Kensington®

The New USB-C Standard and How to Select a Matching Docking Station

WHITE PAPER

What is "USB-C?" USB-C, the latest USB standard, is attracting attention from all over the technology industry, as it carries significant improvements from all previous versions of connectivity technologies.

The most significant improvement for USB-C over traditional USB comes from the more compact and reversible connector. No longer will users get frustrated with cables that won't plug in without seemingly having to turn the connector over at least once. The smaller dimensions also make it possible for device manufacturers to make laptops as slim as possible when designing new machines.

The improvements continue with an all-in-one power, data and video connection that reduces port and cable clutter. A single USB-C connection can support video up to 4K (Ultra HD) resolution, audio, and up to 100W of power delivery, while improving the USB data bandwidth up to 10Gbps, which is two times faster than USB 3.0, or 20 times faster than USB 2.0.

Why is USB-C an ideal technology for docking?

Several key features of USB-C have made it the perfect technology for the newest docking stations. Unlike USB 3.0 docking stations, the Plug & Play nature of USB-C eliminates the need for a separate software driver. IT administrators no longer need to deploy drivers to every user in their deployment base. This greatly reduces setup time for each workstation, as well as the ongoing support time for the software driver of the docking stations.

Since USB-C is an industry standard, it can be implemented universally across different PC brands and operating systems. A single docking station can be used for every laptop, rather than being forced to use OEM-specific options, or splitting docking stations between Windows and Mac OS users.

Using only one cable allows the user to connect to a wide range of peripherals, while keeping the laptop charged if it's designed for Power Delivery. This setup is perfect for business users who are constantly moving around the office, or even share a common space with multiple employees. The users don't have to plug and unplug multiple cables for each time when coming back to their workstation, which reduces hassle and inconvenience along with saving time.

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Hurdles for an IT administrator in selecting a USB-C dock

USB-C, while promising in its functionality, unfortunately comes in many different configurations behind the seemingly equal connector. If the incorrect combination of host device and docking station is selected, it may not work with all the peripherals or could fail to deliver key performance features. This is typical of any new technology with a learning curve, and it usually takes a few years for the industry to adapt and get comfortable. IT administrators will need to fully understand what the USB-C port on the host PC is capable of and make informed decisions before selecting the docking stations they want to deploy to their workforce in order to guarantee the host device and docking station will work in seamless harmony.

Data Speeds—Behind the seemingly equal USB-C connector on a PC or mobile device, the data-transfer rates may vary greatly from a USB 2.0 speed (480Mbps), to Thunderbolt 3 speed (40Gbps). This speed can play a critical role for users, so it's important to pay close attention to what the PC and the dock are supporting.

Power—Power delivery specifications range between 5W (Profile 1) to 100W (Profile 5) and is not a required feature to implement. So, if a device does not support power delivery, and is plugged into a dock that offers PD, the device will not be able to charge via the USB-C connection.

Video—USB-C supports video through the alternate (Alt) mode, where it allows a video signal to "borrow" USB-C connector pins for video transmission. There are a few different versions of Alt mode in the market. The most popular option is DisplayPort, and the much less popular option is MHL, or Mobile High-Definition Link. Alt mode with HDMI was just introduced and it may take some time before it's widely implemented. Intel's Thunderbolt 3 is also considered as an Alt mode to USB-C and has the valued benefit of being backwards compatible (when it is designed into a PC) with DisplayPort Alt. Mode, as well as the other features of USB-C.

Video drives everything from business productivity to the user experience. Be sure to know what video alt mode is supported on the host devices being deployed, or if it's supported at all, before making a decision on the docking stations to be used with them.

What are the important things to watch for in a USB-C docking station?

When considering which USB-C docking station is the ideal fit for an organisation, it requires careful consideration so that the buyer invests in the product best suited to their current and future needs. Just like any other technology product they invest in, IT professionals must have a deep understanding of the future potential for that product because the market is capable of changing in an instant.

One of the easier and most cost-effective transitions IT administrators can make is implementing a solution with universal compatibility across PC brands and operating systems to get the most out of the USB-C docking station. This will reduce the number of docking station models an organisation would have to support and makes each dock future-ready for any new device roll-out. Ideally, the dock should work seamlessly across Windows, Mac OS and Chrome OS so different types of devices can be connected, whether it be a laptop, 2-in-1 convertible, or tablet.

Office vs. Mobile—The needs of someone using a USB-C dock solely at their desk are far different from a road warrior who is constantly plugging in and out at a customer's facility. The key differences in these working environments contributes to a decision on choosing the best model. The office worker won't mind a slightly heavier and larger dock, especially if there is added functionality involved. They have more peripherals to work with, so they appreciate a plentiful number of ports on the dock.

The travel-heavy staff members, on the other hand, may want a second dock as small and light as possible. They only need the bare basics to get by when they're out in the field. They want travel-specific tweaks such as a cord that stores within the unit and the right amount of ports to do the job. When sales reps go to client sites for a presentation, they don't have time to call IT if something goes wrong. User-friendly docking stations save the day, and possibly the account, every time.

ROI—How much money does an organisation spend on technology that later becomes outdated and obsolete? The return on investment for the USB-C dock can be extended by choosing a model with upgradeable firmware. When new technology makes its way into the market, a firmware upgrade keeps the devices on the leading edge of new developments. The next time a new purchase order for the latest laptop models is needed, IT administrators can skip the docking station because the units in place would be ready to support the new PCs. That is one less thing for administrators to put on the IT department's budget.

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Security and Support—Too many companies put all of their effort and resources into the pre-sales process. The representatives promise the moon and the stars, but IT administrators find it impossible to reach out to the vendor once the order is delivered. Look for industry-leading support through multiple channels, such as phone, email and the website. The customer-support team should be knowledgeable about the problems, sympathetic to IT concerns and empowered to make everything right. A great warranty also streamlines the process of dealing with defective units and similar problems.

Laptops can prove to be a tempting target for criminals, whether they want to resell the stolen device or look for valuable data on its drives. USB-C docks with a Kensington Security Slot help you enhance your physical safety measures for end users. Kensington is the industry leader for security features.

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Good build quality also helps IT professionals get the most out of investment since they will not need to send back defective and broken units on a regular basis. No company is immune from a dead-on-arrival product here or there, but a mass return of docking stations can be avoided by going with a reputable, highly experienced leader in the industry.

Can the USB-C dock manufacturer keep up with your deployment requirements? Avoid production delays by going with a well-established company capable of meeting high-volume needs. IT administrators do not have to worry about whether the purchased docking stations would be received in a timely fashion to avoid delays in the overall deployment. Scalable manufacturers, such as Kensington, keep up with the requirements so that the IT administrators can focus on more important things.

Space & Productivity—More screen space is proven to significantly improve employee productivity. This includes replacing existing smaller monitors with larger ones, or simply add more screens to the current setup. Kensington's comprehensive lineup of docking solutions provides users with a straightforward, easy-to-use solution for the additional screen needs. USB-C encourages adoption and reduces setup time since users would only be working with a single cable for both docking and power. The IT department also spends less time walking users through the setup process, which allows IT to focus resources on higher-priority tasks.

Kensington has a Zero Footprint mount capable of attaching to 75mm or 100mm VESA-compatible monitors. Valuable desk space is saved and clutter is reduced for the desk users to be more productive.

Does the current deployment base already have Thunderbolt 3 devices deployed in the organisation? Kensington's USB-C docks also support Thunderbolt 3 host laptops, so you can start using this solution right away.

The USB-C connector takes care of several universal docking station needs, and users could benefit from other ports. Additional USB Type-A ports serve as convenient connections to legacy equipment such as keyboards, mice, printers, and external hard-drives, while a Gigabit Ethernet port gives desk users a solid and secured network connection.

Summary

The USB-C's robust feature set makes it the perfect choice for docking stations. You remove cable clutter, gain a reversible connector, 4K video support, and charge the laptops, all in one simple connection.

While USB-C is a relatively new standard, you must start thinking about your docking station future. This device has a significant impact on the quality of life for your laptop users, and a docking station failure could cost the organisation in poor productivity and user frustration. Choose Kensington, the professionals' choice, when you need a solution that works right out of the box.

The Professionals' Choice™

Kensington