

RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE

**Proposed Performance Specification for
Mobile Communications Onboard Aircraft System**

Purpose

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

HKCA 1077 Issue 1	Performance Specification for Mobile Communications onboard Aircraft (MCA) System
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Background

2. Mobile communications onboard aircraft (“MCA”) systems effectively extend the service coverage of terrestrial mobile networks onboard an aircraft, which enable airline passengers to use mobile communication services during their flight journey similar to regular mobile roaming services on ground.

3. MCA services provided onboard aircrafts registered in Hong Kong are licensed under the Services-Based Operator (“SBO”) Licence¹ regulatory framework. Among other things, schedule 6 of the relevant SBO licence requires that the operation of MCA system shall comply with the technical and operational requirements as prescribed in the Electronic Communications Committee (“ECC”) Decision ECC/DEC/(06)07² and in any applicable standard or specification that may from time to time be issued by the Communications Authority (“CA”). Apparatus comprised in the MCA system shall be of a type approved by the CA.

¹ A sample of the Services-based Operator Licence is available at: <http://www.coms-auth.hk/filemanager/common/licensing/SBO-MCA.pdf>

² Electronic Communications Committee (ECC) Decision of 1 December 2006 on the harmonised use of airborne GSM and LTE systems in the frequency bands 1710 – 1785 MHz and 1805 – 1880 MHz and airborne UMTS systems in the frequency bands 1920 – 1980 MHz and 2110 – 2170 MHz (ECC/DEC/(06)07), amended 13 March 2009 and amended 14 March 2014

4. MCA systems installed onboard aircrafts registered in Hong Kong have been type approved against type acceptance criteria, drawing reference to the then-prevailing harmonised standard EN 302 480 (EN 302 480 V1.1.2³ and EN 302 480 V2.0.1⁴) published by the European Telecommunications Standards Institute (“ETSI”).

Standardisation Development of MCA Systems

5. With technological advancement, MCA systems, which are initially based on GSM technology, have been developed to provide also broadband mobile services based on UMTS and LTE technologies. In March 2014, ECC Decision ECC/DEC/06(07) was amended to cover GSM/UMTS/LTE MCA systems.

6. In July 2016, the ETSI finalised and published version 2.1.1 of the harmonised standard EN 302 480 (i.e. EN 302 480 V2.1.1) which covers technical and evaluation requirements of GSM/UMTS/LTE MCA systems. Under this circumstance, it is timely to consider adding a new HKCA specification for GSM/UMTS/LTE MCA systems.

Proposed HKCA 1077 Specification

7. Having studied EN 302 480 V2.1.1 in details, it is proposed that the technical and evaluation requirements as given in EN 302 480 V2.1.1 be adopted in the proposed specification HKCA 1077 for MCA systems. In addition, it is further proposed that the GSM, UMTS or LTE base transceiver module of MCA systems be evaluated in accordance with specifications HKCA 1020, HKCA 1043 or HKCA 1056 respectively⁵.

8. A copy of the proposed HKCA 1077 is given at Annex. If it is adopted, HKCA 1077 shall replace the type acceptance criteria for MCA systems.

³ EN 302 480 V1.1.2 entitled “Electromagnetic compatibility and Radio spectrum Matters (ERM); Harmonized EN for the GSM onboard aircraft system covering the essential requirements of Article 3.2 of the R&TTE Directive”

⁴ EN 302 480 V2.0.1 entitled “Mobile Communication On Board Aircraft (MCOBA) systems Harmonised Standard covering the essential requirements of article 3.2 of the Radio Equipment Directive 2014/53/EU” (Same title for EN 302 480 V2.1.1)

⁵ HKCA 1020, HKCA 1043 and HKCA 1056 are HKCA Specifications for radio interface standards of GSM, UMTS and LTE radio base stations

Certification Requirement

9. In line with the arrangement of radio systems used in public telecommunications services, it is proposed that MCA systems be classified under the Compulsory Certification Scheme of the Hong Kong Telecommunications Equipment Evaluation and Certification Scheme.

WTO Notification

10. As the proposed HKCA 1077 is based on open standards, notification to the World Trade Organisation (“WTO”) is not required.

Recommendation

11. It is recommended that the proposed HKCA 1077 as given in Annex be submitted to the CA for adoption.

Advice Sought

12. Members are invited to give their comments on the recommendation above.

Office of the Communications Authority
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