

February 18, 2025

<Press Release>

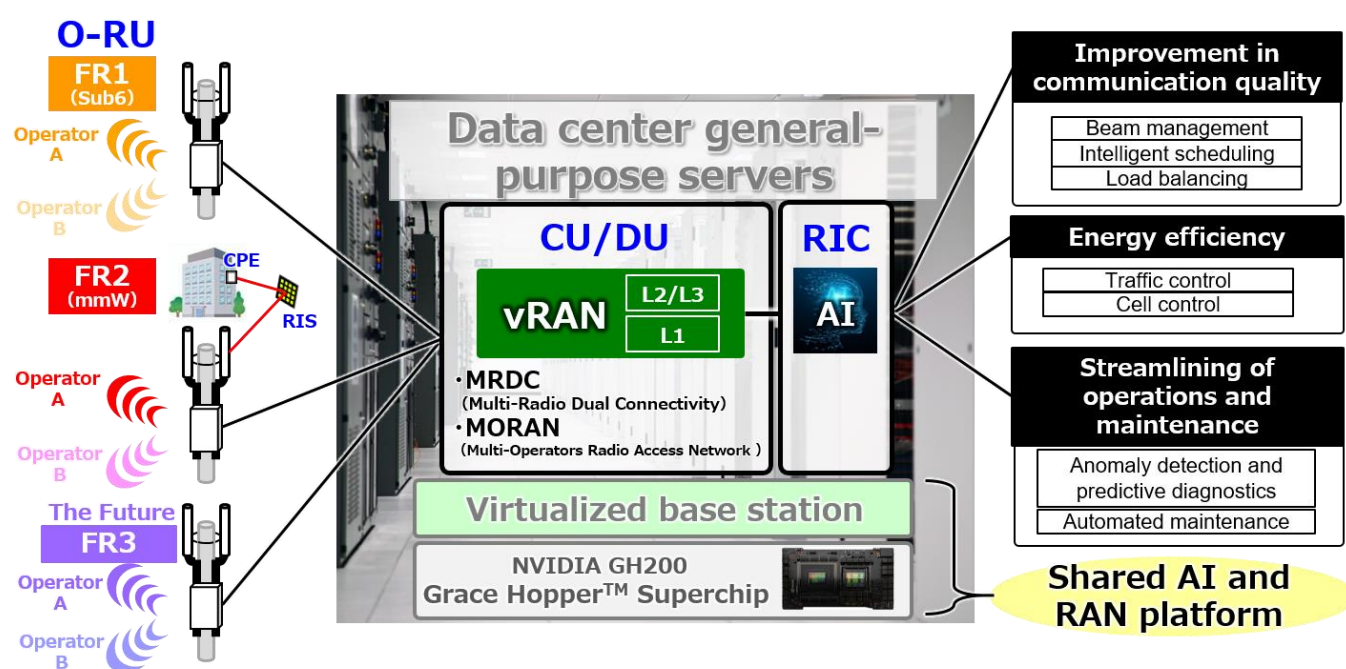
Kyocera Corporation

Kyocera Develops AI-Powered 5G Virtualized Base Station For the Telecommunication Infrastructure Market

*Innovative solution for next-generation networks revolutionizes connectivity,
increases fronthaul coverage*

Kyocera Corporation (Kyoto, Japan; President: Hideo Tanimoto) today announced that it has officially begun the full-scale development of an AI-powered 5G virtualized base station, with plans to commercialize the technology.

As digital transformation (DX) accelerates globally, 5G mobile networks have become a critical societal infrastructure. Kyocera is leveraging its proprietary, globally developed telecommunications and virtualization technologies to bring base station functionality to general-purpose servers using the NVIDIA GH200 Grace Hopper™ Superchip. Using AI, Kyocera's 5G virtualized base stations will enhance performance, reduce power consumption, and streamline both operations and maintenance. By offering these 5G virtualized base stations as an optimized solution to customers worldwide, Kyocera will support the advancement of 5G systems and help create a prosperous and connected society.



(System concept)

Features of Kyocera's 5G Virtualized Base Station

1. AI-Powered Base Station Functionality

Using AI, the system dynamically manages traffic congestion and optimizes frequency allocation, enabling higher upload/download speeds and improved quality. AI also monitors traffic to optimize base station power consumption, enhancing energy efficiency. Additionally, AI automates and optimizes various settings needed for operation and maintenance, allowing more efficient network management.

2. Dual Connectivity Functionality

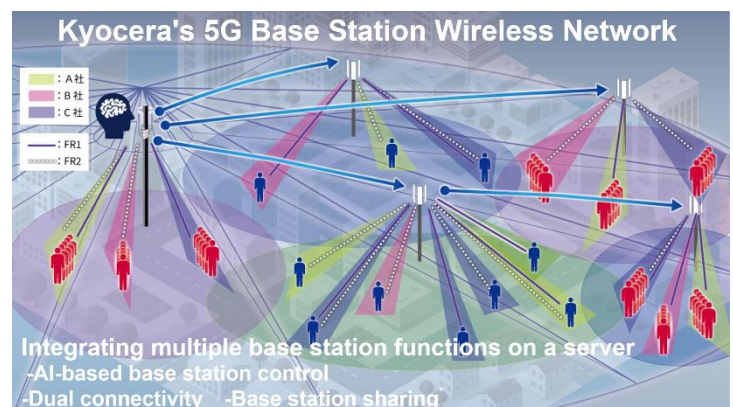
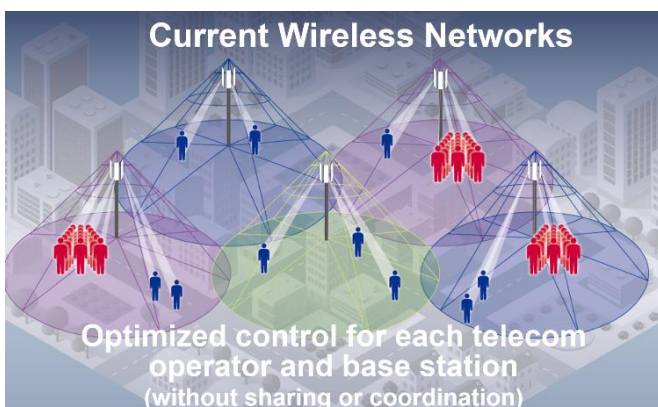
Leveraging its advanced antenna technology, Kyocera has developed O-RAN-compliant CU/DU/RU (O-CU/O-DU/O-RU) capable of handling two distinct frequency bands: Sub-6-GHz and millimeter-wave. The system can accommodate rapid traffic increases by controlling traffic data from both frequency bands on a general-purpose accelerated computing server. Future next-generation frequency bands are supported through software upgrades.

3. Base Station Sharing Functionality

Kyocera's innovation allows multiple telecommunications operators to share a single base station (CU/DU or O-RU) to process communication data. This functionality reduces the number of base stations required, minimizing operators' capital expenditures and electricity costs, while contributing to more efficient expansion of 5G wireless network coverage.

4. Extended Coverage Area and Reduced Power Consumption

With Kyocera's expertise in software implementation, the system can extend fronthaul distance to more than 40 kilometers, enabling broader coverage areas. Additionally, consolidating CU/DU functions on a single server reduces power consumption.



(Wireless network comparison)

About Kyocera's Participation in MWC 2025

Kyocera will showcase its 5G virtualized base station at Mobile World Congress 2025 (MWC), the world's largest communications technology convention, in Barcelona, Spain, March 3-6, 2025.

Dates	March 3-6, 2025
Official Website	https://www.mwcbarcelona.com/
Venue	Fira Gran Via, Barcelona, Spain
Kyocera Booth	Hall 5, 5E12

Explanation of Terms

1. RAN (Radio Access Network): A wireless communications network using radio waves.
2. CU (Central Unit): A component of the wireless access network that manages data processing and control functions near the core network in a centralized manner.
3. DU (Distributed Unit): A component within the wireless access network alongside the CU to handle wireless signal processing and functions that require real-time operation.
4. RU (Radio Unit): A part of the wireless access network that sends and receives wireless signals, directly connecting to antennas and serving as the physical interface for wireless communication.
5. O-RU (Open Radio Unit): An RU that complies with O-RAN standards, enabling interoperability between equipment and software from different vendors.
6. O-RAN Alliance: An international organization that promotes the open and intelligent evolution of Radio Access Networks (RAN) through the participation of telecom operators, equipment manufacturers, and software developers. It aims to improve interoperability, flexibility, and the efficient deployment of 5G and next-generation networks.
7. O-RAN Specifications: Common specifications developed by the O-RAN Alliance to promote the openness and interoperability of Radio Access Networks (RAN). By adhering to these specifications, companies enable flexible and efficient collaboration between devices from different manufacturers.

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About KYOCERA

Kyocera Corporation (TOKYO:6971, <https://global.kyocera.com/>), the parent and global headquarters of the Kyocera Group, was founded in 1959 as a producer of fine ceramics (also known as "advanced ceramics"). By combining these engineered materials with metals and integrating them with other technologies, Kyocera has become a leading supplier of industrial and automotive components, semiconductor packages, electronic devices, smart energy systems, printers, copiers, and mobile phones. During the year ended March 31, 2024, the company's

consolidated sales revenue totaled 2 trillion yen (approx. US\$13.3 billion). Kyocera is ranked #874 on *Forbes* magazine's 2024 "Global 2000" list of the world's largest publicly traded companies, and has been named among "The World's 100 Most Sustainably Managed Companies" by *The Wall Street Journal*.

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