



Why MediaTek Dimensity 8350 is the Best Mainstream SoC of the Year

The [MediaTek Dimensity 8350](#) received widespread acclaim for its performance by winning the “Best Mainstream SoC of the Year” Award by BITA. The award underscores the fact that MediaTek has created a chip with high everyday performance, high-grade power efficiency, and high-grade features, which previously were the characteristics of only flagship chipsets. The Dimensity 8350 and its variants, like MediaTek Dimensity 8350 Apex, are unique players in a very competitive upper mid-range market that sets the benchmark of what mainstream smartphone processors are capable of realistically providing.



Innovation in Performance

The MediaTek [Dimensity 8350](#) is designed to provide outstanding performance for daily smartphone experiences. The SoC is based on an ultra-efficient 4nm process with an octa-core processor comprising four Arm Cortex-A715 cores with up to 3.35GHz and four Arm Cortex-A510 cores with balanced power and efficiency.

Such a design leads to a 4% single-core and 13% multi-core performance improvement over its predecessor, which provides easier multitasking and responsiveness in terms of apps and

services. The chipset is also compatible with quad-channel LPDDR5X memory running at high speeds up to 8533 Mbps and UFS 4.0+ MCQ storage, which can access data very fast and minimize the load time.

Generative AI Performing and Everyday Intelligence

The NPU 780 in the Dimensity 8350 is a multi-core neural processing unit that introduces the state-of-the-art on-device AI features to more affordable smartphones. This NPU can perform 8x faster transformer-based generative AI tasks, 2x faster integer and floating-point calculations, and 10 billion parameter large language models (LLM). The chipset achieves up to a 3.3 times improvement in general AI performance in benchmark tests, which enables functions like real-time translation, AI-assisted photography, voice call summaries, and text generation to perform effectively.

Games and Graphical Capabilities

The graphics performance of the [Dimensity 8350](#) is supported by an Arm Mali-G615 MC6 graphics core, which is designed to support intense mobile games and high-rate content.



This SoC is paired with MediaTek HyperEngine Adaptive Gaming Technology to constantly check the thermal and performance status of CPU, GPU, NPU, and network to provide the

best gaming experiences with 5% lower touch latency and 24% faster game scene transitions, and consumes less power up to 24% lower at full frame rates.

This is due to the fact that there is a hardware-software optimization that makes the device reliable when playing over time without experiencing heavy battery depletion.

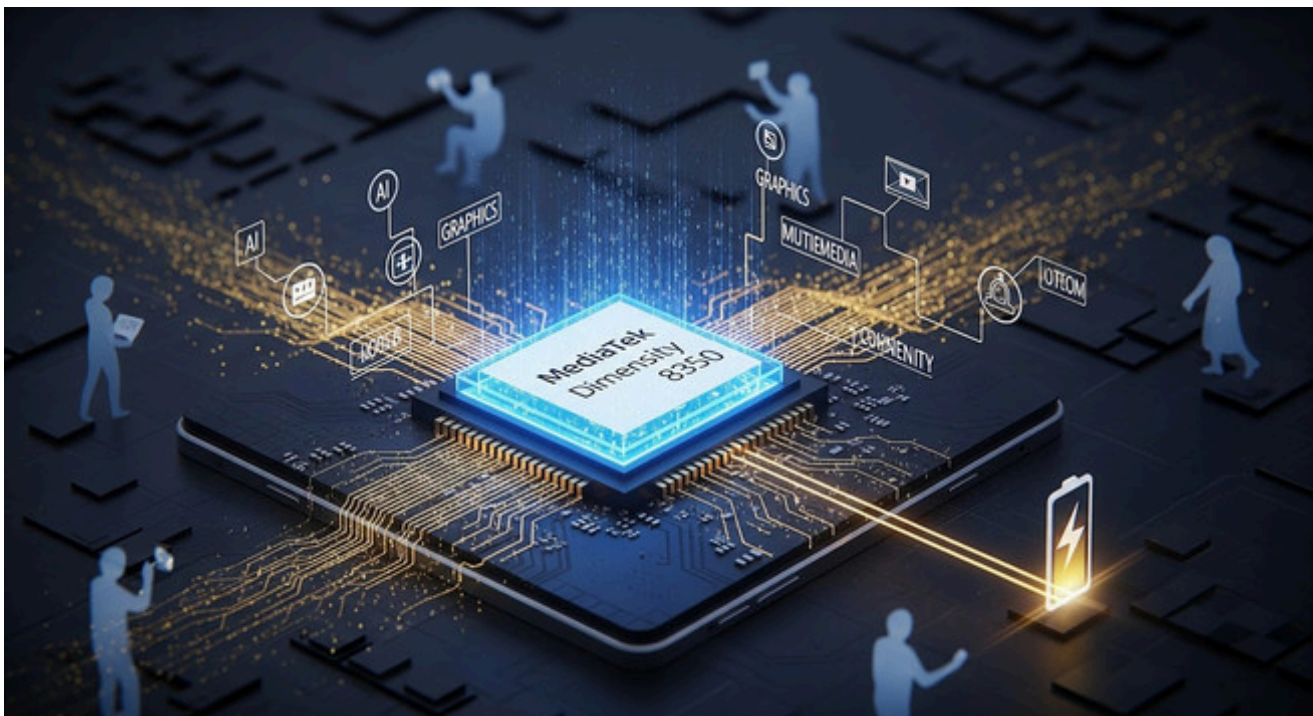
Screen, Connectivity, and Interface Improvements

On the display front, Dimensity 8350 takes up to 180+ refresh rates in the FHD display and up to 120 refresh rates in the WQHD display, delivering a smooth display and touch capabilities. Its integrated modem supports 5G, carrier aggregation, and mixed-duplex up to 5.17Gbps, improved range, and 20% faster re-establishment of 5G after weak connections, which ensures network stability in high-velocity situations.

Wi-Fi 6E and 2T2R antenna is also incorporated in the SoC with Bluetooth 5.4 connectivity, which ensures quality wireless performance of the device in gaming, streaming, and daily activities.

High-end Imaging and Multimedia

The MediaTek Imagiq 980 14-bit HDR native ISP (Image Signal Processor) improves the performance of imaging on the devices powered by the Dimensity 8350.



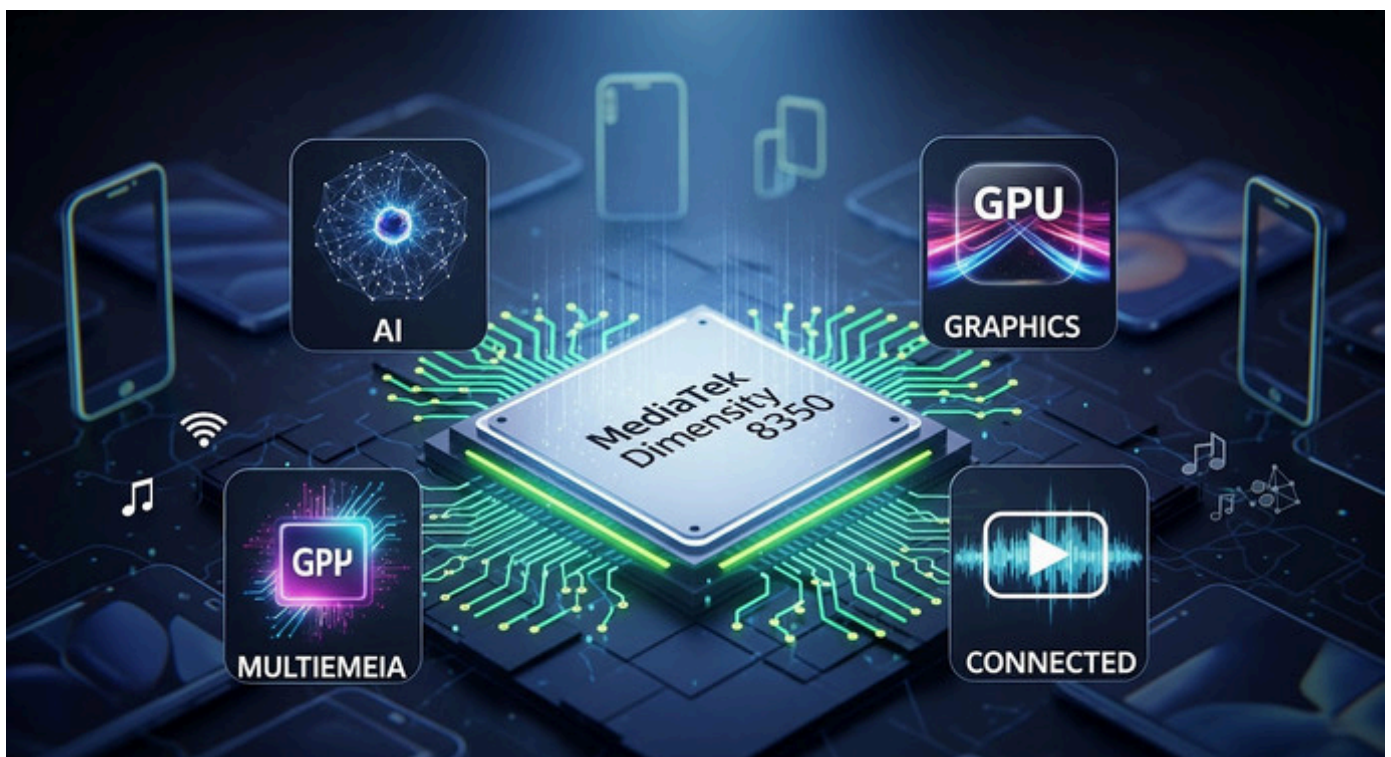
It offers HDR video capture of 4K60 with higher power efficiency and flagship quality images, and dual-camera 4K HDR video capture at the same time. Features such as AI semantic ISP, 4K60 + EIS, and FHD60 + EIS deliver clear, vivid photos.

Another way that the SoC enhances short-video creation is that its AR preview framerate is 15% faster, and video rendering is 6% faster.

An Integrated SoC targeting the Upper Mid-end Market

The combination of high performance of CPU and graphics cards, high-level on-device AI, better imaging and video processing, and up-to-date connectivity options qualifies the Dimensity 8350 as a good choice in a mainstream smartphone aimed at demanding users.

Its performance and efficiency in power are important as it provides a smooth user experience in gaming, productivity, photography, and content creation, making devices powered by this chipset stand out from the crowd.



Conclusion

The [MediaTek Dimensity 8350](#) has challenged the traditional smartphone chips in the mainstream with the ability to provide significant performance gains, including AI, graphics, multimedia, and connectivity, without reducing power efficiency. Its design is an exemplary

combination of a creative and realistic approach to the users who require more from their mobile phone, but they do not want to pay the flagship prices.