

Mixel MIPI C-PHY/D-PHY Combo IP integrated into Synaptics VXR7200 IC enabling next generation VR headsets

C-PHY adoption accelerating beyond Camera and into Display applications

San Jose, CA – October 11th, 2018 - [Mixel](#)[®] Inc., a leader in mixed-signal intellectual property (IP), and Synaptics Incorporated, a leading developer of human interface solutions, today announced that [Mixel MIPI[®] IP](#) has been successfully integrated into Synaptics' [VXR7200](#) DisplayPort to Dual MIPI VR Bridge IC.

The VXR7200 VR Bridge, which is now going to production, is a connectivity solution for tethered USB Type-C cables deploying full VESA DP1.4 bandwidth. It is optimized for VR, AR, and MR dual displays headsets with resolutions up to 3Kx3K running at 120Hz with DSC compression to achieve best-in-class [HMD](#) user experience.

Mixel provided Synaptics with the MIPI [C-PHY/D-PHY Combo](#) solution, and the company achieved first-time silicon success supporting full-production-readiness. The MIPI-TX solution is comprised of 2 IP products delivered fully validated and integrated, namely: MIPI C-PHY/D-PHY Combo Transmitter and a MIPI DSI-2 Host Controller Core. The DSI-2 Controller IP is developed by Northwest Logic, an active participant in [Mixel's MIPI Central Ecosystem Partnership Program](#), which brings together best-of-class MIPI ecosystem stakeholders.

The D-PHY link can operate as 1 to 4 lanes, each running at 2.5Gbps and the C-PHY link can operate as 1 to 3 lanes, each running at up to 2.5 Gbps, which is equivalent to 5.7Gbps. The IP supports a maximum aggregate bandwidth of 10 Gbps in D-PHY mode and 17.1 Gbps in C-PHY mode. The combo PHY IP not only shares the serial interface pins, but Mixel's implementation also reuses all the MIPI D-PHY functional blocks for the MIPI C-PHY, minimizing area and leakage power.

"Mixel differentiated MIPI IP offering along with their leadership position in the MIPI IP market, played a key role during the selection of our MIPI IP provider," said Jeff Lukanc, Senior Director, interface solutions at Synaptics. "We were not only impressed with Mixel's unique MIPI solution, but also with the outstanding support throughout the product development and bring-up phases. We're looking forward to a long-term collaboration with Mixel" he added.

Mixel's MIPI PHY IPs have been silicon-proven at eight different nodes and eight foundries, giving Mixel has the widest coverage in the industry.

"We are delighted to see Mixel C-PHY/D-PHY dual-mode IP integrated into Synaptics ground breaking product targeting state of the art VR display applications," said Ashraf Takla, Mixel's

President and CEO. “It is now clear that C-PHY adoption is accelerating beyond camera and into display applications, which bodes well for Mixel’s continued leadership in that segment.”

Mixel will be demonstrating many of its own and its customers’ products at the MIPI Alliance’s [MIPI DevCon Seoul](#), October 19th, in Seoul, Korea, where Mixel and Synaptics will be detailing their solution in a [co-presentation](#) titled “Dual Mode C-PHY/D-PHY Use in VR Display IC.”

For more information contact:

Mixel, Inc.

Kim Bailey
(408) 436-8500 x117
marketing@mixel.com
www.mixel.com

Northwest Logic

Joe Rodriguez
(503) 533-5800 x310
info@nwlogic.com
www.nwlogic.com

About Mixel[®]:

Mixel is a leading provider of mixed-signal IPs and offers a wide portfolio of high-performance mixed-signal connectivity IP solutions. Mixel’s mixed-signal portfolio includes PHYs and SerDes, such as [MIPI[®] D-PHYSM](#), [M-PHY[®]](#), [C-PHYSM](#), [LVDS](#), and many [dual mode PHY](#) supporting multiple standards. Mixel was founded in 1998 and is headquartered in San Jose, CA, with global operation to support a worldwide customer base. For more information contact Mixel at info@mixel.com or visit www.mixel.com. You can also follow us via [LinkedIn](#), [Twitter](#), [Google+](#) or [YouTube](#).

About Northwest Logic:

[Northwest Logic](#), founded in 1995 and located in Beaverton, Oregon, provides high-performance, silicon-proven, easy-to-use IP cores including high-performance [Memory Interface Solution](#) (HBM2, GDDR6, DDR4/3, LPDDR4), [Espresso Solution](#) (PCI Express 4.0/3.0/2.1/1.1 cores and drivers including DMA support), and [MIPI Solution](#) (MIPI CSI-2SM, MIPI DSI-2SM/DSISM). These solutions support a full range of platforms including ASICs and FPGAs. For additional information, visit www.nwlogic.com or contact info@nwlogic.com.

About MIPI Alliance

MIPI Alliance (MIPI) develops interface specifications for mobile and mobile-influenced industries. There is at least one MIPI specification in every smartphone manufactured today. Founded in 2003, the organization is celebrating its 15th year of moving mobile forward with over 300 member companies worldwide and 14 active working groups delivering specifications within the mobile ecosystem. Members of the organization include handset manufacturers,



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device OEMs, software providers, semiconductor companies, application processor developers, IP tool providers, test and test equipment companies, as well as camera, tablet and laptop manufacturers. For more information, please visit www.mipi.org.

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