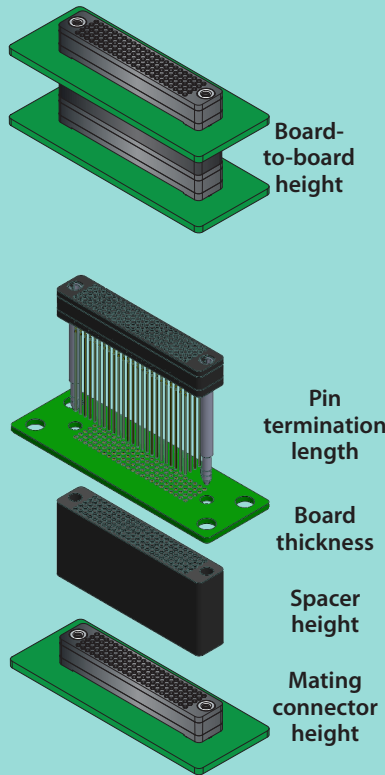


Application notes: Board-to-board heights, Spacers, and pin termination lengths

BOARD-TO-BOARD HEIGHT AS A STARTING POINT FOR STACKING CONNECTOR SPECIFICATION



Next to the number of circuits, the key measurement in stacking connector applications is the board-to-board height. This is the vertical real estate required in the application to accommodate the mating socket connector, as well as electronics or other components placed on the PCB. Glenair supplies nine standard spacers ranging from .080" to .830" (2.03mm to 21.08mm) to allow application designers to engineer board-to-board heights ranging from .295" (no spacer) to 1.125". Dielectric spacers also serve to insulate free-standing connector pins, and act as rigid standoffs in board-to-board applications.

As a practical matter, Glenair recommends engineers begin with their desired board-to-board height for each segment of the application, and choose appropriate size spacers and pin termination lengths that match this choice. While custom height spacers are readily available from the factory, certain limitations apply to ensure pin termination lengths are appropriately sized for each specific situation. Other tricks-of-the-trade, such as doubling-up on mating connectors or adjusting stack-height with spacing shims, are also available. Just ask! Our in-house engineers have years of experience solving stacking connector and board-to-board spacing issues. When using the table, please note all values are based on .060" thickness PCBs and a .100" wiper (insertion) tolerance for the pin-to-socket mate.

Spacer and Pin Termination Length Specification

- 1** Select board-to-board spacing height from the left-hand column. Available choices are laid out in increments from .295" (no spacer) to 1.125".
- 2** Select and note the available catalog Spacer size that, combined with the mating connector, results in the desired amount of board-to-board spacing. How-to-Order tables for spacers are located on page 14.
- 3** Select and note the Pin Termination Length. This variable is used in part number ordering for GSTB (Universal Stacking Connectors) and GSTBL (Low-Profile Top-of-Stack Connectors).

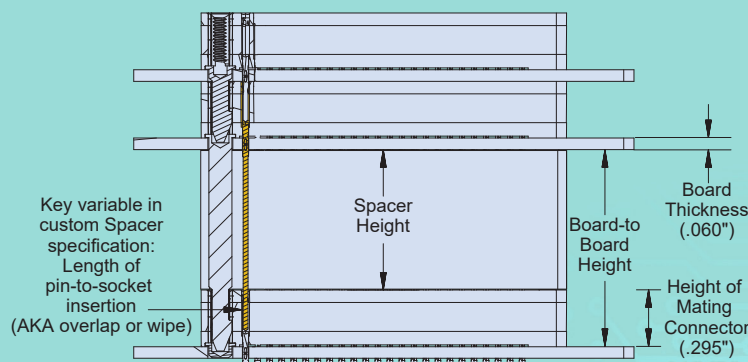


Illustration above depicts all of the standard variables affecting board-to-board height. While custom spacers are available, care must be given to ensure pin termination lengths result in adequate pin-to-socket overlap (not to be reduced in excess of .100")

Board-to-board spacing height	Spacer Height to specify in Spacer part number	Pin Termination Length to specify in Connector part number
0.295*	N/A	0.270
0.295**	N/A	0.300
0.375	.080	0.350
0.425	.130	0.400
0.525	.230	0.500
0.625	.330	0.600
0.725	.430	0.700
0.825	.530	0.800
0.925	.630	0.900
1.025	.730	1.000
1.125***	.830	1.000

* For use with .060"-.090" PCBs when no spacer is required

** For use with .090"-.140" PCBs when no spacer is required

*** For use with .060" PCB