

T ELENOR **N**ETT **S**PECIFICATION

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Access to 2048 kbit/s (Structured/Unstructured) digital leased circuits. Specification of the network side of the user-network interface.

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1 Scope

This specification “ Access to 2048 kbit/s (Structured/Unstructured) digital leased circuits. Specification of the network side of the user-network interface.” describes the physical layer and frame structure of the 2048 kbit/s leased lines delivered by Telenor Nett AS in Norway.

2 References

2.1 Normative references

- [1] ITU-T G.703 Physical/electrical characteristics of hierarchical digital interfaces. Interface at 2048 kbit/s
- [2] ITU-T G.704 Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44 736 kbit/s hierarchical levels

2.2 Informative references

None

3 Definitions and abbreviations

NT	Network Termination
TE	Terminal Equipment
HDSL	High Bitrate Subscriber Line
HDB3	High density bipolar of order 3 code

4 Type of configuration

4.1 Transmission technology

The structured/unstructured 2048 kbit/s is delivered on HDSL or HDB3 transmission equipment. See annex 1 and annex 2.

4.1.1 Location of interface

This specification describes the interface delivered by Telenor on the user side of the Network Termination (NT).

4.1.2 Interface connector and wiring

120 ohm interface:

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The interface is delivered on a 120 ohm external terminal block with screw/knife terminals or on an external RJ45 female connector. The pin allocation for this RJ45 connector is described in annex 3.

75 ohm interface:

This interface is delivered on an external IEC 169-13 connector (Siemens connector)

A permanent wiring connection between TE and NT is also possible. This is described in annex 1 and annex 2.

5 Functional characteristics

The delivery of 2048 kbit/s structured is according to ITU-T G.703 and ITU-T G.704 and the delivery of 2048 kbit/s unstructured is according to ITU-T G.703.

6 Electrical environmental requirements

6.1 General

Below requirements are given for the equipment's safety, resistibility against high voltages and currents from the signal line and from the mains, for the emission of electromagnetic fields and for the immunity against electromagnetic fields.

6.2 Safety requirements

The equipment shall satisfy the safety requirements given in Norwegian Norm NEK-EN 60 950: "Safety of information technology equipment, including electrical business equipment", and NEK-EN 41 003: "Particular electrical safety requirements for equipment to be connected to telecommunications networks".

The requirements given in NEK-EN 60 950 and NEK-EN 41 003 are authorised by law, and shall be satisfied for all relevant equipment.

6.3 Resistibility and overvoltage protection

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Equipment connected to the interface shall be in accordance with [7] ITU-T K20 and [8] ITU-T K15.

6.4 Electromagnetic Compatibility (EMC)

The EMC requirement for the equipment ports is given in [2] EN 300 386-2, subclause 5.2.3: “Other than telecommunication centres, ports for indoor signal lines”

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ANNEX 1: Pin allocation for NT based on HDSL technology

1) 120 ohm connectors on NT

Pin nr.	Function
8	not in use
7	not in use
6	Chassis
5	receive, A Signal from TE
4	receive, B Signal from TE
3	Chassis
2	send, B Signal from Telenor equipment
1	send, A Signal from Telenor equipment

Fig 1. 120 ohm RJ45 connector for NT based on HDSL technology

2) 75 ohm connectors on NT

This interface is delivered on BNC connectors.

ANNEX 2: Pin allocation for NT based on HDB3 technology

1) 120 ohm connectors on NT

This interface is delivered on a screw connection.

2) 75 ohm connectors on NT

This interface is delivered on a IEC 169-13 connector (Siemens connector).

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ANNEX 3 Pin allocation for RJ45 external connector

Pin nr.	Function
1	Send. Signal from Telenor equipment
2	Send. Signal from Telenor equipment
3	Not in use
4	Receive. Signal from TE
5	Receive. Signal from TE
6	Not in use
7	Not in use
8	Not in use

Fig2. External RJ45 connector



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