

August 2024

What's News...

Replacement for Patriot System Coming

The U.S. Army has awarded RTX Corp. a \$2.09 billion contract for low-rate initial production of the Lower Tier Air and Missile Defense System (LTAMDS), also known as GhostEye. This next-generation radar will replace the current Patriot system, offering 360-degree coverage and more than double the performance. Key features include gallium nitride components, one primary and two secondary antenna arrays, and the ability to detect and engage multiple threats simultaneously.



Source: U.S. Army

FAA To Rule on Beyond Visual Line of Sight

The Federal Aviation Administration (FAA) has committed to meeting deadlines for rulemaking beyond visual line of sight (BVLOS). BVLOS operations involve flying aircraft or drones beyond the pilot's or operator's visual range, enabling more extensive and sophisticated drone missions. These operations rely on GPS, telemetry, and potentially artificial intelligence for navigation and control. Due to the complexity and potential risks involved, special certifications are typically required to conduct BVLOS flights. The FAA has outlined a timeline for implementing new BVLOS regulations and intends to publish a Notice of Proposed Rulemaking (NPRM) by the end of the year, with a final rule by January 2026.



Source: Wikipedia

Antenna Paves the Way for OneWeb Satcom Access

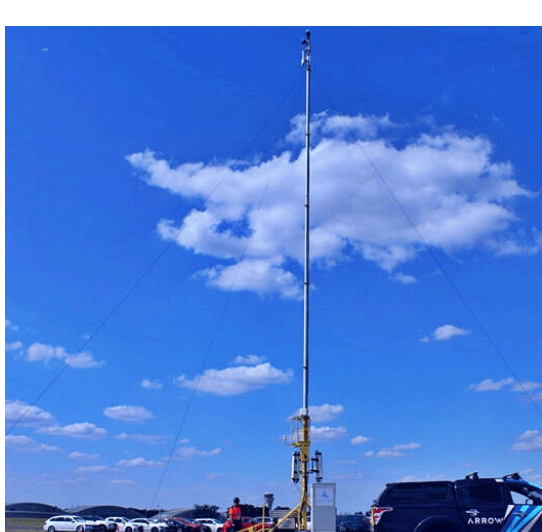
Gogo Business Aviation has successfully connected its HDX antenna to the Eutelsat OneWeb LEO satellite network, marking a major step towards the launch of its Gogo Galileo broadband service later this year. The HDX antenna, designed for ground-based testing, will soon undergo flight tests. Two antenna sizes will be offered: the compact HDX for smaller aircraft and the larger FDX for heavier jets. Hughes Network Systems manufactures both antennas in collaboration with Gogo. With power outputs ranging from 110 to 330 watts, these antennas promise to deliver high-speed connectivity to business aviation.



Source: Gogo Business Aviation

New System Provides Drone Detection

Altitude Angel and NATS Services have launched Arrow, a system that detects and tracks drones and other aircraft in lower-level airspace. This addresses a challenge for traditional radar systems. Arrow was developed to improve safety by monitoring all traffic, authorized or not. Its capabilities were demonstrated at Farnborough Airport, where road-towable sensors provided a comprehensive view of the airspace. Arrow is self-sufficient and uses solar power and a private network. This technology represents a significant step in airspace management, enhancing safety and enabling drone integration in busy areas.



Source: Altitude Angel

A Word from

Sam Benzacar



Fixed-Wireless Access Is Finally Available, and People Love It

By Sam Benzacar

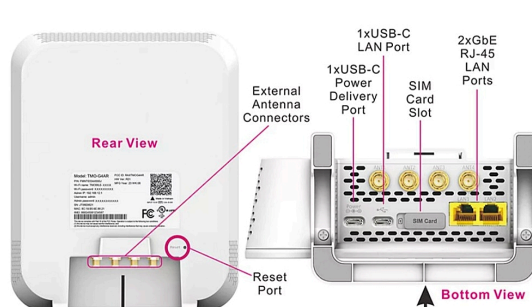
As fiber continues to be rolled throughout the country and cable faces a slow death, another solution, fixed-wireless access (FWA), which relies on 5G, is making significant inroads in bringing broadband to the masses. In fact, FWA accounted for 90% of the broadband additions in 2022, even though it delivers speeds far lower than fiber or cable and is only slightly less expensive. So, why would consumers choose this option?

From my perspective, the adoption of FWA is that it eliminates wiring, whether coax or fiber, both outside and inside the home. Carriers, primarily T-Mobile and Verizon, make installing simple without carriers sending out a technician for every new installation, costing them billions of dollars annually. So, they can offer FWA with monthly costs ranging from \$50 to \$70. The provider mails a package to the home that includes a router-modem combo and sometimes an external antenna. All that's required is to put this "box" near a window, download an app, and create a Wi-Fi SSID.

FWA is basically a point-to-point (or multipoint) microwave by another name. It has been tried several times since the 1990s as a solution for delivering TV, voice, and data, which ultimately failed for various reasons. However, the technologies within 5G and its widespread deployment have finally made it a viable alternative even in rural and underserved communities.

What's the catch? First, speeds are lower than even the least expensive cable plans and an order of magnitude slower than those of fiber. That's fine for most people but not households with "heavy users," who could exceed what the limited bandwidth offers. In some locations, optimum placement of "the box" (with its integrated antenna) might not be possible, which would require an external (and its accompanying cable). In addition, in its current form, FWA has the same asymmetric service as cable—much higher download than upload speeds. Finally, FWA shares 5G bandwidth with mobile subscribers, so speeds might decrease when traffic on the network is heavy. Nevertheless, according to recent reports, people with FWA are happier with this solution than with what they had before.

However, when the wireless industry eventually widely deploys millimeter-wave frequencies, performance should increase dramatically, perhaps rivaling fiber, the high-speed champion. Deployment of millimeter-wave 5G has been a slow process, but it should eventually be widely available, as mandated in the 5G standards. In short, FWS seems destined to be the go-to choice for broadband delivery, replacing cable and competing only with fiber where it's available.



Source: ARRIS CM820B



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