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USA

Federal Communications Commission
7435 Oakland Mills Road
Columbia MD 21046

May 5, 2021

Subject: Attestation of Full Google Waiver Compliance

FCC ID: A4RGUIK2

To Whom It May Concern:

This letter attests to the full compliance of the device bearing FCC ID A4RGUIK2 with conditions in the Commission's Order granting Google LLC's Request for Waiver of Section 15.255(c)(3) of the Rules Applicable to Radars used for Short Range Interactive Motion Sensing in the 57-64 GHz Frequency Band (*Soli Waiver Order*).¹

The device meets the conditions in the *Soli Waiver Order* (i.e., operating in the 57-64 GHz band at a maximum +13 dBm EIRP, +10 dBm transmitter conducted output power, and +13 dBm/MHz power spectral density; complying with the prohibitions of use specified in Rule 15.255(b)(2)(i) and (ii); and operating with a maximum transmit duty cycle of 10 percent in any 33 milliseconds (ms) interval (i.e., not transmitting longer than a total of 3.3 ms in any 33 ms time period). Specifically, all interactive functions operate per their certifications from 58 to 63.5GHz, with 12.86dBm EIRP, 7.86dBm conducted output power, 12.80dBm/MHz power spectral density and 7.9% in any 33ms time period as per Test Report_20200715_v1 - Test Report [60GHz] rev. The user has no way of altering the device settings in a manner that would render the device non-compliant with these conditions.

When the user turns on motion sensing and gestures, the device monitors consistent with the terms in the *Soli Waiver Order* conditions for gestures directing it to play and pause media (e.g., by gesturing in the display's field of vision when music is playing); to control alarms (e.g., when an alarm is ringing, a gesture towards the display can be used to snooze the alarm); or to stop a ringing timer. The interactive sleep sense functionality, when the user enables it, makes use of the exact same scanning data collected by the Soli sensor for that monitoring. Initially, the user interacts with the device using their body to complete the set-up and calibration process. The device/user interaction continues at bedtime as the device lights an icon to signal when the sleep

¹ See *Google LLC's Request for Waiver of Section 15.255(c)(3) of the Commission's Rules Applicable to Radars used for Short Range Interactive Motion Sensing in the 57-64 GHz Frequency Band*, Order, 33 FCC Rcd 12542 (2018).

sensing algorithm is being applied to the motion sensing data. During sleep, the data from ongoing sensing allows the algorithm to identify motions of the body. Sleep monitoring thus does not involve additional radio emissions, but only additional processing of the same user-interaction data that are collected by the Soli sensor whenever the user activates sensing for gesture control.

We note that Rule 15.255 refers to “interactive motion sensing”, rather than “hand gestures.”² Google’s successful waiver request sought permission to use the sensors to “enable touchless control of device functions or features,” noting among other benefits its promise for “people with mobility, speech, or tactile impairments.”³ In granting the waiver, the Commission acknowledged the potential associated with Soli sensors for populations with disabilities. An understanding that “interactive motion sensing” always involves use of the hands could cut against full enjoyment of Soli technology for those experiencing mobility or tactile limitations.⁴

Should there be further questions on this, please feel free to contact us.

Sincerely yours,



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² See 47 C.F.R §§ 15.255(a)(2), (c)(1), (c)(3).

³ Google LLC’s Request for Waiver of Section 15.255(c)(3) the Commission’s Rules in ET Docket No. 18-70 at 2 (filed Mar. 7, 2018).

⁴ *Soli Waiver Order* ¶ 12.