Consultation title	Improving spectrum access for Wi-Fi – spectrum use in the 5 and 6 GHz bands
Representing (delete as appropriate)	Organisation
Organisation name	Qorvo

Your response

Question	Your response
Question 1: Do you have any comments on our proposal to open access to the 5925-6425 MHz band for licence-exempt Wi-Fi use?	Although not acknowledged in the consultation document, the UK already permits unlicensed use in most of the spectrum under consideration, based on the Wireless Telegraphy (Ultra-Wideband Equipment)(Exemption) Regulations 2015. These regulations allow and support all of the applications envisaged on a license-exempt basis, albeit at power levels that would require the Wi-Fi industry to adjust their technology to the rules, rather than changing the rules to fit their technology. The large bandwidths available under the UWB regulations support high-precision ranging applications. While in the past these were mainly used in real-time localisation systems in industrial environments, recently they have been integrated in mobile phones and cars to secure payments and prevent car thefts. Decawave (now Qorvo) is one of the manufacturers providing integrated circuits for UWB applications, including in the 6 GHz band. Most of our customers have chosen to operate in the 6 GHz band due to the favourable coexistence conditions with the highly directional, outdoor-only primary services in this band. As the coexistence studies carried out in ECC Report 302 have shown, at the proposed power levels many UWB installations will not be able to continue to operate reliably.

	We would therefore like to reduce the power levels in this proposal to ensure continued viability of the existing installations of our customers. Reduced power levels would also lead to better spatial reuse, less Wi-Fi to Wi-Fi interference and hence a more efficient use of the spectrum besides increased protection of the existing users of this frequency range. Since the intended applications can already be supported by the existing rules, in a way that is proven to cause no harm to any of the incumbents, we see no need for this proposed rule change. Given the disruption to existing spectrum users, it looks like the Wi-Fi industry is given preferential treatment by regulators; something to which we strongly object.
Question 2: Do you have any comments on our technical analysis of coexistence in the 5925-6425 MHz band?	The assumptions in the document are heavily based on those in ECC Report 302. Decawave see a large number of issues with the assumptions in that report that lead to questions about the conclusions of the studies: • Paragraph A7.26 and table A7.3 show that the sharing studies are based on population estimates for 2025. However, to give existing users confidence that their systems won't be interfered with, longer time horizons should be considered. The highest market adoption factor considered is only 50%, which is unacceptably low in our opinion. If the actual market adoption is only projected to be 32% as suggested in table A7.6, we would suggest that this new spectrum is not needed for RLAN use. • The market adaption and 6 GHz factor are correlated and cannot be treated as independent variables. Most 6 GHz enabled devices can be expected to operate in 6 GHz spectrum since the other bands are assumed to be congested. For this reason, we don't agree with the assessment in table A7.6 that this is a highly conservative assumption.

	• The RF activity factor of 1.97% per person is derived from short-range LOS links. This is not representative of typical, let alone worst case, usage conditions and therefore not suited for sharing studies. We therefore don't agree with the assessment that this is a 'medium' conservative assumption in table A7.6. • For this reason, we expect the number of simultaneously operating RLAN devices to be higher than the estimates in table A7.3. • Assuming every client device has a body loss of 4 dB, as stated in paragraph A7.33, is not realistic. Some devices will have a line-of-sight link to the fixed service receiver. • Similarly, it would be better to replace the average 1.5 dB polarisation loss from paragraph A7.35 with a distribution. Paragraph A7.47 suggests that RLANs will be subject to transmit power control and duty cycle restrictions. Based on the studies into sharing with UWB as part of ECC Report 302, we strongly support including such restrictions in the regulations.
Question 3: Do you agree with our proposal to remove DFS requirements for indoor Wi-Fi up to 200mW from the 5725-5850 MHz band?	Confidential? – Y / N
Question 4: Do you have any comments on other options that may be available for Wi-Fi and RLANs within the 5 GHz band?	Confidential? – Y / N