

vigilance

IIT Kanpur Unveils Anti-Drone System 'Shatakshi'

UP State Bureau

KANPUR

In a significant stride for indigenous defence innovation, the Indian Institute of Technology Kanpur (IIT Kanpur) has developed an advanced anti-drone system named "Shatakshi," designed to detect, track, and neutralise unauthorised unmanned aerial vehicles (UAVs). The innovation arrives at a time when drone-related security concerns are rapidly rising worldwide, with UAVs increasingly used for surveillance, smuggling, and potential attacks on

sensitive installations.

Developed by a team of researchers and engineers, Shatakshi represents a technology-driven response to evolving aerial threats. The system integrates multiple layers of detection and countermeasure mechanisms, enabling authorities to identify rogue drones in real time. Leveraging sophisticated sensors and intelligent algorithms, the platform can distinguish between friendly and hostile aerial objects, a capability considered crucial for preventing false alarms in high-traffic airspaces. According to officials



Advanced anti-drone system promises smarter detection, tracking, and neutralisation capabilities

familiar with the project, Shatakshi combines radar-

based monitoring, radio-frequency analysis, and visual tracking tools to establish accurate situational awareness. Once a suspicious drone is detected, the system can initiate counter-drone measures, including signal jamming or safe neutralisation protocols. Such features are expected to be particularly valuable for safeguarding airports, defence facilities, public events, and critical urban infrastructure.

Security analysts have highlighted that the emergence of affordable commercial drones has introduced new vulnerabilities for law enforcement

agencies. Traditional surveillance systems often struggle to detect small, low-flying UAVs, creating the need for specialised counter-drone solutions. In this context, Shatakshi is being viewed as a timely development that could strengthen India's preparedness against unconventional threats.

Experts also emphasise the broader significance of the project for India's self-reliance initiatives. Indigenous systems like Shatakshi reduce dependence on imported security technologies while fostering home-grown research and manufacturing ecosystems.