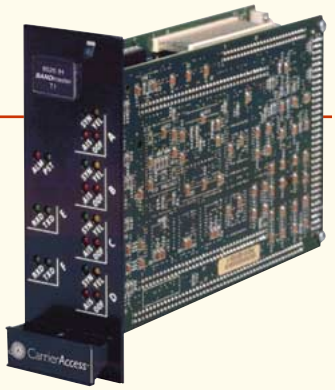
BANDmaster

nxT1/E1 Inverse Multiplexer and MicroDCS
For use in *MASTER*series Platform



Eliminate stranded bandwidth with inverse multiplexing

The ***BAND***master is an intelligent high speed inverse multiplexer with integrated digital cross-connect switching functionality. By combining multiple fractional and full T1/E1 lines, users can create a multi-megabit transmission channel where T3/E3 facilities are unavailable or cost prohibitive. Applications up to 6.112 Mbps (4xT1) and 7.904 Mbps (4xE1) are supported.

The ***BAND***master incorporates Carrier Access' Integrated Inverse Multiple Access (I^2MA) technology. I^2MA provides a unique ability to simultaneously support multiple applications and users that have less than, equal to, or greater than T1/E1 bandwidth requirements each. By viewing the multiple access links as a single high speed connection and maintaining individual DSO resolution, the ***BAND***master delivers maximum bandwidth flexibility and utilization. The optional ***PACKET***core adds high speed IP routing, frame relay transport and a 10 MB Ethernet user interface to the ***BAND***master.

The ***BAND***master includes integrated CSUs and DSUs eliminating the need for and cost of additional boxes and modules. Advanced features such as automatic rate adaptation and automatic protection switching ensure the highest levels of network and application reliability. Any VT100 terminal, Telnet, or PC with a terminal emulator can access all management functions including alarm screens, configuration commands, and diagnostics. The ***BAND***master also supports any SNMP based element manager.

The ***BAND***master is a highly integrated single module solution that can either function as a stand alone unit or be fully integrated with additional ***BAND***master modules or other ***MASTER***series modules in any multi-slot enclosure. Hardware investment is protected as user networking needs change.

What makes the *BAND*master different?

- Creates a multi-megabit transmission channel by inverse multiplexing two to four fractional or full T1/E1 lines
- Supports multiple simultaneous inverse multiplexed applications in any Nx56/64 Kbps contiguous or non-contiguous time slot bundles – no wasted bandwidth!
- Integrates multiple DSUs and multiple CSUs for a variety of networking solutions
- Provides any-to-any channel crossconnect and grooming for flexible circuit management
- Maintains network reliability with robust performance monitoring and automatic protection switching

CarrierAccess™

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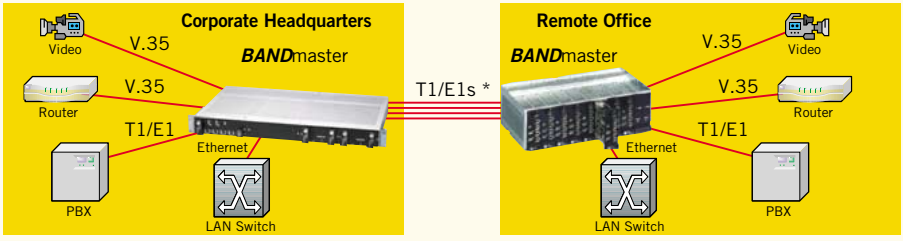
Key Features:

- 2 V.35/RS530 data ports, integrated DSUs
- Provides any-to-any crossconnect
- Nx56/64 Kbps bypass
- Drop-and-insert multiplexing
- Optional ***PACKET***core upgrade provides integrated IP routing and 1 Ethernet LAN Interface
- Automatic protection switching
- Automatic rate adaptation
- Environmentally hardened (-40 ºC to 65 ºC)
- Lightning protection circuit that exceeds Bellcore GR-1089 secondary protection EMI/EMC and safety requirements
- Extensive loopback functionality including fractional DSO
- Built-in Bit Error Rate Tester (BERT)
- Performance monitoring on all network ports
- D4-ESF conversion
- SNMP or VT100 managed, Telnet supported
- Password security
- Differential delay compensation up to 64ms
- Software downloadable
- Supports either stand alone or high density fully integrated rack mount configuration

*BAND*master Private Network Application



* usage from 2 - 4 T1s or E1s inverse multiplexing data up to 6.112 Mbps (T1) or 7.904 (E1)

CarrierAccess™

Product Ordering Information

Inside Sales Representative:

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Technical Specifications for the *BAND*master NxT1/E1 Inverse Multiplexer and MicroDCS

Network Ports (4):

- Line rate:
  - 1.544 Mbps for T1; 2.048 Mbps for E1
- Framing:
  - SF/ESF compatible per TR54016 and TR62411 for T1; CRC-4 and CAS per G.703/704 for E1
- Interface:
  - AMI or B8ZS for T1, HDB3 for E1
- Termination:
  - Female 8 pin RJ-48C
- Timing:
  - Internal or external from any network port
- LED Indicators:
  - YEL/TEST, OOF/LOS, SYNC, AIS

Data Ports (2):

- Data rate:
  - Nx56/64 Kbps; N=1-24 for T1, N=1-31 for E1
- Interface:
  - DCE synchronous CCITT V.35/RS530, RS-449/422/423, and X.21 via external cables
- Termination:
  - Female 25 pin db connector
- LED Indicators:
  - RxD, TxD

Management Interface:

- SNMP:
  - DS1 MIB and MIBII via PPP, Carrier Access private MIB
- Remote Access:
  - In-band via DSO, Telnet supported
- VT100:
  - RS-232 port, 4800-19,200 bps; RJ-45 connector, external modem supported
- Password control:
  - Three levels

Diagnostics:

- Loopback Types:
  - Bi-directional, Fractional DSO (T1 only), Line, Local, Payload, Equipment, Remote in-band/out-of-band, fixed or timed loopback option, user programmable in-band loop up/down codes optional

Performance Monitoring:

- Data storage:
  - Last 24 hours of data in 15 minute intervals, 48 and 72 hour summaries
- Monitors:
  - All network interfaces
- Reports:
  - Based on TR54016 and T1.403 for T1, G.706 for E1, alarm history, network interface statistics

Power:

- AC:
  - 100-250 V ± 10%, 50/60 Hz
- DC:
  - ± 20 VDC to ± 60 VDC

Regulatory:

- FCC: Part 15, Class A; Part 68
- UL: 60950, 3rd Edition
- C-UL: CSA 22.2/60950, 3rd edition
- DOC: ICES-003, ICES-03
- CE: Approved devices

Physical:

- Dimensions:
  - 6.2 in (H) x 2.4 in (W) x 10.22.4 in (D)
  - 15.7 cm (H) x 6.1 cm (W) x 25.9 cm (D)

Environmental:

- Operating Temperature: -40 °F to 149 °F (-10 °C to 65 °C)
- Relative humidity (non-condensing): 0% to 95%

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