



KILOMUX-2000 I/O Module

KTRE - Token Ring Extender Module

FEATURES

- Connects up to eighty remote workstations to a Token Ring LAN via the Kilomux-2000 link
- Fits into any Kilomux-2000 I/O slot
- Bridge-like operation
- 4 or 16 Mbps operation
- LAN interface: STP complies with IEEE 802.5
- Programmable link data rates from 9.6 to 368 kbps
- MAC level operation
- Transparent to higher level protocols
- Allows 4 Mbps workstation to be connected to 16 Mbps Token Ring LAN

DESCRIPTION

- The Kilomux-2000 KTRE, Token Ring Extender, is an I/O module for connecting remote workstations to a 4 or 16 Mbps, Token Ring LAN. The KTRE supports up to eighty workstations on the remote LAN. The STP LAN interface conforms to IEEE 802.5.
- Connection to the remote location is established by using two KTRE modules – one connected to the main Token Ring LAN and the other connected to the remote LAN.

■ Communication between KTREs is over the Kilomux-2000 links. The bandwidth used by the KTRE can be programmed for 9.6 to 368 kbps.

■ The Kilomux-2000 KTRE is fully compatible with the stand-alone and RADring TREs. This enables a stand-alone TRE to be connected to a high speed data module on one side and a Kilomux-2000 KTRE module on the other side.

■ The KTRE operates like a MAC level remote bridge, performing filtering and forwarding of only those packets addressed to the remote stations. Unlike regular remote bridges, the filtering and forwarding operation differs in the main and remote KTREs.

■ The operational differences between the local and remote KTREs are:

- 1) The KTRE connected to the remote LAN is self-learning, recognizing the addresses of all the workstations attached to it. The remote KTRE transmits this information to the KTRE connected to the main LAN, along with all packets whose destination address is not in the remote site.
- 2) The KTRE connected to the main LAN forwards to the remote KTRE only those packets whose destination address belongs to the remote site.
- 3) Broadcast and Multicast packets are always forwarded in both directions, unless masked out.
- 4) Additional bridges or routers may not be connected to the remote LAN. There is no such limitation on the main LAN.



- Local and remote KTREs can operate at different data rates on the LAN interface. This allows the connection of 4 Mbps remote workstations to a 16 Mbps Token Ring LAN, and vice versa.
- The KTRE supports the physical and data link layers of the OSI model, and is completely transparent to higher level protocols, such as TCP/IP, DECnet, XNS, ISO, and to operating systems such as NetWare, VINES and 3COM.
- KTRE operation is fully automatic, and includes serial link start-up and recovery, as well as insertion and removal of remote workstations. All parameters are programmed via the front panel display or via an Alarms Acquisition Management System (AAMS).

■ Diagnostics, configuration and monitoring can be performed on an optional basis from an ASCII terminal connected to the LAN control port. These functions include self-test and fault isolation, masking of frames for security and reduced loading of the wide area link, and monitoring of network parameters.

SPECIFICATIONS

LAN INTERFACE

■ **Standard**

IEEE 802.5

■ **Data Rate**

4 or 16 Mbps, selectable

■ **Remote Side**

Emulates an access unit or workstation

■ **Local (Main) Side**

Emulates a workstation

■ **Connector**

9 pin D-type, female

■ **Interface**

STP

GENERAL

■ **Bandwidth Allocated on Kilomux-2000 Main Link**

9.6 to 368 kbps

■ **Protocol**

HDLC based

■ **Indicators**

LAN ERR ON when LAN interface indicates an error (red)
 LINK ERR ON when an error occurs on the main link (red)
 TX LAN ON when packets are transmitted to the LAN (yellow)
 RX LAN ON when packets are received from the LAN (yellow)
 READY ON when packets can be transferred
 4 M ON when unit operates at 4 Mbps (green)
 16 M ON when unit operates at 16 Mbps (green)
 MAIN ON when unit is configured as local (green)
 REMOTE ON when unit is configured as remote (green)

■ **Diagnostics**

Automatic power-up self-test

■ **Configuration**

Programmable via the front panel display
 Programmable from an Alarms Acquisition Management System (AAMS) via the supervisory port of the Kilomux-2000 Common Logic module

LAN Control Port

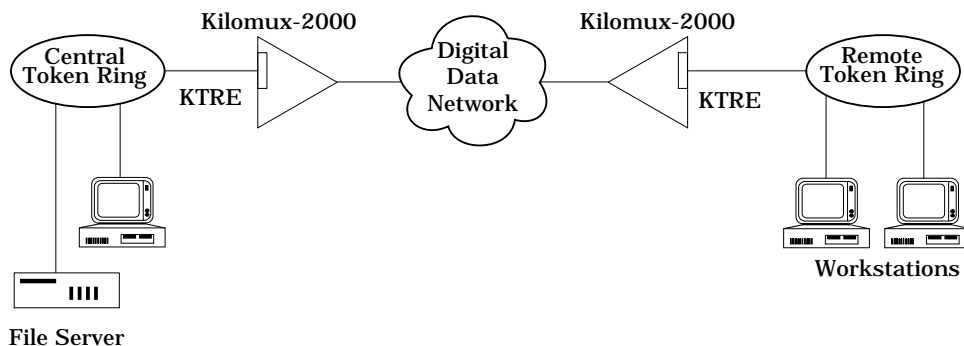
Interface: V.24/RS-232
 Connector: RJ-45
 Speed: 1.2 to 19.2 kbps, autobaud
 Character: 8-bit, no parity

ORDERING

KM-2000M-KTRE

Kilomux-2000 KTRE Token Ring Extender Module

APPLICATION



Specifications are subject to change without prior notification



data communications

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