

## **NEW! Series 80 Models MS16, MS17 LVD/MSE to SE Converter**

### **Getting the Most From LVD/MSE SCSI**

- Convert between LVD/MSE and Single-Ended
- Extend Bus length
- Isolate Segments of a SCSI Bus

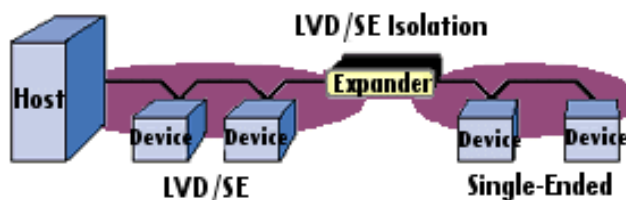


*MS16 Stand-alone version*

**Paralan's Series 80 Models MS16 / MS17** - Expand the functionality of LVD/MSE and SE SCSI in several ways; 1) Allows adding an SE device to an LVD bus without slowing down the LVD bus segment, 2) Conversion from LVD to SE or vice versa, 3) Extending the SE bus length, 4) Isolating an SE SCSI segment from an LVD SCSI segment, 5) Join SCSI segments with no impact on SCSI protocol or data throughput, 6) Adding a non-multimode LVD device to an SE SCSI bus, and 7) Easily add a narrow (8-bit) SE device to a wide (16-bit) LVD bus.

### **Maximizing Thruput with Mixed Devices**

Multimode LVD SCSI will automatically change to Single-Ended (SE) if a SE device is on the bus segment. When both LVD and SE devices share the same bus segment, the entire SCSI bus segment will operate at the lower performance level of single-ended SCSI, including reduced bus length. However, by grouping LVD and SE devices, and isolating them with a Multimode Expander, the LVD devices can be operated at their full designed thrupt levels.

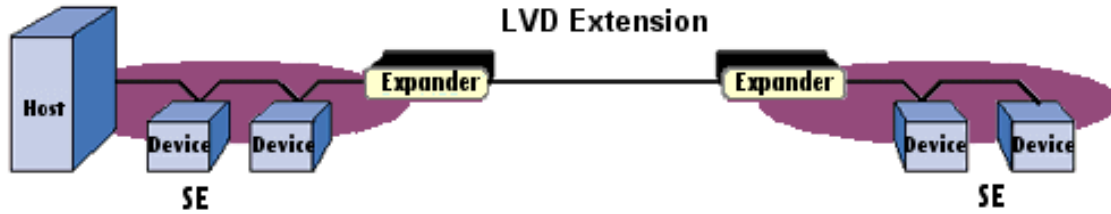


### **When Used to Extend the SCSI Bus**

Cable causes timing delays of approximately 1.5 ns per foot of length. When SCSI-specified cable length is exceeded, this cable-caused delay would normally cause a system to malfunction. Logic circuitry in the Expander manages this delay such that disconnect, reconnect, arbitration and all other SCSI features are not affected. The SCSI signals are regenerated, reshaped, and retransmitted, all transparent to the system.

### **Using MS16 Expanders in a back to back connection**

This configuration works well to extend a single-ended bus segment. Use a full cable length on the SE side, up to 25 meters (82 feet) of SCSI cable between the two expanders and the full SE cable length on the segment to extend the total bus length.



Paralan Expanders are completely compatible with all LVD, LVD/MSE and SE that conform to the full ANSI X3T10 standard. They are available either as stand-alone units utilizing wall power, or as board-level units for installation in other equipment.

## Isolation for Hot Swapping

The logical isolation between the two sides of an Expander allows a device on one side to be disconnected without disturbing devices on the other side.

## Narrow/Wide Conversion

The MS16 and MS17 models may be used to interconnect narrow SCSI devices on one side for example, with wide SCSI on the other side. This method assures proper termination on both bus segments.

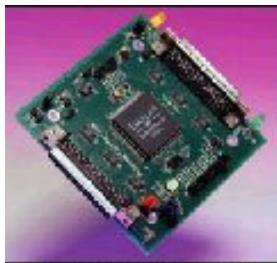
## High Voltage Differential (HVD) SCSI Extenders and Converters

Paralan also has Converters for converting between High Voltage Differential (HVD) and LVD or single-ended SCSI devices. See Paralan [Series 80 MHxx models](#).

To extend an existing HVD bus, see the data sheet for Paralan's [SIR-D16 Regenerator](#)<sup>™</sup>, or use a Paralan [HVD Fiber Optic Extender](#) for very long distances.

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*Does not consume a SCSI ID!*



**MS17 Board-level  
Version**

Targets and initiators may be located on both the A and B sides of the Expander.

The Series 80 models are backward compatible with older versions of SCSI

Stand-alone and Board-level Versions Available:

- The stand-alone MODEL MS16 includes a power supply for standard power line operation.
- The board-level version MODEL MS17 is sized to fit in a standard 5.25" drive bay.

## SCSI Bus Fiber Optic Extenders

Paralan is the world's leader in SCSI extension. If your needs require longer lengths than those managed by Series 80 Expanders, Paralan offers many models of SCSI Fiber Optic [Extenders](#) that extend the SCSI bus up to 750m (2,500 ft). **Paralan is dedicated to SCSI**, and to making your SCSI-interfaced components work to their full potential. We're known as the company that makes SCSI work, because our interface products reliably extend the capabilities of the SCSI bus.

*For a printable version, please*



**NEW!** Paralan can match your SCSI needs with custom SCSI components, modifications to standard Paralan products, or even with [custom systems](#)! Paralan is ready to meet your exact requirements by applying our SCSI-savvy engineering - from SASI through Ultra320.

Need to place an order? Or do you need additional assistance?  
[Click here to get it!](#)

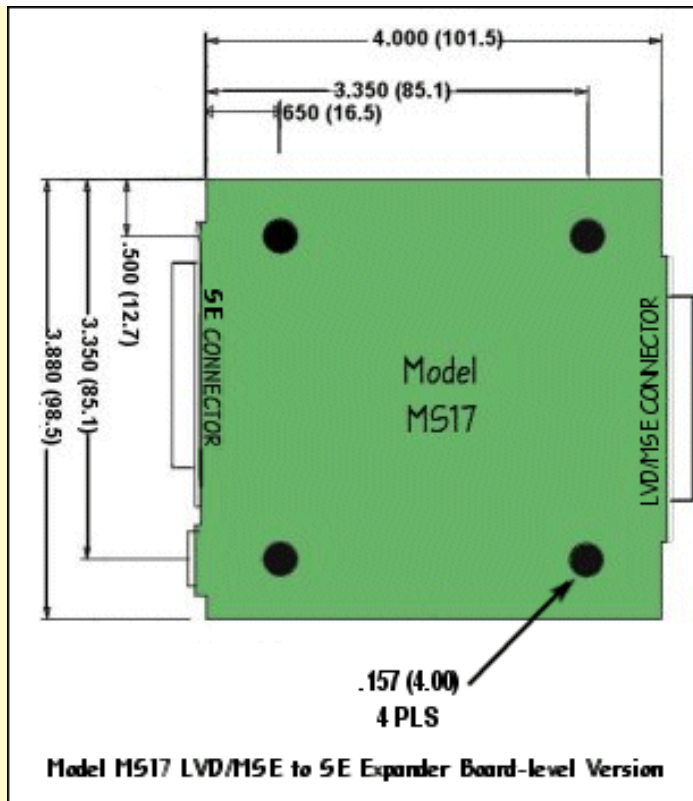
## Ordering Guide

Model Numbers		Description
Stand-alone Unit	Board-level Version	
<b>MS16</b>	<b>MS17</b>	SCSI Wide LVD/MSE to SE Expander (16-bit)
	<b>2811</b>	5-1/4" Half Height Drive Bay Mounting Bracket & Faceplate for MS17
<a href="#">SQxx</a>		<a href="#">SCSI Quiet Cable™ (specify length)</a>

## Specifications MS16/17 SCSI LVD/MSE to SE Expander

<p><b>Environmental</b>            Relative Humidity:0 - 95% non-condensing            Operating Temperature:0 - 50°C            Storage Temperature:-25 - +75°C</p> <p><b>Weight:</b>            MS16: approx. 2 lb (0,9 kg)            Shipping weight, approx. 4 lb (1,8 kg)            MS17: 2.5 oz (71 g)            Shipping weight, approx. 2 lb (1 kg)</p>	<p><b>Safety Approvals</b>            UL, CSA, TUV, CE</p> <p><b>EMI/RFI</b>            FCC Class A, CE</p> <p><b>SCSI Connections</b>            MS16, MS17: SCSI-3 68-pin High-Density female Alt-3 "P" Connector</p> <p><b>Communication</b>            Sustained Data Throughput:            Limited by SE bus to 40 Mbytes/sec (16-bit)</p> <p><b>Warranty</b>            Two year limited warranty</p>
<p><b>Power Requirements</b>            Stand-alone units (MS16):</p> <p>Voltage:100 - 250 VAC, auto select            Frequency:50 - 60 Hz</p> <p><b>Board-level units (MS17):</b></p> <p>Voltage:5 V dc ±5%            Current:0.8 Amps            An additional 1 Amp Max if used to power external terminators</p> <p><b>Physical Size: (MS16)</b>            Height: 1.6 in. (41 mm)            Width: 4.1 in. (104 mm)</p>	

Depth: 4.5 in. (114 mm)  
**(MS17)**  
Height: 0.4 in. (10.2 mm)  
Width: 3.880 in. (98.5 mm)  
Depth: 4.5 in. (114 mm)



For the MS17 Dimensioned Parts Location Drawing download the [PDF](#).

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To Remind you to Come back to this Page!*

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