

**RADIO SPECTRUM AND TECHNICAL STANDARDS
ADVISORY COMMITTEE**

**Proposed Revision to HKCA 1056 and HKCA 1057
Performance Specifications for Base Station, Repeater and User
Equipment for Use in Public Mobile Communications Services based on
Evolved Universal Terrestrial Radio Access (E-UTRA)
Frequency Division Duplex (FDD)**

Purpose

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

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| HKCA 1056 Issue 2 | Performance Specification for Base Station and Repeater Equipment for Use in Public Mobile Communications Services based on Evolved Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD) |
| HKCA 1057 Issue 2 | Performance Specification for User Equipment for Use in Public Mobile Communications Services based on Evolved Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD) |

Background

2. In October 2021, four mobile network operators (“MNOs”) joined the auction of radio spectrum in the 600 MHz, 700 MHz, 850 MHz, 2.5/2.6 GHz and 4.9 GHz bands. The auction was successfully concluded with 255 MHz of spectrum in the 700 MHz, 850 MHz, 2.5/2.6 GHz and 4.9 GHz bands auctioned off to the MNOs.¹ Among the 255 MHz of spectrum, 70 MHz is from the 700 MHz band, i.e. 703 – 738 MHz paired with 758 – 793 MHz. In June 2022, the respective unified carrier licences of the four MNOs were amended to add assignments in the 700 MHz band, thus allowing the MNOs to provide public mobile services in this frequency band.

¹ For details, see https://www.ofca.gov.hk/en/news_info/press_releases/index_id_2274.html.

3. Currently, the 700 MHz band is being used for the provision of public mobile services based on the 5G NR and 4G E-UTRA FDD (commonly known as LTE FDD) radio access technologies (“RATs”)². Base stations operating in the 700 MHz band in use now are of the Multi-Standard Radio type supporting 5G NR and 4G E-UTRA FDD technologies covered by the type acceptance criteria TAC 010³. However, the existing specifications HKCA 1056 and HKCA 1057 covering single-RAT E-UTRA FDD base station/repeater equipment and E-UTRA FDD user equipment respectively do not include the 700 MHz operating frequency band. As such, there is a need to include the 700 MHz band in these two revised specifications.

Proposed Revision to HKCA 1056 and HKCA 1057

4. The specifications HKCA 1056 covering base station/repeater equipment and HKCA 1057 covering user equipment, both based on the E-UTRA FDD technology, are revised to include the 700 MHz operating frequency band, i.e. 703 – 738 MHz paired with 758 – 793 MHz. In addition, some editorial amendments (mainly in the foreword of these specifications) are also made to reflect the changes since the establishment of the Office of the Communications Authority in April 2012. The titles of the standards published by the European Telecommunications Standards Institute under reference in these specifications are also updated. The proposed revised specifications HKCA 1056 and HKCA 1057 are given at **Annex 1** and **Annex 2** respectively.

Certification Requirement

5. Single-RAT base station/repeater equipment based on the E-UTRA FDD technology is classified under the Compulsory Certification Scheme of the Hong Kong Telecommunications Equipment Evaluation and Certification (“HKTEC”) Scheme. Such equipment must be certified before they can be used in Hong Kong.

6. User equipment based on the E-UTRA FDD technology is classified under the Voluntary Certification Scheme of the HKTEC Scheme. Certification of such apparatus is voluntary, but manufacturers, suppliers and dealers must

² NR: New Radio
E-UTRA FDD: Evolved Universal Terrestrial Radio Access Frequency Division Duplex
LTE FDD: Long Term Evolution Frequency Division Duplex

³ TAC 010 “Type Acceptance Criteria for 5G NR, E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station Equipment Operating Below 6 GHz” is available at https://www.ofca.gov.hk/filemanager/ofca/en/content_791/tac010.pdf

ensure that their equipment complies with HKCA 1057 even if they do not apply for certification.

WTO Notification

7. As the proposed revised specifications HKCA 1056 and HKCA 1057 are based on open standards, notification to the World Trade Organisation (“WTO”) is not required.

Recommendation

8. It is recommended that the proposed revised specifications HKCA 1056 and HKCA 1057 be submitted to the Communications Authority for adoption.

Advice Sought

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

**Office of the Communications Authority
June 2023**