

Nokia ACL2ti Line Terminal



Nokia ACL2ti is an efficient and cost-effective n*64 kbit/s SHDSL Line Terminal equipment for standard, unconditioned copper wire local loop environment in point-to-point or alternatively point-to-multipoint applications.

ACL2ti

Nokia ACL2ti is a n*64 kbit/s SHDSL line terminal for data transmission over twisted copper pairs. It provides n*64 kbit/s access to the digital trunk network over a subscriber line. The user data is conveyed either transparently or in a G.704/2M frame structure. The equipment interface of the ACL2ti line terminal is according to specification G.703/704. On the subscriber line ACL2ti uses TC-PAM line coding according to the SHDSL standard. ACL2ti fully integrates into Nokia's access transmission system family (Dynamet); it shares the same mechanical racking, power, and management systems. ACL2ti line card interworks with all Nokia compliant SHDSL Network Terminals (such as DNT2Mi) in tributary applications, DSL2i

regenerators in extremely long distance connections, and with other ACL2i units in aggregate applications.

Application Areas

ACL2ti line cards can be used in a number of applications that requires efficient remote subscriber access over copper lines. The connection can be either point-to-point, or point-to-multipoint. In point-to-multipoint applications ACL2ti improves cost efficiency for up to 1 Mbit data rates. ACL2ti line cards (and possible DSL2i regenerators) connected over the local loop to a Nokia DNT2Mi SHDSL Network Terminal provides an effective way to create versatile data communication networks and modem pool applications. For situations where interchangeable interfaces are not required ACL2ti in combination with DNT2Mi-fp 2w gives an optimal cost profile for the system. At the network end the line is terminated by the ACL2ti Line Terminal that provide a G.703/704 access to other 2Mbit/s equipment (multiplexers, cross connects etc.) in the transport network. Installed at the

subscriber end ACL2ti Line Terminal typically is connected to a multiplexer that provides interfaces to voice, data, or PBX services.

Network Management

Nokia ACL2ti as well as other Nokia Dynamet products can be managed locally with Nokia Service Terminal or by using PC-based management tools including a Craft Terminal. Remote management is enabled by using Nokia Network Management system (NMS) platform tools. The management features include remote configuration, test loop activation, line quality monitoring, and alarms. Q1 management data can be transported by using time-slot 0 or 31 in the 2M frame, or alternatively by using the SHDSL Embedded Operations Channel.

NOKIA
CONNECTING PEOPLE

Technical data

Product Codes

T65720.01 (DC)
T65730.01 (Power Feeding)
P69116.01 (iModem Craft Terminal)

Interfaces

Line

Type (Cu)	2-wire or 4-wire
Physical	2x32 euro
Line code	TC-PAM (Trellis Coded Pulse Amplitude Modulation)
Line Rate	n*64 kbit/s (192...2048 kbit/s)
Signal bandwidth	0...300 kHz (2Mbit/s)
Line impedance	135 ohm
TX power (0dB power backoff)	11.5dBm@135ohm (192 kbit/s, 256 kbit/s) 13.5dBm@135ohm (320 kbit/s ... 1984 kbit/s) 14.5dBm@135ohm (2048 kbit/s)

Equipment

Physical 2x32 euro (sym), 2 x SMB (asym)
Framing G.704/2M (G.703/704)

Network management (Q1)

Physical 1/4 Euro (V.11)

Local management interface

Physical RJ-45

Performance

Meets or exceeds ITU-T G991.2

Power

DC Supply	-40 to -75 V (T65720, T65730)
Consumption	7 W (T65720) 7-25 W (T65730) depending on power feeding

MTBF

>70 years (T65720)
>55 years (T65730)

Protection

Surge protection	ITU-T K20, K21
Overall product safety	EN60950

Environmental Specifications

Transportation	ETSI ETS 300 019-2-2 class 2.3
Storage	ETSI ETS 300 019-2-1 class 1.2
Operation	ETSI ETS 300 019-2-3 class 3.2

Electromagnetic Compatibility

EN 300386: 2000

ACL2ti complies with the specification above provided that required EMC structures (subracks, cartridges, cables, etc.) are used.

Temperature range

-5 to +45 C

Mechanics

For use in	17 slot subrack (T30506.09)
Dimensions (h x w x d)	233 x 21,5 x 160 mm Euro-2 size PCB

Power unit

SPA power unit (T30581.02)
EPSA power unit (T30800.09)
Option for up to four subracks

- ITU-T G.991.2 compliant
- TC-PAM line coding
- 2-wire / 4-wire operation
- n*64 kbit/s line rates
- Point-to-point or point-to-multipoint applications
- 2Mbit/s of aggregate bandwidth
- Remote powering
- Complies with Nokia NMS management system
- Timeslot management



Nokia Corporation

Nokia Networks
P.O.Box 300
FIN-00045 Nokia Group, Finland
Tel. +358 7180 08000
Fax: +358 7180 38200
www.nokia.com