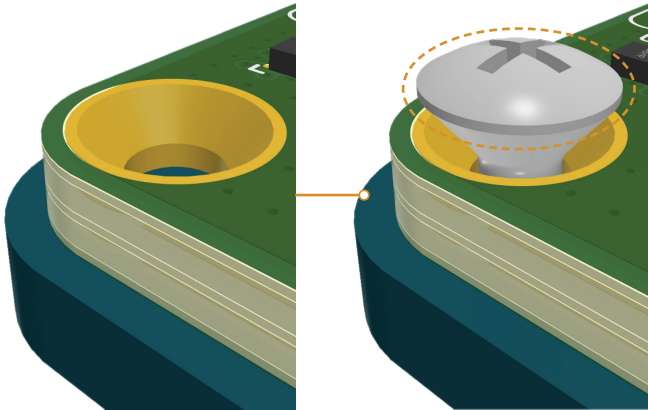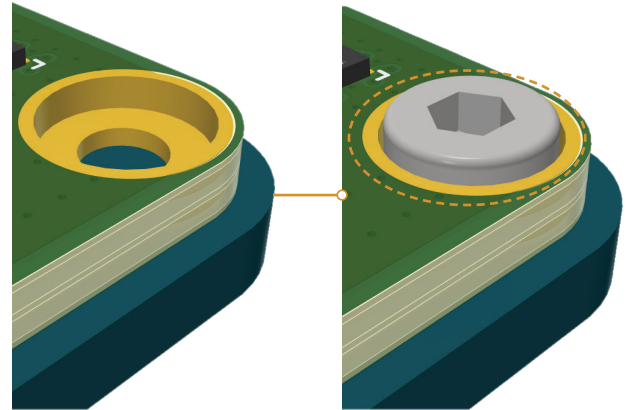# Altium

Countersink and Counterbore

Quick overview

In most cases, printed circuit boards require mounting holes. Holes with countersink and counterbore allow using different types of fixing screws. It is often useful when the space in the mechanical enclosure is limited.
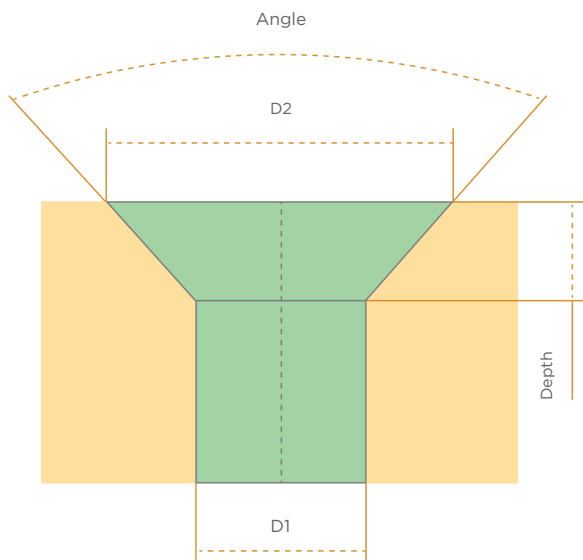
COUNTERSINK

COUNTERBORE

Dimensions

COUNTERSINK

You must decide on the type of screws you are using. The information required for countersink:

- Mounting hole diameter (D1);

- Countersink diameter (D2) or Depth;
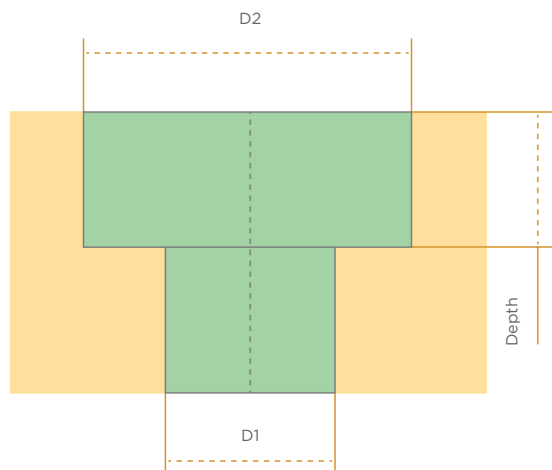
- Countersink angle (82°, 90°, 120° etc).
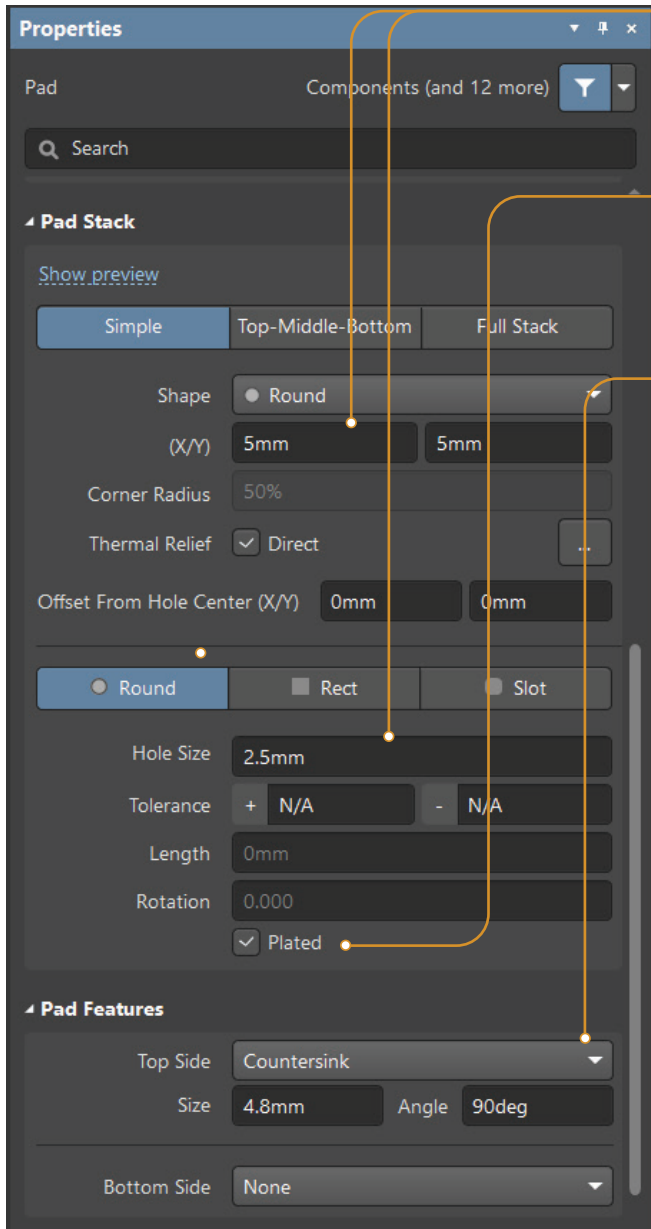
COUNTERBORE

You must decide on the type of screws you are using. The information required for counterbore:

- Mounting hole diameter (D1);

- Counterbore diameter (D2);

- Depth the counterbore is to be drilled.

Countersink bits
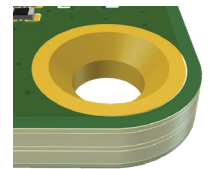
Counterbore bits

Altium

Pad properties

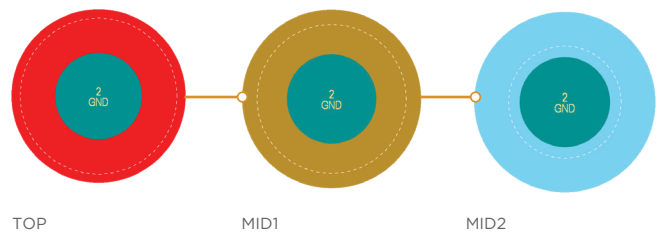Configure the basic parameters: Hole Size and Pad Shape Dimensions (X/Y).

Choose whether the hole will be plated or non-plated.

Choose the counterhole placement side, the type of counterhole and set the dimensions.

A dashed line appears around the pad in 2D to define the counterhole feature on the active layer.
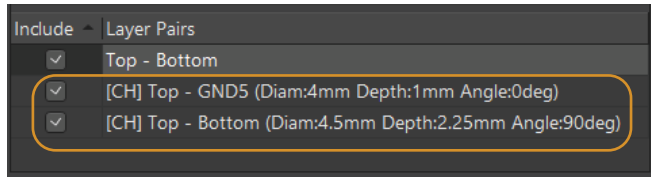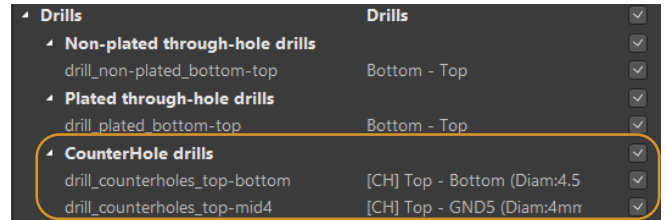

3D view

PAD Properties

Additional features

PCB EDITOR

Counterholes are displayed as Layer Pairs in the Hole Size Editor mode of the PCB panel.

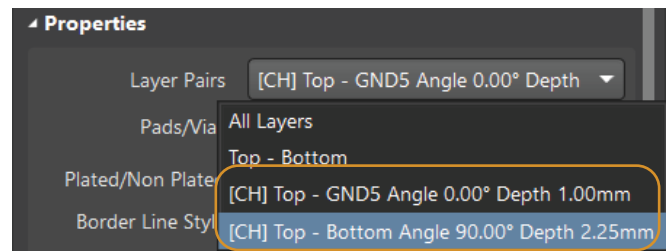Counterholes are supported in the Fabrication Outputs (NC Drill Files, ODB++ Files, IPC-2581):

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Support for Counter Holes in the Drill Table:

Drill table

Symbol	Count	Hole size	Plated
⬦	1	4.00mm	Plated
	1 Total		

Additional Counter Hole Views: