IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

LIBERTY PATENTS, LLC, Plaintiff, v. MICRO-STAR INTERNATIONAL CO. LTD., Defendant.	CIVIL ACTION NO. 2:20-cv-290 ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT **JURY TRIAL DEMANDED**

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Liberty Patents, LLC ("Liberty Patents" or "Plaintiff") files this original complaint against Defendant Micro-Star International Co. Ltd. ("MSI" or "Defendant"), alleging, based on its own knowledge as to itself and its own actions and based on information and belief as to all other matters, as follows:

PARTIES

1. Liberty Patents is a limited liability company formed under the laws of the State of Texas, with its principal place of business at 2325 Oak Alley, Tyler, Texas 75703.

2. Defendant Micro-Star International Co. Ltd. is a foreign company organized and existing under the laws of Taiwan, with a place of business located No. 69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan. Micro-Star International Co. Ltd. may be served with process by serving the Texas Secretary of State, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident agent for service of process in Texas as required by statute. This action arises out of that business.

JURISDICTION AND VENUE

3. This is an action for infringement of a United States patent arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under 28 U.S.C. § 1331 and § 1338(a).

4. This Court has personal jurisdiction over MSI pursuant to due process and/or the Texas Long Arm Statute because, *inter alia*, (i) MSI has done and continues to do business in Texas; and (ii) MSI has committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing a least a portion of any other infringements alleged herein. In addition, or in the alternative, this Court has personal jurisdiction over MSI pursuant to Federal Rule of Civil Procedure 4(k)(2).

5. Venue is proper as to Defendant MSI, which is organized under the laws of Taiwan and has its principal place of business in Taiwan. 28 U.S.C. § 1391(c)(3) provides that "a defendant not resident in the United States may be sued in any judicial district, and the joinder of such a defendant shall be disregarded in determining where the action may be brought with respect to other defendants." *See also In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018).

BACKGROUND

6. The two patents-in-suit cover technology used in computer systems, such as notebook computers, laptop computers, desktop computers, tablets, and other electronic devices. More particularly, the patents-in-suit describe key improvements to electronic devices in the

areas of more efficient handling of computer instructions for faster processing and better power distribution and power management.

7. U.S. Patent No. 6,535,959 ("the '959 Patent") discloses a processor that includes an instruction cache. The instruction cache is a set-associative cache that comprises multiple blocks. Claim 1 of the '959 patent is directed to a processor that generates a power reduction signal, which indicates whether the subsequent instruction to be executed resides in the same block of the instruction cache as the current instruction that is being executed. This advantageously allows, for example, the processor to read consecutive instructions (or instructions that are in the same block) quickly, without multiple additional steps. The novel system results in a processor with increased operating speed and decreased power consumption.

8. The invention described in the '959 Patent was the result of research conducted by two inventors at Conexant Systems, Inc., which was—at the time—the world's largest, standalone communications-IC company. Conexant, itself, was a spin-off from the semiconductor division of the well-known and well-regarded Rockwell International Corp. Conexant was known as a leading supplier of innovative semiconductor solutions for imaging, audio, embedded modem, and video surveillance applications.[1] Recently, Conexant was acquired by Synaptics, the leading developer of human interface solutions for over $300 million. Since its formation, Conexant has been an innovator in the semiconductor field (and others) with more than a thousand patents assigned to it.

[1] *See* Conexant's Audio Solution Named CES Innovations 2011 Awards Honoree, BUSINESS WIRE (Nov. 9, 2010), www.businesswire.com/news/home/20101109005618/en/Conexant%E2%80%99s-Audio-Solution-Named-CES-Innovations-2011.

9. The ’959 Patent has been cited by multiple technology companies—as recently as 2017—including, Apple, Fujitsu, IBM, Honeywell, Intel, Matsushita, Oracle, and Samsung.

10. U.S. Patent No. 6,920,573 (“the ’573 Patent”) generally relates to a system for conserving energy in electronic systems. Specifically, the inventor developed a system that provides much-needed energy savings for computers, such as notebooks and laptops, by including various operating modes that limit power usage. In particular, the ’573 Patent describes three operating modes. The first mode is a regular operating mode where the electronic device is fully powered on and where the main microprocessor is running. The second mode is a power-saving mode where the main microprocessor is not running, yet the system is still activated. The third mode is also a power-saving mode, and more specifically, a standby mode from which the first mode can be activated. The ’573 Patent also discloses components to power the system, such as a rechargeable battery, and components to control the system, such as a power button.

11. Major companies in the electronics industry have cited the invention of the ’573 Patent during patent prosecution. Indeed, the ’573 Patent has been cited over fifty times by leading companies, including Google, Hewlett-Packard, Intel, Matsushita, Microsoft, NVIDIA, Sony, and Transmeta.

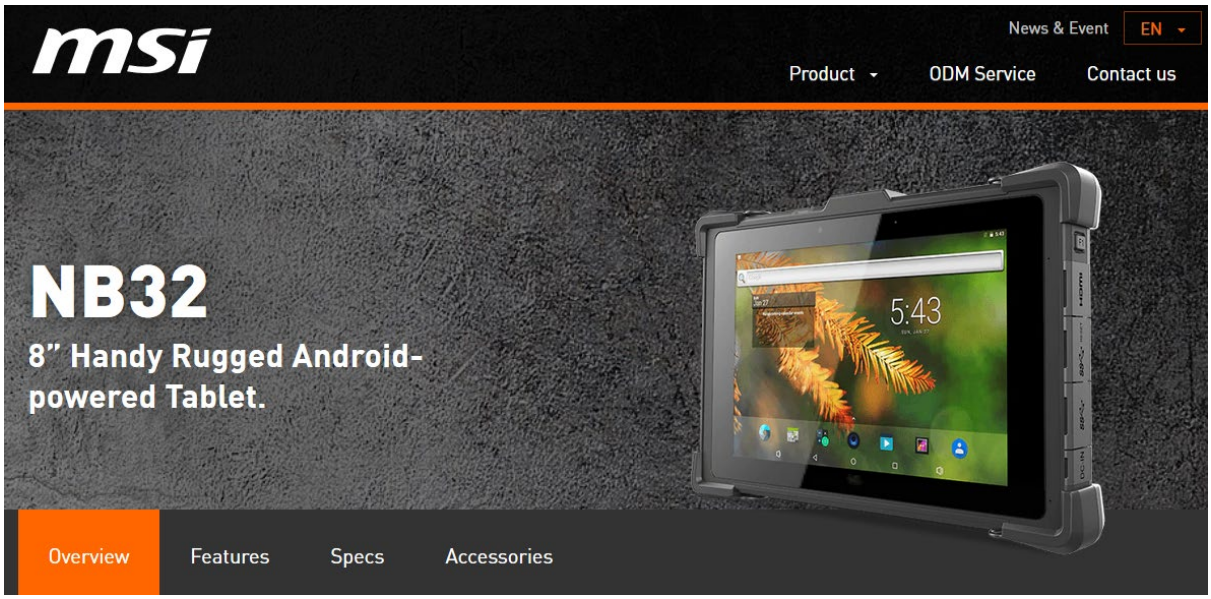
COUNT I

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,535,959

12. On March 18, 2003, the ’959 Patent was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Circuit and Method for Reducing Power Consumption in an Instruction Cache.”

13. Liberty Patents is the owner of the '959 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '959 Patent against infringers, and to collect damages for all relevant times.

14. MSI made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its MSI NB32 Rugged Tablet, and other products that include processors with the capability to ignore reading the tag field when a sequential instruction is to be loaded[2] (processors such as the ARM Cortex-A72, Cortex-A57, Cortex-A15, Cortex-A9, Cortex-R5, Cortex-R4, ARM11, etc.) ("accused products"):



Source: https://ruggedtablet.msi.com/product/NB32

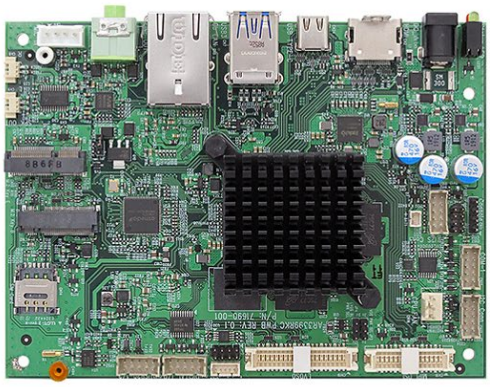
[2] *See, e.g.*, MSI MS776, MS762C, MS773, MS742, MS762E, MS768, MS761, MS760, MS668, MS665, MS772, MS765, MS762, ND52, etc.

Overview | Features | Specs | Accessories | NB32

SPECIFICATIONS

Software	Android 9.0 series
Durability	MIL-STD-810G (Multiple 5'/1.5m Drops) 26 times all corners and sides with single tablet while operating IP65 1000 times x 1 m tumble test Steel ball drop test, 25 mm diameter rounded end steel weight of 250 gm from 50cm. w/ screen protector Glass screen protector Operating Temperature: -10°C ~ 50°C
CPU	Rockchip RK3399
Storage & Memory	LPDDR3 4GB on board 32GB or 64GB or 128GB eMMC

Source: https://ruggedtablet.msi.com/product/NB32



AR3399RK

Rockchip® RK3399 Dual Core Cortex-A72 + Quad Core Cortex-A53 (6-Core) SoC ARM Motherboard

- Rockchip® RK3399 Dual Core Cortex-A72 + Quad Core Cortex-A53 (6-Core) SoC
- 2GB DDR3 Onboard (Expandable to 4GB Max)
- ARM® Mali-T860MP4 Integrated Graphics
- HDMI, LVDS, MIPI-CSI
- 1 x uSD Card Socket, optional eMMC Onboard
- 2 x USB 3.0, 2 x USB 2.0, 1 x USB 3.0 Gen 2 Type C OTG Connector
- 1 x 2230 M.2 E Key and 1 x 2242 M.2 B Key
- I2C, I2S, GPIO
- 12V DC-In
- 3.94" x 5.31" (100mm x 135mm)

Source: www.bcmcom.com/bcm_product_AR3399RK.html

15. By doing so, MSI has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '959 Patent. MSI's infringement in this regard is ongoing.

16. For example, the ARM Cortex-A72 in the MSI NB32 Rugged Tablet is a processor that includes an instruction cache. The instruction cache includes multiple cache lines or blocks.

Features

The Cortex-A72 processor includes the following features:

- Full implementation of the ARMv8-A architecture profile. See *1.2 Compliance* on page 1-15.
- Superscalar, variable-length, out-of-order pipeline.
- Dynamic branch prediction with *Branch Target Buffer* (BTB) and *Global History Buffer* (GHB) RAMs, a return stack, and an indirect predictor.
- 48-entry fully-associative L1 instruction *Translation Lookaside Buffer* (TLB) with native support for 4KB, 64KB, and 1MB page sizes.
- 32-entry fully-associative L1 data TLB with native support for 4KB, 64KB, and 1MB page sizes.
- 4-way set-associative unified 1024-entry *Level 2* (L2) TLB in each processor.
- Fixed 48K L1 instruction cache and 32K L1 data cache.
- Shared L2 cache of 512KB, 1MB, 2MB or 4MB configurable size.

Source:

https://static.docs.arm.com/100095/0002/cortex_a72_mpcore_trm_100095_0002_03_en.pdf

(Page 17).

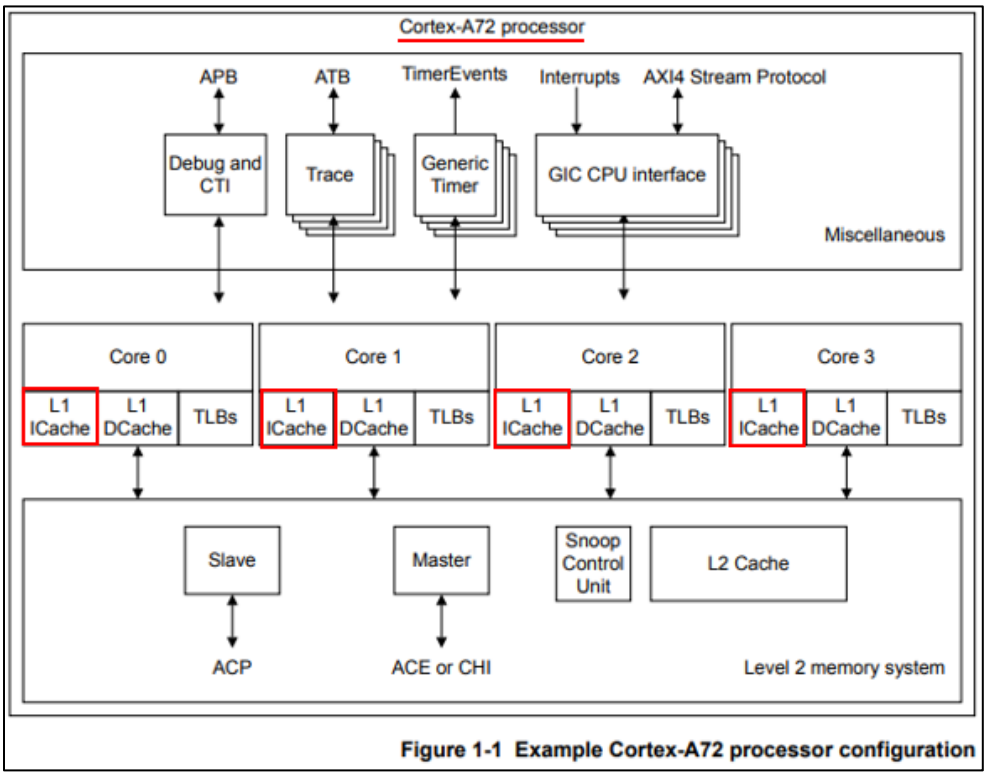


Figure 1-1 Example Cortex-A72 processor configuration

Source:

https://static.docs.arm.com/100095/0002/cortex_a72_mpcore_trm_100095_0002_03_en.pdf

(Page 14).

Instruction fetch

The instruction fetch unit fetches instructions from L1 instruction cache and delivers up to three instructions per cycle to the instruction decode unit. It supports dynamic and static branch prediction.

The instruction fetch unit includes:

- L1 instruction cache that is a 48KB 3-way set-associative cache with a 64-byte cache line and optional dual-bit parity protection per 32 bits in the Data RAM and 36 bits in the Tag RAM.
- 48-entry fully-associative L1 instruction *Translation Lookaside Buffer* (TLB) with native support for 4KB, 64KB, and 1MB page sizes.
- 2-level dynamic predictor with *Branch Target Buffer* (BTB) for fast target generation.
- Static branch predictor.
- Indirect predictor.
- Return stack.

Source:

https://static.docs.arm.com/100095/0002/cortex_a72_mpcore_trm_100095_0002_03_en.pdf

(Page 26).

11.1 Cache terminology

In a von Neumann architecture, a single cache is used for instruction and data (a unified cache). A modified Harvard architecture has separate instruction and data buses and therefore there are two caches, an instruction cache (I-cache) and a data cache (D-cache). In the ARMv8 processors, there are distinct instruction and data L1 caches backed by a unified L2 cache.

The cache is required to hold an address, some data and some status information.

The following is a brief summary of some of the terms used and a diagram illustrating the fundamental structure of a cache:

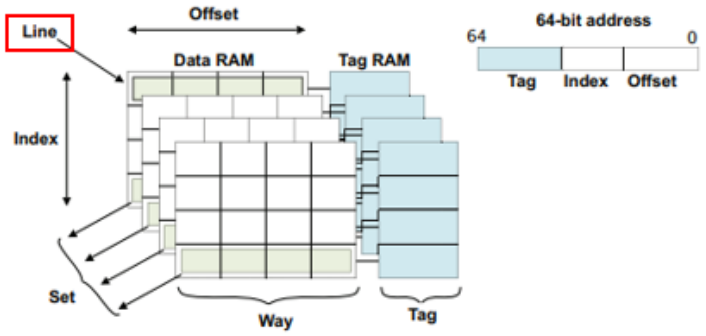


Figure 11-2 Cache terminology

- The *tag* is the part of a memory address stored within the cache that identifies the main memory address associated with a line of data.

Source:

https://static.docs.arm.com/den0024/a/DEN0024A_v8_architecture_PG.pdf?_ga=2.17157625.1756166971.1588761056-4692096.1569325365 (Page 145).

- It would be inefficient to hold one word of data for each tag address, so several locations are typically grouped together under the same tag. This logical block is commonly known as a cache *line*, and refers to the smallest loadable unit of a cache, a block of contiguous words from main memory. A cache line is said to be valid when it contains cached data or instructions, and invalid when it does not.

Source:

https://static.docs.arm.com/den0024/a/DEN0024A_v8_architecture_PG.pdf?_ga=2.17157625.1756166971.1588761056-4692096.1569325365 (Page 145).

Cache set	A cache set is a group of cache lines (or blocks). A set contains all the ways that can be addressed with the same index. The number of cache sets is always a power of two. *See also* Cache terminology diagram on the last page of this glossary.
Cache way	A group of cache lines (or blocks). It is 2 to the power of the number of index bits in size. *See also* Cache terminology diagram on the last page of this glossary.

Source:

http://infocenter.arm.com/help/topic/com.arm.doc.ddi0301h/DDI0301H_arm1176jzfs_r0p7_trm.pdf (Page 746).

17. The ARM Cortex-A72 processor in the MSI NB32 Rugged Tablet supports a power reduction method that is operational when an instruction is being accessed from the instruction cache. The instruction cache includes multiple cache lines or blocks, and each cache line or block is associated with a tag value. These tag values are stored in the tag RAM. The cache also includes data RAM for storing the instructions.

18. If a sequential (or subsequent) instruction to be read from the instruction cache is in the same cache line or block as the previous instruction, only the data RAM of the cache is

accessed for the instruction, and the tag RAM is *not* accessed because the sequential instruction resides in the same cache line or block.

19. Accordingly, the MSI NB32 Rugged Tablet, which includes an ARM Cortex-A72, includes a circuit that sends a signal ("power reduction signal") if a sequential instruction to be accessed from the instruction cache is identified as being in the same cache line or block.

L1 instruction memory system

The instruction cache can source up to 128 bits per fetch depending on alignment.

Sequential cache read operations reduce the number of full cache reads. This has the benefit of reducing power consumption. If a cache read is sequential to the previous cache read, and the read is within the same cache line, only the data RAM way that was previously read is accessed.

Source:

https://static.docs.arm.com/100095/0002/cortex_a72_mpcore_trm_100095_0002_03_en.pdf

(Page 287).

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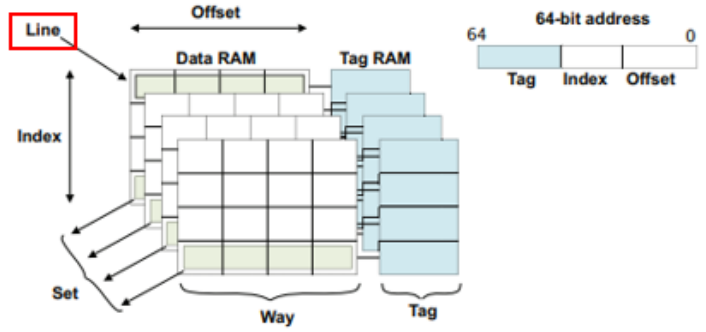

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Source:

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Source:

https://static.docs.arm.com/den0024/a/DEN0024A_v8_architecture_PG.pdf?_ga=2.17157625.1756166971.1588761056-4692096.1569325365 (Page 145).

20. MSI has had knowledge of the '959 Patent at least as of the date when it was notified of the filing of this action.

21. Liberty Patents has been damaged as a result of the infringing conduct by MSI alleged above. Thus, MSI is liable to Liberty Patents in an amount that adequately compensates

it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

22. Liberty Patents and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ’959 Patent.

COUNT II

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,920,573

23. On July 19, 2005, the ’573 Patent was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Energy-Conserving Apparatus and Operating System Having Multiple Operating Functions Stored in Keep-Alive Memory.”

24. Liberty Patents is the owner of the ’573 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ’573 Patent against infringers, and to collect damages for all relevant times.

25. MSI made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its MSI GE62 6QF Apache Pro laptop and other products (e.g., AG270 2PE, Pro 24X 10M, Wind Top AE2210 All-in-One PCs, etc.) including the “Super Charger” feature (“accused products”):

Source: https://www.msi.com/Laptop/GE62-6QF-Apache-Pro/Specification

> **2. USB 3.0 Port/ Super Charger USB Port**
>
> USB 3.0, the SuperSpeed USB, delivers the higher interface speeds for connecting various devices, such as storage devices, hard drives, or video cameras, and offers more advantages over high-speed data transferring.
>
> Super Charger USB port provides faster power charging function for Apple devices when the notebook is in power off mode.

Source: https://download.msi.com/archive/mnu_exe/1795+1794+16J5+16J4_G_English.zip (Page 2-9)

26. By doing so, MSI has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 13 of the '573 Patent. MSI's infringement of the '573 Patent is ongoing.

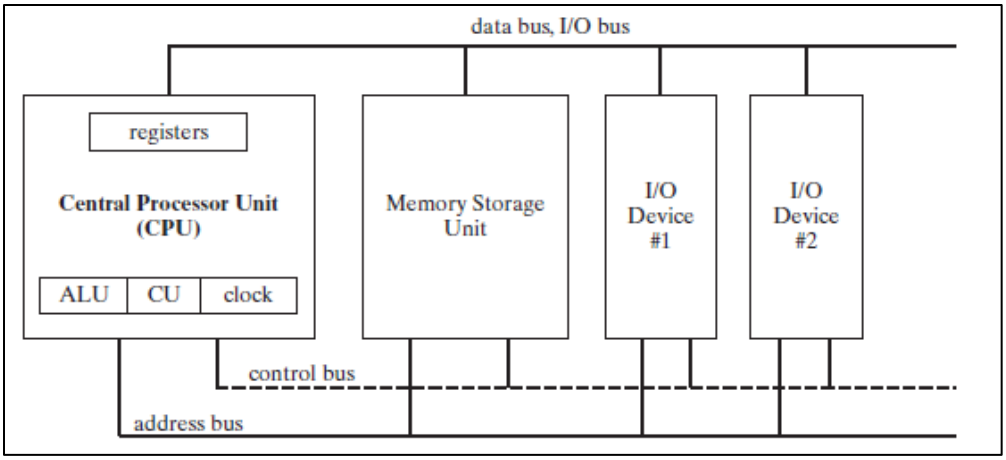
27. The MSI GE62 6QF Apache Pro laptop is an information-processing apparatus with multiple operating functions. It includes a first group of circuitry that is actuatable to provide a first operating function. The first group of circuitry comprises main microprocessor circuitry.

28. For example, the MSI GE62 6QF Apache Pro laptop includes a processor for performing various processing functions. The processor includes Arithmetic Logic Units (ALU), Instruction and Data Caches, and other blocks. The processor also has different states like working state, sleeping state, and off state etc., which correspond to the laptop's Power On mode, Sleep mode and Shut Down mode, respectively. The processor functions differently depending on the current operating mode.

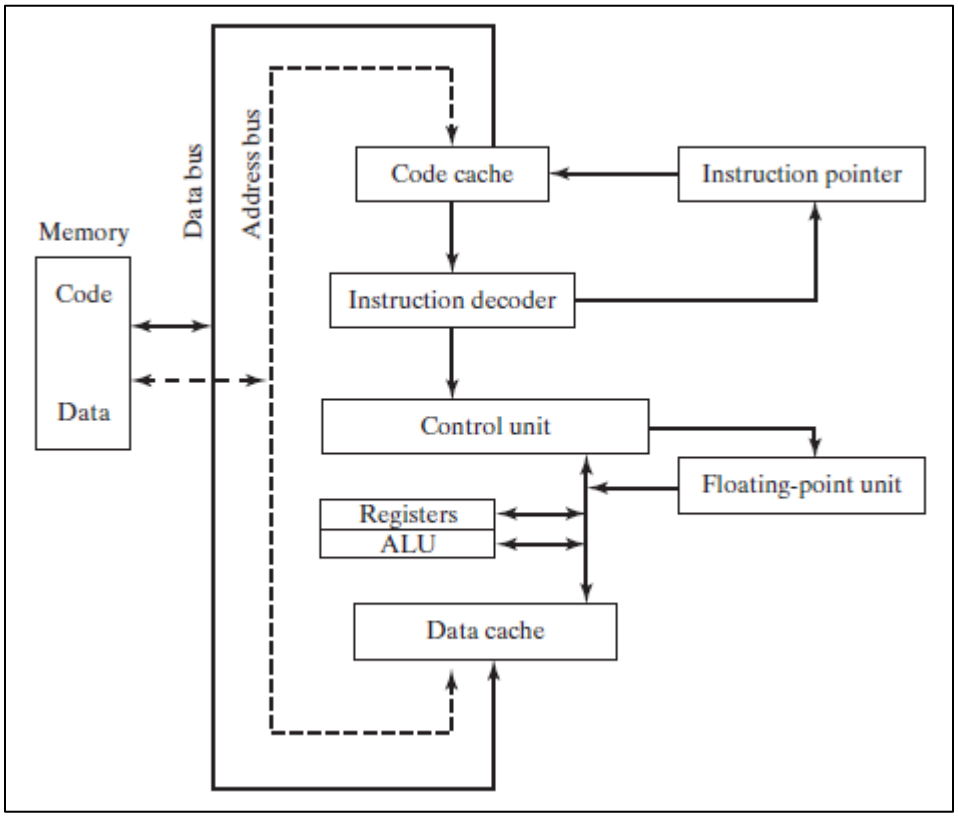
29. During Power On mode, the processor provides processing functions, including application processing, graphics processing, etc. ("first operating function"). The processing blocks like ALU, FPU, memory etc. ("first group of circuitry") consume power and implement these required functions. These blocks are part of the core or Central Processing Unit ("main microprocessor circuitry") of the processor.

> Gamers looking for a relatively inexpensive gaming notebook that still packs a ton of performance would do well the check out the MSI GE62 Apache Pro. It might not be the fastest machine MSI has to offer, nor does it have a QHD or 4K UHD screen (just a plain old 1,920 x 1,080 FHD display), but it compensates by packing in a ton of name brand components.
>
> Among some of the featured hardware is a Killer Gaming Networks Ethernet card, a SteelSeries gaming keyboard, an Nvidia GeForce GTX 1050 Ti video card, and 3D audio provided by Nahimic Sound and supported by four Dynaudio Tech speakers and a subwoofer. That's on top of sporting a 250GB SSD boot drive, a 1TB spinning drive and 16GB of RAM.

Source: https://www.techradar.com/reviews/msi-ge62-apache-pro

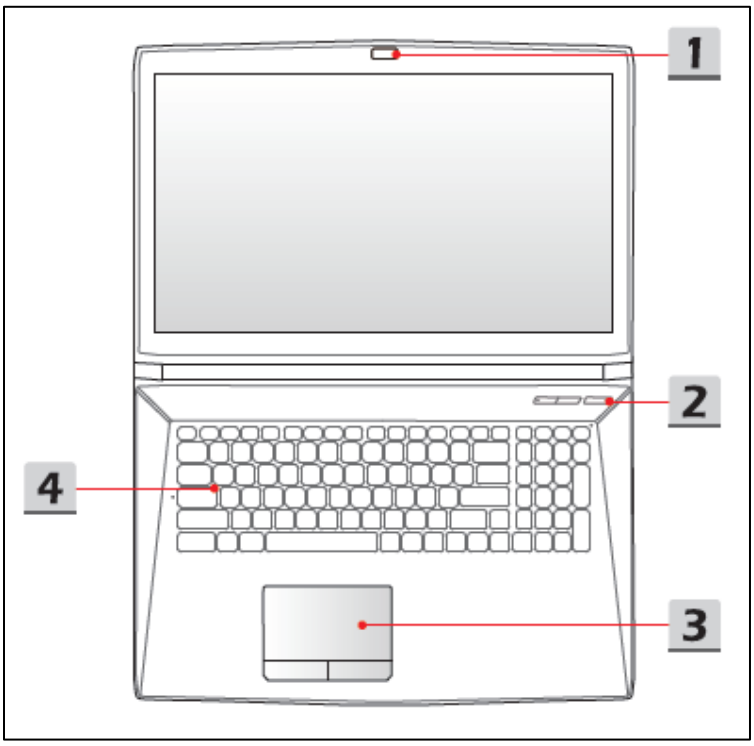


Source: https://www.allaboutcircuits.com/technical-articles/an-introduction-to-x86-processor-architecture/



Source: https://www.allaboutcircuits.com/technical-articles/an-introduction-to-x86-processor-architecture/

30. The following citations disclose different operating modes of the laptop, including Shut Down mode, Sleep mode, and Power On mode. The computer operates differently according to the current operating mode.



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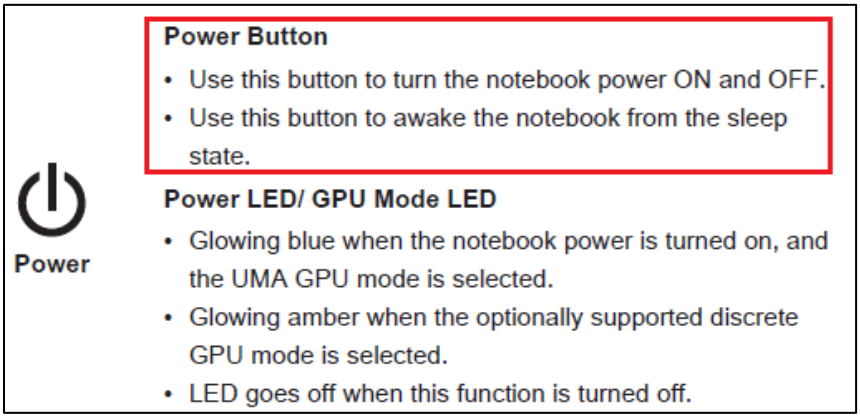
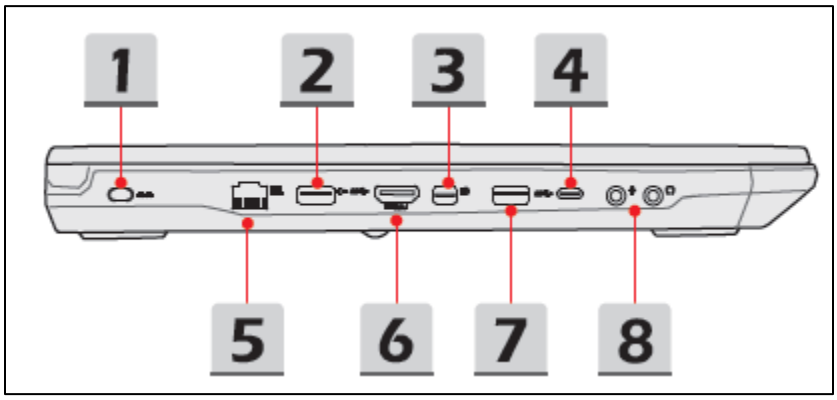


Source: https://download.msi.com/archive/mnu_exe/1795+1794+16J5+16J4_G_English.zip

(Page 2-5)

31. The MSI GE62 6QF Apache Pro laptop includes a second group of circuitry that is actuatable to provide a second operating function. During the second operating function, the system is not required to activate the main microprocessor circuitry.

32. For example, the MSI GE62 6QF Apache Pro laptop includes a USB port that allows a user to charge ("second operating function") USB connected devices (such as such as a mobile devices, cameras, activity trackers, smartwatches, etc.) even when the laptop is in the Shut Down or Off mode. This feature can be enabled during BIOS setup/configuration. Users can enable the USB charging feature during S3/S4/S5 states, which correspond to Sleep, Hibernate, and Shut Down states, respectively. Mobile devices can be charged using the designated USB port without requiring the laptop to be in working state (i.e., Power On mode). The corresponding USB charger IC/USB board circuit ("second group of circuitry") can be actuated to provide the charging function during Shut Down mode.



Source: https://download.msi.com/archive/mnu_exe/1795+1794+16J5+16J4_G_English.zip (Page 2-9)

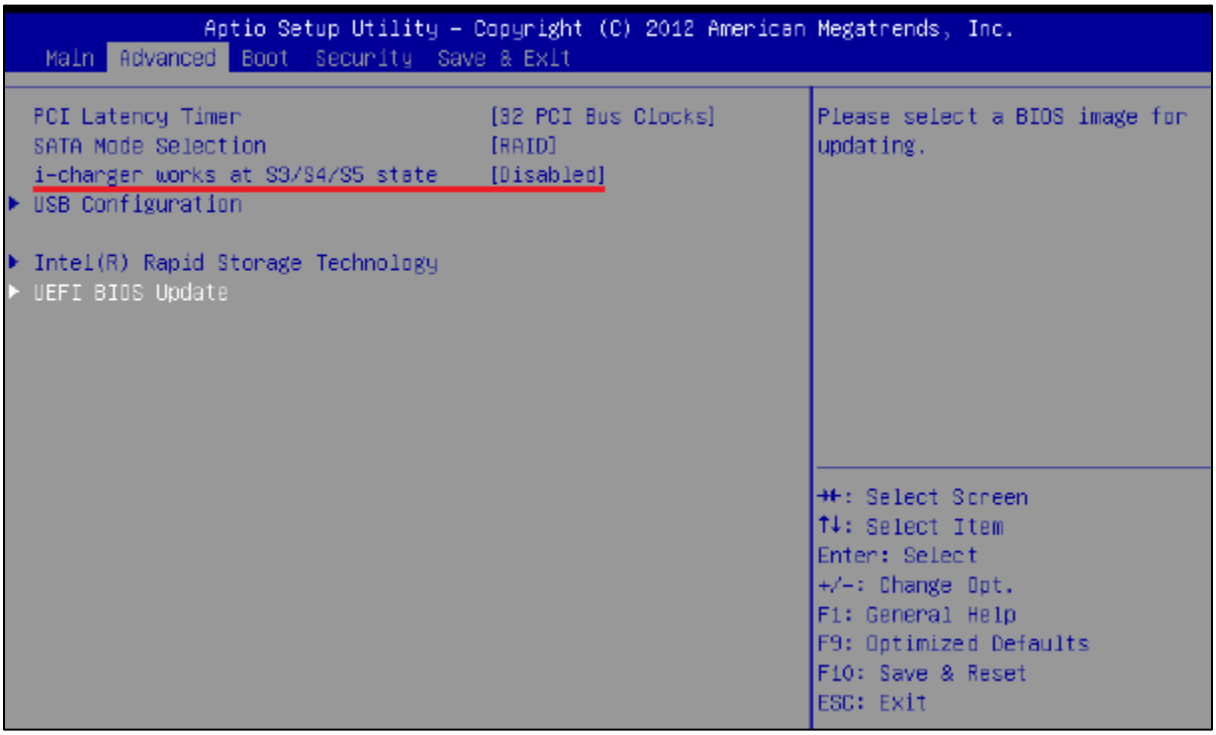
2. USB 3.0 Port/ Super Charger USB Port

USB 3.0, the SuperSpeed USB, delivers the higher interface speeds for connecting various devices, such as storage devices, hard drives, or video cameras, and offers more advantages over high-speed data transferring.

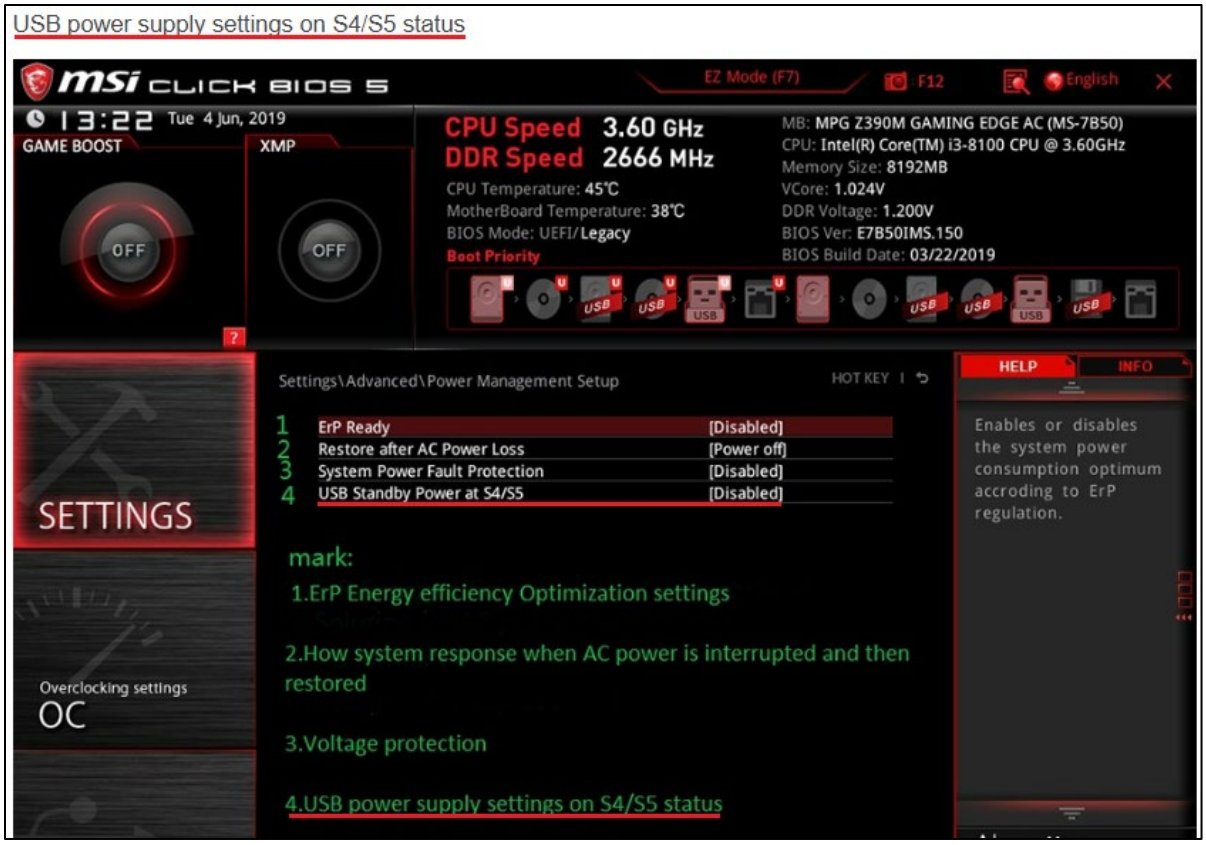
Super Charger USB port provides faster power charging function for Apple devices when the notebook is in power off mode.

Source: https://download.msi.com/archive/mnu_exe/1795+1794+16J5+16J4_G_English.zip

(Page 2-9)

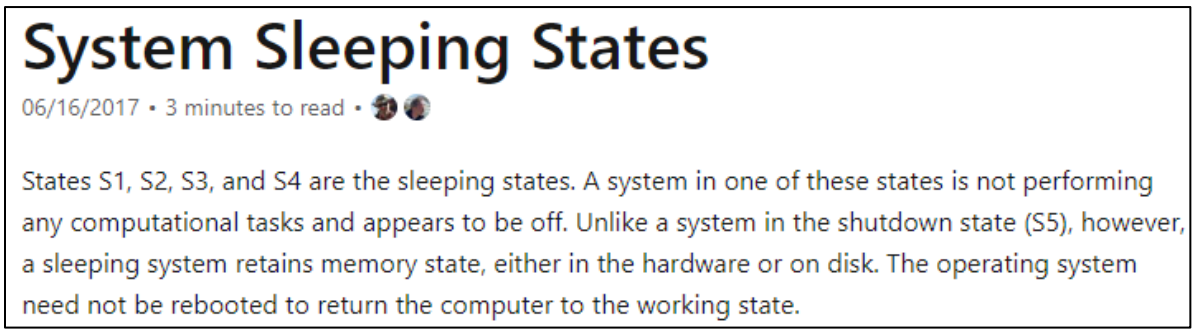


Source: https://download.msi.com/bos_exe/nb/E16J4IMS.117.zip (Page 5)



Source: https://www.msi.com/support/technical_details/MB_BIOS_Manual#txt16

Citation 11:



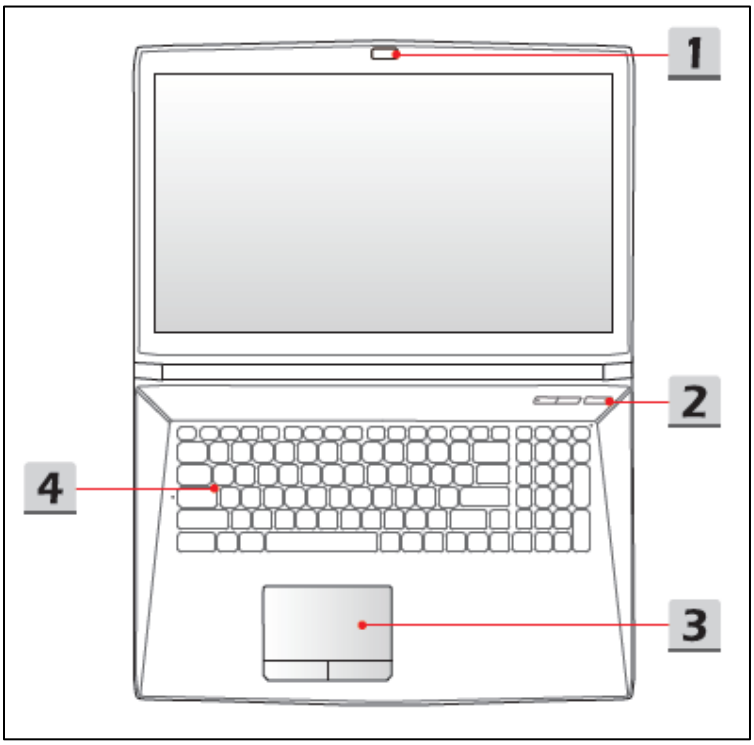
Source: https://docs.microsoft.com/en-us/windows-hardware/drivers/kernel/system-sleeping-states

33. The MSI GE62 6QF Apache Pro laptop includes a third group of circuitry that is actuatable to provide a standby function that allows the first group of circuitry (when deactivated) to be reactuatable so that it can provide the first operating function. The third group

of circuitry also comprises keep-alive memory circuitry for storing information needed for resuming the first operating function or the second operating function.

34. For example, the MSI GE62 6QF Apache Pro laptop includes different operating modes like Sleep mode, Power On mode, and Shut Down mode. The Sleep mode ("standby function") can be activated and deactivated (i.e., to wake up the system) by pressing the Power button. The laptop includes corresponding circuitry ("third group of circuitry") that activates and deactivates the Sleep mode.

35. During Sleep mode, computational tasks are not performed, and the system consumes less power. The system retains enough context in order to return to a working state ("resuming said first operating function") by storing or saving information in hardware memory, such as RAM or in a disk ("keep-alive memory circuitry").



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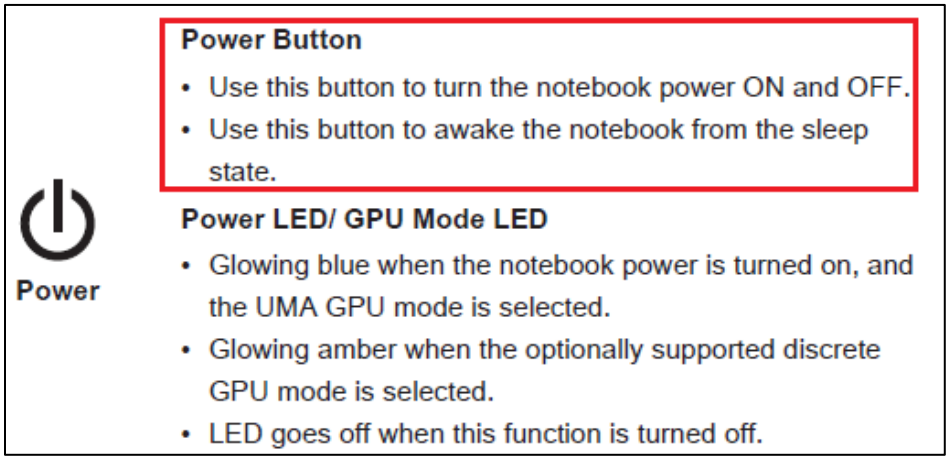

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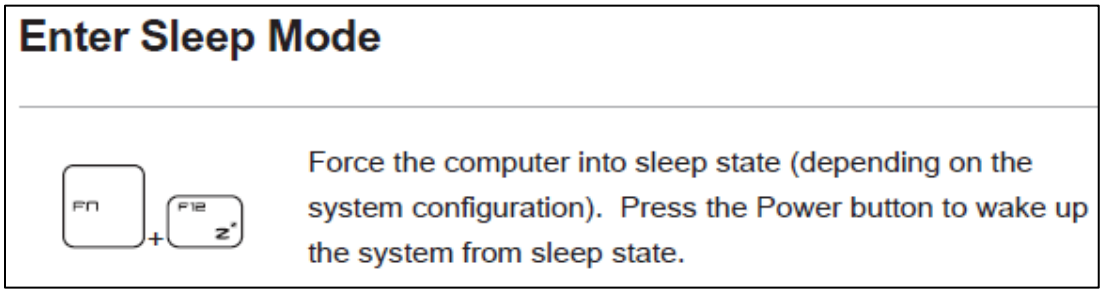

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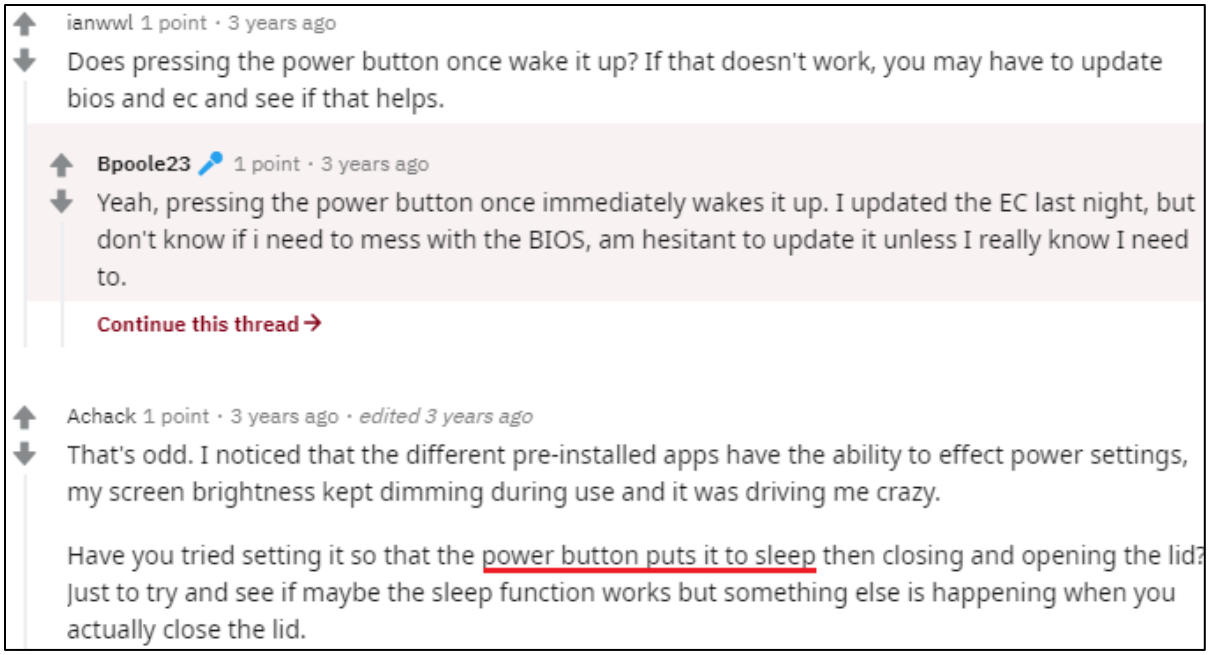
(Page 3-9)

36. The following citation shows that in the MSI GE62 6QF Apache Pro laptop, the Sleep mode can be activated by pressing the Power button.

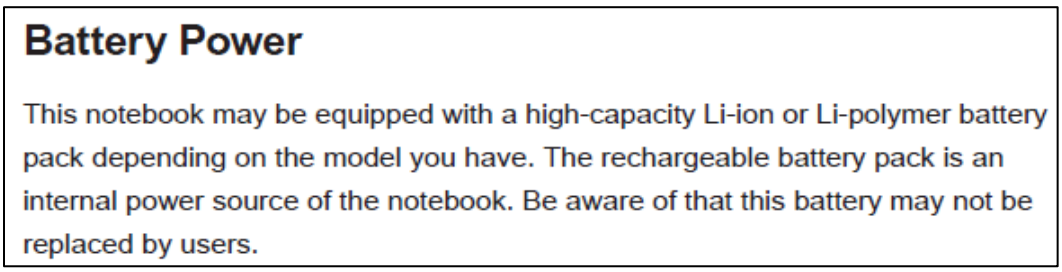


Source:

https://www.reddit.com/r/MSILaptops/comments/5m5fj5/ge62_6qf_wont_wake_up_from_sleep_when_the_lid_is/

37. The MSI GE62 6QF Apache Pro laptop includes power providing means for providing power to the first group of circuitry, the second group of circuitry, and the third group of circuitry.

38. For example, the MSI GE62 6QF Apache Pro laptop includes a Lithium ion battery ("power providing means") for providing power to the different circuits present in the system like CPU, including the CPU, memory, and I/O Peripherals (which include USB).



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(Page 3-4)

> **AC/DC Adapter**
>
> To safely and properly power on a notebook, it is strongly recommended to connect the supplied power adapter before turning it on for the first time. Below are some Do's and Don'ts of an AC/DC adapter.

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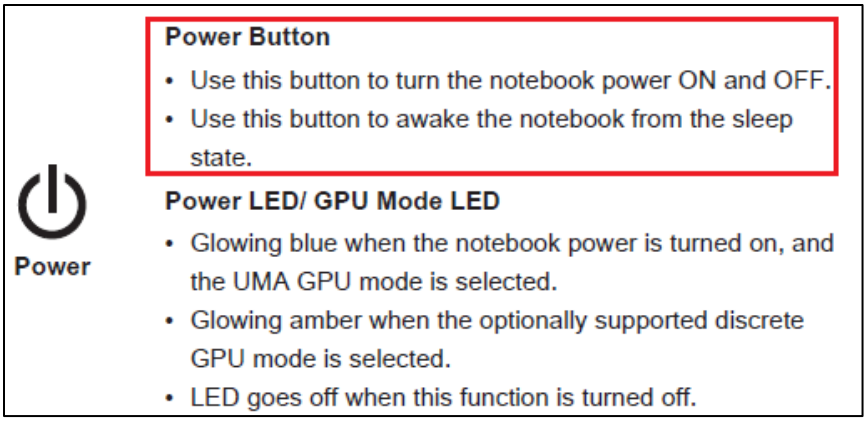
(Page 3-4)

39. The MSI GE62 6QF Apache Pro laptop includes control means for controlling said power providing means to selectively activate said first group of circuitry, said second group of circuitry, and said third group of circuitry, so as to respectively provide said first operating function, said second operating function, and said standby function.

40. The MSI GE62 6QF Apache Pro laptop includes different operating modes like Power On, Sleep, and Shut Down modes. Sleep mode ("standby function"), Shut Down mode, and Power On mode (which provides "first operating function") can be activated using the Power button ("control means"). The USB port with charging capability in S3/S4/S5 states enables charging of a mobile device through the designated USB port during Shut Down mode ("second operating function").

41. The processor of the laptop includes a Power Management Integrated Circuit (PMIC) that manages the power distribution in the processor system. The PMIC provides power to different circuits of the processor system. Further, the PMIC receives control inputs from the processor system, i.e., signals from the power button are used by PMIC as control inputs for enabling and disabling the power distribution for the circuits in the processor system.



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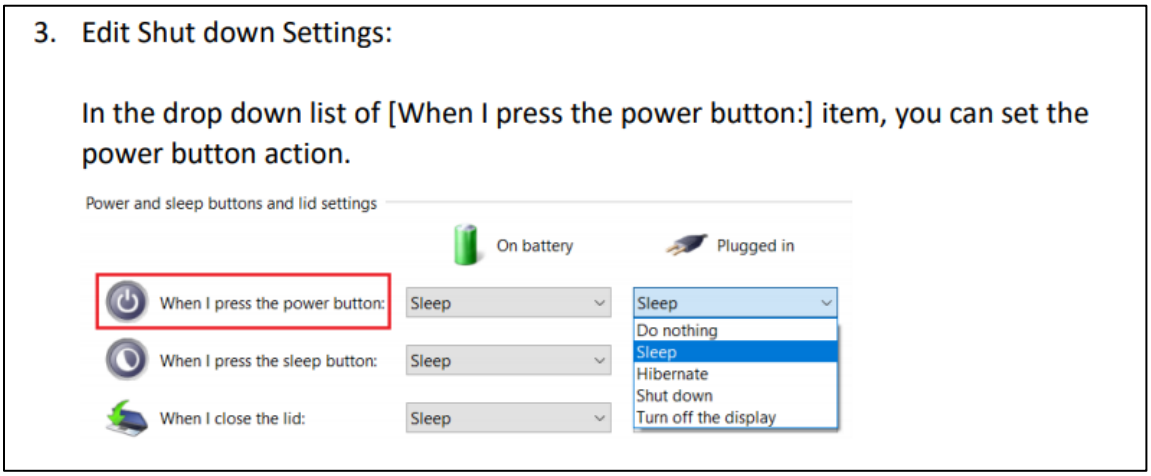

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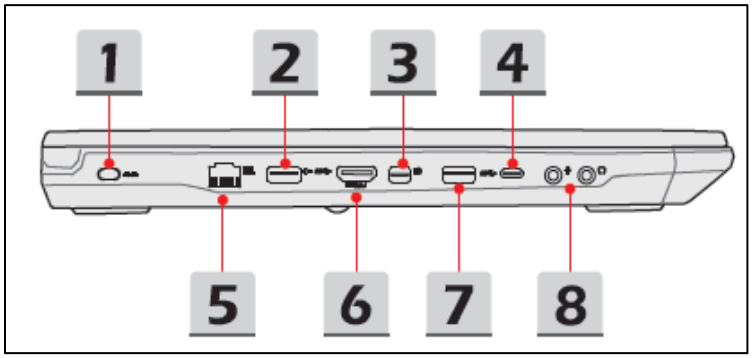

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(Page 2-9)

> **2. USB 3.0 Port/ Super Charger USB Port**
>
> USB 3.0, the SuperSpeed USB, delivers the higher interface speeds for connecting various devices, such as storage devices, hard drives, or video cameras, and offers more advantages over high-speed data transferring.
>
> Super Charger USB port provides faster power charging function for Apple devices when the notebook is in power off mode.

Source: https://download.msi.com/archive/mnu_exe/1795+1794+16J5+16J4_G_English.zip

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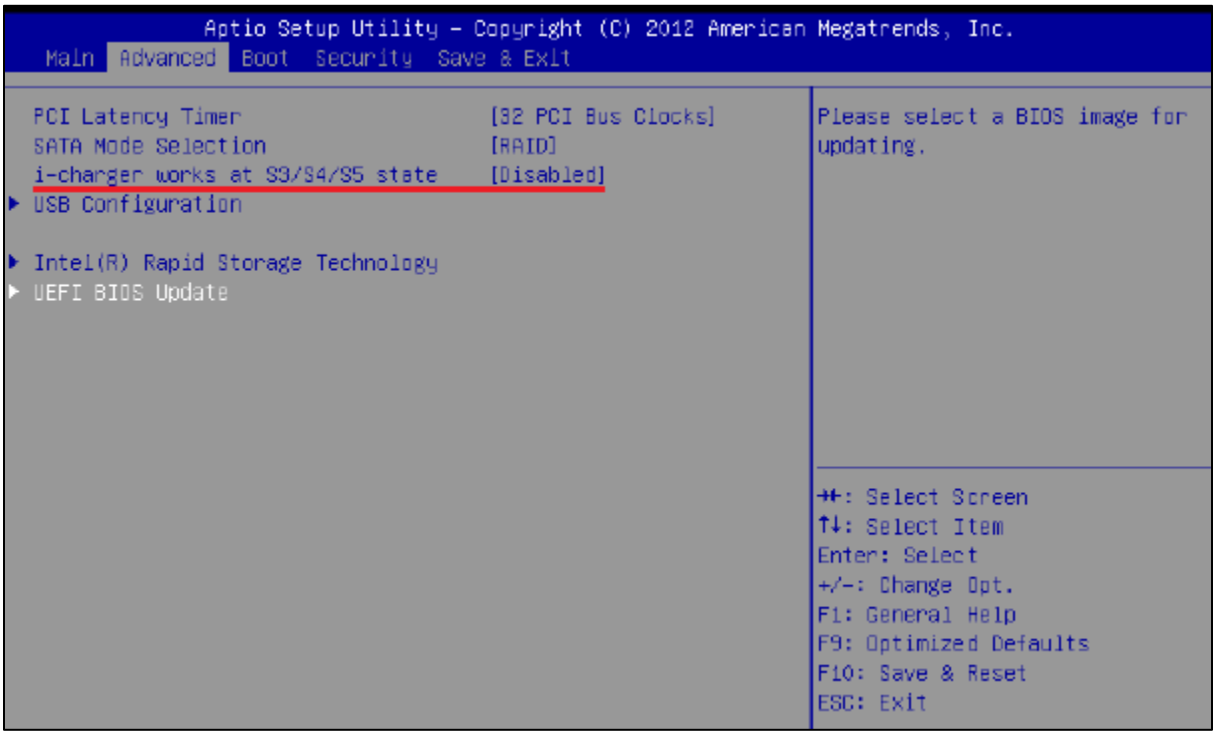

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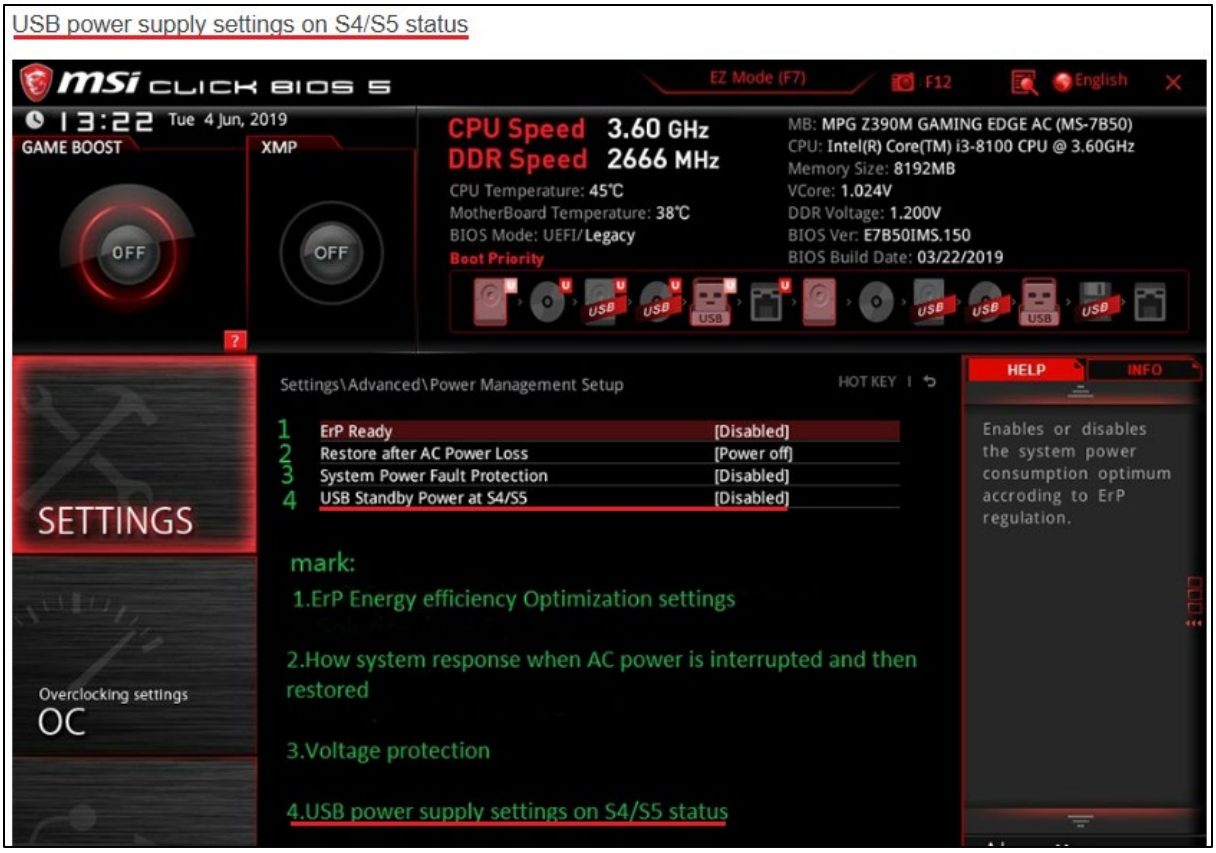

Source: https://www.msi.com/support/technical_details/MB_BIOS_Manual#txt16

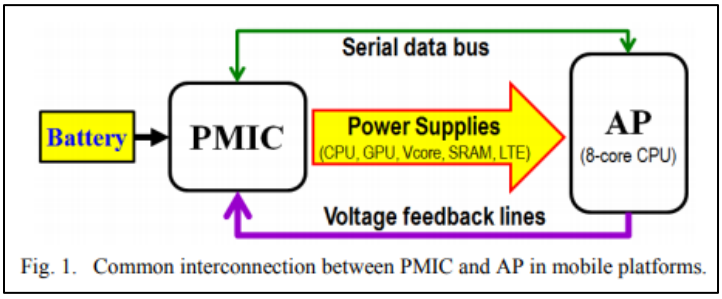

Fig. 1. Common interconnection between PMIC and AP in mobile platforms.

Source: https://ieeexplore.ieee.org/document/7237388

42. MSI has had knowledge of the '573 Patent at least as of the date when it was notified of the filing of this action.

43. Liberty Patents has been damaged as a result of MSI's infringing conduct alleged above. Thus, MSI is liable to Liberty Patents in an amount that adequately compensates it for

such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

44. Liberty Patents and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ’573 Patent.

ADDITIONAL ALLEGATIONS REGARDING INFRINGEMENT

45. MSI has also indirectly infringed the ’959 Patent and the ’573 Patent by inducing others to directly infringe the ’959 Patent and the ’573 Patent. MSI has induced the end-users, MSI’s customers, to directly infringe (literally and/or under the doctrine of equivalents) the ’959 Patent and the ’573 Patent by using the accused products.

46. MSI took active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the accused products in a manner that infringes one or more claims of the patents-in-suit, including, for example, claim 1 of the ’959 Patent and claim 13 of the ’573 Patent.

47. Such steps by MSI included, among other things, advising or directing customers and end-users to use the accused products in an infringing manner; advertising and promoting the use of the accused products in an infringing manner; and/or distributing instructions that guide users to use the accused products in an infringing manner.

48. MSI performed these steps, which constitute induced infringement, with the knowledge of the ’959 Patent and the ’573 Patent and with the knowledge that the induced acts constitute infringement.

49. MSI was and is aware that the normal and customary use of the accused products by MSI's customers would infringe the '959 Patent and the '573 Patent. MSI's inducement is ongoing.

50. MSI has also induced its affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on its or its affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) the '959 Patent and the '573 Patent by importing, selling or offering to sell the accused products, including, for example, Amazon, Best Buy, Fry's Electronics, Micro Center, Office Depot, Staples, Walmart, and others. *See, e.g.*, https://us.msi.com/wheretobuy/main_us/.

51. MSI has a significant role in placing the accused products in the stream of commerce with the expectation and knowledge that they will be purchased by consumers in Texas and elsewhere in the United States.

52. MSI purposefully directs or controls the making of accused products and their shipment to the United States, using established distribution channels, for sale in Texas and elsewhere within the United States.

53. MSI purposefully directs or controls the sale of the accused products into established United States distribution channels, including sales to nationwide retailers. MSI's established United States distribution channels include one or more United States based affiliates (e.g., MSI Computer Corp.).

54. MSI purposefully directs or controls the sale of the accused products online and in nationwide retailers, including for sale in Texas and elsewhere in the United States, and expects and intends that the accused products will be so sold.

55. MSI purposefully places the accused products—whether by itself or through subsidiaries—into an international supply chain, knowing that the accused products will be sold in the United States, including Texas. Therefore, MSI also facilitates the sale of the accused products in Texas.

56. MSI took active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the accused products in a manner that infringes one or more claims of the patents-in-suit, including, for example, claim 1 of the ’959 Patent and claim 13 the ’573 Patent.

57. Such steps by MSI included, among other things, making or selling the accused products outside of the United States for importation into or sale in the United States, or knowing that such importation or sale would occur; and directing, facilitating, or influencing its affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on its or their behalf, to import, sell, or offer to sell the accused products in an infringing manner.

58. MSI performed these steps, which constitute induced infringement, with the knowledge of the ’959 Patent and the ’573 Patent and with the knowledge that the induced acts would constitute infringement.

59. MSI performed such steps in order to profit from the eventual sale of the accused products in the United States.

60. MSI’s inducement is ongoing.

61. MSI has also indirectly infringed by contributing to the infringement of the ’959 Patent and the ’573 Patent. MSI has contributed to the direct infringement of the ’959 Patent and the ’573 Patent by the end-user of the accused products.

62. The accused products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe the ’959 Patent and the ’573 Patent, for example, claim 1 of the ’959 Patent and claim 13 of the ’573 Patent.

63. The special features include, for example, executing computer instructions in an instruction cache used in a manner that infringes the ’959 Patent; and power distribution and power management techniques used in a manner that infringes the ’573 Patent.

64. These special features constitute a material part of the invention of one or more of the claims of the ’959 Patent and the ’573 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

65. MSI’s contributory infringement is ongoing.

66. MSI has had actual knowledge of the ’959 Patent and the ’573 Patent at least as of the date when it was notified of the filing of this action. Since at least that time, MSI has known the scope of the claims of the ’959 Patent and the ’573 Patent; the products that practice the ’959 Patent and the ’573 Patent; and that Liberty Patents is the owner of the ’959 Patent and the ’573 Patent.

67. By the time of trial, MSI will have known and intended (since receiving such notice) that its continued actions would infringe and actively induce and contribute to the infringement of one or more claims of the ’959 Patent and the ’573 Patent.

68. Furthermore, MSI has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Liberty Patents’ patent rights. *See, e.g.*, M. Lemley, “Ignoring Patents,” 2008 Mich. St. L. Rev. 19 (2008).

69. MSI's actions are at least objectively reckless as to the risk of infringing valid patents, and this objective risk was either known or should have been known by MSI. MSI has knowledge of the '959 Patent and the '573 Patent.

70. MSI's customers have infringed the '959 Patent and the '573 Patent, and MSI has encouraged its customers' infringement.

71. MSI's direct and indirect infringement of the '959 Patent and the '573 Patent has been, and/or continues to be willful, intentional, deliberate, and/or in conscious disregard of Liberty Patents' rights under the patents-in-suit.

72. Liberty Patents has been damaged as a result of MSI's infringing conduct alleged above. Thus, MSI is liable to Liberty Patents in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

JURY DEMAND

Liberty Patents hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

Liberty Patents requests that the Court find in its favor and against Defendant MSI, and that the Court grant Liberty Patents the following relief:

a. Judgment that one or more claims of the '959 Patent and the '573 Patent have been infringed, either literally and/or under the doctrine of equivalents, by MSI and/or all others acting in concert therewith;

b. A permanent injunction enjoining MSI and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '959 Patent and the '573 Patent; or, in the alternative, an

award of a reasonable ongoing royalty for future infringement of the '959 Patent and the '573 Patent by such entities;

c. Judgment that MSI account for and pay to Liberty Patents all damages to and costs incurred by Liberty Patents because of MSI's infringing activities and other conduct complained of herein, including an award of all increased damages to which Liberty Patents is entitled under 35 U.S.C. § 284;

d. That Liberty Patents be granted pre-judgment and post-judgment interest on the damages caused by MSI's infringing activities and other conduct complained of herein;

e. That this Court declare this an exceptional case and award Liberty Patents its reasonable attorney's fees and costs in accordance with 35 U.S.C. § 285; and

f. That Liberty Patents be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: September 2, 2020

Respectfully submitted,

/s/ *Zachariah S. Harrington*

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