



PUBLIC NOTICE

Federal Communications Commission
45 L St., N.E.
Washington, D.C. 20554

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**OFFICE OF ENGINEERING AND TECHNOLOGY SEEKS COMMENT ON
ACONEER AB REQUEST FOR WAIVER OF SECTION 15.255(C)(3) OF THE
COMMISSION'S RULES FOR VEHICLE RADAR OPERATION IN THE
57-64 GHZ BAND**

ET Docket No. 21-48

Comment Date: March 12, 2021
Reply Comment Date: March 29, 2021

On December 23, 2020, Acconeer AB (Acconeer) filed a request for waiver of section 15.255(c)(3) of the Commission's rules¹ to allow Acconeer to obtain a grant of equipment authorization for a radar designed to operate in the 57-64 GHz band at higher power than specified in the rule.² Acconeer states that its device would be deployed within automotive vehicle cabins to provide vehicle safety and security functions.³

Acconeer describes its technology as a 57-64 GHz pulse-coherent radar sensor that consumes very low power and that is suitable for integration in a large variety of devices.⁴ However, it limits its waiver request to four automotive use cases: passenger presence detection, seat belt reminder/airbag suppression, intruder alarm, and automotive access gesture control.⁵ Section 15.255 provides for operation by both short-range interactive motion sensor (SRIMS) and fixed radar devices.⁶ Acconeer states that its four automotive use features are a mix of SRIMS and fixed radar applications and therefore its device could be operated consistent with this component of the rule.⁷

¹ 47 CFR § 15.255(c)(3).

² *Acconeer AB Request for Waiver of 47 CFR § 15.255* (filed Dec. 23, 2020) (*Request*). Although Acconeer's *Request* refers to Section 15.255 generally, its request to deploy devices that operate at a higher power than is permitted by the rules relates to Section 15.255(c)(3) specifically.

³ *Request* at 1.

⁴ *Id.* Acconeer describes that because its radar is a pulse-coherent radar (PCR), rather than a Frequency Modulated Continuous Wave (FMCW) radar, under the same technical limits requested, while the average transmitted power will be identical, the maximum power spectral density will be lower for the PCR system, because the energy is spread across a wide band in a transitory manner. *Id.* at 7.

⁵ *Id.* at 3.

⁶ 47 C.F.R. § 15.255(a)(2).

⁷ *Request* at 3. Specifically, Acconeer identifies the passenger presence detection feature (such as detection of a child left behind) is both a SRIMS and fixed radar application because it detects breathing and small movements but is only activated when the vehicle is stationary; the seat belt reminder/airbag suppression feature as a SRIMS application because it detects micro-movements; the intruder alarm feature as both a SRIMS and fixed radar applications because it detects intrusion movements but is only active while the vehicle is stationary; and the

Section 15.255(c)(3) of the rules requires SRIMS and fixed radars to comply with a peak transmitter conducted output power limit of -10 dBm and a peak equivalent isotropically radiated power (EIRP) limit of +10 dBm.⁸ In seeking a waiver of this rule, Acconeer states that it will operate its devices under the same technical parameters as those we granted to Google in a 2018 waiver order.⁹ That waiver permitted Google to deploy a SRIMS device in, for example, its Pixel smartphone, to enable touchless control of device functions or features at +10 dBm peak transmitter conducted output power, +13 dBm peak EIRP level, and +13 dBm/MHz peak power spectral density, with a 10% duty cycle in any 33 milliseconds (ms) interval.¹⁰ As part of its request, Acconeer provides an analysis to support its assertion that deployment of its radar will result in a negligible risk of harmful interference to other users and discusses why its radar has the potential to provide significant public benefits when operated under the proposed technical parameters.¹¹

We seek comment on Acconeer's request. To develop a complete record on the issues presented by this request, the proceeding will be treated, for *ex parte* purposes, as a "permit-but-disclose" proceeding in accordance with Section 1.1200(a) of the Commission's rules, subject to the requirements under Section 1.1206(b). Acconeer filed its petition electronically as a non-docketed proceeding in the Commission's Electronic Comment Filing System,¹² We have opened a new docket, **ET Docket 21-48** to facilitate consideration of this request and have moved Acconeer's submission into this docket. Parties should file all comments and reply comments in **ET Docket 21-48**.

Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the

automotive access gesture control feature (which uses an externally mounted radar to detect foot movements to open/close a car trunk or sliding door) as both a SRIMS and fixed radar application. *Id.* at 4-7.

⁸ 47 CFR § 15.255(c)(3).

⁹ *Request* at 3 (citing *Google LLC 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*, ET Docket No. 18-70, Order, 33 FCC Rcd 12542 (OET 2018) (*Google Waiver*). We note that the Google Waiver only applies to SRIMS applications, and not to fixed radar applications.

¹⁰ *Google Waiver*, 33 FCC Rcd at 12548-49, para. 14. Google developed the Soli sensor to capture motion in a three-dimensional space using a radar beam, which enables persons to use gestures and motions to control a smartphone's functions or features. See www.google.com/soli. We note that Acconeer only seeks a waiver of the power levels in 15.255(c)(3). Google also received a waiver of 15.255(b)(2), which restricts airborne operation. *Google Waiver*, 33 FCC Rcd at 12542, para. 1.

¹¹ *Request* at 7-10.

¹² Acconeer filed in INBOX-PART15 ("Petition for Waiver of Part 15"), which is our preferred intake for waivers of the Part 15 rules. See <https://ecfsapi.fcc.gov/file/1223051676064/Waiver%20Request%20as%20filed.pdf>.

Secretary, Federal Communications Commission.

- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19.¹³
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street, NE, Washington DC 20554.

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Parties should also send a copy of their filings to Anh T. Wride, Office of Engineering and Technology, Federal Communications Commission, 45 L Street, NE, Washington DC 20554, or by e-mail to anh.wride@fcc.gov.

Documents associated with this docket will be available for public inspection through the Commission's ECFS.

By the Acting Chief, Office of Engineering and Technology

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¹³ See *FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy*, Public Notice, 35 FCC Rcd 2788 (OMD 2020).