

# TDB-DST backs M/s Lekha Wireless Solutions, Bengaluru in Advancing India's Wireless Communication Technology

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Prime Minister Shri Narendra Modi has aptly stated that "India's progress hinges on our ability to embrace technology and innovation." These words resound with the Government of India's dynamic initiatives in the field of wireless communication technology. These endeavours encompass a multifaceted approach, including the promotion of research and development in emerging wireless technologies, the encouragement of domestic production of wireless communication equipment, and the facilitation of the adoption of cutting-edge wireless solutions across crucial sectors, including Defence, Healthcare and Telecommunications. This robust commitment exemplifies India's dedication to advancing technology and attaining self-reliance in the realm of wireless communication, making significant contributions to the nation's prosperity and security.



Building upon this vision, the Technology Development Board (TDB) has announced its support for M/s Lekha Wireless Solutions Pvt Limited, Bengaluru for their innovative project "Tactical Advanced SDR for Space, Defence and Aviation Applications." This agreement shows a significant stride towards promoting innovation and technological advancement in India, particularly in the realm of wireless communication. TDB has approved financial assistance of Rs. 4.17 Crores out of Rs. 17.92 Crores.

This ambitious initiative holds great potential for strengthening India's capabilities in the field of wireless communication technology. The project's primary aim is to bring to market an array of cutting-edge products under the brand name "Antares." These products encompass:

- a. Handheld SDR:** A versatile handheld SDR designed to operate in L, S and C bands for tactical applications, specifically intended for Non 3G PP applications. This unit features essential components such as Baseband Processing, Power Amplifier, and an Integrated Antenna. Critical parameters for this unit include weight, form-factor, communication range, and battery management. Certification for both ESS and EMI/EMC is imperative.
- b. Multi-Channel SDR:** Similar to the handheld version but designed in a manpack form, with a 50 W RF capability to facilitate extended communication ranges.
- c. Satcom SDR:** Tailored for Satcom applications and operational within the S & C Band.

**d. High Power Add-On:** This unit offers various add-on power modules, allowing flexibility in selecting the appropriate module to meet the RFP requirements of tenders.

The proposed Tactical SDR represents a unified radio system that accommodates multiple form factors, including vehicle mount, pole mount, and handheld radios. It operates within both licensed and unlicensed bands, supports frequency hopping, and is compatible with both legacy and advanced digital waveforms. This indigenous technology-based radio system serves as an import substitute for the Indian Armed Forces, offering eight different form factors to address a wide range of use cases.

The project places strong emphasis on rigorous testing and certification. All trials involve end-user participation and certification by NABL-approved agencies. The products undergo Environmental Stress Screening (ESS) and EMI/EMC Testing, ensuring compliance with international standards.

Speaking on the occasion, Shri Rajesh Kumar Pathak, Secretary, TDB, said, "TDB is happy to support this ambitious project. This collaboration perfectly embodies TDB's vision of promoting innovation and technology-driven solutions. We firmly believe that this project will not only enhance India's technological prowess but also strengthen our national defence capabilities. TDB eagerly anticipates the positive impact that this project will bring to the wireless communication landscape in India and beyond."

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