**Machine Type**

Embedded: FreeBSD makes an excellent platform to build embedded systems upon. With support for the x86 (both 32 and 64 bit), ARM, AArch64, RISC-V, POWER, and PowerPC computers, coupled with a robust network stack, cutting edge features, and the permissive BSD license, FreeBSD makes an excellent foundation for building embedded routers, firewalls, and other devices :-

**x86 or x86-64**: The x86 and x64 architectures refer to the two most widely-used types of instruction set architectures (ISA) created by Intel and AMD. An ISA specifies the behavior of machine code and defines how the software controls the CPU.

[Source](https://phoenixnap.com/kb/x64-vs-x86)

**ARM** : Processors are used extensively in consumer electronic devices such as smartphones, tablets, wearables and other mobile devices.

[Source](https://www.techtarget.com/whatis/definition/ARM-processor#:~:text=Arm%20processors%20are%20used%20extensively,and%20internet%20of%20things%20devices.)

**AArch64**: Is a machine type that refers to the 64-bit ARM architecture. It is an evolution of the ARM architecture designed by ARM Holdings. AArch64 provides a 64-bit instruction set architecture (ISA) and is commonly used in a variety of computing devices, including mobile devices, servers, embedded systems, and IoT devices.

[Source](https://en.wikipedia.org/wiki/AArch64#:~:text=AArch64%20provides%20user%2Dspace%20compatibility,has%20no%2064%2Dbit%20counterpart.)

**RISC-V**: Open-source instruction set architecture used to develop custom processors for a variety of applications, from embedded designs to supercomputers.

[Source](https://www.synopsys.com/glossary/what-is-risc-v.html#:~:text=RISC%2DV%20is%20an%20open,from%20embedded%20designs%20to%20supercomputers.)

**PowerPC**: a RISC (Reduced Instruction Set Computer) architecture which are very powerful and low-cost microprocessors

(Architecture used primarily in IBM's Power Systems servers and some embedded systems.)

[Source](https://www.geeksforgeeks.org/powerpc-architecture/)

Sources :

* **x86 or x86-64 🡪** [**https://phoenixnap.com/kb/x64-vs-x86**](https://phoenixnap.com/kb/x64-vs-x86)
* ARM🡪 <https://www.techtarget.com/whatis/definition/ARM-processor#:~:text=Arm%20processors%20are%20used%20extensively,and%20internet%20of%20things%20devices>.
* **AArch64🡪** [**https://en.wikipedia.org/wiki/AArch64#:~:text=AArch64%20provides%20user%2Dspace%20compatibility,has%20no%2064%2Dbit%20counterpart**](https://en.wikipedia.org/wiki/AArch64#:~:text=AArch64%20provides%20user%2Dspace%20compatibility,has%20no%2064%2Dbit%20counterpart)**.**
* **RISC-V🡪** [**https://www.synopsys.com/glossary/what-is-risc-v.html#:~:text=RISC%2DV%20is%20an%20open,from%20embedded%20designs%20to%20supercomputers**](https://www.synopsys.com/glossary/what-is-risc-v.html#:~:text=RISC%2DV%20is%20an%20open,from%20embedded%20designs%20to%20supercomputers)**.**
* **PowerPC🡪** [**https://www.geeksforgeeks.org/powerpc-architecture/**](https://www.geeksforgeeks.org/powerpc-architecture/)