An e-Newsletter from Anatech Electronics

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What's News...

ANATECH ELECTRONICS INC

UK Makes EW Upgrades

Britain's Royal Navy is set to receive upgraded EW capabilities, including launchable decoys, to enhance vessel protection against modern threats such as anti-ship missiles. This enhancement, called the Maritime EW Program (MEWP), a major overhaul of EW surveillance and defense systems. The program has two key components: the Maritime EW System Integrated Capability (MEWSIC), which delivers improved sensing and advanced command and control functionality; and EW Counter Measures (EWCM). As part of the EWCM initiative, Royal Navy ships will be equipped with Ancilia decoy launchers, providing rapid protection against hostile threats, including modern anti-ship missiles and directed energy weapons.



Source: UK Royal Navy

New Antenna Operates in GPS-Denied Environments

Persistent Systems' York Multi-Band Tracking Antenna enhances ground-based communication with friendly manned and unmanned aircraft, even during electronic warfare jamming and in GPS-denied environments. This system can locate and track aircraft without relying on satellitebased tracking systems like GNSS or GPS, maintaining connectivity with intelligence and surveillance (ISR) aircraft when conventional systems are disrupted, denied, or spoofed. The antenna system accommodates two MPU5 MANET radios operating on different radio frequency bands, automatically switching to the band with optimal performance when interference is detected.

Advanced Satcom System Enhanced

L3Harris Technologies has selected Honeywell's JetWave X satellite communication system to upgrade the U.S. Army's Airborne Reconnaissance and Electronic Warfare System (ARES). This technology will deliver higher data transmission speeds and enhanced connectivity resilience through multi-network architecture, enabling continuous global communication. The JetWave X system supports multiple Ka-band satellite networks, including Inmarsat Global Xpress and ViaSat-3, and features an open-architecture framework designed for seamless integration with future satellite constellations.



Source: Honeywell





America's Outdated Airport Radar: A Preventable Crisis

The Federal Aviation Administration has boasted that the U.S. is the gold standard in aviation safety and technology. Still, as recent incidents have revealed, our nation's airport radar systems remain outdated. In fact, many of our busiest airports rely on radar technology developed in the 1970s and 1980s, as the FAA has repeatedly deferred critical infrastructure upgrades. Outdated radar systems struggle to provide accurate aircraft positioning during severe weather, creating dangerous blind spots that force controllers to increase separation distances between flights. The result is cascading delays, canceled flights, and frustrated passengers. When multiplied across thousands of daily flights, these inefficiencies cost airlines billions annually while needlessly increasing carbon emissions.



Source: Persistent Systems

World's Largest Steerable Radio Telescope

China is building the world's largest fully steerable radio telescope in Huadian, northeastern China. The telescope is 120-m in diameter, about the area of 30 football fields, and will enhance scientists' ability to study planets and asteroids with greater precision. The project complements China's 500-m aperture spherical radio telescope (FAST) in Guizhou Province, currently the world's largest single-dish and most sensitive radio telescope. FAST's reflector consists of 4,450 equilateral triangular panels, each with 11-meter sides. Unlike fixed radio telescopes of comparable size, fully steerable radio telescopes can observe larger portions of the sky. Similar capabilities exist in other facilities worldwide, including NASA's Goldstone Deep Space Communications Complex and the Very Large Array (VLA) in New Mexico.



Source: Chinese Academy of Science

More concerning are the safety implications. Modern radar systems offer capabilities our aging infrastructure cannot match – enhanced detection of wind shear, better tracking in precipitation, and superior identification of potential runway incursions. Every day we operate without these advancements represents an unconscionable risk.

So, why has the FAA failed to deliver after decades of promises? The usual explanation is budgetary constraints, even though the agency spends billions on administrative overhauls and consultant fees. Technical complexities certainly exist, but other nations with far fewer resources have successfully modernized their systems.

Aviation experts have warned for years about this growing technological gap. Former FAA administrators, airline executives, and safety advocates have all sounded alarms about our deteriorating radar infrastructure. These warnings have been met with promises of future upgrades and modernization initiatives that repeatedly fail to materialize or face years of delays.

The solution requires both immediate action and long-term commitment. Congress must provide dedicated funding for radar modernization while implementing strict oversight to prevent further delays. The FAA needs leadership willing to prioritize infrastructure over bureaucracy, with clear timelines and accountability measures. Our aviation system has long been the envy of the world, but this reputation is increasingly at risk. Unless the FAA commits to and performs these upgrades, the situation will only worsen. Combined with a lack of trained air traffic controllers, we face a future of preventable safety risks. We shouldn't be using systems built when disco was still in fashion.





Anatech Electronics, Inc. focuses on the design and manufacturing of RF and microwave filters and related products.

Anatech Microwave, Inc. focuses on supplying quality RF and microwave products.



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