

Radio Spectrum and Technical Standards Advisory Committee

SSAC Paper No. 4/2021 for Information:

**Brief on Hong Kong Telecommunications
equipment Evaluation and Certification
(HKTEC) Scheme**

Office of the Communications Authority
16 December 2021

Legal Basis on Equipment Certification

- Telecommunications Ordinance (Cap. 106) (**TO**)
Section 32D empowers the Communications Authority (CA) to
 - prescribe specifications for telecommunications equipment and Industrial, Scientific and Medical (ISM) equipment
- **Section 32E of the TO** empowers the CA to
 - require testing and certification of telecommunications and ISM equipment against prescribed specifications
 - accredit organisations for the purposes of testing and/or certification of telecommunications equipment and ISM equipment

Technical Specifications (1)

- Technical specifications are prescribed in the form of **HKCA specifications** or **Type Acceptance Criteria**
 - mainly set for, among others, the purposes of
 - ▶ Prevention of interference
 - ▶ Efficient use of radio spectrum
 - ▶ Compliance with international or recognised industry standards

Note:

- 1) HKCA specifications are available at -
https://www.ofca.gov.hk/en/industry_focus/standards/tel_standards/hkca/index.html
- 2) Type acceptance criteria are available at -
https://www.ofca.gov.hk/en/industry_focus/standards/tel_standards/information/type_acceptance_criteria/index.html



Technical Specifications (2)

- **HKCA specifications** adopt widely recognised applicable standards for regulatory control, such as
 - harmonised European standards (EN standards) published by the European Telecommunications Standards Institute
 - rules of the Federal Communications Commission (FCC) of the United States
 - Three types of **HKCA specifications**
 - ▶ HKCA 10xx for radio equipment
 - ▶ HKCA 12xx for maritime radio equipment
 - ▶ HKCA 20xx for wireline customer premises equipment
- **Type Acceptance Criteria** are used if the relevant HKCA specifications are not yet available
 - such as industry standards of 3GPP specifications
 - mainly for base station and user equipment for 5G services

HKTEC Scheme

Hong Kong Telecommunications equipment Evaluation and Certification (**HKTEC**) Scheme

- provides for the evaluation and certification of telecommunications and ISM equipment against specifications prescribed by the CA
- covers five areas -
 - a) Recognised Testing Agencies
 - b) Certification Bodies
 - c) Granting of Certificates
 - d) Classification of Certification
 - e) Labelling Arrangement



Recognised Testing Agencies (RTAs)

- RTAs to perform testing of telecommunications and ISM equipment to be marketed or used in Hong Kong
 - Testing laboratories accredited to ISO/IEC 17025 [Note 1] with a scope of accreditation covering the relevant HKCA specifications or Type Acceptance Criteria
 - RTA may apply for registration with the CA on a voluntary basis
 - ▶ A list of registered RTAs is available on the website of Office of the Communications Authority (OFCA) [Note 2]
- Manufacturers, suppliers or dealers are free to approach any RTA for testing of their telecommunications or ISM equipment

Note:

- 1) ISO/IEC 17025 is the international standard which sets out the general requirements for the competence of testing and calibration laboratories.
- 2) A list of registered RTAs is available at - https://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/rtalist_en.pdf

Certification Bodies (CBs)

▪ Local Certification Bodies (LCBs)

- Accredited by the CA to provide product certification services for telecommunications and ISM equipment covered by the relevant HKCA specifications and Type Acceptance Criteria
 - ▶ 3 LCBs ^[Note 1] meanwhile
 - Product certification services, accredited to ISO/IEC 17065 ^[Note 2]
 - The associated testing services, accredited to ISO/IEC 17025

▪ Foreign Certification Bodies (FCBs)

- Recognised by Hong Kong, China under the terms of APEC TEL MRA Phase II Procedures ^[Note 3] to provide product certification services
 - ▶ 6 FCBs ^[Note 1] meanwhile

Note:

- 1) See - https://www.ofca.gov.hk/en/industry_focus/standards/tel_standards/telecom/list_of_certification_bodies/index.html
- 2) ISO/IEC 17065 is an international standard sets out the requirements of bodies which certify products, processes and services.
- 3) The Asia-Pacific Economic Cooperation Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (APEC TEL MRA) is a multilateral arrangement between economies in the APEC region aiming to facilitate recognition of each other's conformity assessment results. APEC TEL MRA Phase II covers mutual recognition of certification bodies and mutual acceptance of equipment certifications.

Granting of Certificates (1)

- Methodologies for type-approval or type-acceptance
 - Document evaluation** of test reports produced by a RTA against the relevant HKCA specifications or type-acceptance criteria
 - Test reports for application of certification in other administrations against the relevant recognised standards adopted by HKCA specifications or Type Acceptance Criteria are generally acceptable
 - Test on equipment samples** against the relevant HKCA specifications or Type Acceptance Criteria conducted by or arranged to be conducted by a CB

Granting of Certificates (2)

- OFCA publishes on its website some key information (including brand, model, equipment type, operating frequency) of the certified equipment provided by CBs for public reference

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

List of Certified Telecommunications Equipment for Use in Hong Kong

Search Certified Telecommunications Equipment

Equipment Category (Required Field)

3 - Certified Radio Equipment Exempted from Licensing

-- All --

Marketing Name / Designation: Zyxel

Certificate Number:

Certificate Issuer: -- All --

Search ▶ Reset ▶

Number of Certified Telecommunications Equipment matching the search criteria : 1

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Marketing Name / Designation	Cert. No. / Ref. No.	Category	Operating Frequency
ZyXEL NBG-419N	HK0011000078	2.4 / 5 GHz Wireless LAN Equipment	2400 - 2483.5 MHz

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The information contained in the list is for reference only. Questions concerning this list may be directed to 2961 6321 (Tel. No) or standards@ofca.gov.hk (email).

Classification of Certification (1)

Voluntary Certification Scheme (VCS)

- Applicable to user equipment accessing public telecommunications services covered under the Telecommunications (Telecommunications Apparatus) (Exemption from Licensing) Order (Cap. 106Z) and most Class Licences
 - ▶ Examples: mobile phones, tablets, conventional 2.4/5 GHz Wi-Fi devices, and low power short range devices
- Manufacturers, suppliers and dealers should ensure that their equipment comply with the relevant HKCA specifications or Type Acceptance Criteria even if they choose not to apply for certification



Classification of Certification (2)

Compulsory Certification Scheme (CCS)

- Equipment must be certified to comply with the relevant HKCA specifications or Type Acceptance Criteria before it can be used under an individual licence or certain Class Licences for specific applications
- Certification requirement as a licence condition
 - ▶ Generally applicable to base station equipment for public mobile services, microwave link equipment, private land mobile radio, etc.



Labelling Arrangement

- At present, labelling applies to equipment classified under VCS or CCS on a **voluntary basis**
- Manufacturers, suppliers or dealers are encouraged to affix a label prescribed by the CA (“the CA Label”) to a **certified** equipment to help end users identify compliance
 - attaching the CA Label to or printing it on –
 - equipment’s outside surface; or
 - packing materials and/or user manuals



 **CA Label**

ZZZZZ : Certification Body code
 YY : Year of issue
 XXXXX : Serial number of certificate issued during that calendar year



Related Applications

- Pursuant to the Class Licence for Citizens Band Radio Station
 - Compulsory certification for Citizens Band radio station equipment operating in the 26.96 – 27.41 MHz band
 - Only sale by holders of the Radio Dealers Licence (Unrestricted) is allowed
- A new class licence for Wi-Fi devices operating in the 5925 – 6425 MHz band (“6 GHz Devices”) is currently under consultation until 24 December 2021
 - Cover sale of 6 GHz Devices
 - Licence conditions to combat against the sale and use of non-compliant devices that might cause co-channel interference to the future 5G services likely to operate in the 6425 – 7125 MHz band, or parts thereof
 - ▶ **compulsory certification** for Access Points of 6 GHz Devices
 - ▶ **compulsory labelling** for Access Points of 6 GHz Devices by traders when selling or demonstration in the course of sale

Thank You

