

March 26, 2020

Ex Parte

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: *Unlicensed Use of the 6 GHz Band*, ET Docket No. 18-295; *Expanding Flexible Use in Mid-Band Spectrum*, GN Docket No. 17-183

Dear Ms. Dortch:

A wide array of semiconductor companies, RLAN makers, technology companies, service providers, and public interest groups support Commission action to open the 6 GHz band for unlicensed Very Low Power (“VLP”) devices. This class of devices will enable a new generation of personal area network (“PAN”) technologies with low latency, high capacity, and all-day battery life. The availability of such devices will allow the country to advance from today’s fledgling PAN ecosystem into a robust market that serves millions of Americans with devices that range from sensor networks and augmented and virtual reality (“AR/VR”) glasses, to accessibility technologies, in-vehicle systems, and other emerging technologies.¹

To make this goal a reality, however, Commission rules must establish power levels that enable VLP devices to operate reliably. A Commission decision to establish a maximum power level of less than 14 dBm for a 160-megahertz channel would render VLP devices unreliable based on our examination of body loss and battery drain in typical usage scenarios. If the Commission adopts a lower power limit, this would result in (1) dropped connections between VLP devices, (2) latency levels that would preclude the use of VLP devices for applications that are core to their importance for consumers, and (3) higher power consumption in devices that will have very limited battery capacity.

The record demonstrates that VLP devices will bring consumers an important class of capabilities in addition to those provided by the AFC and LPI device classes. Technical analyses show that these devices can operate at 14 dBm in a 160-megahertz channel without causing harmful interference to FS devices in the U-NII-5, U-NII-7, and bottom 100 megahertz of the U-

¹ See Comments of Apple Inc., Broadcom Inc., Cisco Systems, Inc., Facebook, Inc., Google LLC, Hewlett Packard Enterprise, Intel Corporation, Marvell Semiconductor, Inc., Microsoft Corporation, Qualcomm Incorporated, and Ruckus Networks (“RLAN Group”) at 35-36, ET Docket No. 18-295, GN Docket No. 17-183 (filed Feb. 15, 2019) (“RLAN Group Comments”).

NII-8 bands.² This power level is necessary to ensure that the VLP device class will be successful.

The Commission should therefore adopt rules now establishing a maximum power for VLP devices of 14 dBm per 160-megahertz channel. If, however, the Commission requires additional technical evidence to take this step, it should adopt an FNPRM proposing the 14 dBm power level and seeking additional comment on an expedited timeline—but it should not adopt a lower power level in the interim.

Respectfully submitted,

Apple Inc.
Broadcom Inc.
Cisco Systems, Inc.
Facebook, Inc.
Google LLC
Hewlett Packard Enterprise
Intel Corporation
Microsoft Corporation
Qualcomm Incorporated

² *See The FCC Can Accelerate 5G Services While Protecting Incumbent Operations by Enabling Very Low Power Portable Class Devices in 6 GHz*, (June 28, 2019), as attached to Letter from Apple Inc., Broadcom Inc., Facebook, Inc., Google LLC, Hewlett Packard Enterprise, Intel Corporation, Marvell Semiconductor, Inc., Microsoft Corporation, and Qualcomm Incorporated to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed July 2, 2019); Letter from RLAN Group to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Sept. 25, 2019); Letter from Paul Margie, Counsel to RLAN Group, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 9, 2020); Letter from Paul Margie, Counsel to RLAN Group, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Jan. 31, 2020); Letter from Paul Margie, Counsel to RLAN Group, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 7-183 (filed Dec. 9, 2019); Letter from Paul Margie, Counsel to RLAN Group, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Nov. 12, 2019); Letter from Paul Margie, Counsel to Apple Inc., Broadcom Inc., Facebook, Inc., and Google LLC, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 23, 2020); Letter from Apple Inc., Broadcom Inc., Facebook, Inc., and Google LLC to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 18, 2020).