

# **TLN WRO Certification type Document**

< TLN coax patchcord (IEC male (straight) to IEC female (straight) 1.5m) certification procedures >



## Document Housekeeping

### Document Category and type

CAT	TYPE	DOC ID	Comment
TV	CERT	TLN-WRO-TA-A-C-PAAE	Certification type documents (-CERT) describe the certification process and methodology (so not the interfaces or protocols, those are found in the specification type documents)

### Document Authorization

EDITION	DATE	APPRAISAL AUTHORITY	STATUS	ORIGINATOR
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### Document Effective Date

This document has come into effect as of xx/xx/2012 and remains valid until a valid subsequent Telenet Wholesale Reference offer, substituting this document is published.

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None

## List of Appendixes

This document may refer to further detailed documents that are added in Appendixes to this document.

A reference to an appendix is in this document highlighted with grey background.

The list with appendixes of this document:

- A. Appendix A, < APP-A-C-PAAE-A > contains :
- 1) Appendix A1 - <Test List>

## List of References

This document may refer to external documents or information sources.

A reference to an external document or information source is in this document highlighted with grey background.

The list of referred external documents or information sources in this document:

Reference 1: TLN WRO CAT: TV: TLN-WRO-TA-A-S-PAAE

Reference 2: TLN WRO CAT: General: TLN-WRO-TA-G-C-PDAA

## Restricted information

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# 1 Abstract

Certification type documents have as purpose to describe the roles and responsibilities in the certification process of Telenet and the AO, the test procedures and the interaction between TLN and AO throughout the product lifecycle of AO Customer Premises Equipment (CPE) with as main goal to ensure at any moment in time correct interoperability between the AO CPE and TLN infrastructure according to the relevant specifications. The same types of certification documents and procedures are also applicable for TLN network to AO network level of interconnections.

Generic sections specifying certification procedures applicable to all AO CPE or network equipment that will be connected to the TLN network are described in General Certification Procedures Document [TLN-WRO-TA-G-C-PDAA](#).

Section 2 defines the specific test set applicable to the AO CPE or network equipment which is the subject of this specific document.

The feasibility of the technical designs and methods described in this document are subject to verification by a Proof of Concept (POC) test organized by Telenet and may be changed or updated depending on the outcome of this POC.

## **2 Test Specifications for the TLN coax patchcord (IEC male(straight) to IEC female(straight) 1.5m) certification procedures**

### **2.1 Introduction**

- (1) The tests will cover all of the requirements specified by TLN in the specification document with identification **TLN\_WRO\_TA\_A\_C\_PAAE**.

### **2.2 Test list**

- (2) The test list for this AO equipment is included in **Appendix A1** to this document

## 2.3 Test score card

CONFORMANCE TEST SCORE CARD					
Conformance Test Score Card Number	TLN-WRO-TA-TSC-C-PAAE				
Test Identification					
Test Execution Date					
Test Run Type	Full / Reduced(without OOS cases)				
Device / Equipment / Interface Name					
Device / Equipment / Interface Type / Class					
AO Device / Equipment / Interface Identification					
Software Version					
Tested by					
Overall Result Status	Pass / Fail				
Applicability	Select 1 or more : ROTV / ROBB / AIDTV				
CONFORMANCE TEST ITEM LIST					
Test Cases Summary	FORMAT	IN SCOPE	MAN	PASS/FAIL	REM
			"Y/N"	"P/F"	(*xy)
<b>4. TLN Coax Patchcord Functional Requirements</b>	<b>HO</b>				
4.1. RF Requirements			Y		
4.2. AO Device Management by TLN Requirements	<b>NA</b>				
<b>5. TLN Coax Patchcord Non-Functional Requirements</b>	<b>HO</b>				
5.1. Mechanical Requirements			Y		
5.2. Environmental Requirements			Y		
5.3. Safety Requirements			Y		
5.4. EU Consumer Goods Label Requirements			Y		
<b>Remarks</b>					
(*xy) : "Remark explanation comes here"					

## Appendix A1

Test list for the TLN coax patchcord (IEC male (straight) to IEC female (straight) 1.5m) certification procedures, reference code: **TLN-WRO-TA-A-C-PAAE**.

Test reference or description	OK/KO /NA	Comment
<b>4 TLN Coax Patch cord Functional Requirements</b>		
<b>4.1 RF Requirements</b>		
<b>4.1.1 Insertion Loss</b>		
4.1.1.1 Check if the Insertion loss of patch cord between 5-1000Mhz is $\leq 1.5$ dB		
<b>4.1.2 Return Loss</b>		
4.1.2.1 Check if the Return loss of patch cord 5-1000Mhz In is $\geq$ Cenelec Category B Requirements		
4.1.2.2 Check if the Return loss of patch cord 5-1000Mhz Out is $\geq$ Cenelec Category B Requirements		
<b>4.1.3 Attenuation</b>		
4.1.3.1 Check if the Attenuation of patch cord at 20°C is $\leq 1.5$ dB		
<b>4.1.4 Impedance</b>		
4.1.4.1 Check if the Impedance of patch cord is 75 ohm		
<b>4.1.5 EMC Screening</b>		
4.1.5.1 Check if the Screening effectiveness of patch cord 5-300MHz is $\geq 85$ dB		
4.1.5.2 Check if the Screening effectiveness of patch cord 300-470MHz is $\geq 80$ dB		
4.1.5.3 Check if the Screening effectiveness of patch cord 470-950MHz is $\geq 75$ dB		
4.1.5.4 Check if the Screening effectiveness of patch cord 950-1000MHz is $\geq 55$ dB		
<b>4.2 AO Device Management by TLN Requirements</b>	NA	
<b>5 AO STB non-Functional Requirements</b>		
<b>5.1 Mechanical Requirements</b>		
<b>5.1.1 Cable mechanical characteristics</b>		
5.1.1.1 Check if the length of patch cord is 1.5m with a +0,1 m tolerance including connectors		
5.1.1.2 Check if one of the connectors of patch cord is IEC male (straight) conform Cenelec EN50083-4 HD 134.2 S2 IEC169.2		
5.1.1.3 Check if one of the connectors of patch cord is IEC female (straight) conform Cenelec EN50083-4 HD 134.2 S2 IEC169.2		
5.1.1.4 Check if the Centre Conductor of patch cord is Solid CU		
5.1.1.5 Check if the Dielectric condition for patch cord is Full PE		
5.1.1.6 Check if the Inner shield of patch cord is either AL foil or AL-PET foil bonded		

5.1.1.7	Check if the Braid of patch cord is Tinned CU Braid >50% coverage and >50 micron thick		
5.1.1.8	Check if the Jacket of patch cord is White PVC		
5.1.1.9	Check If the Bend Radius of patch cord meets all specifications (After 1 Bend with radius of 4cm and 10 bends with radius of 8 cm)		
5.1.2	Diagnostic Leds	NA	
5.1.3	Labels		
5.1.3.1	Check if the Patch cord Label has "TELENET-INTERKABEL" information on it with a letter height 3...5mm		
5.1.3.2	Check if the Patch cord Label has "Vendor Name" information on it with a letter height 3...5mm		
5.1.3.3	Check if the Patch cord Label has "Product Type" information on it with a letter height 3...5mm		
5.1.4	Connectors		
5.1.4.1	Check if the connectors for AO STB/TV to WO are IEC male(straight) to female(straight) 1.5m		
5.1.4.2	Check if the Clamping Force of patch cord withstands 200g on the outer conductor		
5.1.4.3	Check if the Patch Cord is capable of withstanding a pulling force of 35cNm (=5kgf)		
5.2	Environmental Requirements		
5.3	Safety Requirements		
5.4	EU Consumer Goods label Requirements		