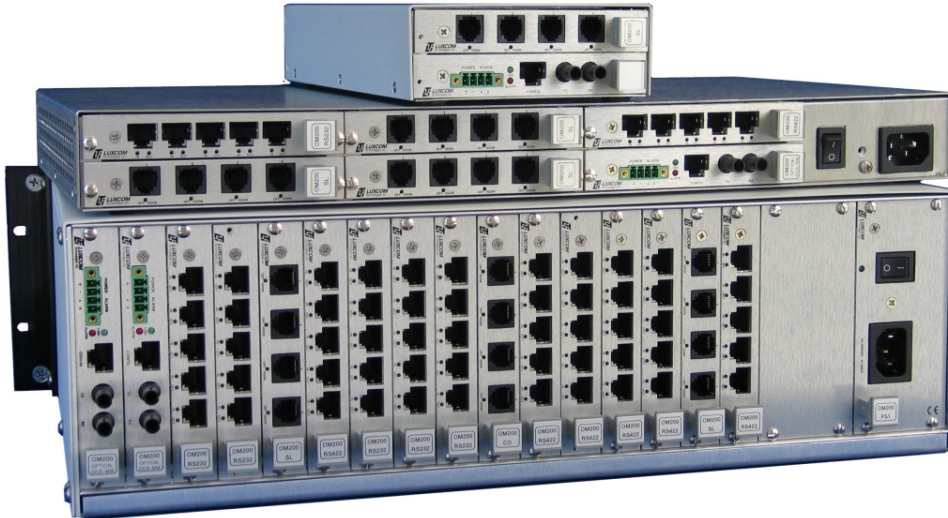


## Radio/Handset for Harris RF5800H Interface For OM200 SONET-OC3 Multiplexer



### 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

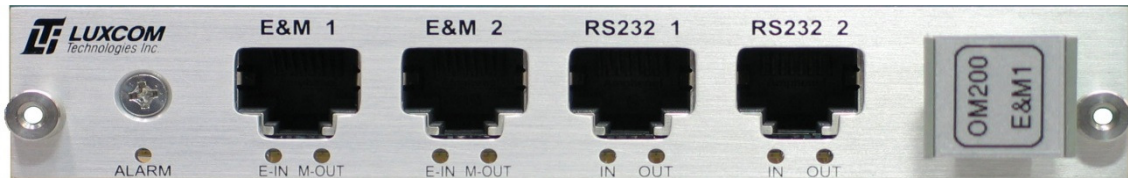
Contact sense/closure  
Alarm - chassis monitor  
Radar - video  
Optical SONET

### 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-E&M1-RAD/REM

### Two channel Push-to-Talk for *Harris RF5800H* radio



### Description

This interface allows a Harris RF5800H radio to connect to a remote Push-to-Talk console over a fiber optic link. Two independent channels are provided. Each channel has a 4-wire audio interface and a contact sense and contact closure for the PTT signal. This card has very high fidelity and audio bandwidth.

The **OM200-E&M1-RAD** interfaces to a *Harris RF5800H* radio.

The **OM200-E&M1-REM** interfaces to the push-to-talk console.

This interface may connect to other radio types; however radio requirements tend to be unique. Contact Luxcom for further discussion.

### Jumper Setting for Push to Talk

These cards have two jumpers behind each RJ45 E&M connector. These jumpers must be in the position furthest from the RJ45 to give push-to-talk signaling. In this mode pins 1&2 are the sense inputs; in the open circuit condition pin 1 is +5 Volt with respect to pin 2. The active state is sensed when these pins are shorted (3 mA will flow), and this state is passed to the remote OM200-E&M1 card where the isolated contact closure pins 7/8 become shorted.

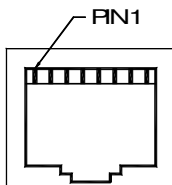
### Audio Ports

The external equipment connects to the E&M interface through the RJ45 connectors. These interfaces are supplied with special cables which allow audio impedance translation. The tip/ring wires for the audio connection can be reversed without affecting performance. The pin-out is shown in the following table; pin1 is on the left when looking at the panel shown above.

| Pin # | Name | Function      | OM200-E&M Signal                 |
|-------|------|---------------|----------------------------------|
| 1     | SB   | Send Battery  | 5V Output used for contact sense |
| 2     | M    | M lead        | Input                            |
| 3     | R2   | RING 2        | Input in 4-Wire mode             |
| 4     | R1   | RING 1        | Output in 4-Wire mode            |
| 5     | T1   | TIP 1         | Output in 4-Wire mode            |
| 6     | T2   | TIP 2         | Input in 4-Wire mode             |
| 7     | E    | E lead        | Output                           |
| 8     | SG   | Signal Ground | Common                           |

### RS232 Ports

Two RS232 serial ports are included on this card; these follow the EIA/TIA 561 pin-out standard. Any data rate up to 64 kbps can be passed. A computer is a DTE (data terminal equipment), and a modem is a DCE (data communication equipment). These ports act as a DCE. A DCE usually interfaces with a DTE, so a straight through cable is used. The pin assignment is shown below.



| Pin # | Pin Name |                           | Direction |
|-------|----------|---------------------------|-----------|
| 1     | RI       | Ring indicator (optional) | Output NC |
| 2     | DCD      | Data Carrier Detect       | Output Hi |
| 3     | DTR      | Data Terminal Ready       | Input NC  |
| 4     | GND      | Ground                    |           |
| 5     | RXD      | Receive Data              | Output    |
| 6     | TXD      | Transmit Data             | Input     |
| 7     | CTS      | Clear To Send             | Output    |
| 8     | RTS      | Request to Send           | Input     |

NC = No Connection Hi = Always high Low = Always Low

### Indicators

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

**IN** is on when the OM200-E&M has sensed an off-hook condition on its PTT or when the RS232 data input is active.

**OUT** is on when the OM200-E&M is outputting an off-hook condition on its E-lead or when the RS232 data output is active.

**Management Port Settings for the OM200-E&M1-RAD:**

- Set **Transit Audio gain** to 0dB.
- Set the **Receive Audio gain** to 0dB.
- Set the Interface to **Four Wire Mode**.
- Set the E&M interface type to *Type 4-5*.

**Management Port Settings for the OM200-E&M1-REM:**

- Set **Transit Audio gain** to 0dB.
- Set the **Receive Audio gain** to +6dB.
- Set the Interface to **Four Wire Mode**.
- Set the E&M interface type to *Type 4-5*.

**Specifications**

|  |              |
|--|--------------|
| System bandwidth used by this card ..... | 4.3%         |
| Current used by this card .....          | < 350 mA     |
| Power consumption .....                  | < 1.25 W     |
| Operating temperature .....              | -40C to +70C |

**Analog Channels**

|  |                    |
|--|--------------------|
| Input/Output connectors .....                          | RJ-45              |
| Analog bandwidth .....                                 | 140 Hz to 22 kHz   |
| Analog input Level without significant distortion..... | 7 Vpp              |
| 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        |

**RS232 Channels**

|                                       |                   |
|---------------------------------------|-------------------|
| Number of channels .....              | 2                 |
| I/O levels.....                       | EIA RS232C        |
| I/O pin-out.....                      | EIA/TIA 561       |
| Data rate .....                       | any up to 64 kbps |
| Data format.....                      | any               |
| RTS/CTS time to pass across link..... | ~0.5 milli sec    |

**Ordering Information**

- Part numbers
- OM200-E&M1-RAD = *Harris RF5800H* radio end
- OM200-E&M1-REM = *Harris RF5800H* remote end