Global Mobile Chipset Market Set to Skyrocket to USD 137.02 Billion by 2035 Amid Surge in 5G, AI, and IoT Adoption

The mobile chipset market is expanding rapidly, driven by 5G adoption, AI integration, and increasing demand for high-performance mobile devices.

Mobile Chipsets Market

NEWARK, DE, UNITED STATES, May 23, 2025 /EINPresswire.com/ -- The mobile chipset market is anticipated to reach a value of USD 22.28 billion by 2025 and is projected to witness an explosive expansion, climbing to USD 137.02 billion by 2035. This remarkable growth corresponds to a compound annual growth rate (CAGR) of 21.5% during the forecast period, marking a significant milestone in the semiconductor and telecommunications industries. The surge is primarily fueled by the rapid evolution of mobile technologies, particularly the global rollout of 5G networks, increasing consumer demand for next-gen mobile devices, and the integration of artificial intelligence, machine learning, and other advanced functionalities within mobile chipsets. With smartphones, tablets, and wearable devices requiring more processing power and battery efficiency, the demand for high-performance, energy-efficient chipsets is becoming more critical than ever.

> “As smartphones evolve into powerful computing hubs, mobile chipsets are the backbone enabling seamless connectivity, speed, and smart user experiences.”
>
> *Sudip Saha*

The transition from 4G to 5G has not only spurred chipset innovation but has also led to significant investments in research and development to produce SoCs (System-on-Chips) capable of handling greater data volumes, real-time processing, and low-latency communication. Furthermore, the proliferation of smart devices across consumer and enterprise domains is creating a parallel demand for AI-

powered mobile chipsets that can support on-device computing, edge processing, and seamless integration with IoT ecosystems. Chipmakers are increasingly embedding AI cores and neural processing units (NPUs) into their products to accelerate mobile gaming, photography, speech recognition, and augmented reality experiences. This trend is reinforcing the shift towards chipsets that support heterogeneous computing environments—blending CPU, GPU, AI engines, and connectivity modules into one cohesive unit.

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Key Takeaways Mobile Chipset Market

The exponential growth of the mobile chipset market is a direct reflection of intensifying consumer expectations for faster, smarter, and more efficient mobile devices. The rising integration of AI, 5G modems, and edge computing capabilities within chipsets is shaping new benchmarks in device performance. Original Equipment Manufacturers (OEMs) are prioritizing advanced chipsets to differentiate product offerings in a highly competitive market. Additionally, the shift toward ARM-based architecture in mobile devices, including some laptops, is redefining how performance and power efficiency are achieved. Emerging economies are also playing a pivotal role in market expansion, driven by mass smartphone adoption and rising internet penetration.

Emerging Trends in the Global Market

Several technological and strategic trends are influencing the future direction of the mobile chipset market. One notable trend is the increasing development of 3nm and 2nm fabrication technologies, which are enabling chipsets with greater transistor density, lower power consumption, and enhanced thermal performance. Another trend is the rise of chipsets tailored for foldable and dual-screen smartphones, which demand unique hardware optimization. The market is also seeing strong momentum in chipsets designed for mobile gaming, equipped with high-end GPUs and support for high-refresh-rate displays. Meanwhile, demand for integrated satellite connectivity and support for Wi-Fi 7 is beginning to influence chipset roadmaps. In the AI domain, chipsets with enhanced NPU capabilities are gaining traction, enabling real-time on-device processing for applications like language translation, object detection, and virtual assistants without relying heavily on cloud resources.

Significant Developments in the Global Sector: Trends and Opportunities in the Market

The growing focus on data privacy and security has led to the development of mobile chipsets with built-in security modules and encryption engines. Chipmakers are collaborating with OEMs to co-design chipsets optimized for unique user experiences, from photography enhancements to health monitoring features in wearables. Strategic partnerships between chipset manufacturers and cloud providers are also facilitating edge-cloud hybrid computing models for

seamless performance. The electric vehicle industry's influence on chipset development is another emerging factor, particularly for infotainment systems and smart cockpits that draw from mobile chipset innovations. Further, government initiatives across Asia-Pacific and Europe to localize semiconductor production and reduce dependence on global supply chains are fostering regional opportunities for emerging players and startups.

Recent Developments in the Market

Recent years have seen a wave of product launches and innovation from leading chipset manufacturers aiming to gain competitive advantages. Companies are releasing chipsets with integrated 5G modems that support both sub-6GHz and mmWave frequencies, offering users improved connectivity in diverse environments. AI optimization, battery-efficient architecture, and enhanced imaging capabilities have become central themes in recent releases. In addition, companies are focusing on chipset customization for verticals such as industrial IoT, autonomous drones, and augmented reality glasses. New players are entering the market with specialized chipsets for niche applications, pushing incumbents to diversify and refine their offerings. Mergers and acquisitions, particularly those focused on AI firms and IP providers, are further intensifying competition while accelerating technological convergence in the industry.

Detailed Market Study: Full Report and Analysis
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Competition Outlook

The mobile chipset market is fiercely competitive and dominated by a mix of global technology giants and specialized semiconductor companies. Key players are investing heavily in R&D to stay ahead in terms of performance, efficiency, and feature integration. Companies are also entering into strategic partnerships with OEMs, telecom providers, and software firms to create holistic ecosystems that enhance end-user experiences.
Key players operating in the mobile chipset market include Qualcomm Technologies Inc., MediaTek Inc., Apple Inc., Samsung Electronics Co. Ltd., Huawei Technologies Co. Ltd. (HiSilicon), Intel Corporation, Unisoc Communications Inc., NVIDIA Corporation, AMD (Advanced Micro Devices Inc.), and Broadcom Inc. These firms offer a wide range of mobile chipsets catering to applications in smartphones, tablets, smartwatches, and other connected devices.

Key Segmentations

The mobile chipset market can be segmented based on chipset type, technology, device type, and region. By chipset type, the market includes application processors, baseband processors, AI chipsets, and multimedia processors. In terms of technology, the market is segmented into 4G/LTE, 5G, and upcoming 6G-ready chipsets. By device type, the segments include smartphones, tablets, wearables, and embedded systems such as automotive infotainment units and industrial handhelds. Geographically, the market is dominated by Asia-Pacific due to the

presence of major manufacturing hubs and high smartphone penetration, followed by North America and Europe, where demand is driven by innovation and enterprise mobility.

Semiconductors Industry Analysis

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