1x 8 or 16 port
Optical Switch
Fiber Solution

AT5000 OPSW Series

- Laser/Fiber Protection
- Low Insertion Loss
- Switching Speed <10 ms
- Manual/Automatic Mode
- High Reliability
- Compact Design
- Redundant DC Power
- Intuitive Front Panel LCD Display
- RS232 control and Ethernet remote management

Ascent’s AT5000 1RU Optical Switch offers a highly reliable and flexible optical fiber route switching platform with low insertion loss and high performance. It is suited for redundant CATV high quality video transmission systems, fiber redundant rings, and FTTX video overlays with 1550 nm optical transmitter and EDFA, to protect the optic path, and fiber ring architecture.

The OPSW switch maintains optical output in the event of failure of an optical input. The unit includes an electrically-operated optical switch. The switch can be activated both manually and automatically. Together with ACT 1RU AT5000 XMOD and EDFA optical amplifiers, the 1RU OPSW Switch provides an ideal fiber protection mechanism for long-distance videos and short, medium video overlay solutions in traditional HFC networks and also high-density FTTX networks to satisfy strict reliability requirements.

AT5000 OPSW receiver is equipped with an intuitive front panel LCD display. The optical receiver is packaged in a self-contained 19” sub-rack of 1 RU with universal mains power supply and SNMP management.
Key Features

- Suitable for laser, fibre-line protection in CATV networks or in data networks.
- 1260 nm to 1650 nm operation window
- Two modes of operation: manual, automatic
- 10 ms switching speed with low optical insertion loss
- High reliability and compact design
- High optical isolation
- Comprehensive computer-controlled status monitoring
- SC/APC connectors.
- Dual redundant DC power supply
- Front-panel LCD for local monitoring of transmitter status
- RS232 control and Ethernet remote management

Application Diagram
## Specifications

**AT5000** 1RU Optical Switch, OPSW

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (^1,2)</td>
<td>Typ.: 1.0 dB</td>
</tr>
<tr>
<td></td>
<td>Max.: 1.2 dB</td>
</tr>
<tr>
<td>Wavelength Range</td>
<td>850 nm ± 40 nm / 1300 nm ± 40 nm or 1260 nm to 1650 nm</td>
</tr>
<tr>
<td>Test Wavelength</td>
<td>850 nm / 1300 nm</td>
</tr>
<tr>
<td></td>
<td>or 1310 nm / 1550 nm</td>
</tr>
<tr>
<td>Return Loss (^1,2)</td>
<td>SM ≥ 45 dB</td>
</tr>
<tr>
<td></td>
<td>MM ≥ 30 dB</td>
</tr>
<tr>
<td>Crosstalk (^1)</td>
<td>≥55 dB</td>
</tr>
<tr>
<td>PDL</td>
<td>≤0.1 dB</td>
</tr>
<tr>
<td>WDL</td>
<td>≤0.25 dB</td>
</tr>
<tr>
<td>Repeatability</td>
<td>≤±0.05 dB</td>
</tr>
<tr>
<td>Durability</td>
<td>≥10 million cycles</td>
</tr>
<tr>
<td>Optical Power</td>
<td>≤500 mW</td>
</tr>
<tr>
<td>Switching Time</td>
<td>≤10 ms (sequence switch time of adjacent channel)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-5 °C to +55 °C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 °C to +80 °C</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>5 % to 95 % RH (non-condensing)</td>
</tr>
<tr>
<td>Monitoring Port</td>
<td>RJ45, RS232</td>
</tr>
<tr>
<td>Power Supply</td>
<td>AC: 100 V(<em>{AC}) to 240 V(</em>{AC}) (50/60Hz)</td>
</tr>
<tr>
<td></td>
<td>DC: 36 V(<em>{DC}) to 72 V(</em>{DC})</td>
</tr>
<tr>
<td>Chassis Dimensions</td>
<td>1U: 482.6 mm × 250 mm × 44 mm (L × W × H)</td>
</tr>
</tbody>
</table>

**Note:** Customization is available
### Ordering Information

<table>
<thead>
<tr>
<th>AT5000 OPSW Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-50-OPSW-1x8-C-M-SP-DC2</td>
<td>AT5000 1RU Optical A/B Switch, 1x8, 1260 nm to 1600 nm, customer threshold, SC/APC connectors, Dual DC PS</td>
</tr>
<tr>
<td>AT-50-OPSW-1x16-C-M-SP-DC2</td>
<td>AT5000 1RU Optical A/B Switch, 1x16, 1260 nm to 1600 nm, customer threshold, SC/APC connectors, Dual DC PS</td>
</tr>
</tbody>
</table>

### Contact Information

**Ascent Communication Technology Ltd**

**AUSTRALIA**
140 William Street, Melbourne
Victoria 3000, AUSTRALIA
Phone: +61-3-8691 2902

**CHINA**
Unit 1907, 600 Luban Road
200023, Shanghai CHINA
Phone: +86-21-60232616

**EUROPE**
Pfarrer-Bensheimer-Strasse 7a
55129 Mainz, GERMANY
Phone: +49 (0) 6136 926 3246

**HONG KONG SAR**
Unit 9, 12th Floor, Wing Tuck Commercial Centre
177 Wing Lok Street, Sheung Wan, HONG KONG
Phone: +852-2851 4722

**USA**
2710 Thomas Ave
Cheyenne, WY 82001, USA
Phone: +1-203 816 5188

**VIETNAM**
15/F TTC Building, Duy Tan Street
Cau Giay Dist., Hanoi, VIETNAM
Phone: +84 243 795 5917

**WEB:** [www.ascentcomtec.com](http://www.ascentcomtec.com)  
**EMAIL:** sales@ascentcomtec.com

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