The protection of information technology networks is a priority in the private sector and also within the branches of the U.S. Military at the Department of Defense (DOD). Ensuring that national security information is never compromised forms the basis for all network communications security initiatives. It is widely known that the fiber-optic or copper cables that form network backbone raceways are vulnerable to intruders that might physically tap into their data streams.

When deployed in parallel within a network conduit, or embedded in a carrier, the Fiber SenSys SL508™ Alarm Processor Unit (APU) is the core component used to alarm the network conduit or the raceway. The SL508, as the integral part of the SecurLAN® network protection model, enables a network carrier system to meet the DOD requirements for Protected Distribution Systems (PDS), a government requirement for physical protection of classified network data. SecurLAN has been approved and certified for the protection of the PDS.

The SL508 APU provides instant notification of unauthorized access, tapping (packet capture) as well as accidental intrusion attempts. When combined with Fiber SenSys optical cutoff switches, the system provides multiple alarm notification options, and it can also provide positive network shutdown of the affected protection zone.

SecurLAN makes protecting DOD networks cost effective and enhances security through multiple annunciation and network communications capabilities. SecurLAN also eliminates the need for visible inspection requirements when securing a PDS. As a result, network raceways and conduit can be concealed above the ceiling or below the floor.

<table>
<thead>
<tr>
<th>Features</th>
<th>Applications</th>
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<tbody>
<tr>
<td>Local Area Network (LAN) Physical Protection</td>
<td>Commercial installations</td>
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<tr>
<td>Protected Distribution Systems (PDS) Approved</td>
<td>Military and Government Facilities</td>
</tr>
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<td>Remote APU Deployment</td>
<td>Banking and Financial Networks</td>
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<tr>
<td>Environmental noise compensation</td>
<td>Indoor Environments</td>
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<tr>
<td>Detects disturbances, tapping, splicing</td>
<td>Secure Distributed Network Systems</td>
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<tr>
<td>Linear, uniform sensitivity</td>
<td>Command and Control Headquarters</td>
</tr>
<tr>
<td>Data center ready / Rack-mounted design</td>
<td>SCADA Utility Networks</td>
</tr>
</tbody>
</table>
SL508 Rack Assembly Diagram

**Drawing Notes:**

- The SL508 Alarm Processor Unit (APU) is compatible with all industry leading head end systems. The “Base Unit Controller” refers generically to controller units common to all annunciators and head end systems.
- Twisted Pair connections (from SL508 relays) are shown connected to rear panel of “Base Unit Controller” (3rd party annunciators and head end systems will have differing rear panel views).

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**Drawing Notes:**

- The SL508 Alarm Processor Unit is compatible with all industry leading head end systems. The “Base Unit Controller” refers generically to controller units common to all annunciators and head end systems.
- To achieve positive network shutdown of affected zones (in the event of an alarm condition), FSI optical cutoff switches (OCS) may be used (not shown).
- For specific design and applications of the SL508, including the alarming of existing “dark” fiber (within distances and specifications), please refer to FSI application notes, available from the FSI website, or by contacting your territory representative.
SL508 Product Specifications

<table>
<thead>
<tr>
<th>System Type</th>
<th>Alarm processor for Protected Distribution System (PDS), and for physical protection of data transmissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of zones</td>
<td>Up to eight fully independent zones</td>
</tr>
<tr>
<td>Sensing fiber</td>
<td>Multimode fiber, custom manufactured to FSI specifications</td>
</tr>
<tr>
<td>Insensitive lead-in fiber</td>
<td>Single-mode fiber, custom manufactured to FSI specifications</td>
</tr>
</tbody>
</table>
| Sensing cable / zone lengths | ● For each zone, sensing fiber + insensitive lead-in cable ≤ 5 km
  ● Sensing fiber length ≤ 5 km |
| APU power requirements       | 12-24 Volts input\n19 watts power consumption (maximum)                                                     |
| Standard, external power supply | 12 volt external power supply\nMaximum power output = 24 watts                                      |
| Front-panel display          | LED indicators for normal, fault, and alarm conditions for each zone                                        |

**Communications**

- USB serial port for configuration and alarm output
- TCP/IP port for alarm output and XML communication
- Individual dry contact alarm relays for each zone

**Relay contact ratings**

- Alarm relay default: 100 mA @ 24 V Normally closed\n  Normally open, or normally closed\n  Normally closed
- ACC bus fault relay default: Normally closed
- Individual Zone Fault Relays: Normally closed

**Dimensions**

- Height = 4.5 cm (1.77 inch) – 1U
- Width = 42.5 cm (16.75 inch)
- Depth = 40.6 cm (16 inch); Compatible with standard 19” rack

**Operating temperature range**

- 0°C to 55°C

**Maximum operating humidity range**

- 0 to 95% non-condensing

**Regulatory Compliance**

- CE, FCC Part 15, RoHS

**Compatibility**

- Compatible with many varieties of network architectures, including secure passive optical networks (S-PON)

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For more information, contact us at info@fibersensys.com
Tel: +1(503) 692-4430
Toll free (US) +1(888)736-7971

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