

# OPTEL2

## Fiber Optic Telephone Voice Modem

### Applications

- Voice Links where security is a priority
- Voice Links over an extended distance
- Voice Links in an EMI noisy environment



### Description

The OPTEL2 is usually used to extend a two wire telephone line using optical fibers. The OPTEL2-SL connects to a *plain old telephone* at one end of the link, and the OPTEL2-CO connects to a CO or PBX at the other end of the link. The optical fiber pair which connects the two may be either multimode or singlemode.

A dedicated voice link (order-wire) can be created by having an OPTEL2-SL at both ends of the link. Lifting the handset at one end causes the other end to ring.

Another version, the OPTEL2-ASL, is an analog two wire modem which transmits and receives analog signals in the 200 to 3400 Hz range. It can be used as a clear channel for PSK, FSK, DTMF, or other signals.

Fiber optic transmission offers information security, electrical isolation, lightning protection, and EMI/RFI immunity. Since the voice is digitally encoded, the quality does not degrade with distance.

### Features

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|--|--|
| Interfaces to a standard analog telephone line | Auxiliary Relay Sense/Closure channel        |
| Singlemode or multi-mode fiber operation       | Can be used as a dedicated link (order-wire) |
| Plug and play operation                        | 5 year warranty                              |
| Caller ID                                      | Wide temperature range (-40°C to 75°C)       |

### Specifications

#### Optical

Light source	M version.....	850 nm LED
	MM version.....	1300 nm SLED
	SM version .....	1300 nm ELED (extended distances)
Optical connectors .....	ST	
Optical sensitivity (10 <sup>-9</sup> BER)	M & MM version.....	<-53 dBm
	SM version.....	<-36 dBm

#### Operating distance

Version	Launch dBm	Fiber size	Loss dB/km	Distance km
M	-18	62/125	3	11
M	-36	9/125	2	8
MM	-18	62/125	0.8	44
MM	-37.5	9/125	0.4	39
SM	-15	9/125	0.4	52*

\* This is a conservative estimate. These units have been tested with over 70 Km of singlemode fiber.

