

Samsung at the Forefront of Korea's AI RAN Projects with KT and SK Telecom

23.9.2026 - | Samsung Electronics Slovakia, s.r.o.

As the only vendor selected for both projects, Samsung will harness its software-driven AI RAN solutions to advance physical AI across industries on the path to AI-native 6G

Samsung Electronics today announced it has signed contracts with KT and SK Telecom for their AI RAN projects under the Korean Ministry of Science and ICT's (MSIT) "Hyper AI Network" initiative, taking on the roles of sole global vendor for KT and main vendor for SK Telecom. Building on its decades-long partnerships with the country's leading operators and its leadership in software-driven, AI-native network innovation, Samsung is the only partner selected for both projects.

Set to begin in October 2026, the projects will deploy 5G Standalone (SA) private networks across industrial environments, ranging from shipyards to petrochemical facilities, to validate AI RAN capabilities and generate real-world insights for future deployments.

As part of the Korean MSIT's initiative, the projects bring together operators, network solution providers, and other industry partners. The collaboration aims to accelerate the adoption of cutting-edge technologies, including AI RAN, physical AI, and autonomous operations, while laying the groundwork for the transition to 6G.

"Korea has long stood at the forefront of global digital and technological advancement. As a key partner with deep roots in this region, we are proud to drive the next stage of network innovation alongside leading operators through these AI RAN projects," said June Moon, Executive Vice President, Head of R&D, Networks Business at Samsung Electronics. "As AI evolves toward embodied intelligence, networks are becoming platforms that connect a new generation of intelligent machines, including humanoids and autonomous vehicles. Bringing AI RAN and physical AI together in real-world industrial settings marks a meaningful step toward the future of connectivity."

AI-Powered Welding Robots at Shipyards

At the Yeongam Shipyard of HD Hyundai Samho, a prominent global shipbuilder, KT will carry out field trials of key physical AI services, ranging from welding and painting robots in manufacturing environments to autonomous robots for telecom facility operations.

For the AI-powered quadruped welding robot use case, Samsung will support KT with its software-driven, AI-native solutions, including Network in a Server (NIS) — an integrated edge AI platform comprising virtualized RAN (vRAN), AI Core, and AI applications — and Samsung CognitiV Network Operations Suite (NOS) for intelligent network automation. Leveraging 5G connectivity and the edge AI platform, the quadruped robot can autonomously perceive its working environment and perform precise welding.

With these capabilities, Samsung is addressing the demanding network requirements of physical AI services in industrial settings, where ultra-low latency, high reliability, and consistent throughput

are critical for real-time robotic control. Designed for on-premise deployment and local processing, NIS brings network and AI capabilities closer to where data is generated and decisions are made. It runs vRAN and 5G SA core software on an AMD EPYC™ 8004 Server CPU-powered commercial off-the-shelf (COTS) Compact Edge Server from Supermicro with Wind River Cloud Platform. Its software-driven architecture also enables flexible scaling, with the ability to incorporate accelerated GPU compute as needed to meet site-specific requirements.

“KT views this project as an important starting point for validating the next-generation communications paradigm where AI and networks converge,” said Jongsik Lee, Executive Vice President, KT. “Together with Samsung, we will demonstrate a range of Physical AI services in an AI-RAN-enabled private network environment and secure the key technologies and service models that will lead the AI-Native 6G era.”

Autonomous Patrol Robots at Petrochemical Facilities

As another key part of the country’s Hyper AI Network initiative, SK Telecom will validate physical AI services at SK Incheon Petrochem, a major energy hub for the Seoul metropolitan area. These capabilities include an autonomous robot that patrols hazardous areas and CCTV-based monitoring. The patrol robot transfers high-definition videos in real time while on the move, enabling AI analysis to detect potential hazards and facilitate integrated monitoring.

Samsung is providing its AI-native NIS solution for SK Telecom’s project. The companies will explore how AI-native connectivity can further enhance safety and efficiency in petrochemical environments, where complex chemical processes require rigorous monitoring and operational precision.

“At SK Telecom, we believe AI creates greater value when paired with the right foundation to support it, and this project puts that belief into practice,” said Takki Yu, Head of Network Technology Office at SK Telecom. “Drawing on our AI expertise, we will work with Samsung to validate physical AI services in real-world environments and advance AI RAN as a key technology underpinning the government’s Hyper AI Network initiative and its AI Highway agenda.”

Samsung’s AI RAN delivers a range of capabilities, including anomaly detection, throughput enhancement, and energy efficiency improvements, all validated on live networks around the globe. Building on this experience, Samsung continues to work with leading operators and partners to expand the real-world footprint of AI-native, 6G-ready networks and propel the adoption of AI-driven services across global markets.

Samsung Networks has pioneered the successful delivery of 5G end-to-end solutions, including chipsets, radios, and cores. Through ongoing research and development, Samsung is driving the industry to advance 5G networks and paving the way for 6G and beyond with its market-leading product portfolio, from purpose-built RAN, vRAN, Open RAN, AI RAN, and cloud-native AI core to private network solutions and AI-powered automation tools (CognitiV NOS). The company currently provides innovative network solutions to mobile operators that deliver boundless connectivity to hundreds of millions of users worldwide.

<https://news.samsung.com/global/samsung-at-the-forefront-of-koreas-ai-ran-projects-with-kt-and-sk-telcom>