toward applications, such as notebooks and All-In-One PCs. Like DisplayPort, it consists of the Main Link, Auxiliary channel, and an optional Hot-Plug Detect signal. *See* https://edc.intel.com/content/www/us/en/design/ipla/software-development-platforms/client/platforms/alder-lake-desktop/12th-generation-intel-core-processors-datasheet-volume-1-of-2/003/embedded-displayport-edp/.
[21] HP. *Serial ATA and Serial Attached SCSI technologies*. TECHNOLOGY BRIEF, 2003, page 5. Available at http://h10032.www1.hp.com/ctg/Manual/c00256909.pdf.
[22] HP. *Serial ATA and Serial Attached SCSI technologies*. TECHNOLOGY BRIEF, 2003, page 5. Available at http://h10032.www1.hp.com/ctg/Manual/c00256909.pdf; Tektonix, THE BASICS OF SERIAL DATA COMPLIANCE AND VALIDATION MEASUREMENTS – PRIMER, page 9.



Ravi Budruk, *et al.*, PCI EXPRESS SYSTEM ARCHITECTURE, 454, (MindShare Inc., 2004), page 401.

49. Each claim of the ACQIS Patents is a patentable, valid and enforceable invention that is novel and non-obvious over the prior art.

50. ACQIS has not authorized or licensed Gigabyte to practice any of the inventions claimed in the ACQIS Patents with respect to the products accused of infringement in this Complaint.

Gigabyte's Infringing Products

51. Gigabyte makes and sells a variety of computer products, including desktops, motherboards, and laptops, among other products. Gigabyte imports these infringing computer products, as well as computer products made using infringing processes, into the United States

and into this judicial District, through established distribution channels with the expectation that those products would be sold in the United States, State of Texas, and this District.

52. Gigabyte has directly infringed one or more claims of each of the ACQIS Patents under at least 35 U.S.C. §§ 271(a) and (g), by making, using, offering to sell, and/or selling within the United States, and/or importing into the United States, computer products that embody the claimed inventions of Dr. Chu, and/or by importing into, and/or using, offering to sell, and/or selling in, the United States computer products that were made abroad using patented processes claimed in the ACQIS Patents.

53. Gigabyte makes, uses, imports, sells, and/or offers to sell a variety of computer products in the United States that infringe one or more of the claims in the ACQIS Patents, and/or imports into, and/or using, offering to sell, and/or selling in, the United States computer products that were made abroad using patented processes claimed in the ACQIS Patents including, without limitation, the BRIX Mini PC Series. These products are collectively referred to as the "Accused Gigabyte Products."

54. On information and belief, Gigabyte manufactures and tests (or, pursuant to Gigabyte designs and instructions, has manufactured and tested) at least certain of the Accused Gigabyte Products abroad and uses, offers to sell, and/or sells such products in the United States, and/or imports such products into the United States (including through a related entity acting as Gigabyte's agent or alter-ego or third party acting as Gigabyte's agent).[23]

55. On information and belief, at least certain of the Accused Gigabyte Products that Gigabyte imports into the United States (including through its agents or alter egos) are

[23] *See, e.g.*, https://youtu.be/bR-DOeAm-PQ; https://youtu.be/QdGW1xE6d_k.

manufactured outside the United States using one or more processes claimed in the ACQIS Patents.

56. The Accused Gigabyte Products also include products made using the processes claimed in the ACQIS Patents and imported into the United States within the six years preceding the date of this Complaint.

57. The Accused Gigabyte Products also include products that are used to perform one or more methods claimed in the ACQIS Patents within the six years preceding the date of this Complaint.

58. The Accused Gigabyte Products also include any product made, used, offered for sale, sold within the United States, and/or imported into the United States, from December 22, 2017 to the termination date of each respective patent, which incorporates PCI Express, USB 3.0 or later, and/or substantially similar communication channels (*e.g.*, Intel OPI and/or DMI channels).

59. On information and belief, all of the Accused Gigabyte Products are configured and operate in substantially the same way for purposes of infringement as explained below using the BRIX Mini PC Series as an example for illustrative purposes.

60. The BRIX Mini PC Series is a computer system that runs the Windows 10 operating system.

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

https://www.gigabyte.com/Press/News/1597.

61. The BRIX Mini PC Series uses an Intel® Core processor, such as quad-core Intel Core i7 processors, which is mounted on a motherboard.

Intel® Turbo Boost Technology

Processor Number	Cores/ Threads	Base Freq (GHz)	Max Single Core Turbo (GHz)	Max Dual Core Turbo (GHz)	Max Quad Core Turbo (GHz)
i7-8550U	4/8	1.8	4.0	4.0	3.7
i5-8250U	4/8	1.6	3.4	3.4	3.4

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

8th Gen. Intel Core Processors

The All-New GIGABYTE BRIX Ultra Compact PC supports the newest quad-core 8th Gen. Intel Core Processors for much improved performance and response time. BRIX uses power efficient 15W Intel Core i5/i7 processors designed with advanced power efficiency, an all-new microarchitecture and an optimized fabrication process to deliver vastly improved performance compared to previous generation processors. Turbo Boost 2.0 technology provides dynamic control over the processor and graphics performance and power consumption so as to further achieve enhanced performance or power saving used on users' PC activity.

https://www.gigabyte.com/Press/News/1597.

62. These processors are also known as the "Kaby Lake" family of processors, Intel's 8th Generation Intel® Core™ i7 Processors. *See, e.g.*, https://ark.intel.com/content/www/us/en/ark/products/122589/intel-core-i7-8550u-processor-8m-cache-up-to-4-00-ghz.html (specifications for the Intel® Core™ i7-8550U processors, and identifying them as 8th Generation Intel® Core™ i7 Processors, products formerly known as "Kaby Lake").

63. The 8th Generation Intel® Core™ i7-8550U processors integrate the central processing unit (CPU) with a graphics subsystem and an interface controller on a single chip. On information and belief, the Intel Core processors integrate one or more integrated interface controllers, such as to drive the PCIe channels connected to the processor.

Figure 1-1. KBL Y/U/U 4-Core and AML-Y22 Processor Line Platforms

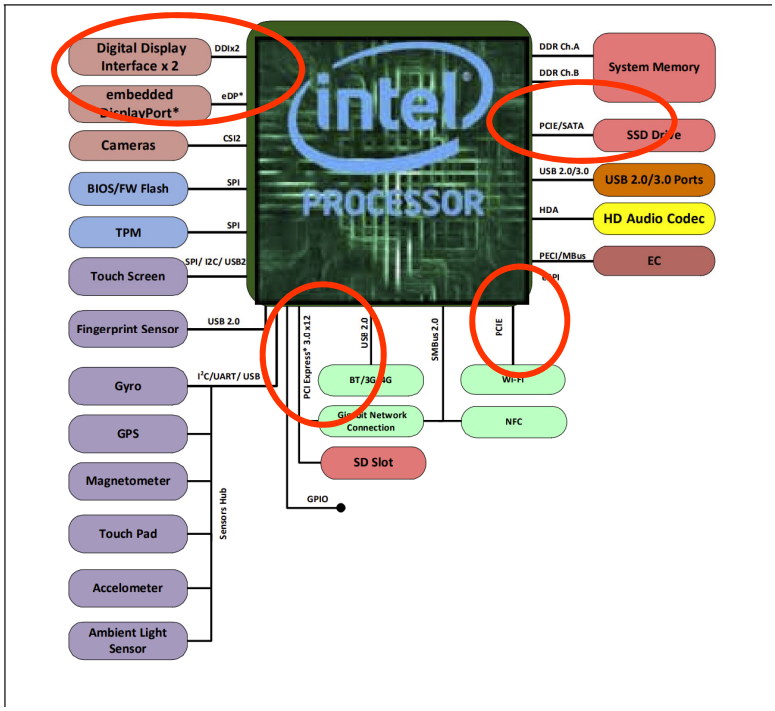
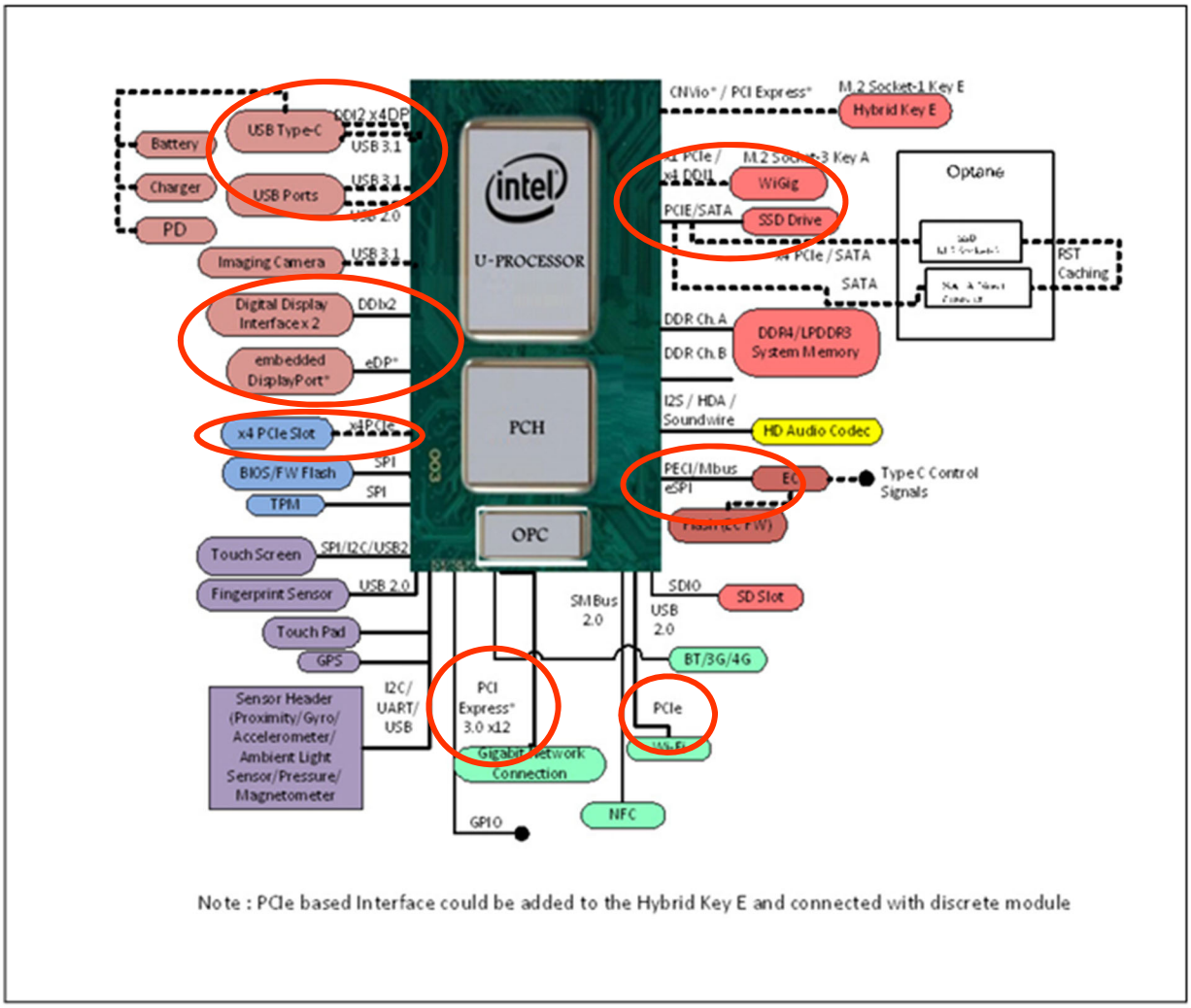


Figure 1-2. U-Processor Line Platform



Note : PCIe based Interface could be added to the Hybrid Key E and connected with discrete module

https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12.

Graphic	Intel® UHD Graphics 620

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

Support for the Latest Multimedia and Graphics Standards

With the newest Intel® HD graphics, users can enjoy improved graphics performance with their new GIGABYTE BRIX Ultra Compact PCs. New Intel® HD graphics supports HDMI 2.0a and DisplayPort1.2a (supports Display Port ++) for multiple displays at 4096x2304 @ 60Hz resolution and the HEVC 10-bit hardware acceleration which improves upon the 4K viewing and content creation performance significantly versus previous generation processors, providing high-efficient and stable multi-display configurations for both home or office use.

https://www.gigabyte.com/Press/News/1597.

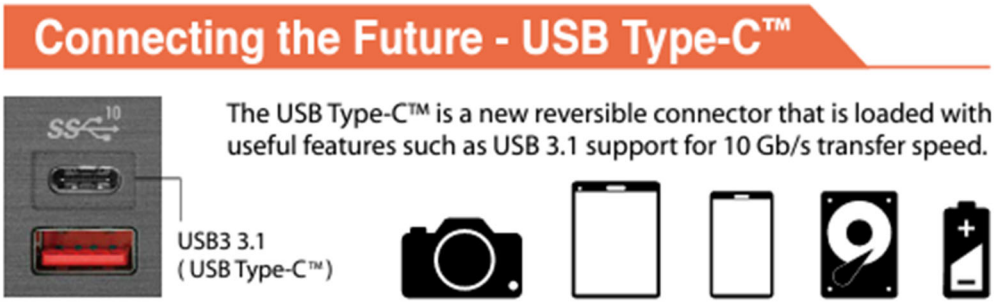
GPU Specifications

GPU Name‡	Intel® UHD Graphics 620
Graphics Base Frequency	300 MHz
Graphics Max Dynamic Frequency	1.15 GHz
Graphics Video Max Memory	32 GB
Graphics Output	eDP/DP/HDMI/DVI
4K Support	Yes, at 60Hz
Max Resolution (HDMI)‡	4096 x 2304@24Hz
Max Resolution (DP)‡	4096 x 2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡	4096 x 2304@60Hz
DirectX* Support	12
OpenGL* Support	4.4
Intel® Quick Sync Video	Yes
Intel® Clear Video HD Technology	Yes
Intel® Clear Video Technology	Yes
# of Displays Supported ‡	3
Device ID	0x5917

https://ark.intel.com/content/www/us/en/ark/products/122589/intel-core-i7-8550u-

processor-8m-cache-up-to-4-00-ghz.html.

64. The BRIX Mini PC Series comprises a chassis or enclosure which houses one or more connectors that can couple to components of other computer systems and consoles, including the USB-C[24] port.

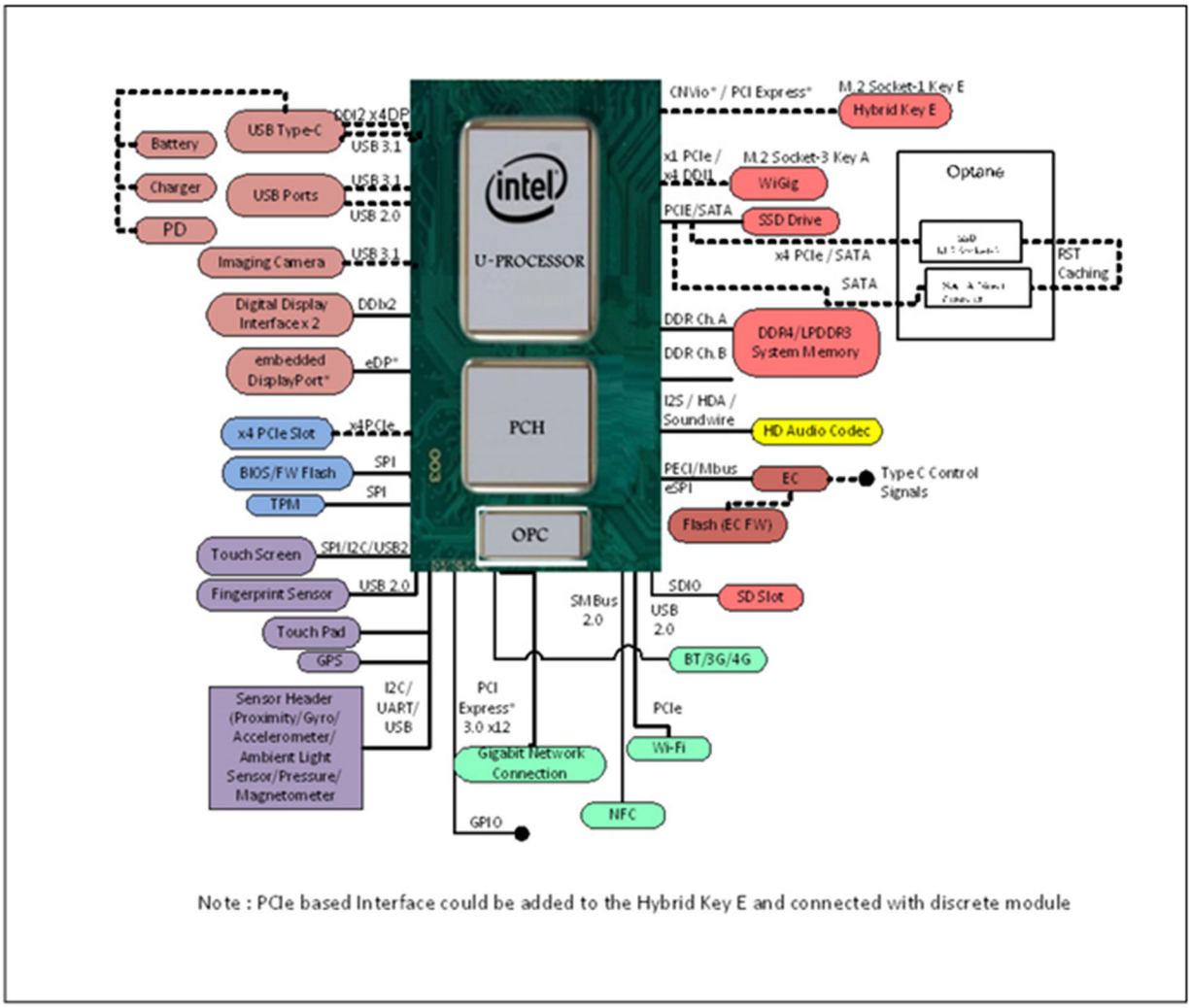


Front I/O	1 x USB 3.1 type C
	1 x USB3.1
	1 x head phone jack with MIC
	1 x Dual array Microphone
Rear I/O	1 x HDMI(2.0a)
	1 x Mini DisplayPort (1.2)
	2 x USB 3.0
	1 x RJ45
	1 x DC-In
	1 x Kensington lock slot
USB 3.1	AsMedia 3142

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

[24] USB Type C connectors can convey both USB protocol data as well as DisplayPort digital video. *See* https://www.usb.org/sites/default/files/D2T1-4%20-%20VESA%20DP%20Alt%20Mode%20over%20USB%20Type-C.pdf; https://www.displayport.org/displayport-over-usb-c-7-reasons/; https://www.androidauthority.com/what-is-usb-type-c-594575/.

Figure 1-2. U-Processor Line Platform



Note : PCIe based Interface could be added to the Hybrid Key E and connected with discrete module

https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12; (identifying DDI, USB 3.x, and eDP channels); *id.* at 40 (explaining that the DDI channels can be configured as DisplayPort, HDMI, or DVI).

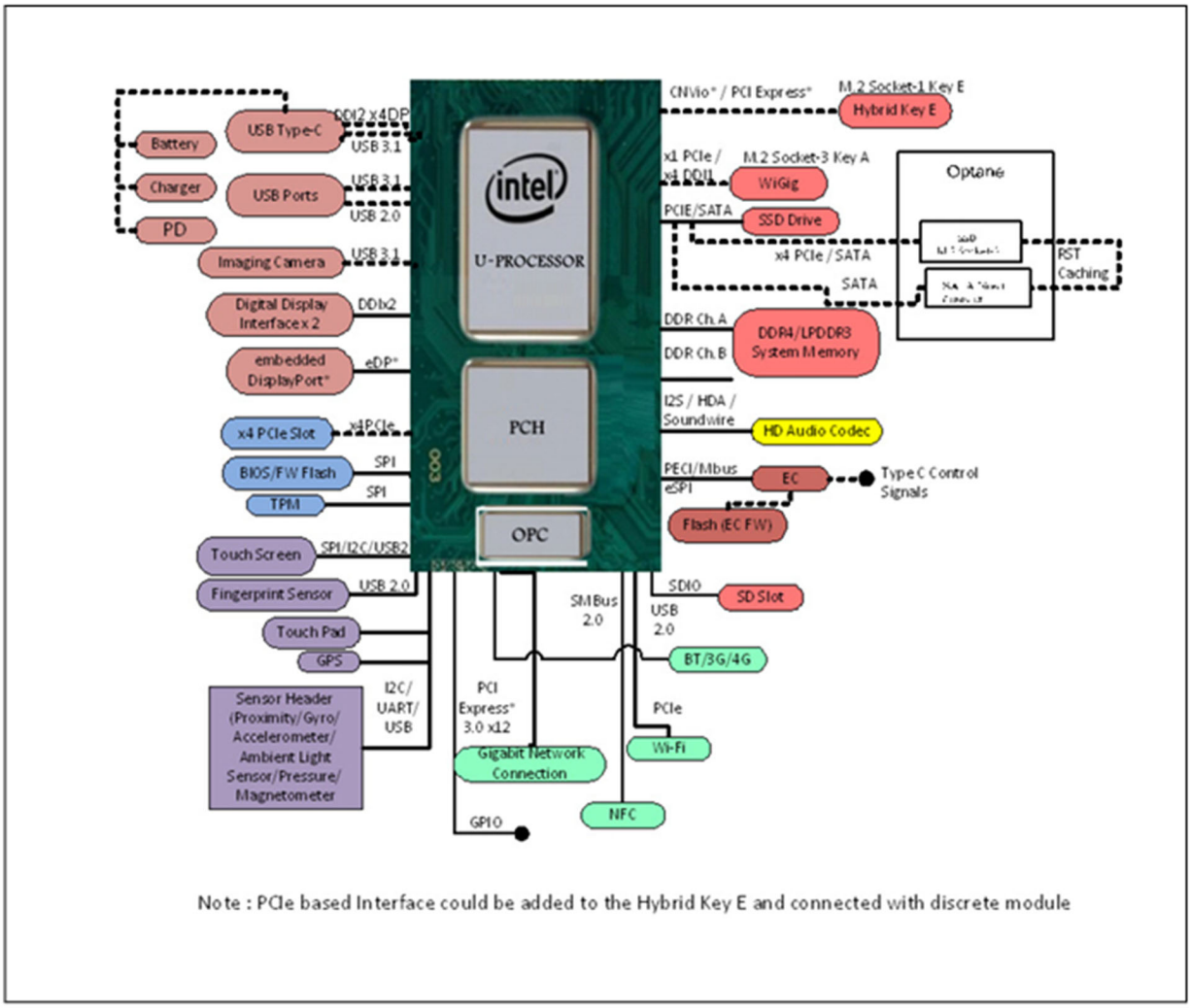
Supports USB 3.1 USB Type-C™ and VESA Bracket Design

USB Type-C™ is the newest USB 3.1 reversible interface for standard peripherals and provides plenty of functionality such as bandwidth and data transfer speeds up to 10Gb/s bandwidth and is compatible with existing USB devices. The built-in Asmedia USB 3.1 controller makes the function of the USB Type-C™ interface even more complete. Furthermore, bundled with a VESA bracket, the GIGABYTE BRIX™ can easily be mounted behind a monitor or HDTV, offering a simple and effective way to turn any VESA-compliant display or TV into a full-featured PC or digital signage unit.

https://www.gigabyte.com/Press/News/1597.

65. The Intel processors employed in the BRIX Mini PC Series connect directly to a variety of LVDS channels that convey data bits in a serial stream using unidirectional pairs of lanes transmitting data in opposite directions, including Intel's DMI and PCIe channels, and the directly-connected PCIe channels connect the CPU to a mass storage device.

Figure 1-2. U-Processor Line Platform

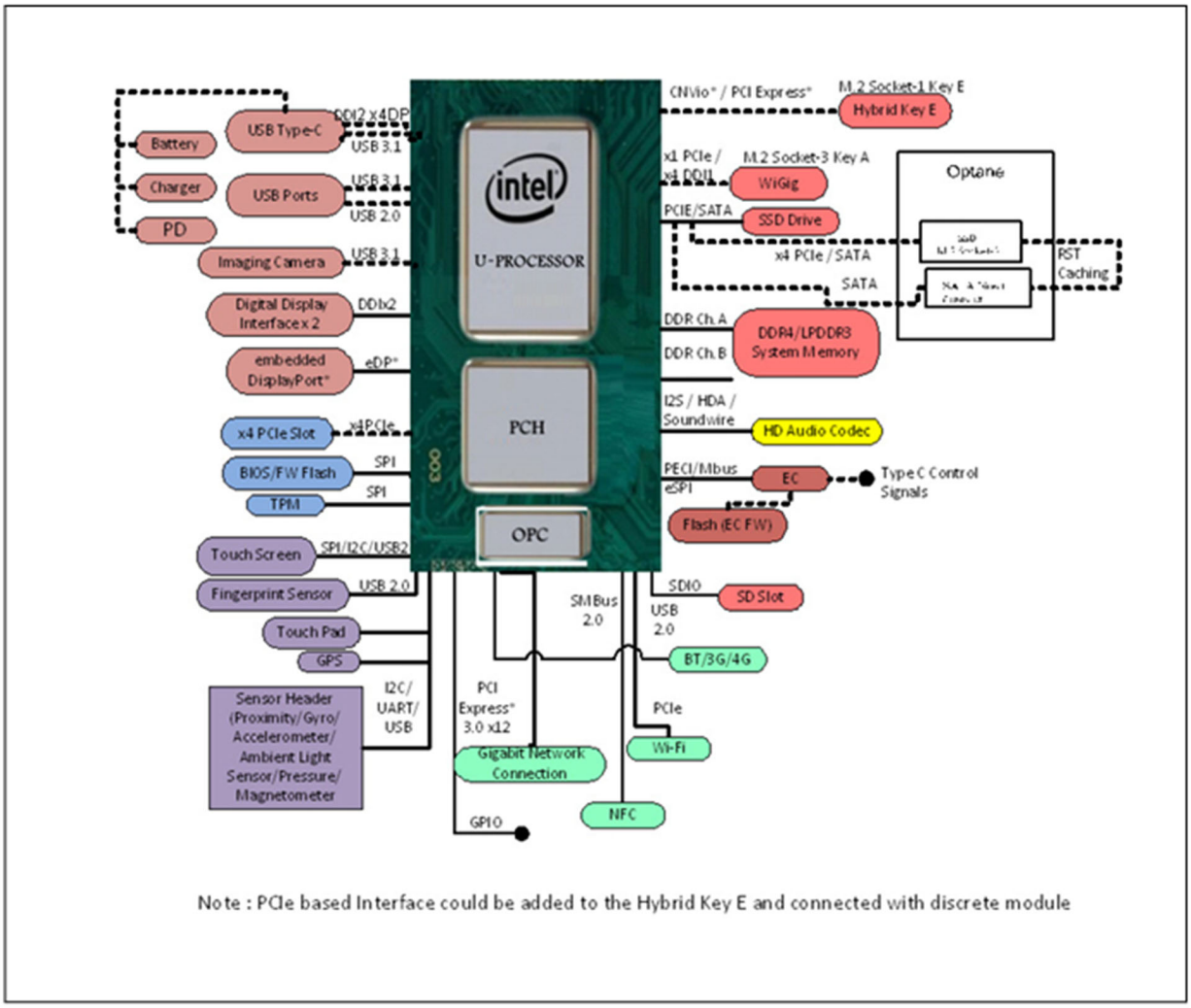


Note : PCIe based Interface could be added to the Hybrid Key E and connected with discrete module

https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12.

66. The Intel processors employed in the BRIX Mini PC Series also connect directly to a variety of differential signal channels that output digital video signals through a connector, including DisplayPort through the USB-C port.

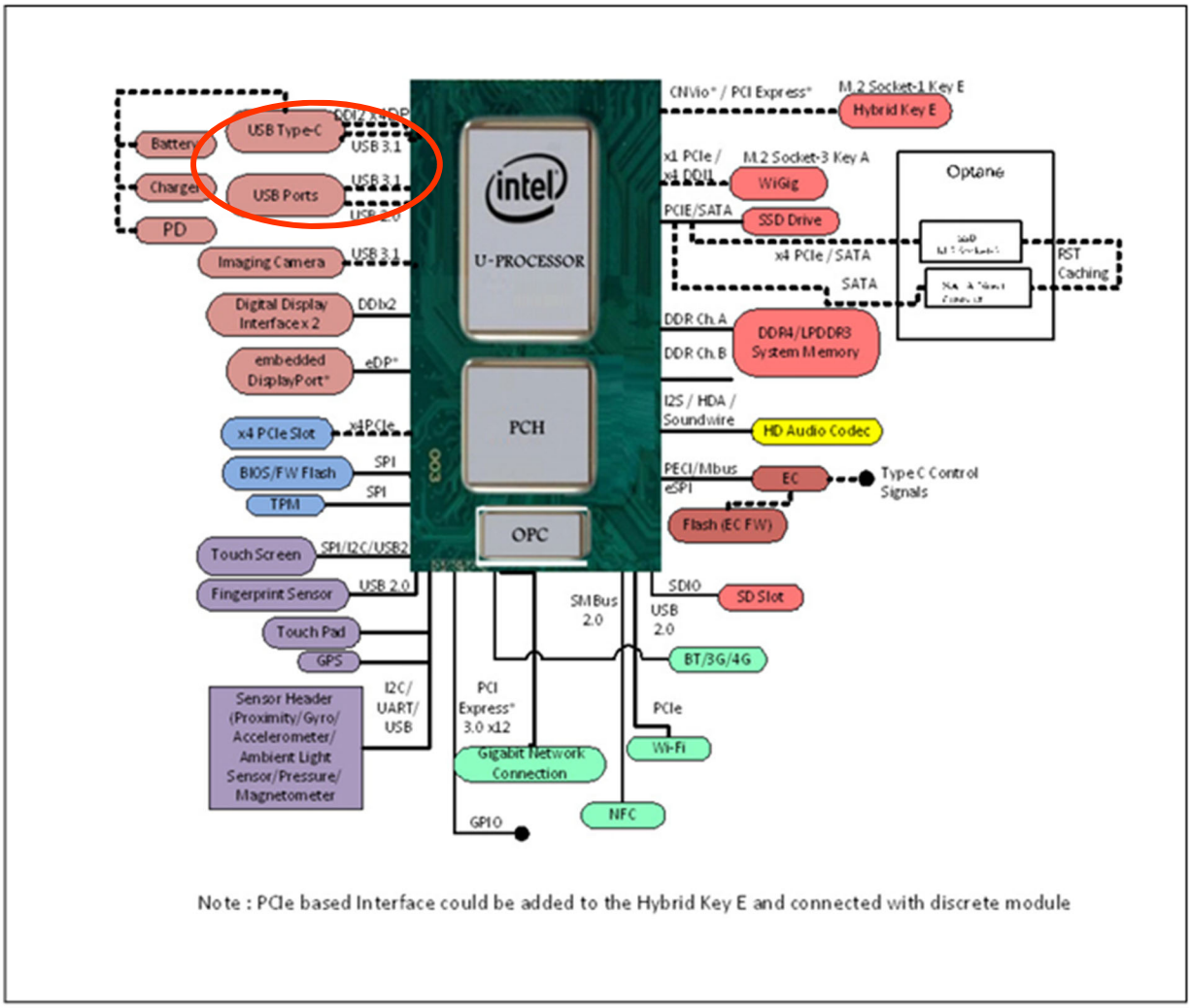
Figure 1-2. U-Processor Line Platform



https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12; *id.* at 40 (explaining that the DDI channels can be configured as DisplayPort, HDMI, or DVI); *see also* https://www.gigabyte.com/Press/News/1597 (disclosing DisplayPort ports on the product).

67. The Intel processors employed in the BRIX Mini PC Series also connect to LVDS channels that convey USB data packets through pairs of unidirectional differential signal paths in opposite directions—USB 3.x ports.

Figure 1-2. U-Processor Line Platform



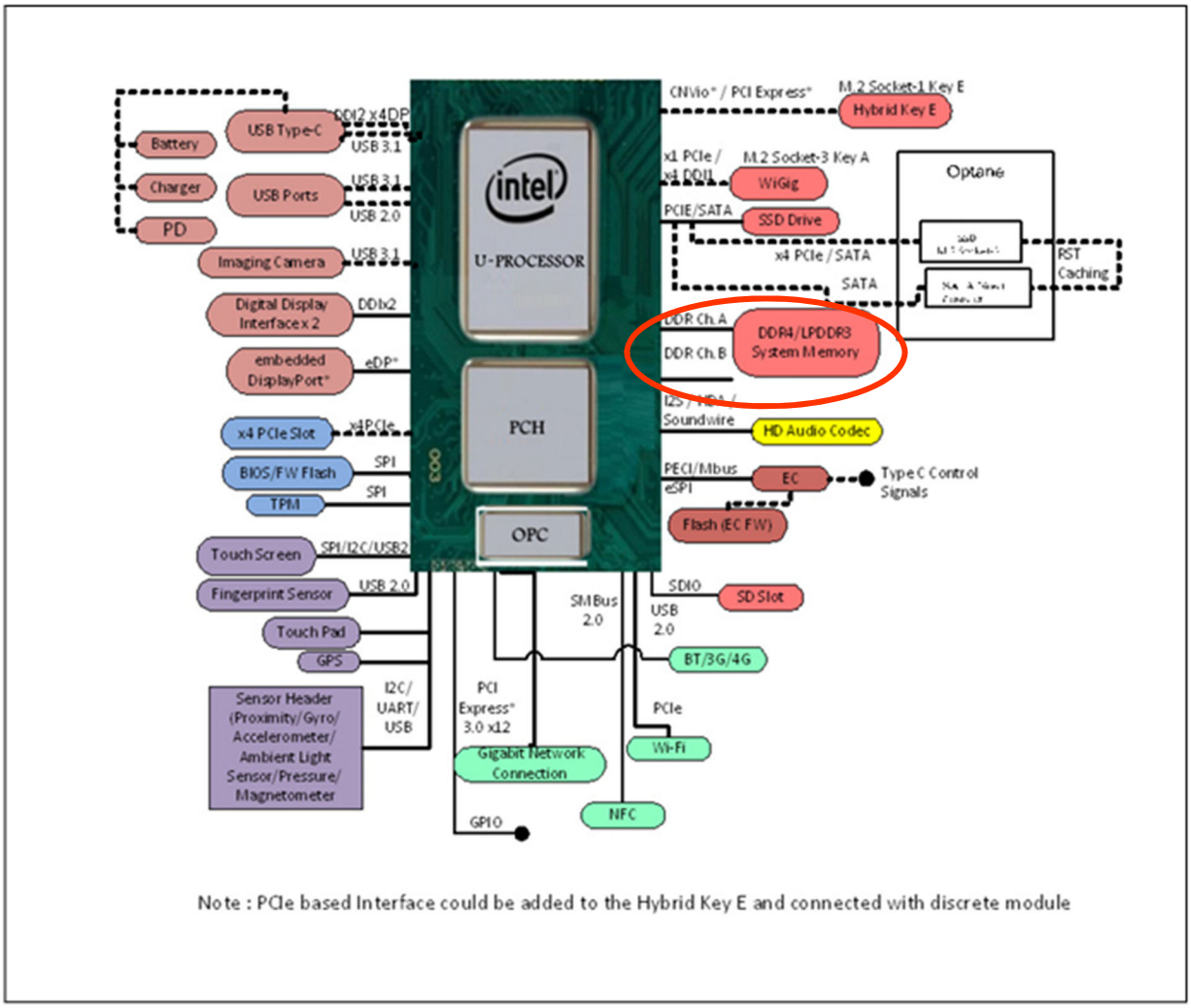
https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12.

68. The BRIX Mini PC Series has DDR3 system memory connected directly to the CPU.

Memory	2 x SO-DIMM DDR4 slots
	2400MHz
	Max. 32GB

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

Figure 1-2. U-Processor Line Platform



Note : PCIe based Interface could be added to the Hybrid Key E and connected with discrete module

https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 12.

69. The BRIX Mini PC Series has a mass storage SSD coupled to the CPU using PCIe.

• 1 x M.2 SSD (2280) slot

https://download.gigabyte.com/FileList/Manual/brix_kabylake_datasheet.pdf?v=0d6a2e503e1f3583015b313f574b6aa1.

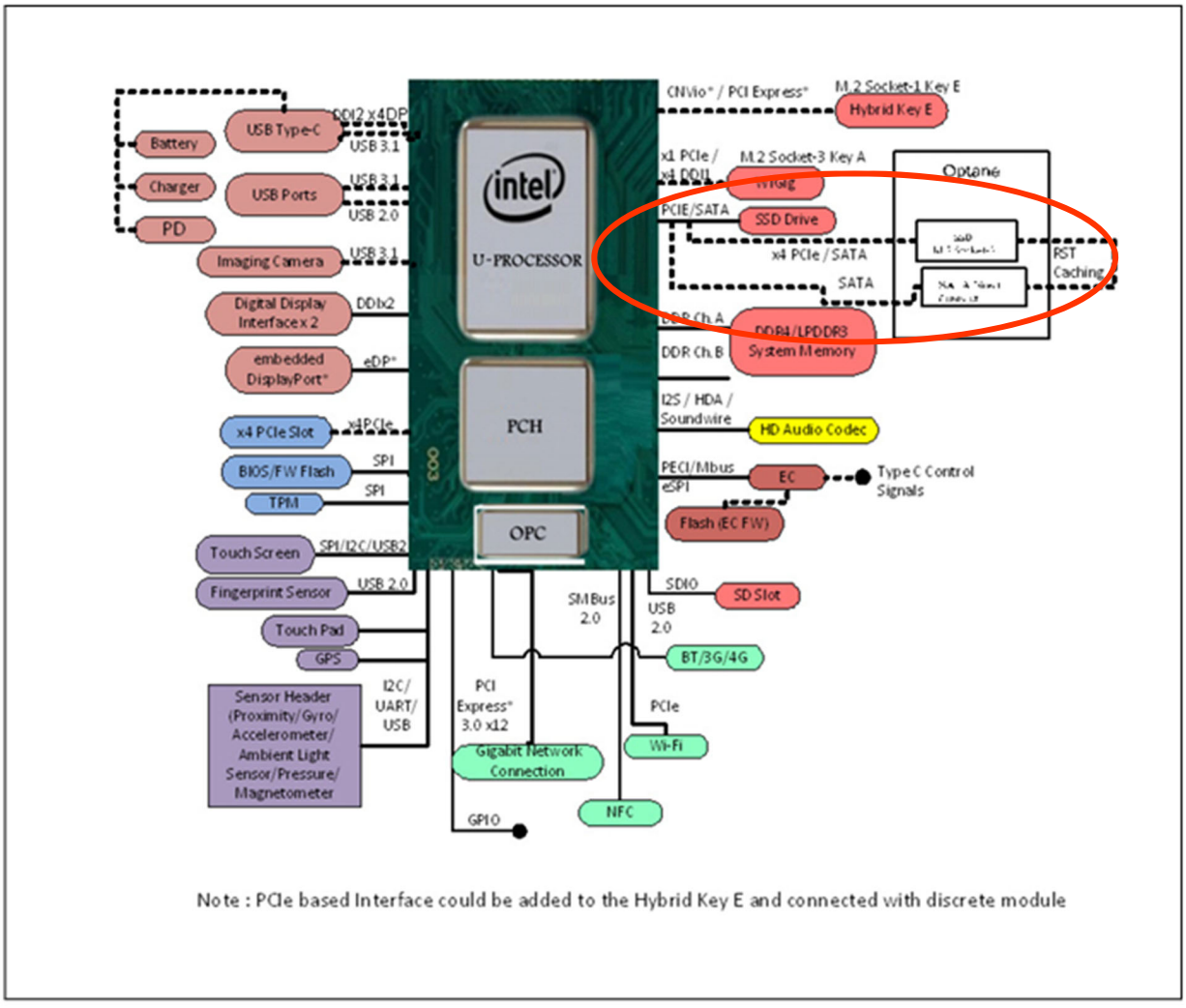
Ultimate Performance with OPTANE and Support for 2.5 Inch HDDs/SSDs

BRIX brings out the best performance of your PC and Intel® Optane™ Memory. Optane™ Memory boosts the performance of traditional hard drives to reduce PC boot times, improving the user experience. This Non-Volatile Memory Device improves the storage capabilities of the system allowing for higher performance.

Additionally, GIGABYTE BRIX supports 2.5 inch SATA III hard drive storage space, which provides transmission speeds up to 6GB/s for users to make full use of high speed data transmission technology! With the accompanied M.2 connector, GIGABYTE BRIX possesses the strengths of both types of storage drives so with three easy steps, Optane™ Memory can be utilized to its full potential, providing fast data transfer rates as well as satisfying needs for high storage capacity!

https://www.gigabyte.com/Press/News/1597.

Figure 1-2. U-Processor Line Platform



https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-

family-datasheet-vol-1.pdf, at 12.

70. The Intel processors used in the BRIX Mini PC Series have a peripheral bridge called the Platform Controller Hub (PCH) connected to the CPU module using DMI. Because the PCH is coupled to PCIe, USB 3.x, and other interface connections, they necessarily have integrated interface controllers to control data transmission through those interfaces. *See* https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 45 (depicting connection between CPU and PCH). The U-Processor Line is offered in a 1-Chip Platform that includes the 8th Generation Intel processor families I/O Platform Controller Hub (PCH) die on the same package as the processor die.[25] PCH is the "chipset with centralized platform capabilities including the main I/O interfaces along with display connectivity, audio features, power management, manageability, security, and storage features."[26]

71. The Intel PCH used in the BRIX Mini PC Series has an Integrated Clock Controller (ICC) that includes PLL circuitry, which generates different clock frequencies to convey the PCI bus transactions and USB transactions through the PCIe and USB channels based on the different clock frequencies. Because the Intel processors used in the MXC-6400 Series have memory, DMI, display, and/or PCIe connections, and can send and receive data on those connections, they necessarily have integrated interface controllers to control data transmission through those interfaces.

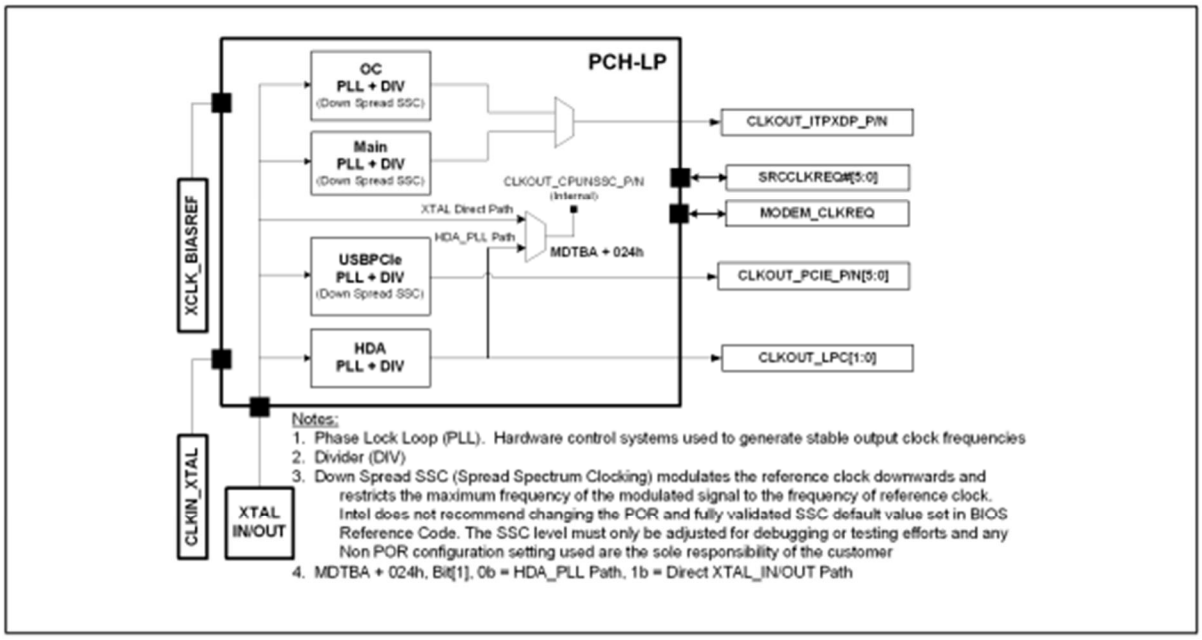
[25] https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/8th-gen-core-family-datasheet-vol-1.pdf, at 87.
[26] *Id.* at 17.

23 PCH and System Clocks

23.1 Overview

Platform Controller Hub (PCH) based platforms require several single-ended and differential clocks to synchronize signal operations and data propagations system wide between many interfaces and across multiple clock domains. The PCH generates and provides this complete system clocking solution through its Integrated Clock Controller (ICC).

Figure 23-1. Integrated Clock Controller (ICC) Diagram



23.2 PCH ICC Clocking Profiles

The PCH ICC hardware includes the following clocking profiles:

— "Standard" Profile (Figure 23-1)
- OC PLL = Disabled
- Main PLL = Enabled with Down Spread Spectrum Clocking (SSC)
- USBPCIe PLL = Enabled with Down Spread Spectrum Clocking (SSC)
- HDA PLL = Enabled

— "Adaptive" Profile (Figure 23-1)
- OC PLL = Enabled with Down Spread Spectrum Clocking (SSC) and Under Clocking Capability
- Main PLL = Disabled
- USBPCIe PLL = Enabled with Down Spread Spectrum Clocking (SSC)
- HDA PLL = Enabled

https://www.intel.com/content/www/us/en/products/docs/chipsets/300-series-chipset-on-package-pch-datasheet-vol-1.html, at 160; *see also* Ravi Budruk, et al., PCI EXPRESS SYSTEM ARCHITECTURE,

454, (MindShare Inc., 2004), page 401.

72. In view of the foregoing facts concerning the technical features and functionalities of the Accused Gigabyte Products, when Gigabyte or another party abroad manufactures the Accused Gigabyte Products, it improves the speed and performance of the peripheral data communication in its computer products by using a method of manufacturing that includes the following steps: (a) obtaining a CPU with a graphics controller in a single chip; (b) connecting one or more unidirectional differential signal channels to the CPU to output digital video data; (c) providing a connector with an LVDS channel to facilitate data communication with external peripherals; (d) providing multiple LVDS channels, connecting them to the CPU, which use one or more pairs of unidirectional lanes that convey USB protocol data and/or address, data, and/or byte enable bits of PCIe bus transaction data in serial bit streams in opposite directions; (e) connecting the CPU directly to a peripheral bridge on a circuit board; and (f) directly connecting to the peripheral bridge one or more LVDS channels with pairs of unidirectional lanes that convey data in serial bit streams in opposite directions.

73. On information and belief, Gigabyte or another party performs the foregoing manufacturing steps outside the United States to make at least certain of the Accused Gigabyte Products, and Gigabyte (directly or through a subsidiary acting as its agent or alter ego, or a third party acting as its agent) then imports those Accused Gigabyte Products into the United States to be marketed and sold.

74. Through making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the Accused Gigabyte Products with the features and functionalities alleged above, Gigabyte has infringed one or more of the claims in each of the ACQIS Patents.

75. Gigabyte's infringing conduct has caused injury and damage to ACQIS and ACQIS' licensees.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 8,977,797

76. ACQIS incorporates by this reference the allegations set forth in paragraphs 1-75 of this Complaint in support of its third cause of action as though fully set forth herein.

77. Pursuant to 35 U.S.C. § 282, the claims of the '797 patent are presumed valid.

78. In view of the foregoing facts and allegations, including paragraphs 51-75 above, Gigabyte has directly infringed one or more claims of the '797 patent in violation of 35 U.S.C. § 271(g) by importing into, or selling, offering to sell, or using in, the United States the Accused Gigabyte Products that were manufactured by one or more of the methods claimed in the '797 patent.

79. The Accused Gigabyte Products are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

80. Gigabyte's infringement of the '797 patent through its importation into, and/or use, offers to sell, or sales in, the United States of, the Accused Gigabyte Products is shown by way of the exemplary BRIX Mini PC Series as set forth in paragraphs 59-75 above. These paragraphs demonstrate that the BRIX Mini PC Series was necessarily manufactured according to at least claim 36 of the '797 patent:

(a) Gigabyte or another party performs a method of improving data throughput on a motherboard when manufacturing the BRIX Mini PC Series, which contains a motherboard;

(b) when manufacturing the BRIX Mini PC Series, Gigabyte or another party mounts an integrated CPU and interface controller as a single chip on the motherboard, because

the Intel processor employed in the BRIX Mini PC Series includes interface controllers (*e.g.*, to drive/control PCIe channels) and the CPU integrated as a single chip;

(c) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects an LVDS channel directly to an interface controller integrated with the CPU, which LVDS channel uses two unidirectional, serial channels to transmit data in opposite directions because the BRIX Mini PC Series has PCIe channels and a DMI interface directly connected to the interface controller;

(d) when manufacturing the BRIX Mini PC Series, Gigabyte or another party increases data throughput in the serial channels by providing each channel with multiple differential signal line pairs, because the PCIe and DMI channels have multiple pairs of differential signal lanes;

(e) when manufacturing the BRIX Mini PC Series, Gigabyte or another party configures the interface controller to adapt to different numbers of differential signal line pairs to convey encoded address and data bits of a PCI bus transaction in serial form, because the interface controllers integrated with the CPU are configured to convey PCIe data signals through PCIe channels having differential signal line pairs; and

(f) when manufacturing the BRIX Mini PC Series, Gigabyte or another party couples the integrated CPU and interface device to a peripheral device such as a storage interface controller or a graphics processor, which is attached to the motherboard through a PCIe channel.

81. ACQIS' infringement allegations against the Accused Gigabyte Products are not limited to claim 7 of the '797 patent, and additional infringed claims will be identified through infringement contentions and discovery.

82. The above-described acts of infringement committed by Gigabyte have caused injury and damage to ACQIS and ACQIS' licensees.

83. ACQIS is entitled to recover all damages sustained as a result of Gigabyte's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 9,529,769

84. ACQIS incorporates by this reference the allegations set forth in paragraphs 1-75 of this Complaint in support of its third cause of action as though fully set forth herein.

85. Pursuant to 35 U.S.C. § 282, the claims of the '769 patent are presumed valid.

86. In view of the foregoing facts and allegations, including paragraphs 51-75 above, Gigabyte has directly infringed one or more claims of the '769 patent in violation of 35 U.S.C. § 271(g) by importing into, or selling, offering to sell, or using in, the United States the Accused Gigabyte Products that were manufactured by one or more of the methods claimed in the '769 patent.

87. The Accused Gigabyte Products are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

88. Gigabyte's infringement of the '769 patent through its importation into, and/or use, offers to sell, or sales in, the United States of the Accused Gigabyte Products is shown by way of the exemplary BRIX Mini PC Series as set forth in paragraphs 59-75 above. These paragraphs demonstrate that the BRIX Mini PC Series was necessarily manufactured according to at least claim 19 of the '769 patent:

(a) Gigabyte or another party performs a method of improving external peripheral data communication in a computer when manufacturing the BRIX Mini PC Series;

(b) when manufacturing the BRIX Mini PC Series, Gigabyte or another party obtains an integrated CPU and graphics controller as a single chip, because the BRIX Mini PC Series uses a 8th Generation Intel® Core™ i7 ("Kaby Lake") Processor;

(c) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects a unidirectional signal channel directly to the integrated CPU and graphics controller to output digital video data, because the 8th Generation Intel® Core™ i7 ("Kaby Lake") Processors employed in the BRIX Mini PC Series directly connect to eDP and/or DDI channels;

(d) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a connector for external peripheral data communication, because the BRIX Mini PC Series has a variety of connectors for external peripherals, including USB-C;

(e) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides an LVDS channel to convey USB protocol data through a connector that uses two unidirectional, serial bit channels that transmit data in opposite directions, because the BRIX Mini PC Series has a USB-C connector that conveys USB 3.x data; and

(f) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a second LVDS channel to convey digital video data through a connector, because the BRIX Mini PC Series has a USB-C port that can convey/output DisplayPort digital video data signals.

89. On information and belief, the Accused Gigabyte Products are in relevant part substantially similar to the exemplary BRIX Mini PC Series, in particular with regard to the

manner in which the Accused Gigabyte Products include and utilize PCIe and/or USB 3.x functionality. This Section is thus illustrative of the manner in which Gigabyte infringes the claims of the '769 patent as to each of the Accused Gigabyte Products.

90. ACQIS' infringement allegations against the Accused Gigabyte Products are not limited to claim 19 of the '769 patent, and additional infringed claims will be identified through infringement contentions and discovery.

91. The above-described acts of infringement committed by Gigabyte have caused injury and damage to ACQIS and ACQIS' licensees.

92. ACQIS is entitled to recover all damages sustained as a result of Gigabyte's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. RE45,140

93. ACQIS incorporates by this reference the allegations set forth in paragraphs 1-75 of this Complaint in support of its third cause of action as though fully set forth herein.

94. Pursuant to 35 U.S.C. § 282, the claims of the '140 patent are presumed valid.

95. In view of the foregoing facts and allegations, including paragraphs 51-75 above, Gigabyte has directly infringed one or more claims of the '140 patent in violation of 35 U.S.C. § 271(g) by importing into, or selling, offering to sell, or using in, the United States the Accused Gigabyte Products that were manufactured by one or more of the methods claimed in the '140 patent.

96. The Accused Gigabyte Products are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

97. Gigabyte's infringement of the '140 patent through its importation into, and/or use, offers to sell, or sales in, the United States of the Accused Gigabyte Products is shown by way of

the exemplary BRIX Mini PC Series as set forth in paragraphs 59-75 above. These paragraphs demonstrate that the BRIX Mini PC Series was necessarily manufactured according to at least claim 35 of the '140 patent:

(a) Gigabyte or another party performs a method of improving performance of a computer when manufacturing the BRIX Mini PC Series;

(b) when manufacturing the BRIX Mini PC Series, Gigabyte or another party obtains an integrated CPU and graphics controller as a single chip, because the BRIX Mini PC Series uses a 8th Generation Intel® Core™ i7 ("Kaby Lake") Processor;

(c) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects an LVDS channel directly to the integrated CPU and graphics controller that uses two unidirectional, serial bit channels to transmit data in opposite directions, because the 8th Generation Intel® Core™ i7 ("Kaby Lake") Processors employed in the BRIX Mini PC Series directly connect to PCIe and DMI channels;

(d) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects a differential signal channel directly to the integrated CPU and graphics controller to output digital video data, because the 8th Generation Intel® Core™ i7 ("Kaby Lake") Processors employed in the BRIX Mini PC Series connect to DDI and/or eDP channels;

(e) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a connector for external peripheral data communication, because the BRIX Mini PC Series has a variety of connectors for external peripherals, including USB-C ports; and

(f) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a second LVDS channel using two unidirectional, serial bit channels to transmit data in

opposite directions through the connector, because the BRIX Mini PC Series has USB-C connectors capable of supporting USB3.x.

98. On information and belief, the Accused Gigabyte Products are in relevant part substantially similar to the exemplary BRIX Mini PC Series, in particular with regard to the manner in which the Accused Gigabyte Products include and utilize PCIe and/or USB 3.x functionality. This Section is thus illustrative of the manner in which Gigabyte infringes the claims of the '140 patent as to each of the Accused Gigabyte Products.

99. ACQIS' infringement allegations against the Accused Gigabyte Products are not limited to claim 35 of the '140 patent, and additional infringed claims will be identified through infringement contentions and discovery.

100. The above-described acts of infringement committed by Gigabyte have caused injury and damage to ACQIS and ACQIS' licensees.

101. ACQIS is entitled to recover all damages sustained as a result of Gigabyte's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

COUNT IV
INFRINGEMENT OF U.S. PATENT NO. RE44,654

102. ACQIS incorporates by this reference the allegations set forth in paragraphs 1-75 of this Complaint in support of its third cause of action as though fully set forth herein.

103. Pursuant to 35 U.S.C. § 282, the claims of the '654 patent are presumed valid.

104. In view of the foregoing facts and allegations, including paragraphs 51-75 above, Gigabyte has directly infringed one or more claims of the '654 patent in violation of 35 U.S.C. § 271(g) by using one or more of the methods claimed in the '654 patent to manufacture the Accused

Gigabyte Products and then importing, selling, offering to sell and/or using the Accused Gigabyte Products.

105. The Accused Gigabyte Products made using the methods claimed in the '654 patent are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

106. Gigabyte's infringement of the '654 patent through its importation into, and/or use, offers to sell, or sales in, the United States of, the Accused Gigabyte Products is shown by way of the exemplary BRIX Mini PC Series as set forth in paragraphs 59-75 above. These paragraphs demonstrate that the BRIX Mini PC Series was necessarily manufactured according to at least claim 23 of the '654 patent:

(a) Gigabyte or another party performs a method of increasing data communication speed of a computer when manufacturing the BRIX Mini PC Series;

(b) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects a CPU directly to a peripheral bridge on a printed circuit board, because the BRIX Mini PC Series uses an Intel Core CPU directly connected to the Intel PCH via a DMI connection;

(c) when manufacturing the BRIX Mini PC Series, Gigabyte or another party connects an LVDS channel directly to the peripheral bridge (PCH), which uses two unidirectional, serial channels to transmit data in opposite directions, because the BRIX Mini PC Series has PCIe channels and a DMI channel directly connected to the Intel PCH;

(d) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a connector to connect the computer to a console, because the BRIX Mini PC Series

has a variety of connector ports such as USB 3.x;

(e) when manufacturing the BRIX Mini PC Series, Gigabyte or another party provides a second LVDS channel using two unidirectional, serial channels to transmit data in opposite directions through the connector to the console, because the BRIX Mini PC Series has USB 3.x ports; and

(f) when manufacturing the BRIX Mini PC Series, Gigabyte or another party enables the transmission of USB protocol data through the second LVDS channel via a USB 3.x port and channel.

107. On information and belief, the Accused Gigabyte Products are in relevant part substantially similar to the exemplary BRIX Mini PC Series, in particular with regard to the manner in which the Accused Gigabyte Products include and utilize PCIe and/or USB 3.x functionality. This Section is thus illustrative of the manner in which Gigabyte infringes the claims of the '654 patent as to each of the Accused Gigabyte Products.

108. ACQIS' infringement allegations against the Accused Gigabyte Products are not limited to claim 23 of the '654 patent, and additional infringed claims will be identified through infringement contentions and discovery.

109. The above-described acts of infringement committed by Gigabyte have caused injury and damage to ACQIS and ACQIS' licensees.

110. ACQIS is entitled to recover all damages sustained as a result of Gigabyte's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

JURY TRIAL DEMANDED

ACQIS LLC hereby demands a trial by jury on all claims and issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff ACQIS LLC respectfully requests that this Court grant the following relief to ACQIS LLC:

A. enter judgment that Gigabyte has infringed one or more claims of each of the ACQIS Patents through: (1) the manufacture, use, offering to sell, and/or sale in the United States, and/or the importation into the United States, of infringing Gigabyte computer products; (2) the practice of claimed methods of the ACQIS Patents by manufacturing, using, and/or testing Gigabyte computer products in the United States; and (3) the importation into the United States of Gigabyte computer products made abroad using patented processes claimed in the ACQIS Patents.

B. enter judgment awarding ACQIS monetary relief pursuant to 35 U.S.C. § 284 in an amount adequate to compensate for Gigabyte's infringement of the ACQIS Patents to be determined at trial, but not less than a reasonable royalty, awarding ACQIS all pre- and post-judgment interest and costs;

C. enter an order, pursuant to 35 U.S.C. § 285, declaring this an exceptional case and awarding to ACQIS its reasonable attorneys' fees; and

D. enter an order awarding to ACQIS such other and further relief, whether at law or in equity, that this Court seems just, equitable, and proper.

Dated: May 10, 2024.

Respectfully submitted,

By: */s/ Case Collard*

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CERTIFICATE OF SERVICE

Pursuant to the Federal Rules of Civil Procedure and Local Rule CV-5, I hereby certify that, on May 10, 2024, all counsel of record who have appeared in this case are being served with a copy of the foregoing via the Court's CM/ECF system.

/s/ Paige Arnette Amstutz
Paige Arnette Amstutz