INTRAPLEX® D-100

Infinity Data Module with Full Rate Flexibility

The Intraplex D-100 Infinity Data Module uses a unique rate justification method to provide transmission of any data rate from 0 bps to 1.968 Mbps, completely decoupled from network timing.

The D-100 plugs into Intraplex access products, allowing specialized data channels to be combined with other types of payload channels for transport over T1 (1.5 Mbps), E1 (2 Mbps), and other high-speed digital lines.

Intraplex® Key Features

- User-selectable data rate; any rate from 0 bps to 1.520 Mbps in T1 systems, and from 0 bps to 1.968 Mbps in E1 systems
- One-way or full-duplex operation
- Fully independent send and receive timing (at the same nominal rate in both directions)

- RS-449, V.35, X.21 or TTL interface
- DTE or DCE configuration
- Clear channel operation, even on AMI T1 networks
- Built-in test pattern generator and error analyzer

Specifications

Specifications and designs are subject to change without notice

General	
System Compatibility	The D-100 is compatible with Intraplex T1, E1, ISDN, and variable-rate Intraplex access products
Operating Modes	Transmit-only, receive-only, or full-duplex
Data Rate	
Data Format	No restriction on data content
Clock	• T1: 0 bps to 1.520 Mbps • E1: 0 bps to 1.968 Mbps
Overhead	16 kbps
Signal Delay	Receive side, minimal buffer (1 ms delay); transmit side, selectable: minimal buffer (1 ms delay), or 12 kb deep buffers to support plesiochronous operation (6 ms to 1.5 s delay, depending on data rate)
Timing	• DTE: Synchronizes network to send or receive timing input. Provides terminal timing output synchronized to the network. • DCE: Provides send and receive timing synchronized to the network. Can synchronize the network to terminal timing.
Input/Output Modules	

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Data Interface	Configurable for RS-449, V.35, X.21 or TTL, DCE or DTE, by selection of appropriate module adapter (see *Connectors*)
Connectors	Each D-100 requires one module adapter (MA), which provides timing I/O (RJ-11 connector) and the following data I/O options: • MA-412: RS-449 DCE, DB-37 • MA-414: RS-449 DTE, DB-37 • MA-413: V.35 DCE DB-37 • MA-415: V.35 DTE, DB-37 • MA-420: X.21 DCE, DB-15 • MA-421: X.21 DTE, DB-15 • MA-416: TTL, Two BNC
Network Interface	
Time Slot Selection	• Selectable use of adjacent or alternate time slots • Time slot 16 can be skipped for CAS usage in an E1 system
Clear Channel Capability	For T1 AMI networks: Alternate time slot usage per AT&T TR-54019
Status and Diagnostics	
LED Indicators	• Service on/off • Transmit activity • Receive activity • Loopback active • Buffer overflow or underflow • Received bit errors (verifies bits from test pattern generator and bits known to be set to logic "1") • Module failure • Error light flashes when bit errors are detected
Loopbacks	Local and far-end loopback capability
Test Patterns	Generates and detects test patterns for one-way or loopback testing: patterns are all ones, a single one with 15 zeroes, and $2^{15} - 1$ quasirandom sequence
Physical and Environmental	
Nominal Power Consumption	3.0 watts
Temperature	0 °C–50 °C operating
Humidity	0%–90% noncondensing