



Making SCSI Work™

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## Narrow Single-ended SCSI Expander

### Models MS8A and MS9A SCSI Expanders

(Available for Special Orders Only - Call Factory)

Narrow Single-ended SCSI Bus Expander sends and receives SCSI transmissions at maximum sustained SE SCSI data rate.

- Extend Single-ended SCSI bus
- Isolate Narrow Single-ended SCSI bus segments
- Enclosed & Board-Level versions available
- May be used as Narrow (8-bit) LVD/MSE to SE Converter

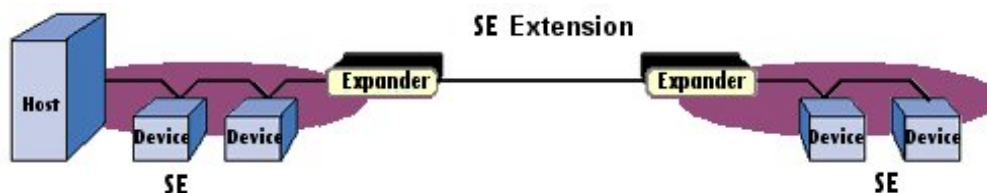


When your Narrow Single-ended (SE) SCSI bus is just a bit too short, there is a simple, economical solution: Paralan's Models MS8A and MS9A SCSI Expanders. A Paralan Expander sends and receives SCSI transmissions at maximum sustained SE SCSI data rate.

No need to modify software or hardware! Does not consume a SCSI ID. Target and initiators may be located on both the A and B sides of the Expander. Just connect your SCSI cables to a Expander and all devices on the bus will be available at an extra bus length. It's as easy as that!

### SCSI too short?

To obtain one extra SCSI length, simply select the Expander model appropriate for your installation and plug in your cables. Daisy chaining of two or more Expanders can achieve even longer extension (see drawing below). This configuration with Model MS8A Expanders works well to extend a single-ended bus segment. A full SE cable length can be used on the end segments and up to 40 feet (12 meters) of cable can be placed between the two MS8As to achieve a total distance of 43 feet (13m) to 80 feet (24m) depending on the speed of the SE bus. For a discussion on SCSI Extension see the [Extending SCSI](#) page, and the article [The Case for SCSI Expanders](#).



### SCSI devices need isolation?

Devices on one side of the Paralan Expander may be disconnected and not affect devices on the other side, as the signals on each side are isolated.

**Paralan Expanders -- Not just repeaters!** 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 Paralan's Expanders 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 hardware, the software and the operator. Paralan's exclusive **Auto Sense™**, standard on all Paralan Expander models, automatically detects correct termination power, solving many initial installation problems.

All Paralan Expanders are compatible with all devices that conform to the full ANSI X3T10 standards through SPI-3 (Ultra160). They are available either as stand-alone units utilizing line voltage (Model MS8A), or as board-level units for installation in other equipment (Model MS9A).

Converters and Expanders for LVD, HVD and SE SCSI

Paralan also has expanders for **extending and/or converting** between High Voltage Differential (HVD), LVD or Single-Ended (SE) SCSI devices.

[PDF version of this data sheet.](#)

Specifications For MS8A/MS9A Narrow SE SCSI Expanders:

<p><b>Environmental</b>  Relative Humidity: 0 - 95% non-condensing  Operating Temperature: 0 - 50°C  Storage Temperature: -25 - +75°C  <b>Weight:</b>  MS8A: 1.5 lb (0.6 kg)  Shipping weight, 4 lb (1.8 kg)  MS9A: 2.5 oz (0.1 kg)  Shipping weight, 2 lb (0.9 kg)  <b>Power Requirements</b>  Stand-alone units (MS8A): 100 - 250 VAC,  50/60 Hz auto select  Board-level units (MS9A):  5 V dc <math>\pm</math>5%  <b>Safety Approvals</b>  UL, CSA, TUV, CE  <b>EMI /RFI</b>  FCC Class A, CE</p>	<p><b>SCSI Connectors</b>  MS8A: 50-pin centronics-type (Shielded, Alt. 2 - A Cable)  MS9A: 2 rows of 25 pins (Unshielded, Alt. 2 - A Cable)  <b>Communication</b>  Parallel Transmission Rate:  Up to 20 MBytes/sec Ultra SCSI  Protocols: ANSI X3T10 SCSI standard  <b>Physical Size: (MS8A)</b>  Height: 1.6 in. (41 mm)  Width: 4.1 in. (104 mm)  Depth: 4.0 in. (106 mm)  <b>(MS9A)</b>  Height: 0.4 in. (10.2 mm)  Width: 3.880 in. (98.5 mm)  Depth: 4.5 in. (114 mm)  <b>Warranty:</b>  Two year limited warranty</p>
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Ordering Guide:

Model Numbers		Description
Stand-Alone	Board-Level	
<b>MS8A</b>	<b>MS9A</b>	SCSI Bus Expander for Narrow (8-bit), Single-ended SCSI
<b>EB1</b>		<b>Rack Mount Expander Box (rack mount up to 3 SCSI Expanders)</b>
<b>2811</b>		5-1/4" Half Height Drive Bay Mounting Bracket & Faceplate for MS9A
<b>SQxx</b>		<b>SCSI Quiet Cable™</b> (specify length)
For quantity purchases contact <a href="#">Paralan</a>		

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