THE DIRTY LITTLE SECRET ABOUT KA VS KU FREQUENCIES.

Author: Krysti Roush | January 28, 2019
There’s a running debate within the small community of satellite communications providers about the merits of the Ka and Ku frequency bands. But here’s a dirty little secret. Your passengers couldn’t care less.

If you need proof, just watch the eyes glaze over when we start to explain wavelengths to a business jet traveler who wants nothing more than in-flight Wi-Fi that is fast, reliable and available anywhere in the world. Whether travelling for business or pleasure, your passengers want – no, expect – the same user experience at 35,000 feet that they enjoy on the ground, in their home or office. And woe to the aircraft operator who can’t provide it.

While other satellite communications options like the L-Band and Swiftbroadband are still widely used in general aviation, the choice for high-speed in-flight Wi-Fi capabilities boils down to either an older, more established Ku-Band system or the newer, faster Ka-Band solution. The choice is best left up to the technical experts and frankly most owners and operators rely happily on their flight operations department to make the call.

The best option depends largely on the aircraft, its size and mission. A solution that might be fine for a twin-turbine that flies a few hundred miles isn’t going to cut it for a heavy-iron business jet that makes frequent flights overseas with the CEO onboard.

Given passenger expectations, most aircraft flying today are probably ready for a connectivity upgrade. Even aircraft that rolled off the assembly line early in this decade are often equipped with only air-to-ground systems or slow-speed voice and data capabilities. The best equipped operate on the Ku-band and probably connect with top speeds in the 3-4 mbps range – too slow to satisfy most discriminating business aviation passengers.

Performance of Ku-Band systems has improved in recent years with typical speeds now around 18 mbps. With Honeywell’s JetWave satellite communications system, which connects to the Inmarsat Jet ConneX satellite communications service, we can achieve speeds of up to 33 mbps, exceeding the speed of many ground-based Wi-Fi services, and with network availability numbers above 95 percent. Each satellite in the Inmarsat 5 constellation operates 89 highly efficient Ka-Band spot beams, giving the network reliable global coverage, except at the poles. With the addition of three more satellites, the first of which will launch in 2019, Jet ConneX will provide even greater bandwidth and additional coverage for the busiest regions of the world.

The technical details obviously set the Honeywell-Inmarsat Ka-Band solution apart from even the best Ku-Band options. But the real difference lies in a superior customer experience that will delight business-jet passengers, especially those who’ve lived through the frustrations of slow and unreliable in-flight Wi-Fi service.

With our JetWave satellite communications hardware and the Jet ConneX service, busy executives can reliably connect to the internet from wheels-up to wheels-down and stay connected wherever they fly, even on international and transoceanic trips.

You can send an email or check stock quotes with either technology, but when it comes to exploring and exploiting the full potential of our 21st Century connected world, the Ka-Band solution stands head and shoulders above the Ku-Band’s capabilities. Our signature speed and reliability enable your passengers to not only send and receive basic emails, but to download and upload huge files, like presentations with lots of graphics and even embedded video.

Speaking of video, only JetWave and JetConneX have the bandwidth they need to join that critical videoconference or connect with their most important customers in real time. When it’s time to kick back, our solution lets passengers Facetime with the family, live-stream the latest blockbuster or watch the big game or that must-see TV show live – just like they were in their own living room.

In short, passengers can access anything available on the internet, in real-time, wherever they fly. Ku-Band options simply can’t deliver comparable levels of service and performance.

All the advantages of a Ka-Band solution are complemented by affordable and flexible airtime service plans that can be tailored to the specific needs of your operation and the unique Honeywell GoDirect Cabin Connectivity suite of services and applications that help you make the most of your connected aircraft investment.

For now, debate continues on the relative merits of Ku-Band and Ka-Band solutions. Chances are your most important customers are ambivalent at best. It’s no secret that all they really care about is being able to access fast and reliable Wi-Fi wherever they fly. The Honeywell-Inmarsat solution is the obvious choice, now and for the future.

Lean more about JetWave or get a quote for upgrading your aircraft at aerospace.honeywell.com