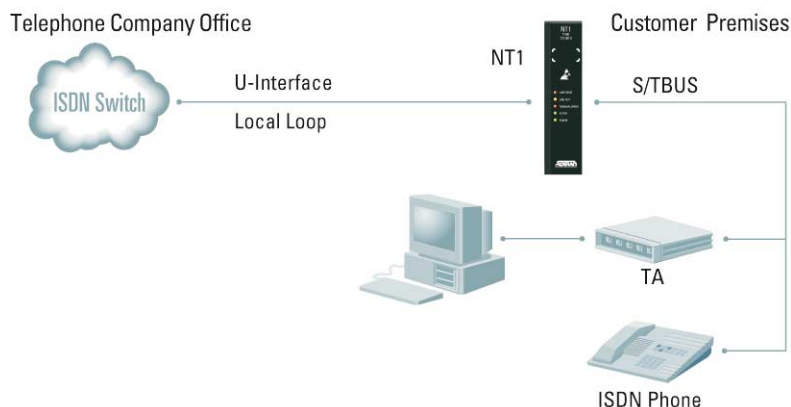# NT1/T400

ISDN Network Termination

FEATURES

- **Compatible with 2B1Q basic rate services and standard ISDN terminals**

- **Provides 2B+D basic rate services**

- **Conforms to ANSI T1.601-1992 and ANSI T1.605-1991**

- **Supports multiple switch vendors including AT&T 5ESS®, NTI DMS-100™**

- **Mounts in a Type 400 multi-mount shelf or as a standalone unit**

- **Supports S/T Bus powering sources including phantom power and dedicated pair**

- **Provides automatic overcurrent protection for S/T power**

- **Supports US or European standard configurations (100 Ω or unterminated)**

- **Allows long and short passive bus arrangements**

- **Provides U-interface lightning protection**

- **Standard 5 year warranty**

The ADTRAN Type 400 NT1 provides network termination for the 2B1Q basic rate interface between the customer terminal equipment and the ISDN network. Basic Rate ISDN consists of two 64 kbps B channels and a single 16 kbps D channel. The U-interface is used for connection to the ISDN network, while the S/T-interface is used for the subscriber terminal equipment. The U- and S/T-interfaces conform to ANSI and CCITT standards and perform all Layer 1 functions. The NT1 contains lightning protection circuitry to protect from lightning and line transients on the network interface. Five LED status indicators on the front panel aid in fault isolation.

The NT1 operates as a standalone unit or in a multiple Type 400 mounting such as the ADTRAN Type 400 Shelf, part number 1150028L1 or 1150024L1. Power Source 1 (phantom power) provides power on the transmit and receive wires of the S/T-interface. Power Source 2 (dedicated pair) provides power over an additional pair of wires. In both cases, the NT1 monitors the S/T-interface for an overcurrent fault condition. In the event of such a condition, the NT1 automatically limits the amount of current being delivered until the fault condition is removed.

The S/T-interface may have as many as eight passive bus devices connected to it as either multiple terminals within 50 meters of each other over the full 1,500 meter range of the interface, or multiple terminals of arbitrary spacing within 200 meters. Termination impedance options include the US standard of 100 Ω or the European unterminated configuration.

ADTRAN

Telephone Company Office — Customer Premises

ISDN Switch — U-Interface / Local Loop — NT1 — S/TBUS — TA — ISDN Phone

ADTRAN

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nsai
I.S. EN ISO 9001

ADTRAN is an ISO 9001 registered company.

Product Specifications

Network Interface
- Line: 2-wire (Tip and Ring)
- Operating Mode: Full-duplex
- Data Rate: 160 kbps total; 144 kbps available to customer
- Signal Format: 2B1Q
- Output Amplitude: 2.5 volt, zero-to-peak
- Tx and Rx Source Impedance: Per ANSI T1.601-1992
- Receiver Sensitivity: Per ANSI T1.601-1992

Environmental
- Operating Temperature: 0ºC to 50ºC, 32ºF to 122ºF
- Storage Temperature: -20ºC to 70ºC , -4ºF to 158ºF
- Relative Humidity: Up to 95%, non-condensing
- FCC Approval: FCC part 15, Class A

Customer Interface
- Line: 4-wire (Tx and Rx pair)
- Operating Mode: Full-duplex
- Data Rate: 192 kbps total; 144 kbps available to customer
- Signal Format: 2B1Q
- Output Amplitude: 2.5 volt, zero-to-peak
- Tx and Rx Source Impedance: Per ANSI T1.605-1991
- Receiver Sensitivity: Per ANSI T1.605-1991

Physical
- Size: 5.625" H, 6" D, 1.375" W
- Weight: 10 oz
- Circuit Pack Mounting: Mounts in Type 400 equipment shelves such as ADTRAN Type 400 Shelf, part number 1150028L1 or 1150024L1

Network Compatibility
- Interface: ISDN and other digital services

Faceplate Indicators
- Power: Power is ON
- Active: Unit is ready for customer data
- Line Error: Network (U-interface) error detected
- Terminal Error: Terminal (S/T-interface) error detected
- Line Test: Network test in progress

Power
- -48 VDC
- 1.75 W dissipation
- Circuit pack: Sources S/T power to 12 watts
- Standalone: Sources S/T power to 7 watts

Ordering Information

EQUIPMENT	PART #
NT1 Circuit Pack	1210010
NT1 Standalone, 110 V	1210016L1

Specifications subject to change without notice.

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DMS-100 is a trademark of Northern Telecom

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