OP7820 DATASHEET
Fiber Optic Module
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OP7820 FIBER OPTIC MODULE

DESCRIPTION

The OP7820 is a conditioning board designed to fit in the back slots of the OP7000 chassis. It either converts 8 logic signals into 8 fiber optic signals (transmit channels), or 8 fiber optic signals into 8 digital logic signals (receive channels).

Each channel has its own optical fiber. The transmit/receive wavelength is 650 nm and uses the standard 62.5 microm/125 micron fiber optic cable, in a Multi-Mode Fiber (MMF) environment.

The maximum frequency of the transmit or receive signal is DC to 25 MHZ, corresponding to a 50 Mbps baud rate, for distances up to 50 meters. The absolute minimum for transmission (Tx) high and low pulse width is 20ns.

The main advantage is to have signals with complete isolation between the simulator and the user equipment. The board’s main purpose is to provide optical digital input and output isolation between the OPAL-RT simulator and the user unit.

FEATURES

- 8 Tx status LEDs
- 8 Rx status LEDs

INSTALLATION

The OP7820 fiber optic module must be inserted at the back of the OP7000 simulator, in an odd numbered slot, making sure that the board is properly aligned using the guide tracks before pressing into place.

Make sure that the board corresponds to the appropriate board at the rear of the chassis.
CHANNEL DIAGRAMS

Figure 1: Tx/Rx typical channel diagram

High Pulse example

Low Pulse example

Figure 2: Minimum high/low TX pulse width
CONNECTORS

![Figure 3: Fiber optic patchcords](image)

![Figure 4: On-board connector](image)

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Product name</th>
<th>OP7820</th>
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<tbody>
<tr>
<td>Part number</td>
<td>126-0422</td>
</tr>
<tr>
<td>Product type</td>
<td>OP7000 fiber optic board</td>
</tr>
<tr>
<td>Receiver</td>
<td>Avago AFBR-2624Z</td>
</tr>
<tr>
<td>Transmitter</td>
<td>Avago AFBR-1624Z</td>
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<tr>
<td>Connector type</td>
<td>VersaLink termination</td>
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<td>Maximum Tx/Rx frequency</td>
<td>DC to 25 MHz (for 50 Mbps at 50 meters)</td>
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<td>Minimum Tx pulse width</td>
<td>High and low = 20ns.</td>
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<tr>
<td>Dimensions</td>
<td>18.8 x 16.4 cm (7.4 in x 6.46 in)</td>
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<tr>
<td>Operating temperature</td>
<td>10 to 40 °C (50 to 104°F)</td>
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<tr>
<td>Storage temperature</td>
<td>-55 to 85°C (-67 to 185°F)</td>
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<tr>
<td>Relative humidity</td>
<td>10 to 90%, non condensing</td>
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<tr>
<td>Maximum altitude</td>
<td>2,000 m (6562 ft.)</td>
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Note:

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