



TECHNICAL SPECIFICATION

FOR

**EQUIPMENT CONNECTING TO X.25 PACKET SWITCHED
NETWORKS**

ISSUED BY

**BOTSWANA COMMUNICATIONS REGULATORY
AUTHORITY**

Document Number: TS0030
Revision: Original V1.1
Date: 11 December 2015

Technical Specification for Equipment Connecting to X.25 Packet Switched Networks

Contents

Scope	3
Entry into Force	3
Document History	3
Additional Requirements	5

Issued by:

Botswana Communications Regulatory Authority

Plot 50671, Independence Avenue

Private Bag 00495

Gaborone

Tel: +267 395 7755, Fax: +267 395 7976

Email: info@bocra.org.bw

Website: www.bocra.org.bw

Scope

This specification applies to any equipment that may be connected to public X.25 packet switched networks in Botswana.

Where terminal equipment supports more than one interface type, each interface must meet the requirements applicable to it. It may therefore be necessary to make reference to additional specifications.

Equipment covered by this specification includes, but is not limited to the interfaces of the following service types:

- X.25
- Other services offering X.21 connections

Entry into Force

This specification shall enter into force on 15/01/2016.

Document History

Description	Status	Date
Equipment Connecting to X.25 Packet Switched Networks	Original V1.1	11/12/2015

Health, Safety, and Generic Emissions

The following universal specifications shall be applied.

TS0001: Health, Safety and Generic Emissions of Radio and Telecommunications Terminal Equipment.

Technical, Spectrum and EMC Requirements

The following specifications shall be applied.

ETSI TBR 002 ed.1

Digital Terminals and Access (DTA); Attachment requirements for Data Terminal Equipment (DTE) to connect to Packet Switched Public Data Networks (PSPDNs)

for CCITT Recommendation X.25 interfaces at data signaling rates up to 1920 kbit/s utilizing interfaces derived from CCITT Recommendations X.21 and X.21bis

or

ITU-T recommendation X.25

X.25 : Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for Terminals operating in the Packet Mode and connected to Public Data Networks by Dedicated Circuit.

ITU-T Recommendation X.21

X.21 : Interface between Data Terminal Equipment and Data Circuit-terminating equipment for synchronous operation on Public Data Network

ITU-T Recommendation X.21 bis

X.21 : Interface between Data Terminal Equipment and Data Circuit-terminating Equipment for synchronous operation on public data networks

Important Note: The revision numbers of the documents given in the approval standard are the minimum standards that apply. Should updated versions of these documents be published, the latest version will always apply. This also applies to documents where no revision number is currently quoted.

Additional Requirements

For connections to X.25 packet switched networks, the physical interface of the terminal equipment shall conform to either ITU-T Recommendation V.35 or V.24

ITU-T Recommendation V.35

V.35 : Data transmission at 48 kbit/s using 60-108 kHz group band circuits

ITU-T Recommendation V.24

V.24 : List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)

Other types of interface may be provided to the customer at the discretion of network operator.

Obtaining Technical Standards

ETSI technical standards may be obtained free of charge for individual use from the ETSI web site. www.etsi.org

CENELEC, IEC and CISPR standards may be obtained at cost from, or through www.cenelec.org and from www.iec.ch respectively.