

Industry-First 20Gbps DisplayPort 2.0/HDMI 2.1, 4-Channel, 2 to 1/1 to 2 Mux/Demux

The PI3WVR14412 is the industry-first 20Gbps, 4-channel, 2 to 1/1 to 2 mux/demux, supporting DisplayPort™ 2.0 and HDMI 2.1 protocols.

The device is used in mobile workstations, game consoles, notebook computers, monitors, TVs, set-top boxes, and docking applications where routing of DisplayPort or HDMI® signals are needed.

The PI3WVR14412 can pass wide voltage input signals, thus enabling direct coupling of either the zero-volt biased DisplayPort or the supply voltage biased HDMI.

The chip supports multiplexing of auxiliary/DDC sideband signals along with Hot Plug Detection (HPD) signals, thus saving external components.

The PI3WVR14412 has excellent signal integrity performance, including very low insertion loss, return loss, crosstalk, and off isolation.

The PI3WVR14412 works over an extended temperature range of 0°C~105°C. The device comes in the space-saving 40-pin TQFN 3 x 6 mm package.

DisplayPort™ is a trademark owned by the Video Electronics Standards Association (VESA®).

HDMI®, High-Definition Multimedia Interface®, and the **HDMI®** logo are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and/or other countries



The Diodes Advantage

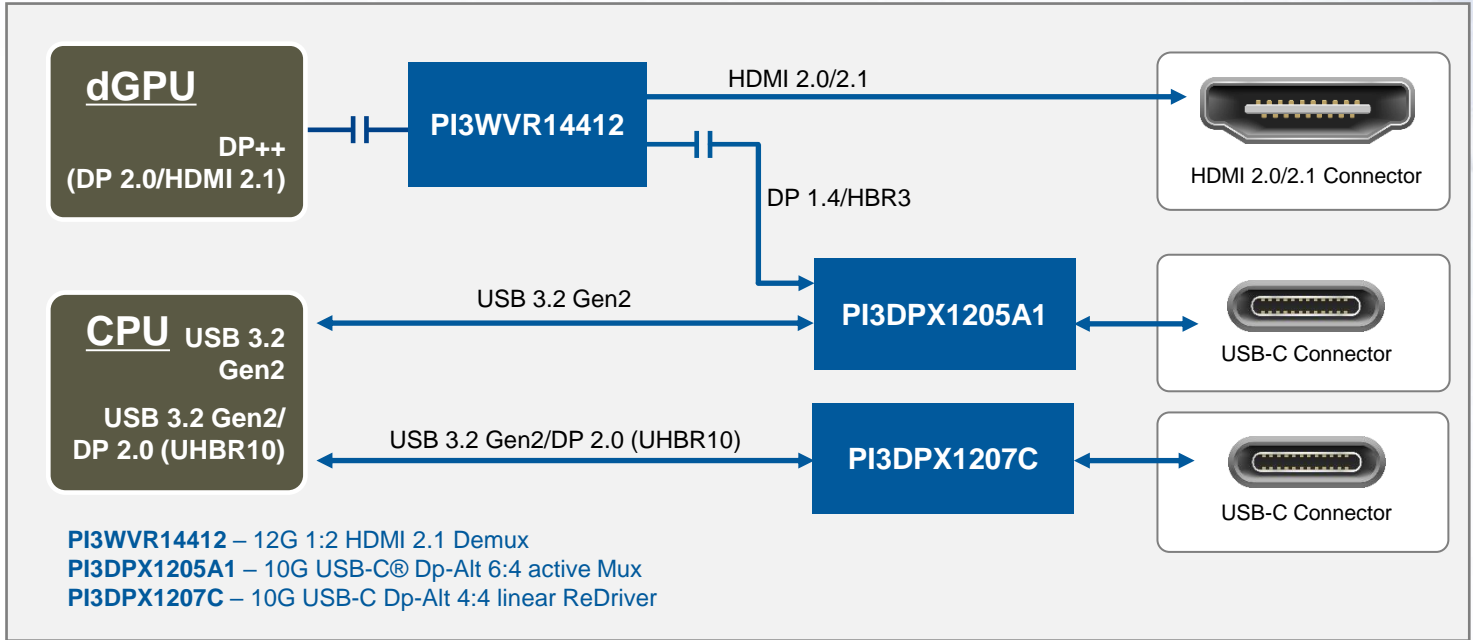
- **Supports routing of DisplayPort 2.0 (20Gbps) and HDMI 2.1 (12Gbps)**
Enables usage in routing of 4K/8K high-definition video signals
- **Excellent signal integrity parameters**
Excellent signal fidelity for up to 20Gbps data rate
- **Space-saving small package**
3 x 6 mm 40-pin TQFN package
- **AUX/DDC and HPD mux**
3Ghz~3dB BW of AUX/DDC mux providing for 720Mbps sideband communication channel

Application(s)

- Notebook PCs
- Monitors
- Docking
- TVs
- Set-top boxes
- Game consoles



Typical Application Circuit



USB-C® is a registered trademark of the USB Implementers Forum.

Product Portfolio

Part Number	Operation Voltage	Channels	Data Rate (Gbps)	Lanes/Ports	Output Swing Max (mV)	Operation Temperature	Packages
PI3WVR14412	3.3V	4	20	4	1.2V	0°C~105°C	40-pin TQFN

Further Information

<https://www.diodes.com/part/PI3WVR14412>

Ordering Information

Ordering Number	Package Code	Package Description
PI3WVR14412ZLCEX	ZLC	40-pin Thin Quad Flat No-Lead (X2QFN) (3 x 6 mm x 0.75mm, 0.4mm pitch)