



CITC Technical Specification

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Specification for Equipment connecting to ADSL, ADSL2 and ADSL2+ Services

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Scope

This document applies to terminal equipment which includes interfaces that may be connected to ADSL, ADSL2 and ADSL2+ services offered by public network operators in the Kingdom of Saudi Arabia.

All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CITC. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. See <http://www.citc.gov.sa/> for details.

If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.

The requirements in this specification limit the disturbance of ADSL services to the voiceband PSTN service provided on the same physical circuit and to services operating at higher frequencies provided on different circuits. Where more than one interface type is offered by a piece of equipment, each interface must meet the applicable National Specifications.

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

Product type	Notes
ADSL Splitter devices	For direct connection to the ADSL line circuit.
ADSL Modems	For direct connection to the ADSL line circuit or indirect connection via an ADSL line splitter.
Other equipment	For direct connection to the ADSL line circuit or indirect connection via an ADSL line splitter.

Entry into force

This specification shall enter into force on 10/01/2010 G

Proof of compliance

It is recommended that test reports are obtained from a laboratory that has been accredited by a body that is a member of the ILAC Mutual Recognition Arrangement.

Technical requirements

Testing should be carried out to ensure compliance with the following specifications as appropriate:

Technical Requirements to limit disturbance to Voiceband Services:

ES 202 913

Access and Terminals (AT); POTS requirements applicable to ADSL modems when connected to an analogue presented PSTN line

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

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

Power Spectral Density in the 0 to 4 KHz band.

(G.992.1 cl. A.2.4.2.1)

The total power in the voiceband (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 voiceband service.

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

If no issue or revision number is quoted along with the title of a technical specification, the latest published version should be used.

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.

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Additional requirements

ADSL equipment should not affect the performance of the analogue PSTN. Reference should also be made to CITC specification AI001”Requirement for equipment which may connect to the Analogue PSTN” in order to understand any additional requirements which apply.

Obtaining technical standards

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

Network information (only for network interfaces)

Further information on the characteristics and presentation of network interfaces can be found by visiting operator's website.

Document history

Description	Status	Date
	Issue 1	11/03/2006 G
	Issue 2	10/01/2010 G