

The Future of AI Software: Skylum Luminar Neo

The future of personal computing is being redefined by the integration of AI directly into software, powered by dedicated AI accelerators called NPUs (Neural Processing Units). As Windows evolves to support a new generation of intelligent features, applications are becoming faster, more context-aware, and more capable of adapting to user needs in real time. Signal65 explores the key AI-enabled capabilities emerging within the Windows ecosystem, highlighting how NPUs are unlocking new levels of performance and efficiency across everyday tasks, enterprise workflows, and entirely new user experiences.



What is Skylum Luminar Neo?

Skylum Luminar Neo is a standalone photo editing app as well as a plugin for Adobe Lightroom, Adobe Photoshop, and Apple's Photos app. Developed by Skylum, Luminar Neo is aimed at beginners and experts and is equipped with a comprehensive set of powerful tools. Users may access it via a subscription or buy a lifetime license, making the app accessible to a variety of users with different budgets.

Image editing software as a whole has been one of the earliest and most mainstream adopters of AI technology, and naturally Luminar Neo boasts a wide range of AI features and tools. In June 2024, just around the time the Snapdragon X Elite launched, Skylum added support for the chip's Hexagon NPU, which can be used to accelerate photo-enhancing functions like Supersharpen AI and Upscale AI.



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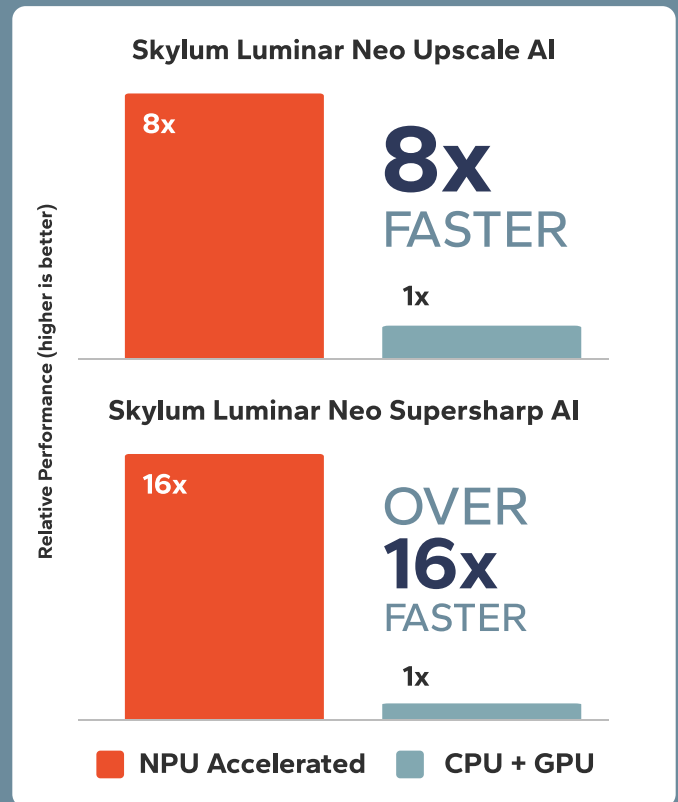
Skylum, a leading innovator in photo editing software, proudly announces that Luminar Neo's advanced features, such as Supersharpen AI and Upscale AI, are now available on the latest Windows Copilot+ PCs powered by Snapdragon® X Elite and X Plus, which became available to the public on June 18. These enhancements leverage the powerful Neural Processing Unit (NPU) capabilities in the Snapdragon® X Elite and X Plus processors, enabling Luminar Neo to perform AI-driven photo editing tasks up to 200 times faster*, significantly enhancing the user experience.

NPU Utilization & Performance

Poor focus and motion blur are some of the most common blemishes to appear in photos, and avoiding them would normally require a very steady hand or tripod. Luminar Neo's Supersharp AI tool is designed to correct focus and blurring issues, which would be very difficult and time-consuming to achieve with manual image editing.

Usually, Luminar Neo relies on the prowess of a graphics processor for Supersharp AI, which for the Snapdragon X Elite means leveraging the chip's integrated Adreno graphics. Using the Acer Swift 14 AI, equipped with the Snapdragon X Elite, it took 17 seconds for Supersharp AI to process a 1440p resolution image with the integrated graphics. While that is pretty fast, it's nothing compared to using the Hexagon NPU, which was able to process the same image in a single second. Saving 16 seconds might not sound like much, but we're talking about making a multi-second operation occur nearly instantly, similar to resizing or cropping an image.

The Upscale AI tool is simply an image upscaler, which increases the resolution and detail of an image that was originally created at a lower resolution. This normally runs on CPU cores rather than an NPU; in the case of our Snapdragon X Elite-powered Acer Swift 14 AI, processing a 1440p image via the CPU with a 2x upscale took 40 seconds. But Upscale AI was able to finish in just five seconds when using the NPU.



Today, over 20 applications leverage Qualcomm's Hexagon NPU to deliver enhanced performance, enable entirely new features, and improve system efficiency. Collectively, these applications offer over 50 unique AI-powered capabilities spanning diverse use cases, from real-time video conferencing effects and advanced photo editing tools to local LLM implementations that bring sophisticated AI experiences directly to users' hardware without cloud dependencies.

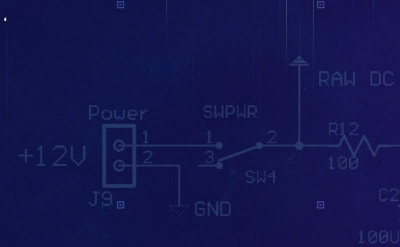
This ecosystem demonstrates how NPU acceleration is transforming software across categories, enabling developers to implement AI features that were previously impractical due to performance or power constraints. As more applications adopt NPU optimization, users benefit from faster processing, longer battery life, and AI capabilities that respond instantly to their needs.

Looking Forward

When it comes to speeding up image processing and other workloads, the NPU is obviously very useful, and Luminar Neo offers a look at how the NPU will shape the landscape of AI software in the near future. Much like how GPUs evolved from specialized graphics processors to general-purpose computing accelerators, NPUs are positioned to become the dedicated platform for AI workloads, delivering superior performance compared to both CPUs and GPUs for machine learning tasks.

Through continued investment in both hardware and software AI capabilities, Qualcomm and Microsoft are establishing NPUs as the foundation for local AI processing, enabling more responsive, efficient, and capable applications across the Windows ecosystem.

Over 50 NPU-powered AI Experiences on Snapdragon X Series Processors



Creator Apps	AI Experience
Adobe Premiere Pro	<ul style="list-style-type: none">Audio Category Tagger to sort different audio clips into categories like ambience or dialogScene Edit Detection automatically labels cuts in raw footage for easier editingText-Based Editing builds a transcript for a video, and editing the transcript instantly edits the video for rough cuts
Automatic1111	Image generation from text using Stable Diffusion and ability to customize parameters
Blender+ControlNet	3D scene to 2D image generation via tools like Automatic1111
Copilot+	<ul style="list-style-type: none">Image generation and photo editing using AI-powered tools like generative fillEasy step retracing with Windows RecallImproved gaming performance and visual quality with Super ResolutionVideo conferencing features like real-time translation, auto framing, portrait lighting, and more
DaVinci Resolve	<ul style="list-style-type: none">AI-accelerated Magic Mask tool for objects and peopleBetter resolution upscaling during rendering
Djay Pro	Separating different instruments and vocals with Neural Mix, and syncing different songs with varying rhythms together with BeatGrid
Gigapixel AI	Crisp upscaling for photos originally taken at low resolution
GIMP+SD	Image generation from text using Stable Diffusion
Luminar Neo	Photo editing with AI-assisted sharpening effects and resolution upscaling
Moises Live	<ul style="list-style-type: none">Instrument and vocal separation for music editingEnhanced performance compared to running on the CPU
Enterprise Apps	AI Experience
Camo Studio	On-the-fly video effects like auto-framing, virtual green screen, and blurred background
Copilot+	<ul style="list-style-type: none">Image generation and photo editing using AI-powered tools like generative fillEasy step retracing with Windows RecallImproved gaming performance and visual quality with Super ResolutionVideo conferencing features like real-time translation, auto framing, portrait lighting, and more
Dynamo AI	Guardrails for AI provided through organizations to prevent misuse
McAfee	AI-powered detection of deepfaked audio
Zoom	Virtual background replacement and portrait lighting for video conferencing
Productivity Apps	AI Experience
AnythingLLM	<ul style="list-style-type: none">Easy setup for small and powerful Microsoft and Meta LLMs with long context windowsUseful LLM features like automation, RAG, and inferencing"
Copilot+	<ul style="list-style-type: none">Image generation and photo editing using AI-powered tools like generative fillEasy step retracing with Windows RecallImproved gaming performance and visual quality with Super ResolutionVideo conferencing features like real-time translation, auto framing, portrait lighting, and more
Liquid Text	Fast annotation of documents using AI
LMStudio	Run LLMs locally and configure them to your liking

Visit Qualcomm for more info: <https://www.qualcomm.com/snapdragon/laptops-and-tablets/npu-powered-ai-experiences>