

## **Scheme on Certification of Telecommunications Equipment and Industrial, Scientific and Medical Equipment by the Local Certification Bodies**

### **Introduction**

The framework for the certification of Telecommunications Equipment (TE) (including radiocommunications equipment and wireline Customer Premises Equipment (CPE)) and Industrial, Scientific and Medical (ISM) Equipment emitting radio frequency energy intentionally to be used or sold in Hong Kong is specified in the Hong Kong Telecommunications equipment Evaluation and Certification (HKTEC) Scheme developed by the Office of the Communications Authority (OFCA)<sup>1</sup>. Details of the HKTEC Scheme are given in the Information Note [OFCA I 421 “Hong Kong Telecommunications Equipment Evaluation and Certification \(HKTEC\) Scheme”](#).

2. Under the HKTEC Scheme, Local Certification Bodies (LCBs) and Foreign Certification Bodies (FCBs) are accredited or recognised to perform certification of TE and ISM equipment on a non-exclusive basis against the technical standards or specifications<sup>2</sup> prescribed by the Communications Authority (CA).

3. This document specifies the operation of the HKTEC Scheme with regard to the certification of TE and ISM equipment by the LCBs, and this part of the HKTEC Scheme is referred to as the “LCB Scheme”. The LCB Scheme specified in this document is a Scheme type 1a product certification scheme in accordance with ISO/IEC 17067.

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<sup>1</sup> Pursuant to the Communications Authority Ordinance (Cap. 616), with effect from 1 April 2012, all duties and powers of the Telecommunications Authority (TA) are conferred on the CA, and all duties and powers of the Office of the Telecommunications Authority are conferred on the Office of the Communications Authority (OFCA), the executive arm of the CA.

<sup>2</sup> Before the establishment of the CA on 1 April 2012, the specifications prescribed by the TA were named as HKTA specifications. From 1 April 2012 onward, revised versions of existing HKTA specifications and new specifications prescribed by the CA are named as HKCA specifications. For the avoidance of doubt, unless the specific issue number of the HKTA specification is explicitly specified, reference in any document to HKTA specification shall be construed as including reference to the corresponding HKCA specification as may be revised from time to time. In addition, reference in any document to HKCA specification shall be construed as referring to the corresponding HKTA specification if the HKCA specification under reference is not yet present.

## Certification Requirements in Hong Kong

4. In accordance with the existing regulatory requirements, TE and ISM equipment that are used or sold in Hong Kong shall comply with the technical standards or specifications prescribed by the CA. The CA prescribes the technical standards or specifications normally in the form of HKCA specifications falling under the categories as given below for equipment certification purpose –

- (a) [HKCA 10xx series Specifications](#)<sup>3</sup> covering radiocommunications equipment and ISM equipment emitting radio frequency energy intentionally;
- (b) [HKCA 12xx series Specifications](#) covering Global Maritime Distress and Safety System maritime radio equipment; and
- (c) [HKCA 20xx series Specifications](#)<sup>4</sup> covering wireline CPE for connection to the public telecommunications networks (PTNs) in Hong Kong.

5. For TE or ISM equipment not covered by any HKCA specifications but approved for use or sale in Hong Kong, the CA may stipulate or approve the relevant technical standards or specifications for such equipment on a case by case basis (the “Type Acceptance Criteria” (TAC)) as appropriate.

6. Under the HKTEC Scheme, TE and ISM equipment are classified under either the Voluntary Certification Scheme (VCS) or the Compulsory Certification Scheme (CCS). ISM equipment normally falls under CCS. Not all TE used or sold in Hong Kong requires compulsory certification. The majority of TE falls under VCS except equipment which is classified as high power radiocommunications apparatus and generally subject to licensing control. Information about the equipment classification (i.e. VCS or CCS) is given in the Schedules to the following information notes –

- (a) [OFCA I 401 “How to Apply for Type-Approval or Type-Acceptance of Radio Equipment”](#)
- (b) [OFCA I 412 “How to Apply for Certification of Wireline Customer Premises Equipment to be Connected to the Public Telecommunications Networks in Hong Kong”](#)

## Scope of the CA Accreditation

7. A LCB shall have obtained the necessary accreditation from the CA and gives

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<sup>3</sup> Excluding HKCA 1046 titled “Method of Measurement for Radio Transmitter for Use in the Land Mobile Service” which specifies the reference methods to measure essential technical performance of radio transmitter for land mobile service and is not used for equipment certification purpose.

<sup>4</sup> Excluding HKCA 2037 titled “Basic Requirements of Broadband Access Equipment for Connection to Local Access Link using Twisted Metallic Pairs” which specifies the requirements about the sharing of the local access link using twisted metallic pairs in relation to broadband type II interconnection and is not used for equipment certification purpose.

an undertaking (“the Undertaking”) to the CA before it is permitted to provide the equipment testing and certification services and charge for the concerned testing and certification. The Undertaking is substantially in the form as given in [OFCA’s website](#)<sup>5</sup>.

8. As stipulated in the Undertaking, a LCB is required to offer –
- (a) all certification services for TE and ISM equipment covered by any HKCA specifications and TAC as described in paragraphs 4 and 5 above respectively; and
  - (b) testing services for TE and ISM equipment covered by technical specifications identified in Schedule 1 to the Undertaking as given below, with the tests conducted by the LCB itself or its subcontractors as approved by the CA, unless an exemption is granted by the CA upon request by a LCB –

<b>Type of TE or ISM Equipment</b>	<b>Technical Specification</b>
Single-sideband (SSB) equipment for voluntary fitting in small craft in 1.6 - 27.5 MHz frequency band	HKCA 1001
Angle modulated VHF and UHF land mobile transceiver	HKCA 1002
Angle modulated VHF and UHF land mobile repeater	HKCA 1002
1429-1530 MHz fixed link transceiver	HKCA 1003
Public paging transmitter	HKCA 1004
Public paging receiver	HKCA 1004
Angle modulated VHF maritime radio equipment for voluntary fitting in small craft	HKCA 1005
1.7/47 MHz cordless telephone	HKCA 1006
Industrial, Scientific and Medical (ISM) equipment	HKCA 1007
Wireless microphone equipment	HKCA 1008
Angle modulated VHF and UHF land mobile transceiver intended primarily for data applications	HKCA 1010
864.1 / 868 MHz cordless telephone	HKCA 1015
Angle modulated 800 MHz trunked radio transceiver	HKCA 1016
Angle modulated 800 MHz trunked radio repeater	HKCA 1016
TV antenna amplifier	HKCA 1019
GSM / PCS repeater	HKCA 1020
CB radio transceiver for use on-board craft and vessels	HKCA 1022
46 / 49 MHz cordless telephone	HKCA 1026

<sup>5</sup> <http://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/i425a1e.pdf>

<b>Type of TE or ISM Equipment</b>	<b>Technical Specification</b>
Radio equipment exempted from licensing	HKCA 1035
Model control and radio equipment operating in the 27 MHz band	HKCA 1041
409 MHz short-range portable radio	HKCA 1044
254 / 380 MHz cordless telephone	HKCA 1045
CB radio transceiver operating in the 27 MHz band	HKCA 1050

9. In addition to the testing services specified in paragraph 8(b) above, a LCB may also offer testing services for other TE and ISM equipment covered by HKCA specifications not listed in Schedule 1 to the Undertaking or the TAC, with the tests conducted by the LCB itself or its subcontractor as approved by the CA.

10. In case of revision to a HKCA specification as specified in paragraph 8(b) or paragraph 9 above, a LCB shall provide testing service for the revised HKCA specification, with the test conducted by the LCB itself or its subcontractor as approved by the CA, within a transitional period as notified by the CA upon the publication of the revised HKCA specification.

11. A LCB shall accept application for certification of TE and ISM equipment submitted by an applicant for certification which, as a requirement of ISO/IEC 17065, shall be a party that is responsible for ensuring that products meet and, if applicable, continue to meet, the requirements on which the certification is based.

### **External Accreditation**

12. A LCB is required to obtain and update its scope of accreditation to ISO/IEC 17065 and ISO/IEC 17025 (the “External Accreditation”) for the following, unless an exemption is granted by the CA upon request by a LCB –

- (a) accreditation to ISO/IEC 17065 for the certification of TE and ISM equipment covered by the HKCA specifications as specified in the Annex, which may be revised from time to time; and
- (b) accreditation to ISO/IEC 17025 for the testing services as specified in paragraphs 8(b) and 9 above where the tests are conducted by the LCB itself.

For avoidance of doubt, the requirements of accreditation to ISO/IEC 17065 and ISO/IEC 17025 as specified above does not include work on certification and testing based on TAC.

13. In case of revision to a HKCA specification as specified in paragraphs 8(b) or 9 above, a LCB shall update its scope of accreditation to ISO/IEC 17025 to cover the revised HKCA specification (if the LCB conducts the test by itself) or provide

updated accreditation information of its subcontractor to cover the revised HKCA specification (if the test is conducted by the LCB's subcontractor) to the satisfaction of the CA within a transitional period as notified by the CA upon the publication of the revised HKCA specification.

14. External accreditation to ISO/IEC 17065 and ISO/IEC 17025 is granted by accreditation bodies such as the Hong Kong Accreditation Service (HKAS). In Hong Kong, the LCBs may contact HKAS for the details of making applications for accreditation to ISO/IEC 17065 and ISO/IEC 17025. Further information can be found from the [HKAS website](#)<sup>6</sup>.

### **Technical Competence**

15. In connection with the requirement for accreditation to ISO/IEC 17065 as specified in paragraph 12 above, a LCB shall demonstrate its technical competence in performing certification of TE and ISM equipment. The technical competence of the LCB will be assessed in accordance with the Technical Competence Checklist (the "Checklist") as given in [OFCA's website](#)<sup>7</sup>, which may be revised from time to time. In particular, the LCBs are required to obtain external accreditation for a core set of tests under the scope of radiocommunications equipment and wireline equipment as specified in items 1 and 2 of the Checklist.

### **Keeping Track of the HKCA Specifications**

16. From time to time, new HKCA specifications may be introduced and existing HKCA specifications may be revised. The LCBs shall monitor and keep track of the introduction of new or revised HKCA specifications as given in paragraph 4 above. Information about this will be published on OFCA's website. The LCBs may subscribe to [OFCA's email notification service](#)<sup>8</sup> to keep abreast of the updating of the HKCA specifications.

### **Certification Procedures**

17. A LCB shall perform certification of TE and ISM equipment based on one or more of the following procedures to demonstrate compliance of the TE or ISM equipment with the relevant HKCA specifications or TAC –

- (a) Testing on unmodified representative sample of the equipment by the LCB and/or its subcontractors as approved by the CA against the relevant HKCA

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<sup>6</sup> <https://www.itc.gov.hk/en/quality/hkas/>

<sup>7</sup> <http://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/i425a2e.pdf>

<sup>8</sup> [https://www.ofca.gov.hk/en/electronic\\_services/enews/index.html](https://www.ofca.gov.hk/en/electronic_services/enews/index.html)

specifications or TAC;

- (b) Evaluating test results on unmodified representative sample of the equipment and other relevant documents and information produced by one or more of the following Recognised Testing/Certification Agencies (RTAs)<sup>9</sup> –
  - (i) testing agencies accredited to ISO/IEC 17025 with a scope of accreditation covering the relevant HKCA specifications or TAC, or equivalent;
  - (ii) Notified Bodies (NBs) designated by a Member State of the European Union (EU) to perform conformity assessment against standards equivalent to the relevant HKCA specifications or TAC;
  - (iii) Federal Communications Commission (FCC) of the United States of America, or Telecommunication Certification Bodies (TCBs) designated by the FCC to perform conformity assessment against standards equivalent to the relevant HKCA specifications or TAC; or
  - (iv) CB Testing Laboratories (CBTLs) recognised in the CB Scheme of the IEC System for Conformity Testing and Certification of Electrotechnical Equipment and Components (IECEE) to perform conformity assessment against standards equivalent to the relevant HKCA specifications or TAC; or
- (c) Evaluating test results on unmodified representative sample of the equipment and other relevant documents and information produced by a testing agency other than (a) and (b) above, against the relevant HKCA specifications or TAC, or equivalent, provided that the LCB has evidence that the testing agency is competent to perform the relevant test in accordance with ISO/IEC 17025, such as documented evaluation performed by qualified personnel according to appropriate procedures.

18. For a test report produced by a NB as specified in paragraph 17(b)(ii) above, a LCB shall also evaluate the associated conformity assurance documents<sup>10</sup> issued by the NB. For a test report produced by FCC or a TCB as specified in paragraph 17(b)(iii) above, a LCB shall also evaluate the associated certificate issued by FCC or the TCB. For a test report produced by a CBTL as specified in paragraph 17(b)(iv) above, a LCB shall also evaluate the associated certificate issued by the relevant National Certification Body of the IECEE CB Scheme.

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<sup>9</sup> For further information about RTAs, please refer to the Information Note [OFCA I 411 “Recognised Testing/Certification Agency \(RTA\) for Evaluation of Telecommunications Equipment”](#).

<sup>10</sup> The conformity assurance documents are issued by a NB under the applicable procedures as specified in the Annexes of the Directive 2014/53/EU of the EU dated 16 April 2014, commonly referred to as the “Radio Equipment Directive”.

19. The HKCA specifications or TAC may draw reference to some external standards<sup>11</sup>. These external standards may be revised regularly by the relevant standards development organisations and there may be new versions published from time to time. A LCB shall use that version of external standards which are currently in force. For further details, the LCBs may refer to the information published on [OFCA's website](#)<sup>12</sup>.

20. A LCB shall carefully review the technical information of the relevant equipment submitted for testing and/or certification including equipment description, test reports, and the associated conformity assurance documents as mentioned in paragraph 18 above if any, and other supporting information. Equipment description may consist of advertising material, schematic diagrams and block diagrams of circuitry, user and maintenance manuals while supporting information may consist of photographs of the internal circuit boards and external views of the equipment for precise identification of the equipment. In case of any incomplete equipment description, test report and the associated conformity assurance documents, or supporting information, a LCB shall notify the applicant for certification to provide supplemental information or materials before performing the testing and/or certification.

21. A LCB shall issue a certificate to the applicant for certification (which will then become the certificate holder) after confirming that the equipment concerned complies with the relevant HKCA specifications or TAC.

22. Certification may be granted for equipment variant, which refers to a model (together with its associated accessories) having electrical and mechanical characteristics identical to a certified equipment.

23. A LCB shall alert the applicants for certification that the CA retains all authority under the law to interpret, implement and enforce the relevant HKCA specifications or TAC governing TE and ISM equipment.

### **Requirements on Certificate**

24. A certificate issued by the LCB to the applicant for certification shall contain the following information –

- (a) a statement of certification to the effect that the concerned equipment has been evaluated and found to comply with the [*HKCA specifications/TAC*] performance specification issued by the Communications Authority;

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<sup>11</sup> The external standards may include the harmonised standards published by the European Telecommunications Standards Institute (ETSI) or the European Committee for Electrotechnical Standardization (CENELEC), the Code of Federal Regulations (CFR) adopted by the FCC, and the standards published by the International Electrotechnical Commission (IEC).

<sup>12</sup> <http://app1.ofca.gov.hk/apps/lcb/ves.html>

- (b) name of the certificate holder;
- (c) name of manufacturer;
- (d) brand name and model number;
- (e) type of equipment;
- (f) HKCA specifications or TAC (including issue number) to which the equipment concerned was tested and certified;
- (g) certification number;
- (h) technical details such as the operating frequency range, RF power, Specific Absorption Rate value (for mobile phone only), antenna information, and emission designations (these apply to radio equipment only);
- (i) the conditions of the certificate, as follows -
  - “1. This certificate may be withdrawn if the equipment marketed is found not meeting the technical specification(s) prescribed by the Communications Authority or any of the conditions on this certificate is breached.
  - 2. The certificate holder shall perform remedial actions or recall the certified equipment marketed in Hong Kong as may be required by [*name of LCB*] or the Communications Authority if they are found not meeting the prescribed technical or safety requirements.
  - 3. Prior approval from [*name of LCB*] is required for any alteration in Model No. / Brand Name or other particulars for this equipment.
  - 4. No electrical or mechanical change shall be made to this equipment without prior approval from [*name of LCB*].
  - 5. The Communications Authority retains all authority under the law to interpret, implement and enforce the relevant technical regulations governing telecommunications equipment, as well as industrial, scientific and medical equipment emitting radio frequency energy intentionally, which is for use or sale in Hong Kong.
  - 6. The certificate holder allows the Office of the Communications Authority to publish the relevant technical information on its website.
  - 7. This certificate may be withdrawn and all the marketed equipment may be recalled if the equipment is a customer premises equipment and generates connection problems in the Hong Kong public telecommunications network.”
- (j) an authorised signature, with the name of the signing officer and the date of issue of the certificate.

25. The certification number shown on the certificate shall be of 12-digit format as follows -

“ZZZZZYXXXXX”

where:

- ZZZZZ stands for the code assigned by OFCA for identification of



- the LCB
- YY denotes the year of issue (e.g. 11, 12, etc.)
- XXXXX denotes the serial number of certificate issued during that calendar year

26. Under the HKTEC Scheme, labelling of certified equipment is voluntary unless otherwise required by the CA for the specific types of equipment. Details of the labelling requirements can be found in the Information Notes OFCA I 401 and OFCA I 412 mentioned in paragraph 6 above. For equipment subject to the compulsory labelling requirement, manufacturers, suppliers or dealers are required to affix a label prescribed by the CA to the certified equipment, or to the packing materials. For equipment subject to the voluntary labelling requirement, manufacturers, suppliers and dealers are encouraged to use labels prescribed by the CA as well in order to provide consumer guidance. More details about the labelling arrangement can be found in [HKCA 3211 “Standardisation Guide for Labelling of Telecommunications Equipment”](#). A LCB shall inform the certificate holder of the labelling arrangement for certified equipment appropriately. For avoidance of doubt, as the aforesaid label is prescribed by the CA, the labelling arrangement is outside the scope of the ISO/IEC 17065 accreditation as mentioned in paragraph 12 above.

## **Record System**

27. A LCB shall maintain a proper record system to keep track of all documentation associated with the testing and certification of each TE or ISM equipment, including application forms, test reports, description of equipment, technical data, operation manual and other related documents and information when the certificate issued remains valid and for an additional period of at least 5 years from the date the certificate is withdrawn for whatever reason. The records shall be made available to OFCA upon request within a reasonable time and at no charge.

## **Notification Requirements**

28. A LCB shall notify OFCA by electronic means (e.g. by e-mail or other means as specified by OFCA) about the issue of a certificate at the same time as it issues the certificate with the following information –

- (a) all the information shown on the certificate;
- (b) contact information of the manufacturer (company name, contact person, address, e-mail address, fax and phone numbers);
- (c) contact information of the certificate holder (company name, contact person, address, e-mail address, fax and phone numbers);
- (d) contact information of the testing laboratory performing the test (company name, contact person, mail address, e-mail address, fax and phone numbers);

- (e) test report reference number and date of test; and
- (f) contact information of an authorised representative of the LCB who can respond to enquiries about the certificate.

29. A LCB's certification process shall include provisions or arrangements for seeking consent from the applicant for certification for –

- (a) transferring all information specified in paragraph 28 above to OFCA and allowing OFCA to publish, where necessary, the relevant technical information on its website; and
- (b) transferring to OFCA all information and materials submitted by the applicant for certification to the LCB for OFCA's information and inspection.

Save for the aforesaid purposes, a LCB shall keep confidential all information and materials furnished by the applicant for certification and shall not make use of such information and materials other than for the purpose of testing and certification.

30. Each model of certified equipment (including the relevant technical information of the equipment as provided by the LCB) will be posted onto the concerned equipment list under the "List of Certified Equipment" on [OFCA's website](#)<sup>13</sup>.

### **Non-Compliance Investigation Requirements**

31. If a complaint is received from consumers or industry about the non-compliance of the certified equipment with the HKCA specifications or TAC to which the equipment is certified, the LCB performing the relevant testing or certification shall perform an investigation on that targeted certified equipment and shall provide OFCA with a result of the investigation within 14 days from the receipt of the complaint. If the investigation result shows any non-compliance by the certificate holder, the LCB shall provide OFCA with a proposed remedial plan together with the investigation result. The LCB shall then give proper instruction to the certificate holder to carry out remedial actions in accordance with the remedial plan it provided to OFCA. Within 14 days from the date the remedial plan is submitted, the LCB shall submit to OFCA a follow-up report on (a) the required remedial actions taken by the LCB on the certificate holder concerned; and (b) the required remedial actions taken by the certificate holder to ensure full compliance.

### **Removal from the Lists of Certified Equipment**

32. If a certificate holder does not take any remedial actions to resolve and correct any non-compliance issue concerning its certified equipment,

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<sup>13</sup> <http://app1.ofca.gov.hk/apps/cte/content/listEquip.asp?lang=E>

- (a) the certificate will be withdrawn by the LCB and the LCB shall act in accordance with the instruction of OFCA on such withdrawal, if any;
- (b) the equipment entry in the concerned equipment list(s) under the “List of Certified Equipment” on OFCA website will be removed.

### **Assessment of LCB Performance**

33. The accreditation granted by the CA to the LCBs will be reviewed periodically. For the purpose of the review, OFCA may pay audit visits, either regularly or as required, to the LCB to assess its performance. This may include examination of the information and documents related to the certification applications, inspection of the testing facilities, and interview with personnel responsible for performing testing and certification. If the LCB fails to deliver the testing and certification services to the satisfaction of the CA, or fails to obtain the required External Accreditations within the specified period, the CA shall review the accreditation granted to the LCB and may take such action as is appropriate, including revocation of such accreditation.

### **Additional Requirements**

34. It is to be noted that, apart from the requirements set out in this document, the LCB shall also observe and abide by the Undertaking it signed, and all other applicable requirements stated in ISO/IEC 17065 and ISO/IEC 17025 as appropriate.

**Office of the Communications Authority**  
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