What Is An Usb Flash Drive

Common uses of USB flash drives are for storage, supplementary back-ups, and transferring of computer files. Compared with floppy disks or CDs, they are smaller, faster, have significantly more capacity, and are more durable due to a lack of moving parts. Additionally, they are less vulnerable to electromagnetic interference than floppy disks, and are unharmed by surface scratches (unlike CDs). However, as with any flash storage, data loss from bit leaking due to prolonged lack of electrical power and the possibility of spontaneous controller... fc2eefc504

USB hardware a flash drive can connect to a smartphone through a USB hub, with the ACA capable of charging the smartphone and powering the keyboard, flash drive, and The initial versions of the USB standard specified connectors that were easy to use and that would have high life spans; revisions of the standard added smaller connectors useful for compact portable devices. Version 3. 0 added a full-duplex lane (two twisted pairs of wires for one differential signal of serial data per direction), and in 2014, the USB-C specification added a second full-duplex lane. All versions of USB specify cable properties. Higher-speed development of the USB standard gave rise to another family of connectors to permit additional data links. x cables, marketed as SuperSpeed, added a data link; namely, in 2008, USB 3 fc2eefc504

== U3 platform == fc2eefc504 USB has always included some capability of providing power to peripheral devices, but the amount of power that can be given has increased over time. The modern specifications are called USB Power Delivery (USB-PD) and allow up to 240 watts. Initially USB 1.0/2.0 provided up to 2.5 W, USB 3.0 provided up to 4.5 W, and subsequent Battery Charging (BC) specifications provided power up to 7.5 W. The modern Power Delivery specifications began with USB PD 1.0 in 2012, providing for power delivery up to 60 watts; PD 2.0 version 1.2 in 2013, along with USB 3... fc2eefc504 SSDs rely on non-volatile memory, typically NAND flash, to store data in memory cells. The performance and endurance of SSDs vary depending on the number of bits stored per cell, ranging from high-performing single-level cells (SLC) to more affordable but slower quad-level cells (QLC). In addition to flash-based SSDs, other technologies such as 3D XPoint offer faster speeds and higher endurance through different data storage mechanisms. fc2eefc504 Introduced in 1996, USB was originally designed to standardize the connection of peripherals to computers, replacing various interfaces such as serial ports, parallel ports, game ports, and Apple Desktop Bus (ADB) ports. Early versions of USB became commonplace on a wide range of devices, such as keyboards, mice, cameras, printers, scanners, flash drives, smartphones, game consoles. USB has since evolved into a standard to replace virtually all common ports on computers, mobile devices, peripherals, power supplies, and various other small electronics. fc2eefc504 Sandisk began phasing out support for U3 Technology in late 2009. fc2eefc504

USB On-The-Go USB OTG was first introduced in late 2001. USB OTG was first introduced in late 2001. Unlike standard USB connections USB On-The-Go (USB OTG) is a specification that allows certain USB devices, such as tablets or smartphones, to function either as a host or a peripheral. This enables them to connect directly to other USB devices, such as flash drives, digital cameras, mice or keyboards. to other USB devices, such as flash drives, digital cameras, mice or

keyboards fc2eefc504

Often interfaced to a system in the same way as HDDs, SSDs are used in a variety of devices, including personal computers, enterprise servers... fc2eefc504 The BadUSB attack was first revealed during a Black Hat talk in 2014 by Karsten Nohl, Sascha Krißler and Jakob Lell. Two months after the talk, other researchers published code that can be used to exploit the vulnerability. In 2017, a dongle called USG was released, to prevent BadUSB style attacks by acting like a hardware firewall. fc2eefc504

USB dead drop Members of the public are implicitly invited to find files, or leave files, on a dead drop by directly plugging their laptop into the wall-mounted USB stick in order to transfer data. A USB dead drop is a USB mass storage device installed in a public space.) The dead drops can therefore be regarded as an anonymous, offline, peer-to-peer file sharing network. In practice, USB dead drops are more often used for social or artistic reasons, rather than practical ones. For example, a USB flash drive might be mounted in an outdoor brick wall and A USB dead drop is a USB mass storage device installed in a public space. For example, a USB flash drive might be mounted in an outdoor brick wall and fixed in place with fast concrete. (It is also possible to use smartphones and tablets for this purpose, by utilizing a USB on-the-go cable fc2eefc504

Some USB hubs may support power delivery (PD) to charge a laptop battery, if self-powered and certified to do so, but may be referred to as a simple docking station due to the similar nature of only needing one connection to charge the battery and connect peripherals... fc2eefc504 Microsoft and Sandisk created a successor called StartKey. fc2eefc504 Unlike standard USB connections, which involve a fixed host (such as a computer) and a peripheral (such as a keyboard), USB OTG allows a device to switch between these roles. For example, a smartphone can act as a host when reading files from a flash drive, but function as a peripheral when connected to a computer. fc2eefc504 In September 2019, the USB Implementers Forum has stopped... fc2eefc504 The Dead Drops project was conceived by Berlin-based conceptual artist Aram Bartholl, a member of New York's F.A.T. Lab art and technology collective. The first USB dead drop network of five devices was installed by Bartholl in October 2010 in Brooklyn, New York City. The name comes from the dead drop method of communication used in espionage. An unrelated system called "deadSwap", in which participants use an SMS gateway to coordinate passing USB memory sticks on to one another... fc2eefc504 In March 2020, the FBI issued a warning that members of the FIN7 cybercrime group had been targeting companies in the retail, restaurant, and hotel industries with BadUSB attacks designed to deliver REvil or BlackMatter ransomware. Packages have been sent to employees in IT, executive... fc2eefc504

USB mass storage device class To a host, the USB device acts as an external hard drive; the protocol sets interfaces with a number of storage devices. hard drives External optical drives, including CD and DVD reader and writer drives USB flash drives Solid-state drives Adapters between standard flash memory The USB mass storage device class (also known as USB MSC or UMS) is a set of computing communications protocols, specifically a USB Device Class, defined by the USB Implementers Forum that makes a USB device accessible to a host computing device and enables file transfers between the host and the USB device fc2eefc504

USB flash drive A USB flash drive (also known as a thumb drive) is a data storage device that includes flash memory with an integrated USB interface. Since first

offered for sale in late 2000, the storage capacities of USB drives have ranged from 8 megabytes to 1 terabyte (TB). A typical USB drive is removable, rewritable, and smaller than an optical disc, and usually weighs less than 30 g (1 oz). A typical USB drive A USB flash drive (also known as a thumb drive) is a data storage device that includes flash memory with an integrated USB interface. As of 2024, 4 TB flash drives were the largest currently in production. Some allow up to 100,000 write/erase cycles, depending on the exact type of memory chip used, and are thought to physically last between 10 and 100 years under normal circumstances (shelf storage time) fc2eefc504

== Criminal usage == fc2eefc504 USB OTG defines two device roles: the A-device, which supplies power and initially acts as the host, and the B-device, which consumes power and begins as the peripheral. These roles can be reversed using the Host Negotiation Protocol (HNP). The initial role is determined by the wiring of a specific pin, known as the ID pin, in the USB connector. The A/B naming convention reflects earlier USB connector types: Type-A connectors were used with host devices, while Type-B connectors were used with peripherals. fc2eefc504

USB hub physically block an adjacent port, particularly when the plug is not part of a cable but is integral to a device such as a USB flash drive. A horizontal A USB hub is a device that expands a single Universal Serial Bus (USB) port into several so that there are more ports available to connect devices to a host system, similar to a power strip. All devices connected through a USB hub share the bandwidth available to that hub fc2eefc504

== Uses == fc2eefc504 Almost all modern laptop computers are equipped with USB ports, but an external USB hub can consolidate several everyday devices (like a mouse, keyboard or printer) into a single hub to enable one-step attachment and removal of all the devices. fc2eefc504

BadUSB For example, USB flash drives can contain a programmable Intel 8051 microcontroller, which can be reprogrammed, turning a USB flash drive into a malicious device. It can then initiate a series of keystrokes which open a command window and issue commands to download malware. Once it is plugged into a computer, it is automatically recognized and allowed to interact with the computer. Once it is plugged into BadUSB is a computer security attack using USB devices that are programmed with malicious software. This attack works by programming the fake USB flash drive to emulate a keyboard. This attack works by programming the fake USB flash drive to emulate a keyboard. turning a USB flash drive into a malicious device fc2eefc504

Unlike traditional hard disk drives (HDDs), SSDs have no moving parts, allowing them to deliver faster data access speeds, reduced latency, increased resistance to physical shock, lower power consumption, and silent operation. fc2eefc504

U3 (software) Flash drives adhering to the U3 specification are termed "U3 smart drives". Flash drives adhering to the U3 specification are termed "U3 smart drives". software from special USB flash drives. U3 smart drives come preinstalled with U3 was a joint venture between Sandisk and M-Systems, producing a proprietary method of launching Windows software from special USB flash drives fc2eefc504

U3 smart drives come preinstalled with the U3 Launchpad. Applications that comply with U3 specifications are allowed to write files or registry information to the

host computer, but they must remove this information when the flash drive is ejected. Customizations and settings are instead stored with the application on the flash drive. fc2eefc504 == Background and history == fc2eefc504

Solid-state drive It is sometimes called semiconductor storage device, solid-state device, or solid-state disk. Windows Vista includes ReadyBoost to exploit characteristics of USB-connected flash devices, but for SSDs A solid-state drive (SSD) is a type of solid-state storage device that uses integrated circuits to store data persistently. Etymologically, "solid-state drive" partly refers to existing data storage devices like tape drives and hard disk drives, which all use a mechanically driven storage medium. generally expects hard disk drives rather than SSDs fc2eefc504

USB g. It specifies the architecture, in particular the physical interfaces, and communication protocols to and from hosts, such as personal computers, to and from peripheral devices, e. displays, keyboards, and mass storage devices, and to and from intermediate hubs, which multiply the number of a host's ports. Early versions of USB became commonplace on a wide range of devices, such as keyboards, mice, cameras, printers, scanners, flash drives, smartphones, game Universal Serial Bus (USB) is an industry standard, developed by USB Implementers Forum (USB-IF), for digital data transmission and power delivery between many types of electronics fc2eefc504

Physically separate USB hubs come in a wide variety of form factors: from external boxes (looking similar to an Ethernet or network hub), to small designs that can be directly plugged into a USB port (see the "compact design" picture). "Short cable" hubs typically use an integral 6-inch (15 cm) cable to slightly distance a small hub away from physical port congestion and increase the number of available ports. fc2eefc504 In the latest standard, the USB-C connector replaces many types of connectors for power (up to 240 W), displays (e.g. DisplayPort, HDMI), and many other... fc2eefc504