Sharp Semiconductor Innovation Corporation Japan, IIT Hyderabad and WiSig Networks Private Limited (Startup incubated at IIT Hyderabad) successfully demonstrated advanced Beyond 5G and 6G Technologies

Key Highlights:

- *Sharp Semiconductor Innovation Corporation (SSIC), IIT Hyderabad (IITH), and WiSig Networks Private limited* **(Startup incubated at IITH)** *have successfully demonstrated advanced Beyond 5G (B5G) and 6G technologies through collaborative field trials at IITH.*
- *The trials validated the interoperability of SSIC's customizable Software-Defined Radio (SDR) SoC User Equipment with WiSig's Open RAN base stations, confirming high-performance wireless connectivity comparable to commercial 5G systems.*
- *The initiative represents a strong partnership between Japanese and Indian institutions, blending academic research, industrial innovation, and international cooperation to advance global 6G standards.*
- *SSIC exhibited its advanced SDR technology at MWC25 in Barcelona, reinforcing its role as a leader in future wireless communication platforms.*
- *The collaboration aims to expand in the year 2026 to support advanced applications such as Fixed Wireless Access, Mission-Critical Push-to-Talk, V2X autonomous navigation, and satellite-compatible NB-IoT smart metering.*

Hyderabad, 15th May 2025: Sharp Semiconductor Innovation Corporation (SSIC), The Indian Institute of Technology Hyderabad (IITH) and WiSig Networks Private Limited (Startup incubated at IITH), have announced the successful completion of ground-breaking field demonstrations for advanced **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, Department of Electrical Engineering, IITH & founder of WiSig Networks (Startup incubated at IITH) 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*."

Prof. B S Murty, Director of IITH, remarked, "*This partnership underscores our commitment to fostering international collaboration and driving innovation in wireless communication technologies, placing IITH 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 IITH at: https://pr.iith.ac.in/press-release
Please direct all media queries to | Public Relations Officer, IITH | pro@iith.ac.in, 8331036099

About Sharp Semiconductor Innovation Corporation:

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

Media Contacts:
Sharp Semiconductor Innovation Corporation: Corporate Communications, ssic-design@mail.sharp

About WiSig Networks Private Limited:

WiSig Networks, **Startup incubated at IITH,** is a leading provider of wireless communications solutions, specializing in cutting-edge technologies such as Massive MIMO, 5G ORAN, NB-IoT SOC solutions, 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. With a commitment to innovation and excellence, WiSig is dedicated to shaping the future of Wireless connectivity. www.wisig.com, a leading innovator in Open RAN and advanced 5G/6G technologies

Media Contacts:

WiSig Networks: Media Relations, contactus@wisig.com