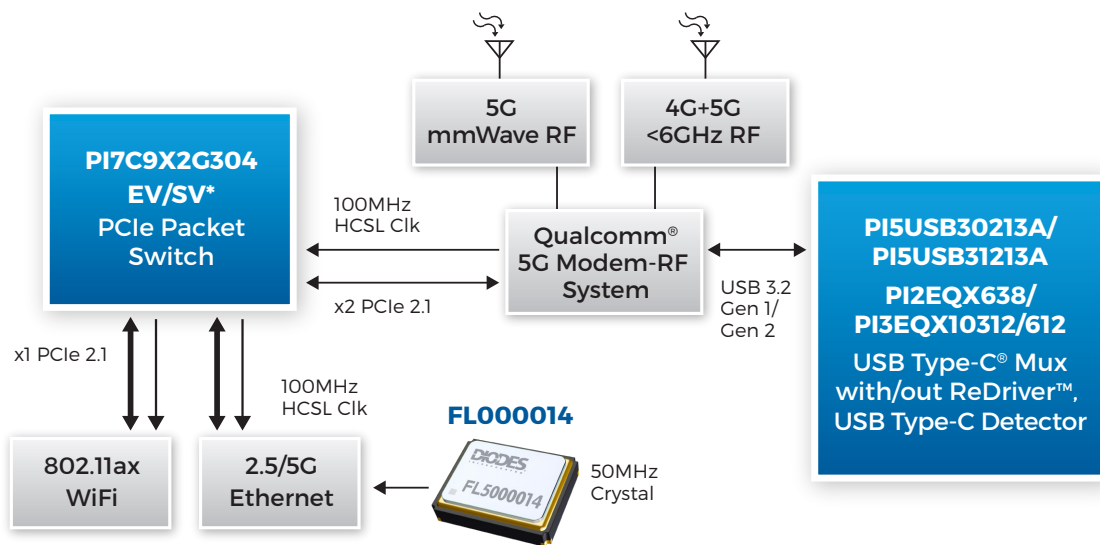


Simple Serial Connectivity and Timing Solutions for 5G Router/CPE/FWA/MiFi

PCIe® Packet Switch, Crystal, USB Muxes, USB Type-C® Controller



* Contact your local Diodes sales office for PCIe 3.1 packet switch

THE DIODES ADVANTAGE

PCIe 2.1 3-Ports/4-Lanes Packet Switch

- Proven to work with Qualcomm 5G broadband SoC
SoC utilizes PI7C9X2G304EV to enable required multiple PCIe endpoint functions (EPs)
- PI7C9X2G304EV/ PI7C9X2G304SV are low power, I-temp, high performance
Cost-effective solution for 5G router (MiFi) and indoor/outdoor CPE/ FWA
- PI7C9X2G404EV/ PI7C9X2G404SV are 4-port/ 4-lane PCIe 2.0 variants
Supports connection to more EPs (x1 up to 3 x1 down)

Low Jitter 50MHz Crystal

- High-precision, 50MHz crystal FL5000014
Cost-effective solution for Ethernet applications



USB Type-C Mux/DeMux ReDrivers with/out Detector and VCONN

- Independent configuration of receiver equalization, output swing, and flat gain
Extends PCB trace lengths while minimizing cost and power, and reducing signal latency

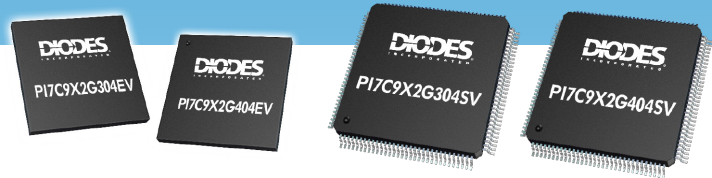
Dual-Role USB Type-C Controller with Mux and VCONN Switch

- Highly integrated PI5USB3x213A - USB Type-C controller, USB 3.2 Gen1 mux, and VCONN switch
Cost-effective USB Type-C enabler with small PCB real estate of 2mm x 4mm

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Key Products



PCIe 2.1 Packet Switches

Part Number	Port/Lane	Configuration	Integrated Clock Buffer	Power (5Gbps typ)	Standby Power (L1.1 D3 hot)	Package	Latency (typ.)	Advanced Power Saving	Ambient Temperature	Signal Integrity	ACS/Peer-to-Peer Support	DPC	LTR/OBFF Support
PI7C9X2G304EV	3-Port, 4-Lane	1x1 (x2) Up 2x1 Down	Yes	0.3W ^Λ	0.035W ^Λ	aQFN136 (ZXA136 - 10mm x 10mm x 0.8mm)	150ns	Yes	-40°C ~ +85°C	Programmable	Yes	Yes	Yes
PI7C9X2G404EV	4-Port, 4-Lane	1x1 Up 3x1 Down	Yes	0.3W ^Λ	0.035W ^Λ	aQFN136 (ZXA136 - 10mm x 10mm x 0.8mm)	150ns	Yes	-40°C ~ +85°C	Programmable	Yes	Yes	Yes
PI7C9X2G304SV	3-Port, 4-Lane	1x1 (x2) Up 2x1 Down	Yes	0.3W ^Λ	0.035W ^Λ	LQFP128 (FDE128 - 14mm x 14mm x 1.6mm)	150ns	Yes	-40°C ~ +85°C	Programmable	Yes	Yes	Yes
PI7C9X2G404SV	4-Port, 4-Lane	1x1 Up 3x1 Down	Yes	0.3W ^Λ	0.035W ^Λ	LQFP128 (FDE128 - 14mm x 14mm x 1.6mm)	150ns	Yes	-40°C ~ +85°C	Programmable	Yes	Yes	Yes

^Λ: Power consumed includes clock buffer * Contact your local Diodes sales office for PCIe 3.1 packet switch

Crystal

Part Number	Description	CL	F	Temp	Stability	Package
FL5000014	Seam Sealed SMD	18pF	50MHz	-20°C to 70°C	20ppm	4-pad 3.2mm x 2.5mm x 0.65mm

USB Type-C Port Controllers

Part Number	Description	USB 3.2 Gen	Data Rate Gbps	IDD		IDevice Standby	IDual Standby	IHost Standby	Package
				Active Device	Active Host				
PI5USB30213A	USB Type-C Port Controller with USB 3.2 Mux and VCONN	1	5	200µA	280µA	45µA	55µA	65µA	X1-QFN4020-24 (AKA X1QFN24 XEA24 - 4mm x 2mm x 0.5mm)
PI5USB31213A		2	10	200µA	280µA	45µA	55µA	65µA	



USB 3.2 ReDrivers

Part Number	Description	Data Rate	Lanes/Ports	Output Swing Max	Programming Interfaces	Package
		Gbps		mV		
PI3EQX10312	USB 3.2 Gen 2, Mux/Demux ReDriver, with USB-C Detector, VCONN	10	2/2	1200	I2C/Pin Strap	TQFN42 (ZH42 - 3.5mm x 9mm x 0.8mm)
PI3EQX10612	USB 3.2 Gen 2, Mux/Demux ReDriver	10	2/2	1200	I2C/Pin Strap	TQFN40 (ZLC40 - 3.5mm x 9mm x 0.8mm)
PI2EQX638	USB 3.2 Gen 1, Mux/DeMux ReDriver	5	1/2	1100	Pin Strap	X2QFN18 (XUB18 - 2mm x 2mm x 0.35mm)

