

# IMX-6L

## Inverse Multiplexer for Leased Lines



### FEATURES

- 6 x 64 kbps inverse multiplexer for leased lines
- Transmits a high speed data channel over two to six 64 kbps lines
- Supports BONDING 1, 2 and 3 protocol specifications
- Tolerates a differential delay of up to 512 msec
- Setup and control via supervisory port
- Supports applications for:
  - LAN internetworking
  - Video conferencing
  - Channel connection
- G.703 codirectional network interface available
- SNMP support using SLIP protocol
- Software download via Xmodem protocol

### DESCRIPTION

- The IMX-6L inverse multiplexer splits a high speed data channel over two to six 64 kbps network channels to support higher rate applications such as LAN internetworking and video conferencing.
- IMX-6L operates with permanent 64 kbps channels such as leased lines. It is intended for use where data transmission above 64 kbps is required, but higher speed lines are either not available or are prohibitively expensive.
- The inverse multiplexer operates by dividing the payload bandwidth among the multiple 64 kbps network channels. At the remote site, a second inverse multiplexer restores the original signal by synchronizing and reassembling the channels into a single higher rate data stream.
- During the initial handshaking process, both units measure the delay of each network channel. This enables the two units to reconstruct the data after it has been spread across the separate channels to ensure that the data is delivered in the proper order.
- Operation is in compliance with the BONDING protocol specifications (Modes 1, 2 and 3) for multivendor interoperability. Mode 2 and 3 enable autorecovery from link failure.

- The differential delay tolerance of 512 msec is enough to support two satellite hops.
- Command driven software offers complete control of configuration, diagnostics, alarms, etc.
- IMX-6L offers a large choice of interfaces for the network and data ports:
  - V.35
  - V.36/RS-449
  - RS-530
  - RS-530A
  - X.21
  - V.24/RS-232 (network ports only)
  - G.703 codirectional (network ports only)
- SNMP over SLIP support is available for most monitoring and configuration functions.
- IMX-6L can be ordered with two, four or six 64 kbps channels.
- IMX-6L is a compact 1U-high standalone unit. It can be mounted in a 19" rack using the optional rack-mount hardware (see *Ordering*).

### SPECIFICATIONS

#### NETWORK PORTS

- **Number of Ports**  
2, 4 or 6 (see *Ordering*)
- **Bit Rate per Port**  
64 kbps
- **Configuration**  
DTE
- **Transmit Timing**
  - Internal: accuracy 32 ppm
  - DCE transmit timing (looped back from the network)

# IMX-6L

## Inverse Multiplexer for Leased Lines

- **Interfaces**  
V.24/RS-232, V.35, V.36/RS-449, RS-530, RS-530A, X.21, or G.703 codirectional (see *Ordering*)
- **Connectors**
  - G.703: RJ-45
  - All other interfaces: 26-pin high density D-type, female + appropriate conversion cable (see *Ordering*)

### DATA PORT

- **Bit Rate**  
n x 64 kbps (n = 1 to 6)
- **Configuration**  
DCE
- **Transmit Timing**  
Locked to the network transmit timing
- **Interfaces**  
V.35, V.36/RS-449, RS-530, RS-530A or X.21 (see *Ordering*)
- **Connector**
  - 26-pin high density D-type, female + appropriate conversion cable (see *Ordering*)

### CONTROL (SUPERVISORY) PORT

- **Interface**  
V.24/RS-232
- **Configuration**  
DCE
- **Connector**  
9-pin D-type, female
- **Baud rate**  
1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6 kbps, autobaud option
- **Character**
  - 8 bit, no parity
  - 7, 8 bit; odd, even parity

### GENERAL

- **Indicators**  
LINK ACTIVITY (per network channels 1-6)  
TD, RD, CALL (for data port)  
TEST, ALARM

- **Delay Equalization**  
512 msec
- **Physical**  
Height: 4.3 cm / 1.7 in (1U)  
Width: 43.2 cm/ 17.0 in  
Depth: 24.3 cm/ 9.5 in  
Weight: 2.3 kg / 5.0 lb
- **Power**  
100-240 VAC, 35W  
-48 VDC
- **Environment**  
Temperature: 0-50°C / 32-122°F  
Humidity: Up to 90%, non-condensing

## ORDERING

### IMX-6L-2/~/@/#

2-port Inverse Multiplexer for 64 kbps Leased Lines (includes one data port)

### IMX-6L-4/~/@/#

4-port Inverse Multiplexer for 64 kbps Leased Lines (includes one data port)

### IMX-6L-6/~/@/#

6-port Inverse Multiplexer for 64 kbps Leased Lines (includes one data port)

~ Specify **48** for -48 VDC power supply  
(Default is 100 to 240 VAC)

@ Specify data port interface (26-pin female connector):

**V35** for V.35  
**V36** for V.36/RS-449  
**530** for RS-530  
**530A** for RS-530A  
**X.21** for X.21

# Specify network port interfaces:

**V24** for V.24/RS-232  
**V35** for V.35  
**V36** for V.36/RS-449  
**530** for RS-530  
**530A** for RS-530A  
**X21** for X.21  
**703** for G.703 codirectional

### CABLES

All data and network port interfaces (except G.703) have a 26-pin high-density D-type, female connector. The conversion cable is supplied automatically in accordance with the interface ordered. The cables for the V.35, V.24/RS-232, V.36/RS-449, RS-530, or X.21 physical interfaces have a female connector on the user side. If you want a unit with a male connector on the user side, specify this in the *Ordering notes*. The RS-530A option has only male connector option.

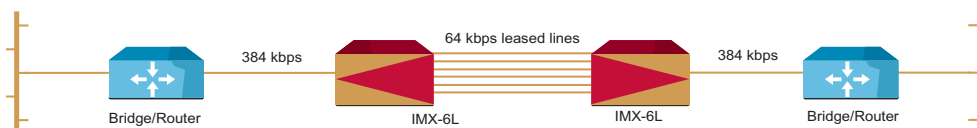
To order an additional conversion cable, specify:

### CBL-SCS26/a/b

- Specify physical interface:  
**V24** for V.24/RS-232, 25-pin  
**V35** for V.35, 34-pin  
**V36** for V.36/RS-449, 37-pin  
**530** for RS-530, 25-pin  
**SCS26** for RS-530A, 26-pin  
**X21** for X.21, 15-pin
- Specify connector on the user side:  
**M** for male connector  
**F** for female connector

### RM-7/NEW

Hardware for mounting one or two standalone units in a 19" rack



data communications

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