

HighPoint Rocket 1604L Compatibility List

2026/2/27

This document was designed to serve as general reference for compatibility between the HighPoint Rocket 1604L Gen5 NVMe Switch AIC and specific motherboards's described herein.

The motherboards included in this document are recommended for HighPoint Rocket 1604L x16 PCIE5.0 configurations. Specific motherboards may have special requirements or restrictions. Please refer to the motherboard's PCIe Expansion slot settings.

Note: *Bifurcation is required. The motherboard must be configured to PCIe Bifurcation mode to work with the R1604L.*

Motherboard Compatibility List

Notes:

The recommended PCIe slot we filled in are based on the description of the motherboard manual.

The maximum number of supported M.2 SSDs is dependent on the specific CPU model.

- Intel Chipset

Intel Chipset	Model & CPU	Recommended PCIe Slot	PCIe bifurcation in PCIe slot
			M.2 SSD quantity
Intel C621A	Model: Supermicro X12DPi-N6 CPU: Intel® Xeon® Silver 4314*2	CPU1 SLOT1 PCIe4.0x8	2(x4+x4)
		CPU1 SLOT2 PCIe4.0x16	4(x4+x4+x4+x4)
		CPU1 SLOT3 PCIe4.0x16	4(x4+x4+x4+x4)
		CPU2 SLOT4 PCIe4.0x16	4(x4+x4+x4+x4)
		CPU2 SLOT5 PCIe4.0x16	4(x4+x4+x4+x4)
		CPU2 SLOT6 PCIe4.0x8	2(x4+x4)
Intel® Xeon® 6511P	Model: Supermicro X14SBI-F CPU: Intel® Xeon® 6511P	CPU SLOT1 PCIe5.0X16	4(x4+x4+x4+x4)
		CPU SLOT2 PCIe5.0X8	2(x4+x4)
		CPU SLOT3 PCIe5.0X16	4(x4+x4+x4+x4)
		CPU SLOT4 PCIe5.0X8	2(x4+x4)
		CPU SLOT5 PCIe5.0X8	2(x4+x4)
		CPU SLOT6 PCIe5.0X16	4(x4+x4+x4+x4)
Intel Z890	Model: ASUS PRIME Z890-P WIFI CPU: Intel Core Ultra 9 285K	PCIEX16(G5)	3(x8+x4+x4)
	Model: GIGABYTE Z890M AORUS ELITE WIFI7 CPU: Intel Core Ultra 9 285K	PCIEX16	3(x8+x4+x4)

Intel W790	Model: ASUS Pro WS W790E-SAGE SE CPU: Intel Xeon w5-3535X	PCIEX16(G5)_1	4(x4+x4+x4+x4)
		PCIEX16(G5)_2	4(x4+x4+x4+x4)
		PCIEX16(G5)_3	4(x4+x4+x4+x4)
		PCIEX16(G5)_4	4(x4+x4+x4+x4)
		PCIEX16(G5)_5	4(x4+x4+x4+x4)
		PCIEX16(G5)_6	2(x4+x4)
		PCIEX16(G5)_7	4(x4+x4+x4+x4)
Intel C741	Model: Supermicro X13SEI-TF CPU: Intel Xeon silver 4510 Processor	CPU SLOT1 PCIe5.0X8	2(x4+x4)
		CPU SLOT2 PCIe5.0X8	2(x4+x4)
		CPU SLOT4 PCIe5.0X16	4(x4+x4+x4+x4)
		CPU SLOT6 PCIe5.0X16	4(x4+x4+x4+x4)
		CPU SLOT7 PCIe5.0X8	2(x4+x4)
	Model: GIGABYTE MS03-6L0 CPU: Intel Xeon silver 4410Y	PCIE_2	4(x4+x4+x4+x4)
		PCIE_3	4(x4+x4+x4+x4)
		PCIE_4	4(x4+x4+x4+x4)
		PCIE_5	4(x4+x4+x4+x4)
		PCIE_6	4(x4+x4+x4+x4)
	Model: Supermicro SYS-741GE-TNRT CPU: Intel Xeon silver 4410Y	P1 Slot2 PCIe 5.0x16	4(x4+x4+x4+x4)
		P1 Slot4 PCIe 5.0x16	4(x4+x4+x4+x4)
		P2 Slot5 PCIe 5.0x16	4(x4+x4+x4+x4)
		P2 Slot7 PCIe 5.0x16	4(x4+x4+x4+x4)
		P2 Slot9 PCIe 5.0x16	4(x4+x4+x4+x4)
		P1 Slot10 PCIe 5.0x16	4(x4+x4+x4+x4)
		P2 Slot11 PCIe 5.0x16	4(x4+x4+x4+x4)

● AMD Chipset

AMD Chipset	Model	Recommended PCIe Slot	PCIe bifurcation in PCIe slot
			M.2 SSD quantity
AMD EPYC 7002/7003 series	Model: Supermicro H12SSL-i CPU: AMD EPYC™ 7282	CPU SLOT1 PCI-E 4.0X16	4(x4+x4+x4+x4)
		CPU SLOT2 PCI-E 4.0X8	2(x4+x4)
		CPU SLOT3 PCI-E 4.0X16	4(x4+x4+x4+x4)
		CPU SLOT4 PCI-E 4.0X8	2(x4+x4)
		CPU SLOT5 PCI-E 4.0X16	4(x4+x4+x4+x4)
		CPU SLOT6 PCI-E 4.0X16	4(x4+x4+x4+x4)
		CPU SLOT7 PCI-E 4.0X16	4(x4+x4+x4+x4)
	Model: ASROCK ROMED8-2T CPU: AMD EPYC™ 7282	PCIE1	4(x4+x4+x4+x4)
		PCIE2	4(x4+x4+x4+x4)
		PCIE3	4(x4+x4+x4+x4)
		PCIE4	4(x4+x4+x4+x4)
		PCIE5	4(x4+x4+x4+x4)
		PCIE6	4(x4+x4+x4+x4)
		PCIE7	4(x4+x4+x4+x4)
AMD EPYC 9004/9005 series	Model: Supermicro 2025HS-TNR CPU: AMD EPYC 9124*2	SLOT1 PCIE 5.0X16	4(x4+x4+x4+x4)
		SLOT2 PCIE 5.0X8	2(x4+x4)
		SLOT3 PCIE 5.0X16	4(x4+x4+x4+x4)
		SLOT4 PCIE 5.0X8	2(x4+x4)
		SLOT5 PCIE 5.0X16	4(x4+x4+x4+x4)
		SLOT6 PCIE 5.0X8	2(x4+x4)
		SLOT7 PCIE 5.0X16	4(x4+x4+x4+x4)
		SLOT8 PCIE 5.0X16	4(x4+x4+x4+x4)

AMD Pro 695	Model: HP Z6 G5 A CPU: AMD Ryzen™ Threadripper Pro 7945wx	SLOT1 PCIe5x16 CPU	4(x4+x4+x4+x4)
		SLOT2 PCIe5x16 CPU	4(x4+x4+x4+x4)
		SLOT4 PCIe5x16 CPU	4(x4+x4+x4+x4)
		SLOT5 PCIe5x16 CPU	4(x4+x4+x4+x4)
		SLOT6 PCIe4x16 CPU	4(x4+x4+x4+x4)
AMD TRX50	Model: ASUS Pro WS TRX50-SAGE WIFI CPU: AMD Ryzen™ Threadripper™ Pro 7960X	PCIEX16(G5)_1	4(x4+x4+x4+x4)
		PCIEX16(G5)_2	4(x4+x4+x4+x4)
		PCIEX16(G5)_3	2(x4+x4)
		PCIEX16(G4)_2	4(x4+x4+x4+x4)
AMD WRX80	Model: ASUS Pro WS WRX80E-SAGE SE WIFI CPU: AMD Ryzen™ Threadripper™ Pro 5965WX	PCIEX16_1	4(x4+x4+x4+x4)
		PCIEX16_2	4(x4+x4+x4+x4)
		PCIEX16_3	4(x4+x4+x4+x4)
		PCIEX16_4	4(x4+x4+x4+x4)
		PCIEX16_5	4(x4+x4+x4+x4)
		PCIEX16_6	4(x4+x4+x4+x4)
		PCIEX16_7	4(x4+x4+x4+x4)
AMD WRX90	Model: ASUS Pro WS WRX90E-SAGE SE CPU: AMD Ryzen™ Threadripper™ Pro 7965WX	PCIEX16(G5)_1	4(x4+x4+x4+x4)
		PCIEX16(G5)_2	4(x4+x4+x4+x4)
		PCIEX16(G5)_3	4(x4+x4+x4+x4)
		PCIEX16(G5)_4	4(x4+x4+x4+x4)
		PCIEX16(G5)_5	4(x4+x4+x4+x4)
		PCIEX16(G5)_6	2(x4+x4)
		PCIEX16(G5)_7	4(x4+x4+x4+x4)
	Model: ASROCK WRX90 WS EVO CPU: AMD Ryzen™ Threadripper™	PCIEX1	4(x4+x4+x4+x4)
		PCIEX2	4(x4+x4+x4+x4)

	Pro 7965WX	PCIe3	4(x4+x4+x4+x4)
		PCIe4	4(x4+x4+x4+x4)
		PCIe5	4(x4+x4+x4+x4)
		PCIe6	2(x4+x4)
		PCIe7	4(x4+x4+x4+x4)
X670	Model: ASUS PROART X670E - creator CPU: AMD Ryzen™ 9 7950X	PCIEX16_1	4(x4+x4+x4+x4)
		PCIEX16_2	2(x4+x4)
X870	Model: ASUS PRIME X870-P WIFI CPU: AMD Ryzen™ 5 9600X	PCIEX16(G5)	4(x4+x4+x4+x4)

NVMe SSD Compatibility List

Notes:

None of the M.2 disks on the compatibility list have heat sinks. Disks with heatsinks are not supported.

“Double Side” indicates a double-sided SSD. Designs may vary by capacity within the same model; confirm with the drive manufacturer.

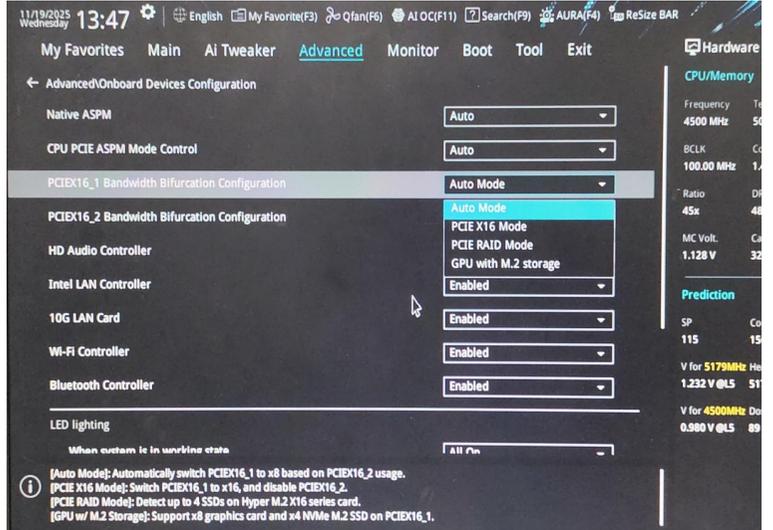
Manufacture	Model/Series	Form Factor	Capacity	Remark
PCIe Gen4				
Samsung	980 PRO	M.2 2280	250GB, 500GB, 1TB, 2TB	
Samsung	990 PRO	M.2 2280	1TB, 2TB, 4TB	
Samsung	990 EVO	M.2 2280	1TB, 2TB	
Seagate	FireCuda 530	M.2 2280	500GB, 1TB, 2TB, 4TB	
Sabrent	Rocket NVMe 4.0	M.2 2280, Double Side	500GB, 1TB, 2TB	
Sabrent	Rocket 4 Plus	M.2 2280, Double Side	500GB,1TB, 2TB, 4TB, 8TB	
KIOXIA	XG8 Series	M.2 2280, Double Side	512GB, 1024GB, 2048GB, 4096GB	
Western Digital	SN850X	M.2 2280	1TB, 2TB, 4TB, 8TB	
PCIe Gen5				
Crucial	Crucial T700	M.2 2280, Double Side	1TB, 2TB, 4TB	
Crucial	Crucial T705	M.2 2280, Double Side	1TB, 2TB, 4TB	
Phison	PS5026-E26	M.2 2280, Double Side	1TB, 2TB, 4TB	
Samsung	9100 PRO	M.2 2280, Double Side	1TB, 2TB, 4TB, 8TB	
Western Digital	SN8100	M.2 2280	1TB, 2TB, 4TB, 8TB	

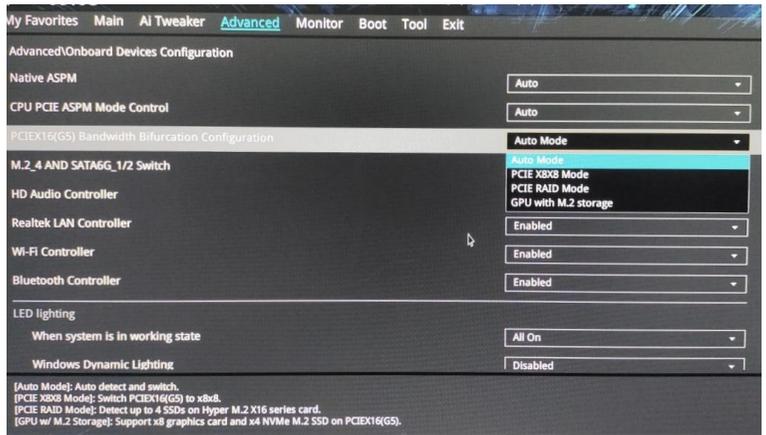
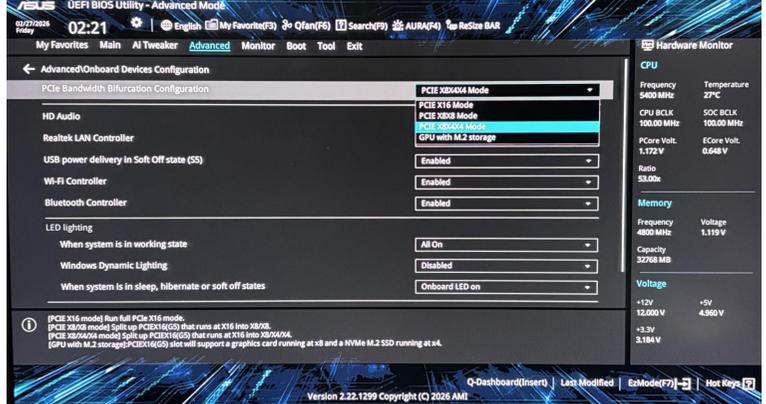
If you have any questions about compatibility, please contact us at Sales@highpoint-tech.com

Appendix

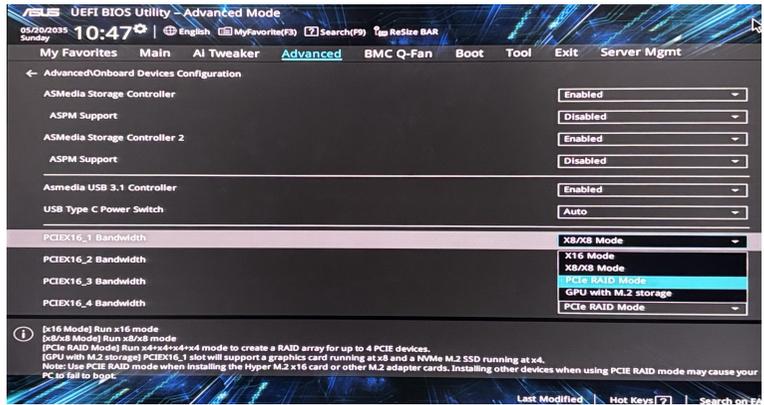
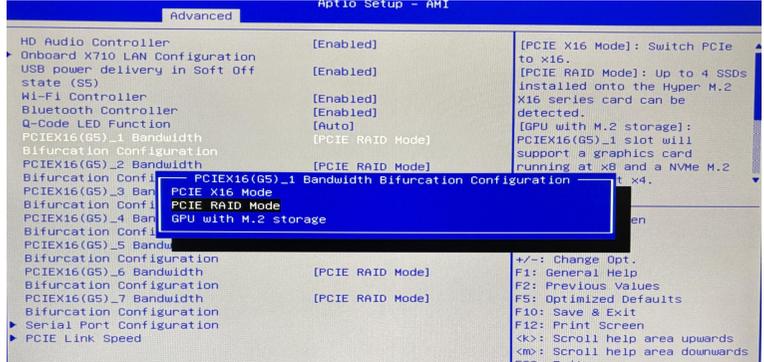
Note: The BIOS setup path is derived from HighPoint test results and is provided for customer reference.

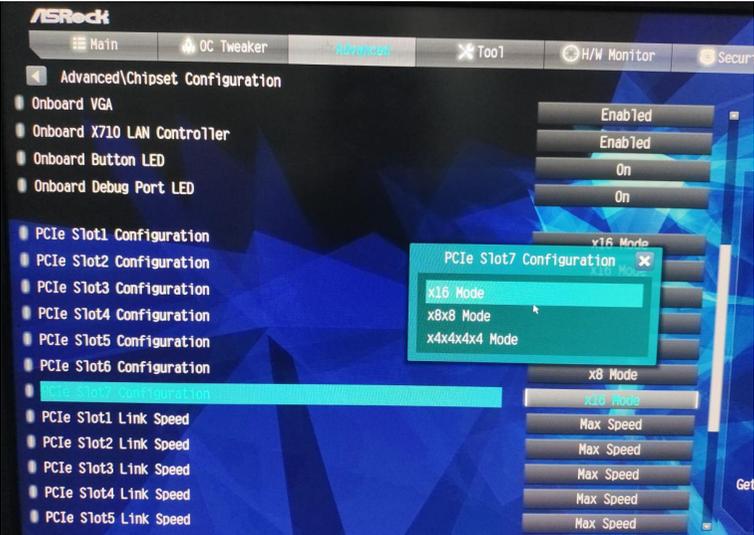
1. ASUS

Classification	Motherboard	BIOS Setup Path	Support for Motherboard Bifurcation Mode
Desktop	ASUS PROART X670E - creator	Advanced → Onboard Devices Configuration → PCEX16_1 Bandwidth Bifurcation Configuration	 <p>The screenshot shows the BIOS 'Advanced' tab with 'Onboard Devices Configuration' selected. Under 'PCIe Bandwidth Bifurcation Configuration', the following settings are visible:</p> <ul style="list-style-type: none"> Native ASPM: Auto CPU PCIe ASPM Mode Control: Auto PCIEX16_1 Bandwidth Bifurcation Configuration: Auto Mode PCIEX16_2 Bandwidth Bifurcation Configuration: Auto Mode HD Audio Controller: Enabled Intel LAN Controller: Enabled 10G LAN Card: Enabled Wi-Fi Controller: Enabled Bluetooth Controller: Enabled LED lighting: All On <p>Information at the bottom of the screen:</p> <ul style="list-style-type: none"> [Auto Mode]: Automatically switch PCIe16_1 to x8 based on PCIe16_2 usage. [PCIe X16 Mode]: Switch PCIe16_1 to x16, and disable PCIe16_2. [PCIe RAID Mode]: Detect up to 4 SSDs on Hyper M.2 X16 series card. [GPU w/ M.2 Storage]: Support x8 graphics card and x4 NVMe M.2 SSD on PCIe16_1.

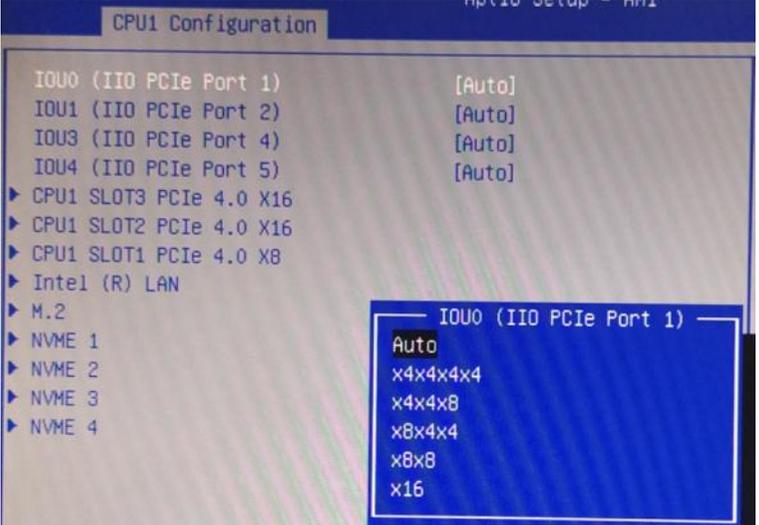
	<p>ASUS PRIME X870-P WIFI</p>	<p>Advanced → Onboard Devices Configuration → PCIeX16 (G5) Bandwidth Bifurcation Configuration</p>	
	<p>ASUS PRIME Z890-P WIFI</p>	<p>Advanced → Onboard Devices Configuration → PCIe Bandwidth Bifurcation Configuration</p>	

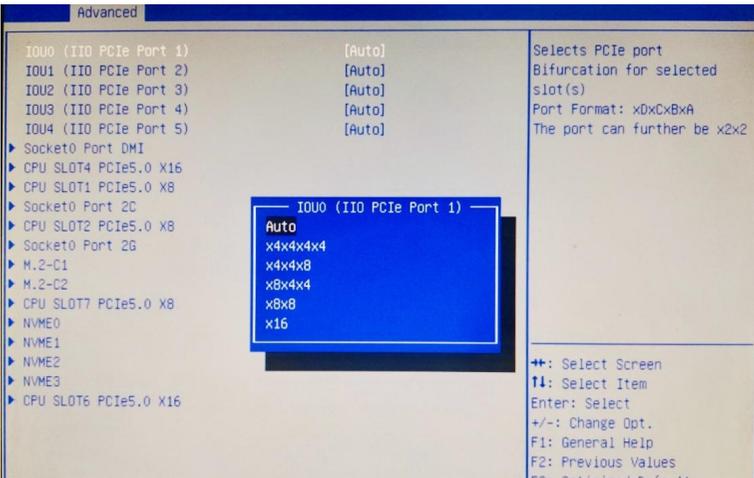
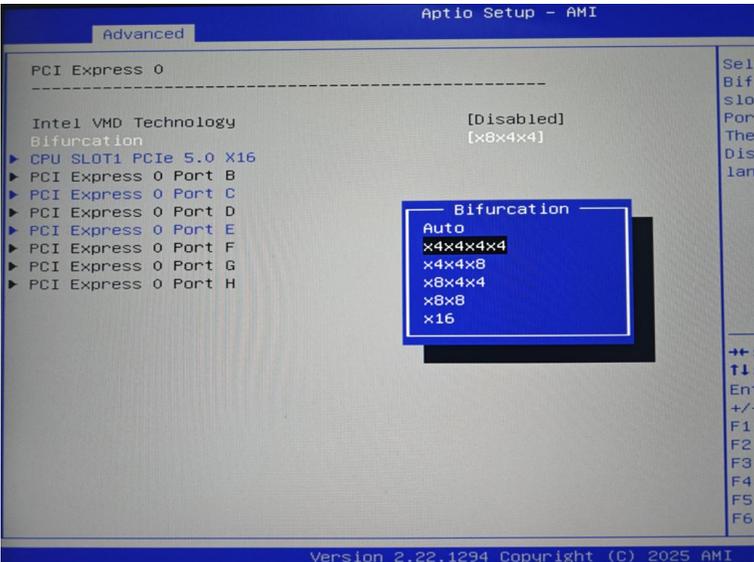
WorkStation	ASUS Pro WS790E-SAGE SE	WS Advanced → Onboard Devices Configuration → PCIe16(G5)_1 Configuration	
	ASUS Pro WS TRX50-SAGE WIFI	WS Advanced → Onboard Devices Configuration → PCIe16(G5)_1 Bandwidth Bifurcation Configuration	

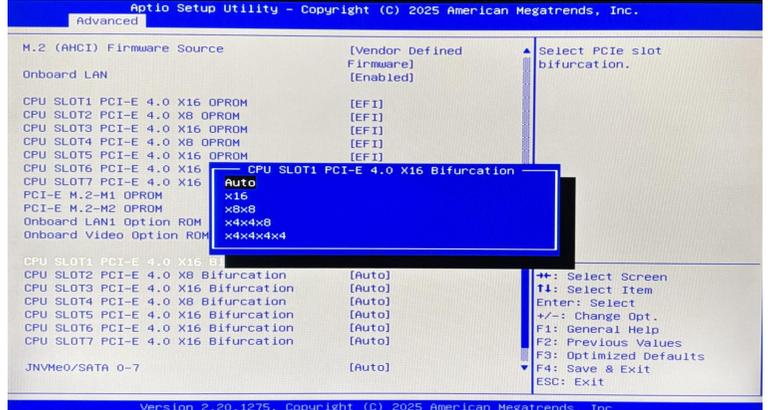
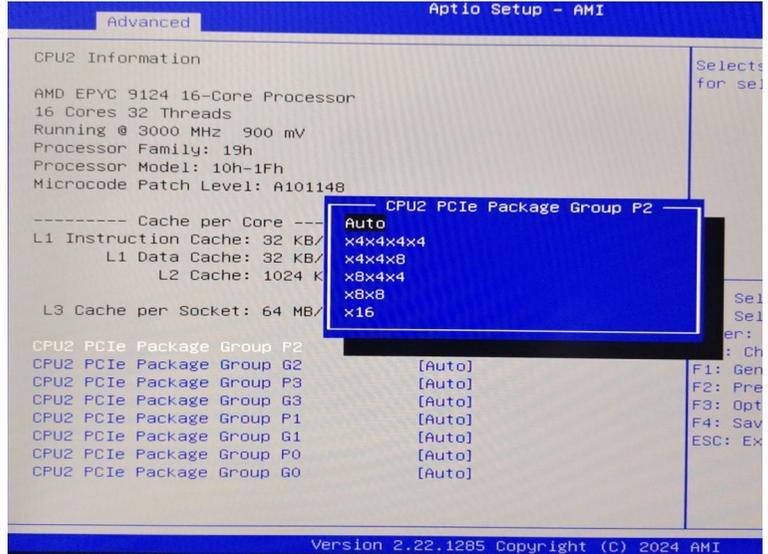
	<p>ASUS Pro WS WRX80E-SAGE SE WIFI</p>	<p>Advanced → Onboard Devices Configuration → PCIEX16_1 Bandwidth</p>	
	<p>ASUS Pro WS WRX90E-SAGE SE</p>	<p>Advanced → Onboard Devices Configuration → PCIEX16(G5)_1 Bandwidth Bifurcation Configuration</p>	

	ASROCK WRX90 WS EVO	Advanced Configuration → Chipset Configuration → PCIe Slot7 Configuration	 <p>The screenshot shows the ASRock BIOS interface. The 'Advanced' tab is selected, and the 'Chipset Configuration' menu is open. Under 'PCIe Slot Configuration', 'PCIe Slot7 Configuration' is highlighted. A sub-menu for 'PCIe Slot7 Configuration' is displayed, showing 'x16 Mode' selected, with other options being 'x8x8 Mode' and 'x4x4x4x4 Mode'. Other settings like 'Onboard VGA', 'Onboard X710 LAN Controller', and 'Onboard Button LED' are visible on the right side of the screen.</p>
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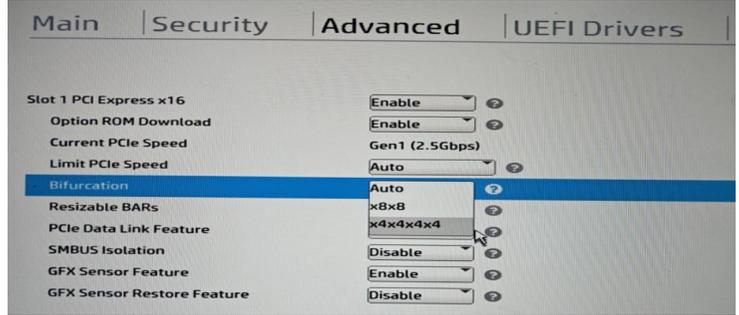
2. Supermicro

Classification	Motherboard	BIOS Setup Path	Support for Motherboard Bifurcation Mode
Server	Supermicro X12DPi-N6	Advanced → Chipset Configuration → North Bridge → IIO Configuration → CPU1 Configuration → IOU0(IIO PCIe Port 1)	 <p>The screenshot shows the BIOS 'CPU1 Configuration' screen. It lists several IOU (IIO PCIe Port) settings, all currently set to '[Auto]':</p> <ul style="list-style-type: none"> IOU0 (IIO PCIe Port 1) [Auto] IOU1 (IIO PCIe Port 2) [Auto] IOU3 (IIO PCIe Port 4) [Auto] IOU4 (IIO PCIe Port 5) [Auto] <p>Below these are other configuration options like CPU1 SLOTS, Intel LAN, M.2, and NVME. A dropdown menu for IOU0 is open, showing the following options:</p> <ul style="list-style-type: none"> Auto x4x4x4x4 x4x4x8 x8x4x4 x8x8 x16

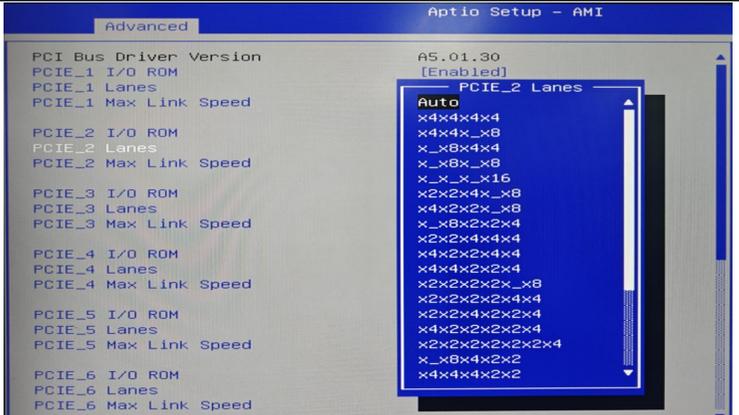
	<p>Supermicro X13SEI-TF</p>	<p>Advanced → Chipset Configuration → North Bridge → IIO Configuration → CPU1 Configuration → IOU0(IIO PCIE Port 1)</p>	
	<p>Supermicro X14SBI-F</p>	<p>Advanced → Chipset Configuration → IIO Configuration → CPU Configuration → PCI Express → Bifurcation</p>	

	<p>Supermicro H12SSL-i</p>	<p>Advanced → PCIe/PCI/PnP Configuration → CPU SLOT1 PCI-E 4.0 X16 Bifurcation</p>	
	<p>Supermicro 2025HS-TNR</p>	<p>Advanced → CPU Configuration → CPU1/2 Information → CPU PCIe Package Group P2</p>	

3. HP

Classification	Motherboard	BIOS Setup Path	Support for Motherboard Bifurcation Mode
WorkStation	HP Z6 G5 A	Advanced → Slot Setting → slot1 PCI Express x16 → Bifurcation	 <p>The screenshot shows the BIOS Advanced menu with 'Slot 1 PCI Express x16' selected. The 'Bifurcation' dropdown menu is open, showing options: Auto (selected), x8x8, and x4x4x4x4. Other settings include Option ROM Download (Enable), Current PCIe Speed (Gen1 (2.5Gbps)), Limit PCIe Speed (Auto), Resizable BARs (x8x8), PCIe Data Link Feature (x4x4x4x4), SMBUS Isolation (Disable), GFX Sensor Feature (Enable), and GFX Sensor Restore Feature (Disable).</p>

4. GIGABYTE

Classification	Motherboard	BIOS Setup Path	Support for Motherboard Bifurcation Mode
Server	GIGABYTE MS03-6L0	Advanced → PCI Subsystem Settings → PCIE_x Lanes	 <p>The screenshot shows the BIOS Advanced menu with 'PCIE_2 Lanes' selected. A dropdown menu is open showing various lane configurations: Auto (selected), x4x4x4x4, x4x4x_x8, x_x8x4x4, x_x8x_x8, x_x_x_x16, x2x2x4x_x8, x4x2x2x_x8, x_x8x2x2x4, x2x2x4x4x4, x4x2x2x4x4, x4x4x2x2x4, x2x2x2x2x_x8, x2x2x2x2x4x4, x2x2x4x2x2x4, x4x2x2x2x2x4, x2x2x2x2x2x2x4, x_x8x4x2x2, and x4x4x4x2x2.</p>