

ADC Automotive Distance Control Systems GmbH, Peter-Dornier-Straße 10, 88131 Lindau, Germany

Telecom Regulatory Authority of India (TRAI)
Mr. Shri Akhilesh Kumar Trivedi
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg,
New Delhi – 110 002

Thomas Reitmayer
Phone: +49 (0)8382 96990
e-mail: Thomas.Reitmayer@continental-
corporation.com

Date
14.11.2023

Our reference
**Consultation Paper No. 21/2023 / Consultation Paper on Open and De-licensed use of
Unused or Limited Used Spectrum Bands / Delicensing of the 77-81 GHz Band for
Automotive Radars**

Dear Mr. Shri Akhilesh Kumar Trivedi,

Thank you for opening the public consultation also considering the Delicensing of the 77-81 GHz Band for Automotive Radars as Proposed by the DoT's Committee.

We, Continental **ADC Automotive Distance Control Systems GmbH**, manufacturer of driver assistance systems, located in Germany, welcome the inquiry for delicensing the 77-81 GHz band for automotive radar applications.

We would therefore like to provide feedback on the related questions raised in the consultation paper:

Question4 - Whether there is a need for permitting license-exempt operation in 77-81 GHz band for automotive radar applications? Please provide a detailed response with justification.

Vehicle applications targeted by 77 -81 GHz frequency band:

Radar sensor manufacturers around the world are planning to deploy radar sensors also in the upcoming frequency band 77 – 81 GHz.

Applications include but are not limited to e.g. Short Range Radar (SRR) for obstacle detection, stop&go, blind spot detection, parking aid, backup aid and pre-crash warning, L3 driving environmental perception, intersection assistance, parking assist and autonomous parking.

Many of the above listed functions require the complete 4 GHz bandwidth. The 4 GHz bandwidth will enable advanced performance in resolution and support flexibility in the frequency use in a multi sensor vehicle environment for safety reasons.

Therefore, the 77-81 GHz band will be an important part of enabling vehicle automation features from driver support up to automated driving.

Permitting the license-exempt operation in 77-81 GHz will allow to provide such-vehicle automation features to the India market.



Question 5. In case it is decided to permit license-exempt operations in the 77-81 GHz band for automotive radar applications, what should be the terms and conditions including technical parameters for permitting licensed-exempt operations in this frequency band?

Technical aspects of implementing the 77 -81 GHz frequency band:

Continental ADC proposes to copy the rules specified for 76-77 GHz in the Gazetta of India, the 16th September 2015, to be also applied to the 77-81 GHz band for automotive applications.

Proposed implementation:

Technical characteristic:

Frequency band	Maximum Effective Radiated Power
77 to 81 GHz	5 W (37 dBm)

Arguments to support the proposed implementation:

- The Maximum Effective Radiated Power of 5W (37 dBm) [Average power] will satisfy implementation of all upcoming applications in the 77-81 GHz band.
- Will allow Short Range Radar / and Long Range Radar applications to be deployed
- Will enable new functions like parking and park assist by providing 4 GHz Bandwidth for better resolution.
- Will allow band sharing in between 76-77 GHz and 77-81 GHz in a multi sensor environment for considering same functions for efficient use of spectrum.
- The parameters are closely aligned with US power levels (FCC part 95) the EU European Communication (CEPT / ECC) for upcoming technical requirements.
- Test reports covering either EU or US technical requirements and can be used for applications to show compliance with the rules.

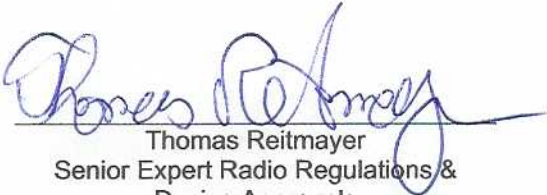
We also propose the same application procedure and scheme as currently applied for 76-77 GHz radars to be considered for implementation.

Thank you for taking into consideration our proposals in the discussion and evaluation of your decision making for the upcoming regulations.

Best Regards,

Name:
Title:


Sebastian Gladbach
Head of Homologation Radar


Thomas Reitmayer
Senior Expert Radio Regulations &
Device Approvals