



Comments of the

Ultra Wide Band (UWB) Alliance

Before the

Federal Communications Commission

on

**OFFICE OF ENGINEERING AND TECHNOLOGY SEEKS COMMENT ON
LUMI'S REQUEST FOR WAIVER OF SECTION 15.519(a) AND 15.519(a)(2)
OF THE COMMISSION'S RULES FOR A UWB LOCK SYSTEM**

ET Docket No. 25-102

March 21, 2025

About the UWB Alliance

The Ultra Wide Band (UWB) Alliance is a global not-for-profit organization that works to collectively establish ultra-wideband (UWB) technology as an open-standards industry. A coalition made up of vendors that either design, manufacture, or sell products that use ultra-wideband technology, the UWB Alliance aims to promote and protect the current allocation of bandwidth as well as promote the continuing globalization of the technology. As part of our mission, we advocate UWB technology and use cases to promote verticals showing the value of UWB for IoT and Industry 4.0 and to build a global ecosystem across the complete UWB value chain, from the silicon to the service. In addition, the Alliance is promoting and assuring interoperability through its work with Standards Development Organizations such as the IEEE and ETSI and then working with members to define upper layers and testing to assure compliance. For more information, please visit us at www.UWBAlliance.org.

Introduction and Summary

We thank the Commission for providing the opportunity to comment on the public notice on the waiver request by e Lumi United Technology Co., LTD¹ (Lumi). The Ultra Wide Band Alliance favors granting the request to waive Sections 15.519(a), and 15.519(a)(2) of the Commission's rules.

Review of Waiver Request

We note that the Lumi smart door lock is substantially similar to systems for which the FCC has previously waived Sections 15.519(a), and 15.519(a)(2) of the Commission's rules, e.g. Schlage Lock Company².

UWB is optimal technology for this use, as noted by Lumi, providing more secure authentication provided by distance bounding technique possible due to the high precision ranging capability of the UWB transceiver. The secure entry application has been proven in vehicle entry systems, aka digital key, in vehicles throughout Europe, Asia, and the US. The UWB digital key was developed to address a demonstrated need for more secure authentication to prevent vehicle thefts. Extending the technology to building entry provides the same benefits with respect to safety, security, and convenience.

The location of the fixed antenna in the system described by Lumi will provide similar propagation characteristics as a handheld device. Typical door locks are located at a height in the range of a handheld device when operating. As described, the system in operation will transmit when in proximity to the user; the proximity of the human body will further attenuate transmitted signals. This meets the intent of the prohibition on fixed outdoor infrastructure as stated in the Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, First Report and Order, to protect non-GPS government systems such as radio navigation and radar systems³. The elevation of the fixed antenna is well below the 30m and 2m height considered by the NTIA interference analysis.

We urge the Commission to grant this waiver.

Respectfully Submitted,

Tim Harrington, Chairman
Ultra Wide Band Alliance

¹ <https://docs.fcc.gov/public/attachments/DA-25-162A1.pdf>

² In the Matter of Schlage Lock Company LLC's Request for Waiver of Section 15.519(a) and 15.519(a)(2) of the Commission's Rules, ET Docket No. 22-248.

³ Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems FIRST REPORT AND ORDER, ET Docket 98-153.