

Sharp Semiconductor Innovation, IIT Hyderabad and WiSig Networks, successfully demonstrate Beyond 5G and 6G Technologies

SSIC, IITH & WiSig demoed B5G/6G at IITH: ASUKA SDR-UE + Open RAN base station hit 5G-class performance, paving Indo-Japan path to FWA, V2X, NB-IoT.

HYDERABAD, TELANGANA, INDIA, May 15, 2025 /EINPresswire.com/ -- Sharp Semiconductor Innovation Corporation (SSIC), The Indian Institute of Technology Hyderabad (IITH) and WiSig Networks have announced the successful completion of ground-breaking field demonstrations for Beyond 5G (B5G) and 6G technologies. This collaboration signifies a major advancement toward Japan and India's shared vision of a digitally connected future.

The joint demonstrations, conducted at IITH Campus in Hyderabad, India, validated the performance and interoperability of SSIC's flexible Software-Defined Radio (SDR) System-on-Chip (SoC) User Equipment (UE) and WiSig Networks' Open RAN (O-RAN) base stations. The experiments showcased the compatibility and effectiveness of advanced communication terminals developed by Sharp Semiconductor Innovation Corporation in Japan.

Leveraging SSIC's state-of-the-art ASUKA SDR-Box, equipped with a versatile communication SoC designed to support future communications protocols, the trials confirmed high-quality wireless connectivity and performance comparable to existing commercial 5G SoCs.

Prof Kiran Kuchi of IIT Hyderabad, founder of WiSig Networks and a prominent contributor to 5G and 6G global standards including 3GPP, emphasized the significance of the collaboration: "This initiative bridges academic excellence, industrial innovation, and international collaboration efforts, reinforcing the global partnership of India and Japan in next generation wireless communications."

Toyofumi Horikawa from SSIC, who is a technical leader of development of the customizable SDR SoC, expressed enthusiasm about the partnership's outcomes: "The results from tests and experiments carried out at the IITH campus demonstrate the immense potential of customizable SDR SoC platforms in accelerating the development of future wireless technologies. SSIC also exhibited its advanced SDR technology at the Mobile World Congress (MWC25) in Barcelona. In 2026, we plan to further expand this collaboration for advanced communication protocol testing."

WiSig Networks, a leading innovator in Open RAN and advanced 5G/6G technologies, played a crucial role in the integration and seamless operation of equipment throughout the trials. IIT Hyderabad's extensive indoor and outdoor facilities provided an optimal environment for comprehensive real-world wireless testing.

Prof. B.S. Murty, Director of IIT Hyderabad, remarked, "This partnership underscores our commitment to fostering international collaboration and driving innovation in wireless communication technologies, placing IIT Hyderabad at the forefront of technological breakthroughs."

The partners intend to deepen their collaborative efforts by focusing on advanced use cases such as Fixed Wireless Access (FWA), Mission-Critical Push-to-Talk (MC-PTT), autonomous navigation (V2X), and smart metering applications leveraging NB-IoT technology compatible with satellite communications.

This Indo-Japanese collaboration exemplifies the potential for international partnerships to shape global standards and drive innovation in next-generation wireless communications.

About IIT Hyderabad:

IITH, established in 2008, has reached a respectable position in Academics, Research, Technology development and Startups in a short span of 16 years. In the National Institutional Ranking Framework (NIRF), IITH has bagged at 3rd in Innovation and 8th among Engineering institutes in the last two consecutive years, while it has maintained its rank within top 10 Engineering Institutes ever since NIRF was launched. IITH has been striving for excellence with a motto of "Inventing & Innovating in Technology for Humanity (IITH)".

With 325+ full-time Faculty and 5,300+ Students (PG+PhD students accounting for about 60%), IITH has a strong research focus with ~ 4630 Projects worth of Rs. 1510+ Cr of R&D funding (Rs. 335+ Cr funding in 2024-25), 11,680+ Publications, 2,15,000+ Citations, 510+ Patents (210 Patents in 2024 and a commitment to "Patent a Day: Mission 365" for 2025 to earn 365 Patents by the end of 2025), and about 260+ Startups (that have generated 1100+ jobs with a revenue of Rs. 1500+ Cr).

Media Contacts:

You can view all press releases/notes from IIT Hyderabad at: <u>https://pr.iith.ac.in/press-release</u> Please direct all media queries to | Public Relations Officer, IIT Hyderabad | Cell: 8331036099

About Sharp Semiconductor Innovation Corporation

Sharp Semiconductor Innovation Corporation specializes in semiconductor solutions and flexible SDR platforms, actively shaping global wireless communication standards. <u>https://ssic.jp.sharp/en/</u>

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About WiSig Networks

WiSig Networks is a leading provider of wireless communications solutions, specializing in cutting-edge technologies such as Massive MIMO, 5G ORAN, and NB-IoT SOC solutions. With a commitment to innovation and excellence, WiSig is dedicated to shaping the future of wireless connectivity. <u>www.wisig.com</u>

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