3.3V Digital Optocouplers
for IEEE802.3af or Power Over Ethernet Applications

Avago Technologies’ 3.3V digital optocouplers are the industry’s first low power optocouplers. This product family encompasses products from 100kBD up to 15MBd. The HCPL-263L/063L optocouplers eliminate the need for additional level shifting circuitry, saving board space and power consumption. In addition, Avago 3.3V optocouplers are the first commercially available optocouplers designed to meet the JEDEC specification for 3.3V LVTTTL/LVC莫斯 logic, thereby simplifying the implementation of isolation in systems utilizing 3.3V logic circuits.

The 15MBd 3.3V optocouplers are available in single and dual channels and are offered in both the standard DIP and SMT (SO8) packages. The HCPL-263L/063L are ideal for Power over Ethernet (PoE) applications, since they operate in all the I²C standard mode frequencies.

Power Over Ethernet (IEEE802.3af) is an emerging standard approved by the IEEE in June 2003. This standard applies to transferring both data and power (13W, 48V) over CAT5 copper wiring or LAN cable. These LAN connections are used to power up VoIP phones, Wireless LAN Access Points, Bluetooth Access Points and Network Cameras.
Avago Technologies 3.3V Digital Optocouplers

HCPL-263L/063L Features and Benefits

- Low power consumption
- 15kV/µs minimum Common Mode Rejection (CMR) @ Vcm = 50V
- High speed: 15 MBd typical
- LVTT/LVCMOS compatible
- Low input current capability: 5mA
- Guaranteed performance over temperature: – 40ºC to +85ºC
- Available in 8-pin DIP, SOIC-8
- Available in single and dual channel configurations
- Strovable output (single channel products only)
- Safety approvals: UL, CSA, IEC/EN/ DIN EN 60747-5-2
- Eliminates the need of additional level shifting circuitry
- Eliminates the need of additional power supply
- Reduces board space

PoE Block Diagram

Optocouplers Selection Guide

<table>
<thead>
<tr>
<th>Single/Dual Channel SO8 packages</th>
<th>HCPL-060L/063L</th>
<th>HCPL-050L/053L</th>
<th>HCPL-070L/073L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Speed</td>
<td>15 MBd</td>
<td>1 MBd</td>
<td>100 kbd</td>
</tr>
<tr>
<td>Safety Approvals</td>
<td>IEC/EN/DIN EN 60747-5-2, UL, CSA</td>
<td></td>
<td></td>
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<tr>
<td>Max Prop Delay tP(MAX)</td>
<td>90 ns</td>
<td>1 µs</td>
<td>90 µs</td>
</tr>
<tr>
<td>Max Data Rate/Clock Frequency</td>
<td>10 MBd/5 MHz</td>
<td>1 MBd/500 kHz</td>
<td>10 kBD/5 kHz</td>
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<tr>
<td>High-Speed 3.4 MHz</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Fast Mode 400 kHz</td>
<td>Yes</td>
<td>Option</td>
<td>No</td>
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<tr>
<td>Standard Mode 100kHz</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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To find out more, please visit

www.avagotech.com/optocouplers

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