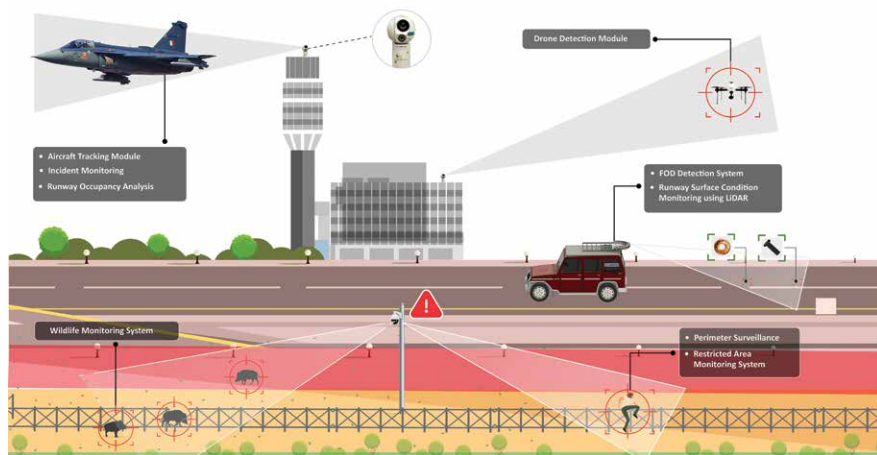


HC Robotics: Pioneering the future of aerospace & defence intelligence



In aviation, precision and safety are paramount. Takeoffs and landings, the most critical yet accident prone phases of flight, pose significant risks, disruptions, and financial losses, on account of Foreign Object Debris (FOD), wildlife intrusions, and security breaches, creating multi-billion-dollar challenges. With exponential growth of air traffic grows, the need for real-time intelligence and automated safety solutions has never been felt more urgent.

HC Robotics is at the forefront of this transformation, engineering advanced imaging, detection for monitoring systems for airbases, defence forces and aviation leaders. Our solutions enable real-time surveillance, precision monitoring and AI-driven automation, ensuring safer and more efficient aerospace operations.

Visibility is the key in defence and aviation. HC Robotics' high-performance electro-optical and infrared (EO/IR) imaging systems deliver unparalleled situational awareness. Our Chakshu EO/IR gimbal cameras offer long range precision tracking for defence, border security and aerospace applications. Additionally, our thermal imaging and PTZ surveillance systems provide reliable monitoring in low visibility conditions, including night operations and extreme weather. To enhance security, our Automated Perimeter & Intrusion Monitoring systems offer real time detection and alerts for unauthorised movement and airfield breaches. By integrating AI-driven automation, HC Robotics enhances human oversight, ensuring no critical detail is overlooked.

Advanced safety solutions for aviation and defence

Automated FOD Detection: Runway safety is a race against time. Conventional FOD inspections require extensive manpower and hours of scanning. HC Robotics' AI-powered FOD detection system streamlines

this process, delivering rapid, precise results. Our system offers real time detection of objects as small as 5 mm, faster turnaround times with full runway scans in under 30 minutes using only 2–3 operators, and has been tested and validated at AFS Hakimpet. This efficiency boost enhances both commercial aviation operations and mission readiness for defence forces.

Wildlife Detection and Reporting System: Wildlife intrusions remain a persistent challenge for airbases. Traditional visual spotting methods are limited, especially at night and in adverse weather. HC Robotics'

AI-powered Wildlife Detection System provides 24/7 monitoring, offering instant alerts for animal movement near runways, thermal based tracking for visibility in complete darkness, and predictive AI insights to deter intrusions and enhance safety measures.

Aircraft Landing and Takeoff Recording System: Regulatory bodies, such as the Directorate General of Civil Aviation (DGCA), mandate flight data monitoring. Yet many airbases rely on manual logging and low resolution CCTV footage. HC Robotics' Aircraft Landing and Takeoff Recording System transforms flight



documentation by capturing high-resolution video from up to 10 km away, providing automated insights for incident analysis and regulatory compliance, and enhancing aviation training programs with verifiable, high-quality visual data. This system ensures regulatory compliance while improving operational efficiency and safety audits.

Unmanned Systems and AI-driven aviation intelligence: HC Robotics develops advanced unmanned systems that provide long-endurance intelligence for continuous surveillance, real time reconnaissance for