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**NETWORK CONNECTION SPECIFICATION
FOR CONNECTION OF CUSTOMER
PREMISES EQUIPMENT (CPE) TO THE
PUBLIC TELECOMMUNICATIONS
NETWORKS (PTNs) USING DIGITAL LEASED
CIRCUITS AT DATA RATES BELOW 64 kbit/s
BASED ON ITU-T V-SERIES
RECOMMENDATIONS**



**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) using digital leased circuits at data rates at data rates below 64 kbit/s based on the ITU-T V-series recommendations.
2. Digital leased circuits may be provided by any one of the Fixed Telecommunications Network Services (FTNS) operators in Hong Kong. CPE should comply with this specification for connection to the digital leased circuits at data rates below 64 kbit/s provided by the FTNS operators. The general technical characteristics of the FTNS networks are given in HKTA 2201. 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 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 label prescribed by the Telecommunications Authority (TA) may be affixed to the certified equipment. 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 downloaded from OFTA’s website at <http://www.ofta.gov.hk>. Enquiries about this specification may be directed to:

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AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1.	Issue 2	Foreword	Certification and labelling requirements are updated.
2.	Issue 3	Title	Revise the title to cover only connection interfaces supporting data rates below 64 kbit/s based on ITU-T V-series Recommendations.
3.	Issue 3	Foreword	Update information on certification and labelling as a result of the accreditation of Certification Bodies (CBs).
4.	Issue 3	Foreword, Para. 1	Revise the information to reflect the coverage of only connection interfaces based on ITU-T V-series Recommendations.
5.	Issue 3	Para. 2.2, 5	Update the title of HKTA 2001.
6.	Issue 3	Para. 4.1	Delete the note about the use of other types of interfaces (other than V.24/V.28 as specified in this specification).
7.	Issue 3	Para. 4.2	Revise information on the data rates to be supported.

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- 1. SCOPE**
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1. SCOPE

This network connection specification covers the minimum technical requirements of customer premises equipment (CPE) for connection to the public telecommunications networks (PTNs) using digital leased circuits at data rates below 64 kbit/s based on the ITU-T V-series recommendations.

2. ELECTRICAL SAFETY

2.1 Principle of Protection

In order to safeguard operating personnel, users, and plant, it is essential to prevent the transmission of excessive voltages from the CPE into the public telecommunications networks (PTNs) in Hong Kong.

2.2 Safety Requirements

The CPE shall comply with the HKTA 2001 specification entitled “Compliance Test Specification - Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment” issued by the Telecommunications Authority (TA).

3. INTERCONNECT POINT

3.1 Interconnection with the digital leased circuits at a data rate below 64 kbit/s (sub-64 kbit/s) will require the installation of the FTNS operators' equipment and internal cabling in customer premises. A normal office air-conditional environment is required together with a maintained power supply. Either a mains power supply at $220 \text{ Vrms} \pm 10\%$ taken from the same point in the building distribution as the CPE or a suitable power supply at $-48 \text{ Vdc} \pm 10\%$ should be provided by the customer.

3.2 The interconnect point (IP) marks the division of responsibility between the FTNS operator and the customer (see Figure 1).

3.3 The FTNS operator will provide sockets for connection, disconnection or re-connection of the equipment to the IP. The customer will be responsible for connection and disconnection of CPE at the IP.

3.4 A DB25 connector with pole allocation according to ISO 2110 will be used for connecting the CPE to the socket at the IP.

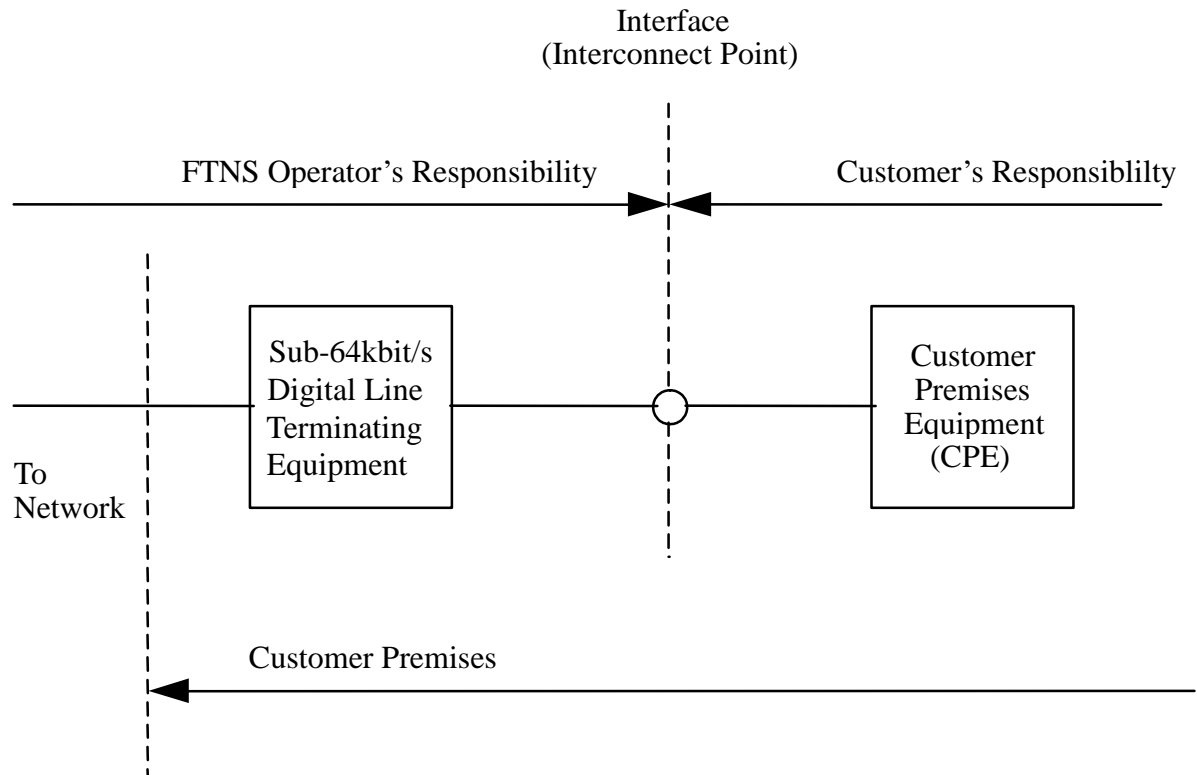


Figure 1 - Interconnection of CPE to FTNS operator's PTN at the Interconnect Point

4. INTERFACE ELECTRICAL REQUIREMENTS

4.1 GENERAL

The digital interface of the CPE shall conform to ITU-T Recommendations V.24 and V.28.

4.2 DATA RATE

The CPE shall be capable of operating at a data rate supported by the network, e.g. 2.4 kbit/s, 4.8 kbit/s, 9.6 kbit/s, 19.2 kbit/s, 38.4 kbit/s.

Note: The data rates that are supported by the network will be provided to the customer at the discretion of individual FTNS operator.

5. REFERENCE

- 5.1 HKTA 2001 - "Compliance Test Specification - Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment" issued by the Telecommunications Authority

- 5.2 ITU-T Recommendation V.24 - List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)
- 5.3 ITU-T Recommendation V.28 - Electrical characteristics for unbalanced double-current interchange circuits
- 5.4 ISO/IEC DIS 2110 Information technology -- Data communication -- 25-pole DTE/DCE interface connector and contact number assignments (Revision of ISO 2110:1989)

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