

□ UWB usage trend

UWB frequency band in use	Please fill out all the frequency channels using.								
	√ Ch.3	√ Ch.5	√ Ch.6	√ Ch.8	√ Ch.9	√ Ch.10	√ Ch.12	√ Ch.13	√ Ch.14
	4.2-4.8 GHz	6.2-6.7 GHz	6.7-7.2 GHz	7.2-7.7 GHz	7.7-8.2 GHz	8.2-8.7 GHz	8.7-9.2 GHz	9.4-9.7 GHz	9.7-10.2 GHz
UWB Utilization Product / Service Description	Ultra-Wideband (UWB) technology is a fast-growing, spectrum-efficient solution enabling a wide range of high-value applications. Since its adoption in consumer electronics in 2018, UWB adoption has surged, particularly in smartphones and personal accessories. UWB deployment continues to expand rapidly across multiple sectors.								
	Centimeter-level precision enables critical applications such as digital key access, location tracking, and presence detection. Other deployed uses include wall scanners, heart monitors, and high-definition audio. UWB complements Bluetooth, Wi-Fi, and mobile communications, offering superior precision and minimal interference, enabling high spectrum reuse.								
	Key market drivers for UWB include:								
	● Consumer Electronics. UWB adoption in smartphones enables secure sharing, accessory tracking, and better device connectivity. Excitement is growing around UWB headphones and loudspeakers, launched in 2024. Consumers also use high-quality wall and floor scanners for safe home modifications, avoiding pipes and wiring. ● High Definition Audio. UWB audio products, showcased at events like the Munich High End Audio Show, CES, and the Audio Engineering Society convention, have gained attention and rave reviews for their exceptional quality and ultra-low latency. ● Low latency Human Interface Devices: UWB powers high-performance gaming peripherals like mice, joysticks, and controllers, delivering ultra-low latency for competitive gaming and e-sports. ● Automotive: UWB enables keyless entry and enhanced vehicle security while also detecting unattended children to prevent heat strokes. Current automotive applications primarily use channels 5 and 9.								

	• Healthcare: UWB helps track critical hospital equipment like infusion pumps, mobile X-ray machines, and defibrillators. It also monitors patient vitals, staff and patient locations, and environmental conditions in sensitive areas requiring precise control. • Connected sports: UWB provides real-time tracking of athletes and equipment, measuring position, speed, and movement to enhance training, performance analysis, and game strategies. • Manufacturing: UWB enables real-time tracking of materials, tools, and products on factory floors. It is streamlining operations, enhancing worker safety, securing access control, and supporting precision industrial controls with high-resolution positioning and timing. • Retail: UWB enhances inventory management and customer experience with location-based ads and product info. • Precise Navigation: UWB enables centimeter-accurate 3D positioning for indoor navigation, complementing satellite navigation where unavailable. Fixed outdoor anchors further improve positioning for applications like EV charging alignment and smart parking. International Standards Development Organizations such as IEEE Standards Association, ETSI, and the Audio Engineering Society have developed standards to support many of these applications. Standards development continues to evolve as technology advances. Industry organizations such as the UWB Alliance are developing interoperability conformance programs to support mass market adoption.
--	--

☐ Contents of Demand

Do you agree with UWB power deregulation?	☒ Yes ☐ No
Problems occurred from current output	With hundreds of millions of UWB devices deployed globally, no interference with other radio services has been reported. UWB's extremely low transmit power—far lower than Bluetooth or Wi-Fi—and noise-like signal make it minimally impactful. In high-power environments, signals from Wi-Fi and mobile base stations can affect

criteria	UWB performance, but modest power increases, supported by ECC Report 327, have can help mitigate disruptions without harming other services.
Urgency of power output improvement	EC decision 2024/1467 raises the indoor power limit to -31.3 dBm, reflected in the latest draft of ETSI EN 302 065-2-5. Devices supporting this increase are emerging, and early adoption will maximize their benefits.
Improvements due to regulation change	Modest UWB power increases enhance usability and performance across environments. Aligning indoor and outdoor limits will boost utility without raising interference risks. Benefits include: • Greater flexibility to adapt to a variety of environments • Enhanced performance in the presence of other higher power services. • Improved support for indoor uses such as personal and item location, access control systems, and presence detection • Support for augmentation of satellite positioning systems indoors and outdoors in dense urban areas • Support for smart city uses such as smart parking and traffic management systems • Enhanced location accuracy for emergency response services • Improved link margin in data centric uses such as High Definition Audio and high-performance human interface devices.
Other suggestions	We respectfully ask for consideration of the following: • Allow UWB outdoors with fixed nodes (anchors) to enable high-precision applications such as navigation, asset tracking, access control and presence detection beyond indoor environments. • Prioritize UWB's high value and coexistence before introducing higher-powered technologies like IMT. Limit power for other services in shared bands to maintain compatibility with UWB users. • For certain applications, consider increasing or removing duty cycle limits. The proposed -31.3 dBm/MHz remains far below other technologies and poses minimal interference risk.

Company name (Bureau)	UWB Alliance	Name/ Position	Benjamin Rolfe Chief Technology Officer
Phone Number	+1 408 395 7207	E-mail	ben@uwballiance.org