BLACK BOX NETWORK SERVICES

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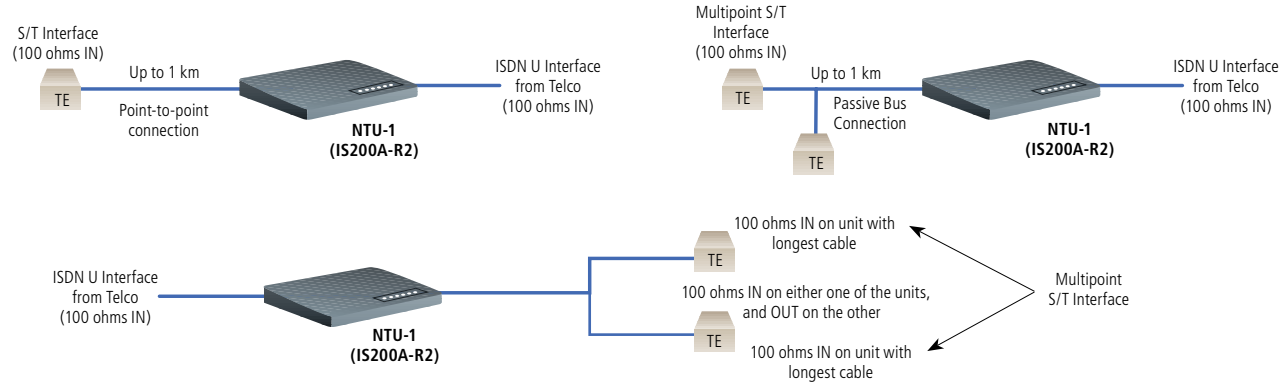
NTU-1 (Network Termination Unit-1)

Your affordable link to the ISDN network.

FEATURES

- Point-to-point or point-to-multipoint configuration.
- Up to 18,000 feet (5500 meters) operating distance.
- Easy configuration—everything you need is on the rear panel.
- Uses standard RJ-45 jacks on all interfaces.
- Operates automatically.
- For wallmount or desktop use.
- Power supply is included.

The NTU-1 in typical applications.



OVERVIEW

ISDN service requires an NT1 to connect the terminal adapter to the ISDN line. If your terminal adapter doesn't have a built-in NT1, the NTU-1 is your affordable choice.

The NTU-1 converts the 2-wire echo-canceled 2B1Q code from the central office to a Customer Premise 4-wire alternate space inversion code. It supports both point-to-point and point-to-multipoint configuration. All options and connections are accessible on the rear panel, and the NTU-1 comes with surge protection. Also, all interfaces have standard RJ-45 jacks.

Power Information:

Wallmount Transformer—

The NTU-1 is normally powered from the wallmount transformer. The transformer and the NTU-1 power-supply circuitry provide 5 watts for up to two terminal devices connected to the S/T interface. Connect the transformer's barrel connector to the Power jack on the rear panel. Plug the transformer into a standard 120-VAC wall socket.

Signal Power—

The NTU-1 routes local and remote power to the signal leads of the S or T interface. For phantom powering applications, S/T interface connector pins 4 and 5 (Transmit) are the negative power leads, and pins 3 and 6 (Receive) are the positive power leads.

Remote Power—

The NTU-1 can receive backup power over the U interface connector. The input must be a minimum of 48 VDC and 5 watts. Both local and backup power is routed to the S/T interface connectors to power the associated terminal equipment. Pins 7 and 8 on the U interface provide remote power to both S/T jacks and the NTU-1.

Technically Speaking

Light-emitting diodes (LEDs) display the status of certain operating functions and will indicate if malfunctions are occurring.

Keep these guidelines in mind when observing the NTU-1's LEDs:

- If a disruption occurs between the U interface and the ISDN switch, the ACT LED flickers.
- If a disruption occurs between the S or T interface and the TE, the ACT LED blinks once per second.
- If a disconnect occurs on both interfaces, the ACT LED goes out.

The NTU-1's six LEDs are:

LP (Local Power)—ON indicates the wallmount transformer is plugged in, and 120 VAC is present.

RB (Remote Power)—ON indicates the remote power source is connected and functional.

RPR (Remote Power Reversed)—ON indicates the remote power source is connected, but polarity is reversed. This must be corrected by site facilities.

LB (Loopback)—ON indicates that the telephone company's ISDN switch has sent a 2B+D loopback command to the NTU-1.

SC (Sealing Current)—ON indicates a presence of metallic termination test voltage from the ISDN switch.

ACT (Activity)—ON indicates that a link-up between the TE and ISDN Central Office via the NTU-1 has been achieved, and transmission can take place.

IS200A-R2

TECH SPECS

Line Type — Basic Rate ISDN (2B1Q)
Switch Compatibility — AT&T®, Northern Telecom®, Siemens®, GTE®
Maximum Operating Distance —
U interface: 18,000 feet (5500 meters);
S/T interface: 3280 feet (1000 meters)
Operation — Full or half-duplex
Operating Mode — Point-to-point or multipoint
Indicators — (6) LEDs: Local Power (LP), Remote Power (RB), Remote Power Reversed (RPR), Loopback (LB), Sealing Current (SC), Activity (ACT)
Connectors — (3) RJ-45 (2 for the S/T interface, 1 for the U interface)
Diagnostics — None
Temperature — Operating: 32 to 122°F (0 to 50°C);
Storage: -40 to +176°F (-40 to +80°C)
Humidity Tolerance — 10 to 95%, noncondensing
Power — 120 VAC, 60 Hz, 5 watts maximum, external supply
Size — 1.4"H x 6.3"W x 3.8"D (3.6 x 16 x 9.7 cm)
Weight — 0.6 lb. (0.3 kg)

Item	Code
NTU-1 (Network Termination Unit-1)	**IS200A-R2**

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
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According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

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