

Coming soon: 16K video over USB-C

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USB4 will fully support the latest implementation of DisplayPort 2's warp-speed standards.

VESA announced last week that it is implementing a new DisplayPort Alt Mode 2.0 standard that will maximize performance over USB4

pathways boasting 40 Gbps speeds. In fact, Alt Mode 2.0 will allow [video](#) signals to travel at twice the 40 Gbps rate. That's because DisplayPort, which is generally used for one-directional video—PC to a monitor, can be configured to utilize pathways that are normally divided between send and receive transmissions, and instead use them as one-way send only. This doubles the number of lanes available, allowing DisplayPort 2.0 to achieve 80 Gbps speeds.

DisplayPort 2 supports video resolutions of 8K, 10K and 16K with 60 Hz refresh rates, double the resolution and bandwidth of previous DisplayPort standards. With a data transfer rate of 77.37 Gbps, users specializing in [video production](#) and virtual reality gaming will see vast improvement in resolution and speed.

Other enthusiasts taking advantage of lower video monitor prices by configuring multi-monitor setups will also benefit from the new protocol. The Alt Mode 2.0 standard enables powering up to three 10K monitors.

VESA says Alt Mode 2.0 won't require new cables; it will support regular USB4 cables.

As such, since the new mode also supports Thunderbolt 3 protocols, it is expected that USB4 will become a universal connection standard, supporting activities such as docking, gaming, AR/VR HMDs and professional HDR displays, according to VESA. It is poised to replace numerous older-style ports on popular digital devices for peripherals such as printers, power cables, earphones and external displays.

DisplayPort relies on the popular powerful USB Type-C connector, which won fans by embracing "flippability," the ability to be inserted into a socket normally or upside down.

According to VESA Board Vice Chairman Syed Athar Hussain, "USB Type-C is becoming the connector of choice in notebooks and mobile solutions. With the new DisplayPort Alt Mode 2.0 specification, USB Type-C now delivers compelling single-connector solutions for... professional HDR displays that combine 80Gbps of video bandwidth and other important features of DisplayPort 2.0 with the transport of USB data and power delivery."

VESA, formerly known as Video Electronics Standards Association, is the industry group that establishes video display standards. It created the new DisplayPort 2.0 specs alongside the USB Implementers Forum, which oversees USB protocols. The DisplayPort 2.0 implementation is set to begin sometime next year.

More information: vesa.org/featured-articles/vesa-introduces-displayport-2.0-specification

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