United Arab Emirates

هيئة تنظيم الاتصالات TRA
TELECOMMUNICATIONS REGULATORY AUTHORITY

TECHNICAL SPECIFICATION

Requirements for Connection to xDSL

Version 1.0

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1. Scope

This specification lists the safety and Electromagnetic Compatibility requirements applicable to all radio and telecommunications terminal equipment intended to be used in the UAE.

2. Definitions

Unless the context requires otherwise, the expressions and wordings appearing in Federal Law by Decree No. (3) of 2003 Regarding the Organisation of the Telecommunications Sector shall have the same meaning ascribed thereto in the above-mentioned Federal Law by Decree, and the following expression and wording shall have the following meanings assigned thereto:

ANSI	American National Standards Institute[1]
CENELEC	European Committee for Electro-technical Standardisation[2]
CISPR	International Special Committee for Radio Interference[3]
IEC	International Electro-technical Commission[4]
ITU	International Telecommunications Union[5]
ETSI	European Telecommunications Standards Institute[6]

3. Technical Requirements

General

All equipment shall comply with TRA specification TS001 concerning safety and EMC performance.

[1] ANSI standards can be obtained from, http://webstore.ansi.org
[2] CENELEC standards can be obtained from, www.cenelec.org
[3] CISPR standards can be obtained from, www.cenelec.org
[4] IEC standards can be obtained from, www.iec.ch
[5] ITU standards can be obtained from, www.itu.int
[6] ETSI standards can be obtained from, www.etsi.org

Specific

Unless stated otherwise below, the latest published versions of the following standards shall apply, as applicable to the interfaces supported by the terminal:

HDSL

ETSI ETR 152	Transmission and Multiplexing (TM); High bit-rate Digital Subscriber Line (HDSL) transmission system on metallic local lines; HDSL core specification and applications for 2 048 kbit/s based access digital sections

SHDSL

ITU G992.1	Single-Pair High-Speed Digital Subscriber Line (SHDSL) subscriber transceivers.

SDSL

ETSI TS 101 524-1	Transmission and Multiplexing. Access transmission system on metallic access cables. Symmetrical single pair high bit rate Digital Subscriber Line (SDSL)

ADSL

Technical Requirements to limit disturbance to Voice band Services:

ETSI ES 202 913	Access and Terminals (AT); POTS requirements applicable to ADSL modems when connected to an analogue presented PSTN line
ETSI TS 101 952-1-1	Access network xDSL transmission filters; Part 1: ADSL splitters for European deployment; Sub-part 1: Specification of the low pass part of ADSL/POTS splitters

ETSI TS 101 952-1-2	Access network xDSL transmission filters; Part 1: ADSL splitters for European deployment; Sub-part 2: Specification of the high pass part of ADSL/POTS splitters
ITU Recommendation	Asymmetric Digital Subscriber Line (AD|SL) transceivers Power Spectral Density in the 0 to 4 KHz band. (G.992.1 cl. A.2.4.2.1) The total power in the voice band (0 Hz to 4 kHz) shall not exceed 15 dBm. The power spectral density in the range 0 to 4 kHz shall not exceed -97.5 dBm/Hz.

Technical requirements to limit disturbance to services operating at frequencies above the voice band service:

Power Spectral Density (PSD).

ADSL equipment shall operate within the specified upstream PSD mask (see Table 1) to prevent interference to other services.

Aggregate transmit power

The Upstream aggregate transmit power for an ADSL equipment shall not exceed the limits specified in Table 1.

Table 1 Power Spectral Density and aggregate power limits for ADSL equipment.

Service	Specification	Upstream PSD	Aggregate upstream transmit power
ADSL (G.dmt)	G.992.1 (07/1999)	Annex A (A2.4)	Annex A (A.2.4.3.3)
Splitterless ADSL (G.Lite) (Non overlapped spectrum)	G.992.2 (07/1999)	Annex A (A1)	Annex A (A1.2.3)
Splitterless ADSL (Overlapped spectrum)	G.992.2 (07/1999)	Annex B (B1)	Annex B (B1.2.3)
ADSL2	G992.3 (01/2005)	Annex A	Annex A
RE-ADSL2	G992.3 (01/2005)	Annex L	Annex L
ADSL2 increased upstream rate	G992.3 (01/2005)	Annex M	Annex M
Splitterless ADSL2	G992.4 (07/2002)	Annex A	Annex A
ADSL2+	G992.5 (01/2005)	Annex A (A2.2)	Annex A (A2.2.2)
ADSL2+ increased Upstream rate	G992.5 (01/2005)	Annex M	Annex M