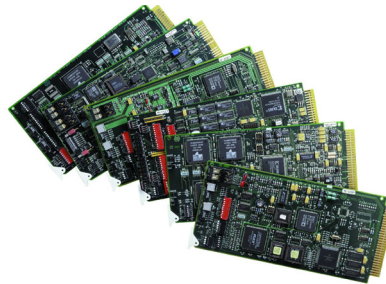# INTRAPLEX® DS-64NC

LAN/Wideband Synchronous Data Module

GatesAir's Intraplex DS-64NC Wideband Synchronous Data Module provides transmission of LAN or synchronous data at rates up to 1.984 Mbps.

The DS-64NC plugs into Intraplex access products, allowing wideband data 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.

- Selectable data rate from 8 kbps to 1.536 Mbps in T1 multiplexers, and from 8 kbps to 1.984 Mbps in E1 multiplexers (8 kbps increments)
- One-way or full-duplex operation
- Fully independent send and receive timing (at the same nominal rate in both directions)
- Integrated Ethernet bridge (MA-427): IEEE 802.3 with

- 10,000 MAC address storage, 15,000 fps filtering, and 256-frame buffer capacity
- 10BaseT, V.35, X.21, or RS-449 interface
- DTE or DCE configuration
- Clear channel operation, even on AMI T1 networks
- Built-in test pattern generator and error analyzer

Intraplex® DS-64NC

Specifications

Specifications and designs are subject to change without notice

General	
System Compatibility	The DS-64NC is compatible with Intraplex T1, E1, and Ethernet access products.
Operating Modes	Transmit-only, receive-only, or full-duplex
Data	
Data Ports	• Data rates (8 bps increments) • T1: 8 kbps to 1.536 Mbps • E1: 8 kbps to 1.984 Mbps
Data Format	• No restrictions on data content • Supports clear channel for T1 AMI networks
Transmit and Receive Buffers	Selectable: 64 bits, or 12 kb deep buffers to support plesiochronous operation
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

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Input/Output Modules	
Data Interface	Configurable for 10BaseT, RS-449, V.35, or X.21, DCE or DTE, by selection of appropriate module adapter (see *Connectors*, below)
Signals Supported	• 10BaseT: UTP (Tx+, Tx−, Rx+, Rx−) • V.35: RTS, CTS, RLSD, DSR, LT • RS-449: RS, CS, RR, DM, TM • X.21: T, R, C, I, S
Connectors	Each DS-64NC requires one module adapter (MA), which provides a data I/O connector and an RJ-11 timing I/O connector <table><tr><td>*Adapter*</td><td>*Interface*</td><td>*Connector*</td></tr><tr><td>MA-412</td><td>RS-449, DCE</td><td>DB-37S</td></tr><tr><td>MA-414</td><td>RS-449, DTE</td><td>DB-37P</td></tr><tr><td>MA-413</td><td>V.35, DCE</td><td>DB-37S</td></tr><tr><td>MA-415</td><td>V.35, DTE</td><td>DB-37P</td></tr><tr><td>MA-420</td><td>X.21, DCE</td><td>DB-15S</td></tr><tr><td>MA-421</td><td>X.21, DTE</td><td>DB-15P</td></tr><tr><td>MA-428</td><td>10BaseT, UTP</td><td>RJ-45</td></tr></table>

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
Time Slot (DS0) Assignments	56 or 64 kbps per time slot, with unused bits set to logic 1
Clear Channel Capability	For T1 AMI networks: Alternate time slot use per AT&T TR-54019, or 56 kbps per time slot with 8th bit set to logic 1

Status and Diagnostics	
LED Indicators	• Service on/off • Transmit activity • Receive activity • Loopback active • Buffer overflow or underflow • Received errors (pattern bit errors)
Loopbacks	Equipment, network, and remote 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 • Error light flashes when bit errors are detected

Physical and Environmental	
Nominal Power Consumption	0.4 watts
Temperature	0 °C–50 °C operating
Humidity	0%–90% noncondensing