

Special Specification 6023

ISDN Network Termination Unit



1. DESCRIPTION

This Item will govern for the furnishing and installation of stand-alone ISDN Network Termination Units (INTU) in the locations shown on the plans, as detailed in accordance with these specifications, and as directed.

2. MATERIALS

Provide all materials.

2.1. **General Requirements.** All materials furnished, assembled, fabricated or installed under this Item will be new, corrosion resistant and in strict accordance with the details shown on the plans and in the specifications.

2.2. **Functional Requirements.** The INTU will meet the following minimum requirements:

The INTU will be a fully compliant 2B1Q Basic Rate Network Termination 1 (NT-1) unit as described in ANSI specification T1.601-1991. It will provide the conversion of a 2 wire echo cancelled 2B1Q U interface line code, to a 4 wire S/T pseudoternary line code with the capability of performing all required maintenance functions. The NT-1 will connect with the ISDN termination as supplied by SBC, and with the video codec.

The INTU will have the following features:

- Will provide two 64,000 bps B channels that can be used simultaneously for error free data communication up to 128,000 bps without compression.
- Fully compliant with ANSI Standard T1.601-1991.
- Fully compliant with ISDN Standards National ISDN-1, AT&T 5ESS, Northern Telecom DMS-100.
- Will meet FCC Certifications FCC Part 15 Class B, UL, CUL, CSA, and CSO3 and FCC Part 68.
- Supports multiple protocols including multilink PPP, V.120, Async Bonding, and Fallback rate adaption.
- Dialing Selection will use AT Commands and DTR Assertion.
- Performs all embedded operation channel (EOC) functions.
- U interface metallic termination (sealing current).
- Network Loop back testing.
- Remote activated quiet mode and insertion loss tests.
- Local power loss "dying gasp".
- Supports warm-start activation.
- Operating distance up to 18,000 ft. on 26 AWG transmission line.
- Windows 95 Plug and Play compatible.
- Remote configuration capabilities.
- Software setup.
- Automatic SPID and Switch Detection.
- Automatic Com port selection.
- Preconfigured application files.
- Will include an EIA 232 DB25 female connector, an EIA 530 V.35 connector and a RJ 45 connector.
- Supports DTE data from 1,200 to 230,400 bps asynchronous.
- Power provided by 110 V wall mount transformer.

Provide the RJ-45 cable, the power supply, the user's manual, and configuration software.

- 2.3. **Environmental Design Requirements.** The equipment will meet all its specified requirements during and after subjecting to any combination of the following requirements:
- Ambient temperature rating of 0°F to 140°F.
 - Relative humidity from zero percent to 95% non-condensing.

3. CONSTRUCTION METHODS

- 3.1. **General.** The equipment design and construction will utilize the latest available techniques with a minimum number of parts, Subassemblies, circuits, cards, and modules to maximize standardization and commonality.
- The equipment will be designed for ease of maintenance. All component parts will be readily accessible for inspection and maintenance. Test points will be provided for checking essential voltages and waveforms.
- 3.2. **Electronic Components.** All electronic components will comply with Special Specification Item, "Electronic Components."
- 3.3. **Mechanical Components.** All external screws, nuts, and locking washers will be stainless steel. No self-tapping screws will be used unless approved.
- All parts will be made of corrosion resistant material, such as plastic, stainless steel, anodized aluminum, or brass.
- All materials used in construction will be protected from fungus growth and moisture deterioration.
- Dissimilar metals will be separated by inert dielectric material.
- 3.4. **Documentation Requirements.** The documentation requirements will be in accordance with Special Specification Item, "Testing, Training, Documentation, Final Acceptance and Warranty," Article 4.
- 3.5. **Testing.** The testing will be in accordance with Special Specification Item, "Testing, Training, Documentation, Final Acceptance and Warranty," Article 2.
- 3.6. **Training.** The training will be in accordance with Special Specification Item, "Testing, Training, Documentation, Final Acceptance and Warranty," Article 3.
- 3.7. **Warranty.** The warranty will be in accordance with Special Specification Item, "Testing, Training, Documentation, Final Acceptance and Warranty," Article 6.

4. MEASUREMENT AND PAYMENT

No direct measurement or payment will be made for the work performed and materials and equipment furnished in order to provide the ISDN Network Termination Units, made fully operational and tested in accordance with this specification. The work performed and materials furnished under this specification will be considered subsidiary to Special Specification Item, "ISDN Compressed Video Equipment," and will not be paid for directly.