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**NETWORK CONNECTION SPECIFICATION  
FOR CONNECTION OF  
CUSTOMER PREMISES EQUIPMENT (CPE)  
TO THE PUBLIC TELECOMMUNICATIONS  
NETWORKS IN HONG KONG USING  
ASYNCHRONOUS TRANSFER MODE (ATM) WITH  
SWITCHED VIRTUAL CONNECTION (SVC)**



**TELECOMMUNICATIONS AUTHORITY  
HONG KONG**

## **FOREWORD**

1. This specification is issued pursuant to Section 32D of the Telecommunications Ordinance (Cap. 106). This specification sets out the technical requirements for connection of customer premises equipment (CPE) to the public telecommunications networks (PTNs) in Hong Kong using Asynchronous Transfer Mode (ATM) with switched virtual connection (SVC). The specification defines a user-network interface (UNI) signalling standard which ATM CPE should implement for compatibility with the public switched ATM services.
2. Public ATM services may be provided by any one of the Fixed Telecommunication Network Services (FTNS) operators in Hong Kong. ATM CPE supporting SVC should comply with this specification for connection to the networks of the FTNS operators. Supplementary information on network characteristics and services of the FTNS networks may be obtained direct from the operators. Contact information of the FTNS operators can be found in the information note OFTA I 412.
3. At present, the Office of the Telecommunications Authority (OFTA) operates a **Hong Kong Telecommunications Equipment Evaluation and Certification** (“HKTEC”) scheme. Details of the scheme can be found in the information note OFTA I 421. Under the scheme, suppliers or manufacturers may apply to OFTA for certification of their customer premises equipment against this specification. The application procedures for certification of customer premises equipment can be found in the information note OFTA I 412. A prescribed label may be affixed to the equipment which has been certified by the Telecommunications Authority (TA). Details of the labelling arrangement can be found in the Standardisation Guide HKTA 3211.
4. The TA may amend any part of this specification as and when he deems necessary.
5. In case of doubt about the interpretation of this specification, the methods of carrying out the test and the validity of statements made by the manufacturers of the equipment, the decision of the TA shall be final.
6. The TA accepts no responsibility for the satisfactory performance of the CPE connected to the public telecommunications networks. The CPE is not normally evaluated against performance, reliability or quality-of-service parameters.
7. The HKTA specifications and information notes issued by the TA can be obtained through one of the following methods:-
  - Downloading direct through the OFTA’s Internet Home Page. The Home Page address is <http://www.ofta.gov.hk>;
  - Making a request for hard copies to:-

Senior Telecommunications Engineer  
Standards Section  
Office of the Telecommunications Authority  
29/F Wu Chung House  
213 Queen’s Road East

Wanchai  
Hong Kong

Fax: +852 2838 5004  
Email: standards@ofta.gov.hk

8. Enquiries about this specification may be directed to:-

Senior Telecommunications Engineer  
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29/F Wu Chung House  
213 Queen's Road East  
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## AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1.	Issue 2	Foreword	Certification and labelling requirements are updated.

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## **1. SCOPE**

This network connection specification covers the minimum technical requirements for connection of customer premises equipment (CPE) to the public telecommunications networks (PTNs) in Hong Kong using Asynchronous Transfer Mode (ATM) with switched virtual connection (SVC). The specification defines a user-network interface (UNI) signalling standard which ATM CPE shall comply for compatibility with the public switched ATM services.

## **2. BASIC TECHNICAL REQUIREMENTS**

The CPE shall comply with the HKTA 2016 specification issued by the Telecommunications Authority for the electrical safety, physical layer and ATM layer requirements for connection with the PTNs using ATM.

## **3. ATM ADDRESSING SCHEME**

For the purpose of establishing SVC with the PTNs, the CPE shall be able to support all of the following ATM address structures defined in the ATM Forum's User-Network Interface (UNI) Specification Version 3.1 :

- (a) ICD (International Code Designator) ATM end system address (AESA)
- (b) DCC (Data Country Code) AESA
- (c) E.164 AESA
- (d) Native E.164 address

Note 1: The ATM address structures used by the public ATM networks will be specified by the individual FTNS operators.

## **4. ATM UNI SIGNALLING REQUIREMENTS**

The CPE shall comply with the UNI signalling requirements as defined in Section 5 of ATM User-Network Interface (UNI) Specification Version 3.1 published by the ATM Forum Technical Committee.

Note 2: Support of advanced / optional features in ATM Forum's UNI Specification Version 3.1 or higher version by the CPE is optional and compatibility of such features with the public ATM networks should be checked with the individual FTNS operators.

## 5. REFERENCE

- [1] HKTA 2016 "Network Connection Specification for Connection of Customer Premises Equipment (CPE) to the Public Telecommunications Network (PTN) in Hong Kong using Asynchronous Transfer Mode (ATM)" issued by the Telecommunications Authority
- [2] ATM User-Network Interface Specification Version 3.1 (af-uni-0010.002), 1994 published by the ATM Forum Technical Committee
- [3] ATM User-Network Interface (UNI) Signalling Specification Version 4.0 (af-sig-0061.000), July 1996 published by the ATM Forum Technical Committee
- [4] ITU-T Recommendation E.164 : Numbering Plan for the ISDN Era
- [5] ITU-T Recommendation E.191 : B-ISDN Numbering and Addressing
- [6] ITU-T Recommendation Q.2931 : Broadband Integrated Services Digital Network (B-ISDN) - Digital Subscriber Signalling System No. 2 (DSS 2) - User-Network Interface (UNI) - Layer 3 specification for basic call/connection control

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