SNAPDRAGON® X2 ELITE

A legendary leap in performance

Snapdragon X2 Elite

Unleash your masterpiece with ultra-premium performance, multi-day battery life, and blazing AI processing power.

Comparison table

Snapdragon® X2 Elite Platforms			Qualcomm Oryon™ CPU							Qualcomm® Adreno™ GPU		Qualcomm® Hexagon™ NPU	Memory	
			Prime Cores			Performance Cores								
Platform	Part Number	Total Cores	Core Count	Max Multi-Core Frequency	Boost Frequency	Core Count	Max Multi-Core Frequency	Total Cache	Part Number	Max Frequency	TOPS	Type	Bandwidth
Snapdragon® X2 Elite Extreme	X2E-96-100	18	12	4.4 GHz	5.0 GHz Single-Core / 5.0 GHz Dual-Core	6	3.6 GHz	53 MB	X2-90	1.85 GHz	80	LPDDR5x	228 GB/s
Snapdragon® X2 Elite	X2E-88-100	18	12	4.0 GHz	4.7 GHz Single-Core / 4.7 GHz Dual-Core	6	3.4 GHz	53 MB	X2-90	1.70 GHz	80	LPDDR5x	152 GB/s
Snapdragon® X2 Elite	X2E-80-100	12	6	4.0 GHz	4.7 GHz Single-Core / 4.4 GHz Dual-Core	6	3.4 GHz	34 MB	X2-85	1.70 GHz	80	LPDDR5x	152 GB/s

Performance

Snapdragon X2 Elite sets a new bar for groundbreaking performance, expanded memory cache, and graphics performance per watt for maximum productivity and speed.

- Best-in-class Qualcomm Oryon™ CPU up to 18 cores for the fastest and most power-efficient performance at up to 5.0 GHz frequency
- Up to 1.85 GHz GPU
- Multitasking across up to three 5K 60Hz monitors

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Battery Life

Experience multi-day battery life without compromising performance. Play and work longer with leading power efficency.

- Multi-day battery life
- Truly mobile PC with sustained performance when on battery
- Optimized power consumption spreads workloads across the CPU, GPU, and NPU

AI

Snapdragon X2 Elite powers the most intelligent PCs with the industry-leading Qualcomm Hexagon™ NPU. Built to run multiple intelligent experience concurrently with faster responsiveness and reduced latency.

- Featuring up to 80 TOPS of AI processing
- AI acceleration for media editing, multimodal content generation, and agentic AI
- 64-bit NPU architecture with increased memory access to the latest AI models
- Powers Copilot+ PCs for the fastest, most intelligent Windows PCs

Security

Protect your data from the moment you turn on your device. Advanced security features ensure a secure and reliable computing experience wherever you go.

- State-of-the-art security from chip to cloud powered by the Qualcomm SPU that supports Microsoft Pluton
- Snapdragon® Guardian Technology for remote manageability
- Automatic presence detection & biometric authentication

Connectivity

Snapdragon X2 Elite delivers fast, intelligent connections with the latest in 5G, Wi-Fi 7, and Bluetooth® technologies.

- Lightning-fast 5G for up to 10 Gbps peak speeds
- Wi-Fi 7 with High Band Simultaneous for peak speeds of 5.8 Gbps
- Dual Bluetooth with Snapdragon Sound support

SPECS & FEATURES

Name	Brand	Snapdragon® X2 Elite Extreme	Snapdragon® X2 Elite	Snapdragon® X2 Elite
	Part Number	X2E-96-100	X2E-88-100	X2E-80-100
3rd Gen Qualcomm Oryon™ CPU	Architecture	ARM64-Compatible	ARM64-Compatible	ARM64-Compatible
	Total Cores	18	18	12
	Prime Cores	12	12	6
	Multi-Core Max Frequency	4.4 GHz	4.0 GHz	4.0 GHz
	Boost Frequency	5.0 GHz Single-Core / 5.0 GHz Dual-Core	4.7 GHz Single-Core / 4.7 GHz Dual-Core	4.7 GHz Single-Core / 4.4 GHz Dual-Core
	Performance Cores	6	6	6
	Multi-Core Max Frequency	3.6 GHz	3.4 GHz	3.4 GHz
	Total Cache	53 MB	53 MB	34 MB
Qualcomm® Adreno™ GPU	GPU Part Numbers	X2-90	X2-90	X2-85
	Max Frequency	1.85 GHz	1.70 GHz	1.70 GHz
	API Support	DirectX 12.2 Ultimate, Vulkan 1.4, OpenCL 3.0	DirectX 12.2 Ultimate, Vulkan 1.4, OpenCL 3.0	DirectX 12.2 Ultimate, Vulkan 1.4, OpenCL 3.0
Qualcomm® Hexagon™ NPU	TOPS (INT8)	80	80	80
	Micro NPU	Dual Micro NPU on the Qualcomm® Sensing Hub	Dual Micro NPU on the Qualcomm® Sensing Hub	Dual Micro NPU on the Qualcomm® Sensing Hub
Memory	Memory Type	LPDDR5x	LPDDR5x	LPDDR5x
	Max Capacity	128+ GB	128 GB	128 GB
	Configured Capacity	48 GB	Device-Specific	Device-Specific
	Transfer Rate	9523 MT/s	9523 MT/s	9523 MT/s
	Bus Width	192-bit	128-bit	128-bit
	Bandwidth	228 GB/s	152 GB/s	152 GB/s
Process	Process Node	3nm		
Storage	NVMe	Supported via Dual PCIe 5.0		
	UFS Version	4.0		
	SD Standard	SDUC with SD Express SDXC with UHS-I		
Display	Display Processing Unit Name	Qualcomm® Adreno™ DPU		
	On-Device Display Standard	Embedded DisplayPort (eDP) 1.5, Digital Serial Interface (DSI)		
	Max. On-Device Display Resolution	4K at 144 Hz		
	External Display Standard	Display Port 1.4		
	Max. External Display Resolution	3 displays at up to 4K at 144 Hz or 5K at 60 Hz		
Qualcomm® Adreno™ VPU	Encode	HEVC, AVC: Dual 8K UHD at 30 FPS AV1: 8K UHD at 15 FPS, UHD at 60 FPS	HEVC, AVC: Dual 8K UHD at 30 FPS AV1: 8K UHD at 15 FPS, UHD at 60 FPS	HEVC, AVC: 8K UHD at 30 FPS AV1: 8K UHD at 15 FPS, UHD at 60 FPS
	Decode	AV1, HEVC, AVC: Dual 8K at 60 FPS	AV1, HEVC, AVC: Dual 8K at 60 FPS	AV1, HEVC, AVC: 8K at 60 FPS
	Concurrency	8K UHD at 30 FPS Encode + 8K at 60 FPS Decode	8K UHD at 30 FPS Encode + 8K at 60 FPS Decode	UHD at 60 FPS Encode + 8K at 30 FPS Decode
Camera	Image Signal Processor Name	Qualcomm Spectra™ ISP		
	ISP Bit Width	Dual 18-bit ISPs		
	Always Sensing	Supported		
	Dual Camera	Up to 36 MP		
	Single Camera	Up to 36 MP		
	Video Capture	Up to 4K, 30 FPS		
Audio	Audio Technology	Qualcomm Aqstic™ Audio Codec, Qualcomm® aptX™ Audio Technology		
Manageability	Out-of-Band Management via Cellular & Wi-Fi	Snapdragon® Guardian Technology		
Cellular Modern-RF	Latest Supported System	Snapdragon® X75 5G Modem-RF System		
	Peak Download Speed	Up to 10 Gbps		
	Peak Upload Speed	Up to 3.5 Gbps		
	Bandwidth	Up to 1000 MHz (5G)		
	Interface	M.2 PCIe 3.0		
Wi-Fi/ Bluetooth	Latest Supported System	Qualcomm® FastConnect™ 7800 System		
	Generations	Up to Wi-Fi 7 (802.11be), 802.11ax, 802.11be, 802.11ac, 802.11n, 802.11g, 802.11b, 802.11a		
	Bands	6 GHz, 5 GHz, 2.4 GHz		
	Bluetooth Specification Version	Bluetooth 5.4		
	Bluetooth Connection Technology	Bluetooth LE		
	Interface	M.2 PCIe 3.0		
USB	USB Specification Version	USB4 (40 Gbps)		
	Interface Type	3x USB-C		
PCIe	PCIe Gen 5.0 Lanes	12	12	8
	PCIe Gen 4.0 Lanes	4	4	4