

**RADIO SPECTRUM AND TECHNICAL STANDARDS
ADVISORY COMMITTEE**

**Proposed Revision to HKCA 1082
Performance Specification for New Radio (NR) Base Station**

Purpose

This paper proposes the adoption of the following revised HKCA specification:

HKCA 1082	Performance Specification for New Radio (NR)
Issue 2	Base Station

Background

2. The Ministry of Industry and Information Technology (“MIIT”) announced in June 2023 that the whole or part of the 6425 – 7125 MHz band (“6/7 GHz band”) would be identified for International Mobile Telecommunications (“IMT”) services in the Mainland with effect from 1 July 2023 to promote fifth generation (“5G”) and the future sixth generation (“6G”) mobile communications technology and industry innovation¹.

3. In the World Radiocommunication Conference held by the International Telecommunication Union (“ITU”) in Dubai, the United Arab Emirates, from 20 November to 15 December 2023 (“WRC-23”), the 6/7 GHz band has been identified for IMT. In order to ensure protection for the fixed-satellite service (Earth-to-space), WRC-23 has added Resolution 220 to the ITU Radio Regulations², which defines the requirement on the level of expected power spectral density emitted by an IMT base station as a function of the vertical angle above the horizon.

4. On 1 March 2024, the Communications Authority (“CA”) and the Secretary for Commerce and Economic Development issued a joint statement

¹ The announcement of MIIT (in Chinese only) is available at:
https://www.gov.cn/lianbo/bumen/202306/content_6888759.htm

² The ITU Radio Regulations are available at:
<https://www.itu.int/hub/publication/r-reg-rr-2024>

announcing the arrangements for assignment of the spectrum in the 6/7 GHz band for the provision of public mobile services and the related spectrum utilisation fee³. Thereafter, an auction of the radio spectrum in the 6/7 GHz band was conducted in November 2024, with three mobile network operators successfully bidding for 300 MHz of spectrum in the 6/7 GHz band.

5. The current issue of HKCA 1082 (Issue 1) covers 5G NR base stations by drawing reference to the harmonised European standards ETSI EN 301 908-1 and ETSI EN 301 908-24 published by the European Telecommunications Standards Institute (“ETSI”), and the standards 3GPP TS 38.141-1 and TS 38.141-2 published by the 3rd Generation Partnership Project (“3GPP”). It covers all the existing frequency bands for IMT services in Hong Kong, except the newly auctioned 6/7 GHz band.

6. 3GPP introduced in June 2022 the 6/7 GHz band as one of the IMT bands for NR to Release 17 of the 3GPP specifications, including 3GPP TS 38.141-1 and TS 38.141-2, while the 6/7 GHz band has not yet been included in the relevant ETSI standards.

Proposed Revision to HKCA 1082

7. Having considered the frequency bands and technical requirements, revision to the existing specification HKCA 1082 is proposed to include the 6/7 GHz band for mobile services in Hong Kong.

8. Salient points of the proposed revision to specification HKCA 1082 are given below –

- (a) the 6/7 GHz band is added to the list of operating frequency bands; and
- (b) reference is made to Resolution 220 of the ITU Radio Regulations for the requirement on the level of expected power spectral density as a function of the vertical angle above the horizon.

The proposed revised specification HKCA 1082 is given at the **Annex**.

Certification Requirement

9. NR base station equipment is classified under the Compulsory Certification Scheme of the Hong Kong Telecommunications Equipment

³ The joint statement is available at:
https://www.coms-auth.hk/filemanager/statement/en/upload/632/ca_statement_20240301.pdf

Evaluation and Certification Scheme. Such equipment must be certified before it can be used in Hong Kong.

World Trade Organisation (“WTO”) Notification

10. As the proposed revised specification HKCA 1082 is based on open standards, notification to the WTO is not required.

Recommendation

11. It is recommended that the proposed revised specification HKCA 1082 be submitted to CA for adoption.

Advice Sought

12. Members are invited to offer comments on the recommendation above.

Office of the Communications Authority
January 2025