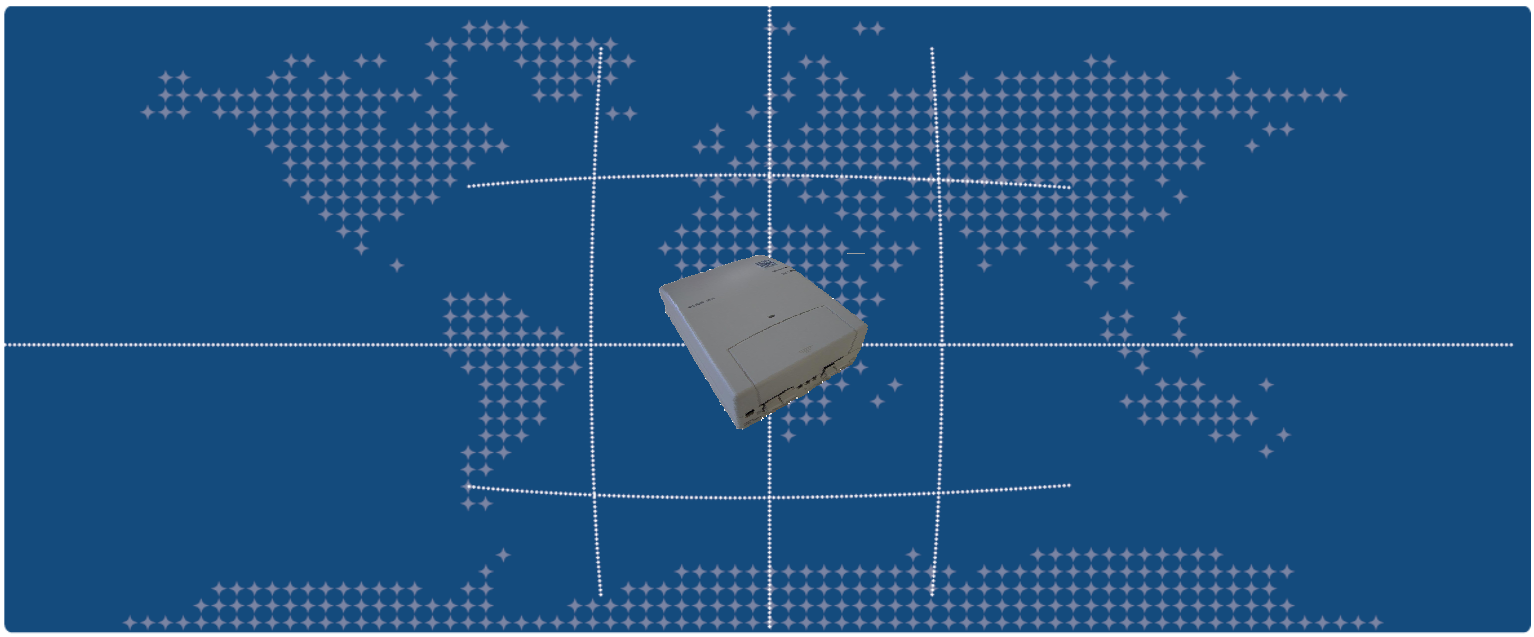
aethra telecommunications

NT1 Plus

ISDN Network Termination with dual analogue interfaces



ISDN Network Termination with 2 Analogue Interfaces

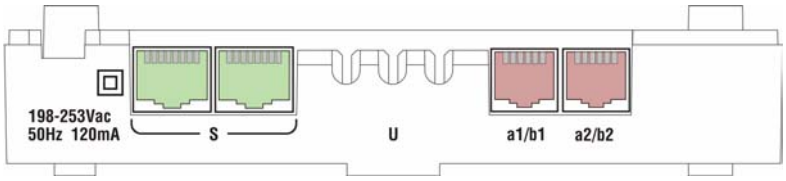
The NT1 Plus is a network termination for the ISDN basic rate access, with two analogue interfaces for connection to POTS (Plain Old Telephone System)

Preserving the investment in existing Customer Equipment Premises

Subscribers can take benefit of the ISDN network, without the need to purchase additional equipment; they can keep using standard devices like analogue phones, modems, group 3 fax, automatic answering machines, micro PBX's etc

Functional Characteristics

- Full ISDN service to terminals connected to the So bus
- Standard and optional supplementary telephony services support
- Emergency operation guaranteed to one POTS interface
- Support to both 2B1Q and 4B3T line code



Standard NT1 Features

- 2-wire interface on the U reference point
- 4-wire user bus on the S/T reference point
- Emergency power supply to user terminals

Analogue Terminals Interface Features

- Pulse and/or tone dialling
- 25 Hz low distortion asymmetric ringing signal
- PCM speech coder, according to G.711, A-law
- Emergency power to one POTS interface

Additional Features

- Easy installation, operation and maintenance
- Local or remote configuration through a standard DTMF phone
- Local or remote maintenance, including configuration and diagnostics on the POTS and the U interface
- Local and remote download of firmware upgrades
- Support for stimulus and ETSI supplementary services

TECHNICAL SPECIFICATIONS

NT1 Plus

ISDN Termination with dual analogue interfaces

Power Supply

The NT1 Plus has no batteries and is powered through an internal mains power supply or from the power supplied by the network over the line pair.
Power consumption from the network is limited to 1400 mW in the worst case (one POTS interface powered under emergency conditions)

So Interface

On the So interface the NT1 Plus provides the same quality of service as a standard NT1, including:

- full compliance to regulatory standards
- up to 8 terminals allowed on the S bus
- complete transparency to the test procedures from the exchange

POTS Interfaces

POTS interfaces support both pulse and DTMF dialling. Local tone generation (dial tone, congestion and call waiting) is provided when required. Register recall and hook-flash keys are also supported (e.g. to invoke supplementary services)

Standard Supplementary Services

- Multiple Subscriber Numbers (MSN)
- Calling Line Identification Presentation (CLIP)
- Connected Line Identification Presentation (COLP)

Optional Supplementary Services

- Call Forwarding (Unconditional - CFU, On User Busy - CFB, No Reply - CFNR)
- Call Completion on Busy Subscriber (CCBS)
- Call Waiting (CW)
- Malicious Call Identification (MCID)
- Calling Line Identification Restriction (CLIR)
- Line Identification Restriction (COLR)
- 3-Pty Conference (3PC)
- Closed User Group (CUG)
- Call Hold (CH)
- Advice of Charge (AOC)

Switch Settings

The front panel has a removable cover to access switch settings for:

- So bus configuration (short passive/extended)
- emergency power (one of the POTS interfaces or the So bus)
- terminating resistors for the So Bus

Installation and Configuration

Local and Remote installation and configuration procedures are available through a DTMF phone either connected to one of the POTS interfaces or from a “secured” ISDN access, through a normal telephone or a PC connected to an Aethra TA1008 terminal adapter or an Aethra Front End

Local and Remote Maintenance

The NT1 Plus provides a list of diagnostic features:

- download of firmware upgrades
- remote diagnostics for POTS interfaces
  - ringing voltage
  - microphone current
  - capacity measurement on the POTS interfaces short circuit control

Technical Specifications

Line Interface

Line codes	2B1Q or 4B3T
Standard compliance	TS 102 080
Power consumption	max 1.4 W
Range	up to 1kΩ (V remote supply > 90Vdc)

POTS Interfaces

Dialling mode	DTMF, pulse
Impedance	600Ω or complex (optional)
Speech quality	Q.552
No load voltage	< 60 V
d.c. load	from 0 to 800Ω

Ringing Generator

Ringing Voltage	> 40 V / 2kΩ
Ringing load	approx. 3 REN
Frequency	25 Hz, asymmetrical
Max distortion	10%

Reference Standard for Environmental Quality

Safety	EN60950 (oct. 96)
EMC & protections	ETS 300 047, ETS 300 386-2-2
Transport	ETS 300 019-1-2 class 1.2
Storage	ETS 300 019-1-1 class 2.2
Operation	ETS 300 019-1-3 class 3.2

Overvoltages protection: exceeds ITU-T K21

Mechanical

Dimensions	212x160x57 mm.
Weight	1100 gr.

Power Supply

Current	<100 mA
Voltage	230 Vac + 10% - 15% 50 Hz

Connections

So bus	Two modular connectors 8p/4c RJ-45, ISO8877 Terminal blocks (optional)
POTS	Two modular connectors 6p/2c RJ-11 Terminal blocks
Line pair (U)	2-pole terminal block, or RJ-11
Mains supply	Internal power supply, bipolar cord

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