

### Overview

The OMC650 provides optical mode conversion for synchronous and asynchronous digital optical signals between 1 Kbps and 650 Mbps.

The OMC650 provides logic to logic serial data transmission over optical fiber. It functions as a bi-directional multimode to singlemode repeater and can operate on a primary or secondary ring. It is an ideal transportation system for multimode to singlemode conversion or singlemode repeating functions. As a Digital Optical Repeater it can transmit up to 50Km with standard 1300nm Laser and up to 100Km with 1550nm DFB laser.

The OMC650 is the premier inter-networking alternative for connecting multiple facilities around a private metropolitan area network at full LAN speeds. It can also be used in applications where only singlemode SONET, SDH or ATM equipment is available if the location has a multimode fiber plant.



### Features

- ◆ *Transparent Mode Conversion*
- ◆ *Data Speeds up to 650 Mbps*
- .. *Distance up to 100 Km*
- .. *25 dBm Optical Budget*
- .. *Signal Status Indicators*

### Applications

- ◆ *Singlemode to Multimode conversion*
- ◆ *Digital Optical Repeater*
- ◆ *FDDI or ATM Conversion or Repeating*
- ◆ *SONET OC-1, OC-3, or OC-12 Conversion or Repeating*
- ◆ *SDH STM-1 and STM-4 Conversion or Repeating*
- .. *ESCON and Fiber Channel Remote*
- .. *100 Base Fast Ethernet Conversion*

### Ordering Information:

| Model          | Description   |
|----------------|---|
| OMC65013/13X/Y | Distance up to 50 Km, 1300nm MM to 1310nm SM            |
| OMC65013/15X/Y | Distance up to 100 Km, 1300nm MM to 1550nm SM           |
| OMC65015/15X/Y | Repeater, Distance up to 100 Km, 1550nm SM to 1550nm SM |

\* Please consult factory for additional models and specifications

**System:**

Error Rate Indicators 1 in 10<sup>9</sup> or Better  
 PWR, MMTX, MMRX, SMTX, SMRX

**Environment:**

Operating 0°C to 50°C  
 Storage -40°C to 95°C  
 Humidity 95% Non-Condensing

**Physical:**

Dimensions 1.75" x 17" x 10"  
 Weight 5 lbs.

**Power:**

AC 90-240 VAC, 47-63 Hz  
 DC -48 VDC (Optional)  
 Volts/Amp 5 VDC @ 2.5 Amp

**Optical:**

I/O Data Rate 1 Kbps to 650 Mbps

**Multimode:**

Transmitter -6 dBm  
 Power Budget 22 dBm  
 Receiver Sensitivity -28 dBm

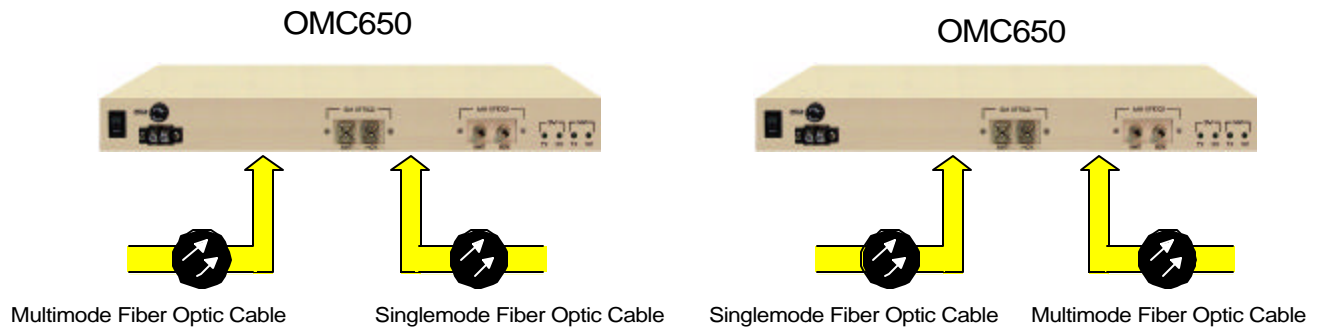
**Singlemode:**

Transmitter 0 dBm  
 Power Budget 25 dBm  
 Receiver Sensitivity -25 dBm

**Data Interface:**

Telecom T1/E1, T3/E3, OC1-OC12  
 Data-com FDDI, ATM, ESCON  
 LAN/WAN/MAN Ethernet, Fiber-Channel

## Example Applications



### Typical OMC650 Fiber Optic Mode Converter Application