Kilomux-2100/2104

KHS.1

2-Channel High Speed Data Module

- Selectable interface: V.35, RS-530, V.36/RS-449 or X.21
- DCE, DTE1 or DTE2 clocking options
- Independent parameter selection for each channel
- End-to-end control signal transfer
- Enhanced diagnostics

KHS.1 is a high-speed data module featuring two high-speed synchronous data channels for the Kilomux system. Parameters can be programmed independently for each channel. Each channel can be configured for V.35, RS-530, V.36/RS-449 or X.21 operation.

The data rate for each channel can be selected for 32, 48, 56, 64, 128, 192, 256 or 384 kbps.

Programmable timing modes and built-in elastic buffers enable connection to all types of digital lines, including digital data services, ensuring data integrity.

One control signal per channel may be transmitted end-to-end for handshaking purposes. Typical end-to-end delay is 2.5 msec.

Comprehensive diagnostic capabilities reduce downtime to a minimum. Diagnostics include V.54 loopbacks, initiated via connector pins or by the user, and built in BER test initiated by the user. Automatic self-test is performed during power-up and normal operation.

Each channel terminates on a 25-pin D-type, female connector. Pin-out assignment is according to EIA RS-530 specifications. Local support of four control signals is provided. For connection to V.35, V.36/RS-449 or X.21 equipment, special cables are available (see *Ordering*).

Provides two synchronous high speed data channels

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Table 1. Compatibility of Main Link and KHS.1 Data Rates

KHS.1 Data Rate [kbps]	KML Data Rate [kbps]										
	48	56	64	128	192	256	384	512	768	1024	1536
32	+	+	+	+	+	+	+	+	+	+	+
48		+	+	+	+	+	+	+	+	–	–
56			+	+	+	+	+	–	–	–	–
64				+	+	+	+	+	+	–	–
128					–	+	+	+	+	+	+
192						–	+	–	+	–	+
256							–	+	+	+	+
384								–	+	–	+

Figure 1. KHS.1 Application for Extending High-Speed Data

Specifications

Number of Channels
2, synchronous

Interface
V.35, RS-530, V.36/RS-449 or X.21

Connectors
Two 25-pin D-type, female
Cables are available for connection to
    V.35, V.36/RS-449 or X.21 physical
    connectors

Pin Assignment
Per EIA RS-530

Bandwidth Allocation on Main Link
Selectable, according to the programmed
    channel data rate

Data Rates
32, 48, 56, 64, 128, 192, 256 or 384 kbps

Note: Certain KHS.1 channel data rates are not
supported by some of the Kilomux main link data
rates. Table 1 details the compatibility of the KHS.1
channel with the main link data rates (in kbps).

Data Clamp
Mark hold on Out of Sync

Control Signals
Local support: RTS-CTS delay soft
    controlled, DSR,   DCD
End-to-end, selectable per channel:
    RTS-DCD; 2.5 msec typical delay

Clock Options
DCE, DTE1, DTE2

Diagnostics
Independent for each channel
Soft Controlled:
    Local loopback
    Remote loopback
    Built in BER test
Connector Pin Control:
    Local loopback (V.54 Loop 3)
    Remote loopback (V.54 Loop 2)
Auto self-test upon power-up and during
normal operation

Indicators
For selected channel: TX, RX, RTS
    and DCD on Kilomux front panel
For X.21 interface: Control and
    Indication replace RTS and DCD

Management
Programmable via terminal interface,
Telnet or Network Management System

KHS.1

2-Channel High Speed Data Module

Ordering

KM-2000M-KHS.1

SUPPLIED ACCESSORIES

CBL-HS2/*/#
Adapter cable for KHS.1's DB-25 channel connectors. Converts to connector of type specified (separate cable is needed for each connector). Cable must be chosen to match the desired clock mode. Cable length is 2m (6 ft).

Legend

* DB-25 channel connector:
   V1   34-pin V.35, DCE
   V2   34-pin V.35, DTE1
   V3   34-pin V.35, DTE2
   R1   37-pin V.36/RS-449, DCE
   R2   37-pin V.36/RS-449, DTE1
   R3   37-pin V.36/RS-449, DTE2
   X1   15-pin X.21, DCE (30 cm/1ft long)
Cable connector (on user side):
   F   female
   M   male

Table 1. Kilomux-2100/2104 Data Modules

	KHS.1	KHS.2	KHS.U	KHS.703	KLS.2	KLS.1/N
No. of Channels	2	2	1	2	4	2
Interface	V.35, RS-530, V.36/RS-449 or X.21	V.35, RS-530, V.36/RS-449 or X.21, V.24/RS-232	ISDN "U"	Codirectional, per G.703	V.24/RS-232	V.24/RS-232, Sync or Async
Connector	Two 25-pin D-type, female	Two 25-pin D-type, female	RJ-45	RJ-45	Four RJ-45 connectors	Two 25-pin D-type, female
Data Rates	32, 48, 56, 64, 128, 192, 256 or 384 kbps*	2.4 kbps to 614.4 kbps*	Per B Channel 16, 32 and 64 kbps Per D Channel 16 kbps	64 kbps	300 bps to 19.2 kbps async. (statistically multiplexed)	Group 1: 300 bps to 38.4 kbps, sync and async, Group 2: 7.2, 14.4, 28.8, 57.6 kbps, sync and async, Group 3: 8, 16, 24, 32, 48, 56, 64 kbps, sync

Note: The supported channel data rates specified in Table 1 are dependent on the main link rates employed. To view limitations please refer to Specifications in the relevant module data sheets.

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