

# MediaTek Unveils the Dimensity 8400, the First All Big Core Chip for Premium Smartphones

*MediaTek Dimensity 8400 offers standout performance and efficiency for the latest AI and gaming experiences.*

UNITED ARAB EMIRATES, December 26, 2024 /EINPresswire.com/ -- MediaTek today announced the Dimensity 8400, a premium smartphone chip offering the most powerful Gen-AI performance in its class. Building on the legacy of the flagship Dimensity 9400, the MediaTek Dimensity 8400 brings an All Big Core design to the premium smartphone market for the first time.

The All Big Core CPU is paired with a powerful NPU to accelerate Gen-AI tasks, along with MediaTek's new Dimensity Agentic AI Engine (DAE) that turns traditional AI applications into sophisticated agentic AI applications.



**MediaTek Dimensity 8400**  
First All Big Core Chip for Premium Smartphones

**Epic All Big Core CPU**  
We're extending our global leadership in smartphone chips and upgrading another tier of smartphones with our innovative all big core design.

- World's first all big core SoC for premium segment
- 8x Arm Cortex-A725 up to 3.25GHz
- +41% multi-core performance\*

**Exceptional Power Efficiency**  
Leveraging our industry-leading power management expertise, the Dimensity 8400 precisely controls the performance and power curve of its all big core CPU design, resulting in class-leading power efficiency.

- 44% peak power use\*
- Up to +100K L3 cache\*
- +50% L3 cache\*
- +25% SoC cache\*

**Premium Graphics Engine**  
The Arm Mali-G720 (P7) GPU provides immersive gaming performance, plus MediaTek Frame Rate Converter (MFR) advantages.

- +24% higher peak performance\*
- +42% power use\*
- Higher power efficiency with MAGT
- Network Observation System (NOS) enables 5G power and data savings
- Touch latency optimization

**Most Powerful Generative AI NPU in Its Class**  
The MediaTek NPU 880 offers state-of-the-art Gen-AI capabilities for translation, rewriting, contextual reply, AI recording, media generation, and more.

- +20% faster INTTP operation\*
- +18% power efficiency\*
- +33% in LLM text generation (Bakchuan 407)
- +21% in Stable Diffusion v1.5\*

**Imagiq 1080: Flagship-grade Image Quality**  
Achieve exceptional photography and video record quality, with flagship-grade HDR image quality that noticeably exceeds alternative platforms.

- In-sensor zoom with 100% PSAP
- HDR video recording throughout the entire zoom range
- +2X power use in 4K HDR video capture\*

**New 5G Advanced Modem**  
MediaTek's 5G-A modem is ready for markets with the next-generation of cellular networks.

- Up to 3CC-CA
- Up to 5 Gbps performance
- Ultra-low latency

www.mediatek.com/dimensity-8400  
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\*Compared to previous generation Dimensity platform

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MediaTek Dimensity 8400

The Dimensity 8400 SoC has an eight-core Arm® Cortex®-A725 processor operating at up to 3.25GHz, providing 41% higher multi-core performance compared to the previous generation chip, the Dimensity 8300. The Dimensity 8400 is designed to precisely control the CPU's performance and power curve, offering a 44% reduction in peak power use compared to its predecessor.

Additionally, the Dimensity 8400 supports immersive gaming experiences with its Arm Mali® -G720 GPU that offers 24% higher peak performance and 42% greater power efficiency than the Dimensity 8300. The Mali-G720 GPU works in tandem with MediaTek Frame Rate Converter (MFR), which delivers smoother gameplay, and MediaTek Adaptive Gaming Technology (MAGT) 3.0, which optimizes game and app performance in real-time.

With MediaTek's NPU 880, the Dimensity 8400 supports mainstream LLM/SLM/LMMs across the globe so users can enjoy the latest Gen-AI applications such as translation, rewriting, contextual replies, AI recording, and media generation. The Dimensity 8400 also integrates MediaTek's DAE,

which the company recently introduced in the flagship Dimensity 9400 SoC, enabling developers to create innovative agentic AI applications that anticipate user needs and adapt to their preferences.

“MediaTek is redefining premium smartphone experiences with the Dimensity 8400, unleashing creativity with generative and agentic AI applications and taking mobile gaming even further,” said Dr. Yenchi Lee, General Manager of MediaTek's Wireless Communications Business Unit. “Our All Big Core design, which we’ve also integrated into our flagship chips, highlights the impressive performance and efficiency that can go hand-in-hand so consumers don’t have to compromise.”

The built-in MediaTek Imagiq 1080 ISP leverages QPD remosaic technology to capture more light, focus faster and more accurately, and produce high-resolution images. The chip also supports HDR recording throughout the entire zoom range so users can take incredible videos.

Additional features of the Dimensity 8400 include:

- 5G-A modem which supports up to 3CC-CA and up to 5.17Gbps performance
- Network Observation System (NOS) technology for precise 5G/Wi-Fi switching, improving power efficiency and optimizing network connectivity
- WQHD+ up to 144Hz and dual screen support

The first smartphones powered by the MediaTek Dimensity 8400 will be available in the market by end of 2024. To learn more about MediaTek's Dimensity portfolio, please visit:

<https://i.mediatek.com/mediatek-5g>.

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