Alcatel·Lucent

7302 ISAM family

DSLAMs

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1   INTRODUCTION

In this document is found base information on the foundation for design of the ISAM family of Alcatel-Lucent DSLAMs. Modem vendors will find information on base recommendations and standards and information on how to obtain more specific information.

2   7302 ISAM FAMILY CAPABILITIES OVERVIEW

The Alcatel-Lucent 7302 ISAM family of products are DSLAMs based on international standards and recommendations, using Ethernet/and IP based communications towards the telecommunications network and xDSL based communications towards the subscribers. The system supports all relevant DSL flavours: ADSL, ADSL2, ADSL2plus, SHDSL and VDSL2.

The system is designated to be compliant with relevant international standards and recommendations, especially ITU-T based recommendations. An overview is found in the later parts below.

Please note that Alcatel-Lucent offers a family of products within the ISAM family:

- 7302 ISAM (larger rack-based system, ETSI rack standards)

- 7330 ISAM FTTN (smaller system with 19" for factor)

- 7356 REM (small 19" system used as "slave" to the larger 7330)

- 7357 SEM (small outdoor "slave" system)

3   ADSL, ADSL2, ADSL2PLUS

In this section are listed the relevant standards and recommendations that forms the basis for the implementation into the product.

ITU-T recommendations:

- G.992.1 (1999-07): Asymmetric Digital Subscriber Line (ADSL) Transceivers

- G.992.3 (2009-04): Asymmetric digital subscriber line transceivers 2 (ADSL2)

- G.992.5 (2009-04): Asymmetric digital subscriber line (ADSL) transceivers – Extended bandwidth ADSL2 (ADSL2plus)

4 SHDSL

In this section are listed the relevant standards and recommendations that forms the basis for the implementation into the product.

ITU-T recommendations:

- G.991.2 (2003-12) Single-pair High-speed Digital Subscriber Line (SHDSL) transceivers

5 VDSL

In this section are listed the relevant standards and recommendations that forms the basis for the implementation into the product.

ITU-T recommendations:

- G.993.2 (2006-02) Very high speed digital subscriber line transceivers 2 (VDSL2)

6 ADDITIONAL RECOMMENDATIONS AND STANDARDS

In this section are listed the relevant standards and recommendations that forms the basis for the implementation into the product.

ITU-T recommendations:

- G.994.1 (2006-02): Handshake procedures for digital subscriber line (DSL) transceivers
- G.996.1 (2001-02): Test procedures for digital subscriber line (DSL) transceivers
- G.996.2 (2009-05): Single-ended line testing for digital subscriber lines (DSL)
- G.997.1 (2009-04): Physical layer management for digital subscriber line (DSL) transceivers
- G.998.2 (2005-01: Ethernet-based multi-pair bonding

- ATM Forum AF-PHY-0086.000, "Inverse Multiplexing over ATM", 1997.

ETSI Technical Specification ETS 101 388 (RTS/TM-06025), "Access transmission systems on metallic access cables; Asymmetric Digital Subscriber Line (ADSL)", Version 1.3.1, Feb 2002

7 COMPLIANCE WITH SUBSCRIBER LOCATED DEVICES (MODEMS)

8 ALCATEL-LUCENT POLICY ON COMPLIANCE WITH MODEM VENDORS

Alcatel-Lucent wants to come to the situation that we can rely on it that a particular DSLAM and a particular CPE are interoperable, when this DSLAM and this CPE are each separately formally verified by an officially certified party that applies a standardised methodology.

Alcatel-Lucent supports the current initiatives by standardisation bodies and industry forums to establish an objective standardised methodology to establish the interoperability between a DSLAM and a CPE. The main references of these standards are relevant Broadband FOURum Technical Reports (TR's) related to interoperability

9   BROADBAND FORUM ACTIVITIES

Alcatel-Lucent is a sponsor of Broadband Forum and supports its activities to ensure interoperability between DSLAMs and CPEs. Our equipment is designed according to the relevant Working Texts published by the Broadband Forum.

http://www.broadband-forum.org/

10 SUPPORT OF INDEPENDENT TEST LABS

Alcatel-Lucent will facilitate public CPE-Interop qualification via the Broadband Forum Independent Test Labs (ITL), by ensuring that the ITL have up-to-date DSLAM hardware and software. Currently Alcatel-Lucent is working closely with the following ITL: LAN (France), Cetecom (Germany) and KTL (UK).
A list of ITL's approved by the Broadband Forum is found in the link below.

http://www.broadband-forum.org/technical/independenttestlaboratories.php

11 INFORMATION TO CPE VENDORS

In general, it is recommended that, in order to evaluate compatibility between a vendor's modem and the ISAM family, this should be verified using suitable independent test laboratory. This ensures that the modem vendor can establish verification based on independent testing.

It is to be noted that Alcatel-Lucent is not an independent testing laboratories and generally does not conduct interoperability testing on a general basis.

Modem vendors which need additional information on specific topics related to interoperability should contact Alcatel-Lucent local organisation. For information about local contact in Norway, please see below.

12 CONTACT ALCATEL-LUCENT

For additional information about specific functionality, modem vendors should contact Alcatel-Lucent:

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Please indicate or mark requests with "7302 ISAM compliance with xDSL modems"

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