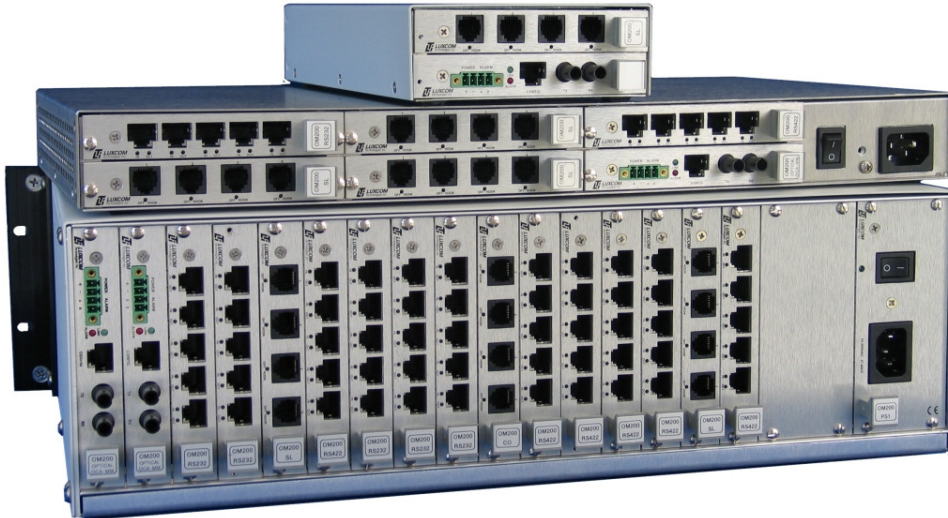


## Analog 4-wire Interface For OM200 SONET-OC3 Multiplexer



### Chassis

- Chassis sizes of 2, 4, 6, and 16 slot.
- Optical data rate of 155Mbps
- Single or multimode fiber versions
- Point-to-point topology
- Add/drop topology
- Fiber protection ring switching

### Interfaces

#### Telephony

Subscriber Loop & CO  
 Digital - MC300  
 Digital – M3903/4  
 T1 or E1

#### Data

EIA530, RS232, V.35  
 RS485/RS232 - Add/Drop  
 RS232  
 RS485  
 Ethernet

#### Audio

Analog 2-wire  
 Analog 4-wire  
 E&M  
 Radio - Harris RF5800H

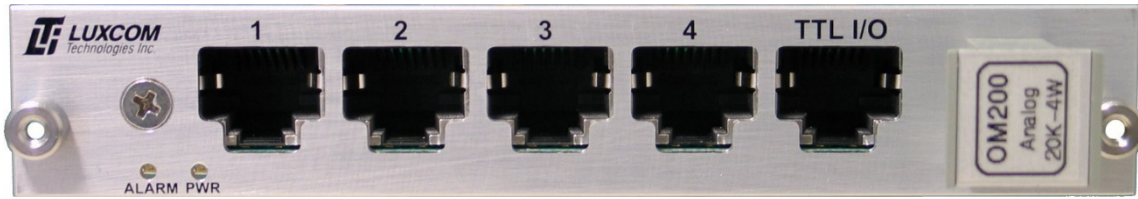
#### Other

Contact sense/closure  
 Alarm - chassis monitor  
 Radar - video  
 Optical SONET

### General

Every chassis requires at least one *Optical SONET* card and one *Interface* card.  
 Full details can be found at: [www.luxcom.com/product/om200](http://www.luxcom.com/product/om200)

## Interface: OM200-Analog-20K-4W (BW > 20 kHz, 4-wire)

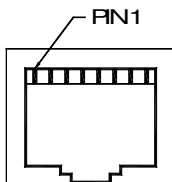


### Description

This analog card contains four bidirectional analog channels, and is primarily used for high quality audio. Each of the four ports communicates with a corresponding port at the remote node, and each port is four-wire (separate transmit and receive pairs) with 600 ohms of source/load impedance. The analog bandwidth is from 140 Hz to 22 kHz, and has very low noise. Eight general purpose TTL level I/O lines are included on this card.

### RJ45 Audio Connectors (ports 1-4)

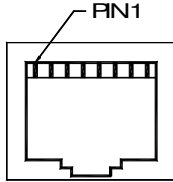
The external analog equipment connects to the Analog interface through the RJ45 connectors. One end of a standard Ethernet cable can be used to connect to the OM200-Analog card; the other end of the cable will have to be custom to interface to the attached equipment. The tip/ring wires for the audio connection can be reversed without affecting performance. Each of the four RJ45 connectors has a general purpose TTL level input and output pin. The pin-out is shown in the following table.



Pin #	Name	OM200-Analog Signal Direction
1	Audio Output +	Output from card
2	Audio Output -	Output from card
3	Ground	Digital Signal Return
4	Audio Input +	Input to card
5	Audio Input -	Input to card
6	Ground	Digital Signal Return
7	Digital Input	Input to card
8	Digital Out	Output from card

### RJ48 Digital Connector (port 5)

Four input and four output general purpose TTL level signals can be transmitted and received on this connector. The pin assignment is shown below.



Pin #	Pin Name	Direction
1	Ground	Digital Signal Return
2	Digital Out 1	Output from card
3	Digital Out 2	Output from card
4	Digital Out 3	Output from card
5	Digital Out 4	Output from card
6	Ground	Digital Signal Return
7	Digital Input 1	Input to card
8	Digital Input 2	Input to card
9	Digital Input 3	Input to card
10	Digital Input 4	Input to card

### Indicators

**PWR** is on when the OM200-Analog has powered up correctly.

**ALARM** On (red) indicates there is no connection with a remote partner, or a card failure.

### Management Port Settings:

#### Transmit Audio gain

Average audio signals are usually about 0.7 Vpp (-10 dBm) with peak levels up to 7 Vpp; the Analog card will accept these levels without distortion. If the input audio is significantly lower, the full range of the analog to digital converter is not used, and the signal output at the remote end will have a slightly higher noise level. If the input audio is too high, the signal will clip causing distortion. To rectify these conditions, the transmit gain (input to the Analog card) can be adjusted using the management interface. The card is shipped from the factory with 0dB gain setting, and it should only be adjusted if problems arise.

#### Receive Audio gain

if the equipment attached to the OM200 is being over-driven, the management interface can attenuate the received signal (output from the Analog card). The card is shipped from the factory with 0dB gain setting, and it should only be adjusted if problems arise.

## Specifications

System bandwidth used by this card .....	3.5%
Current used by this card .....	0.25A
Power consumption .....	1.25 W
Operating temperature .....	-40C to +70C

### Analog Channels

Number of audio channels .....	4
Input/Output connectors .....	RJ-45
Input/Output impedance .....	600 ohms nominal
Analog bandwidth with maximum output signal .....	140 Hz to 22 kHz
Analog input Level without significant distortion.....	7 Vpp max
Analog insertion gain (factory default) .....	0 dB
Gain Flatness (200 Hz to 20 kHz) .....	+/- 0.1 dB typical
Idle channel noise (C Message Weighted).....	< 2 dBBrnC0
Idle channel noise (3 kHz flat) .....	< 5 dBBrnC0
Idle channel noise (15 kHz flat) .....	< 9 dBBrnC0

### TTL Channels

Number of TTL channels .....	8 in, 8 out
Input level Low.....	< 1.6 V
Input level Hi.....	> 1.6 V
Output level high 1K Ohm load .....	5 V
Output level low 1K Ohm load.....	0 V
Data rate .....	< 800 Hz
Data format.....	any

## Ordering Information

Part number OM200-20K-4W