

MediaTek Expands Cloud-to-Edge Leadership with Next-Generation Connectivity and AI at MWC 2025

Showcasing 6G Hybrid Computing Technologies, 5G-Advanced Modem, NR-NTN and Generative AI Gateways

UNITED ARAB EMIRATES, February 27, 2025 /EINPresswire.com/ -- At Mobile World Congress 2025, MediaTek is showcasing several key technologies that enable wireless evolution towards 6G, including hybrid computing, a live

LEO broadband NR-NTN trial, sub-band full duplex (SBFD), along with the new M90 5G Advanced modem. In addition, the company is also sharing its latest developments in Dimensity Auto and Dimensity Smartphone SoCs. The newest MediaTek-powered devices from some of the world's leading brands will be on display at their booth in Hall 3. "We're pushing forward industry-leading connectivity and AI applications through high-quality products and global standardization, which create significant new opportunities to enrich everyday living for more people around the world," said Joe Chen, President of MediaTek. "This is exemplified by our most recent developments in leading-edge 6G-era technologies, generative AI hybrid computing, and 5G-Advanced solutions, which will be on display this week."



Enabling 6G with Integrated Communications & Computing

MediaTek is demonstrating its Hybrid Computing innovation (Integrated Communication & Computing) that brings together a device cloud + RAN as an 'edge cloud', a key technology component proposed for upcoming 6G standardization, that extends ambient computing from device to RAN, achieving low latency in activities such as Generative AI (Gen-AI), carrier-grade privacy & personal data governance, and dynamic computing resource scheduling. The implementations are exhibited in collaboration with NVIDIA, Intel and G REIGNS, respectively.

Ultra Power-Efficient Envelope Assisted RFFE positioned for next-generation wireless products
MediaTek's Envelope Assisted RFFE System increases power amplifier efficiency by 25%, reducing device heating rate, widening addressable bandwidth by over 100MHz in the same power envelope, and allowing higher power delivery for wider coverage.

Sub-Band Full Duplex for efficient use of 6G spectrum

Sub-Band Full Duplex (SBFD), a key physical layer technology applicable to 5G-Advanced and 6G, will feature unprecedented improvements in unpaired TDD spectrum, significantly boosting uplink coverage and reducing latency. Both factors are key enablers of new services. In cooperation with Keysight, MediaTek is demonstrating a major technological breakthrough: Mitigating self-interference of SBFD, which is particularly problematic in small devices such as smartphones because of the proximity of the transmitting and receiving antennas.

MediaTek M90 5G Advanced Modem

The upcoming M90 5G-Advanced modem will deliver speeds of up to 12Gbps, support for 3GPP-standard Release 17 and the forthcoming Release 18 specifications, simultaneous FR1+FR2 connectivity, and a novel Smart Antenna technology that leverages AI to enable user scenario identification and significantly boosts data throughput. The M90 utilizes MediaTek UltraSave technology, which reduces average power consumption by up to 18% compared to the previous generation modem. During MWC 2025, MediaTek will show it has achieved an industry-leading 10Gbps throughput using FR1 3CC + FR2 8CC using an M90-based device on a live Ericsson network configuration.

Smart AI Antenna

The M90 modem supports Smart AI Antenna, which provides native body proximity sensing without requiring external sensors. The feedback response and intelligent signal analysis can detect how the device is held, as well as its network environment, and it will actively tune the antenna and uplink power to ensure that signal quality is maintained. MediaTek will demonstrate Smart AI Antenna in collaboration with Anritsu at MWC 2025.

Intelligent CPE: Generative AI Gateway

MediaTek is exhibiting its Generative AI infrastructure, consisting of a Gateway and Context Synchronization system. This decentralizes Gen-AI capabilities beyond smartphones and smart home devices, providing Gen-AI functionality to all connected devices. It enhances device capabilities while fostering wider adoption and new service opportunities, all without compromising data privacy and security. The latest MediaTek-powered CPE devices and modules are also on display from partners. Unique technologies on display include a 1.9x uplink performance boost achieved through three transmission antennas (3TX), applicable across 5G NR band combinations, as well as Low-Latency, Low-Loss, and Scalable throughput (L4S), which reduces network latency by over 20x and minimizes packet loss. These advancements greatly enhance the user experience compared to legacy designs.

Next Generation Satellite (NTN) Connectivity

At the show, MediaTek will present its continuing industry leadership in 5G-Advanced Non-Terrestrial Network (NTN) technology. This next generation of satellite connectivity – Ku-band NR-NTN – will bring a future of ubiquitous broadband connectivity to 5G devices. This follows a recent successful field trial of Ku-band NR-NTN over commercial OneWeb sLow Earth Orbit (LEO) satellite. The field trial was conducted with Eutelsat infrastructure, AIRBUS in-orbit satellites

connecting to a MediaTek Ku-band NR-NTN test chip, ITRI NR NTN test gNB, and Sharp array with support by Rodhe & Schwartz testing equipment.

MediaTek Dimensity Auto

With rapid progress in automotive, MediaTek's Dimensity Auto development platform will be at the show, highlighting its leading capabilities in multimedia, 3D graphics, and AI processing capabilities across multiple virtual machines (VMs) on a hypervisor. The innovative eCockpit features an 8K display, and is developed in collaboration with strategic partners, illustrating what people can expect from next-generation in-vehicle experiences.

MediaTek Dimensity 9400

Various smartphones powered by the flagship Dimensity 9400 5G chip will be showcased, demonstrating their leading-edge Generative and Agentic AI applications and services. The showcase will also include the latest advancements in photography and videography, such as AI Audio Focus, AI Telephoto, Best Snapshot capabilities, AI Depth Engine for video playback, and the newest feature rich games with ray-traced graphics.

224G SerDes for ASIC

MediaTek's 224G SerDes represents a significant advancement in technology leadership, offering exceptional performance, reliability, and efficiency. This solution is designed to meet the rigorous interconnect demands of AI, hyperscale computing, data centers, and networking infrastructure. Our SerDes expertise is integral to our ASIC offerings, driving the next generation of AI acceleration and many other interconnect applications. MediaTek SerDes solutions empower ASIC customers with advanced process technology that enhances performance and bandwidth density, making them both power-friendly and cost-effective. These 224G SerDes solutions are silicon-proven, and development of the next-generation SerDes is already underway.

To learn more about MediaTek at MWC 2025, please stop by our booth #3D10 or visit:

<https://www.mediatek.com>

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