Altium to Adiva Interface (Quick-Start User Guide)

Document: 2/3/2021

Adiva Version 9.5

Notice

Representations in this User Guide are meant as an overview and quick reference. Full details can be found in the On-Line manuals located at the *ADIVA Corporation* website – www.adiva.com

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Getting Started…

Make sure all of your Gerber / Drill files along with their support detail files .DRR and .EXTREP are located in a single directory.

Also, include Altium's IPC-D-356 netlist for automatic Netlist Comparison during the Altium to Adiva conversion process.

NOTE:

ALL data files (Gerber and Drill along with the IPC-356 file) **MUST** be of the same units.

Drill files must be split on output from Altium such that plated holes are in a different file than non-plated holes.

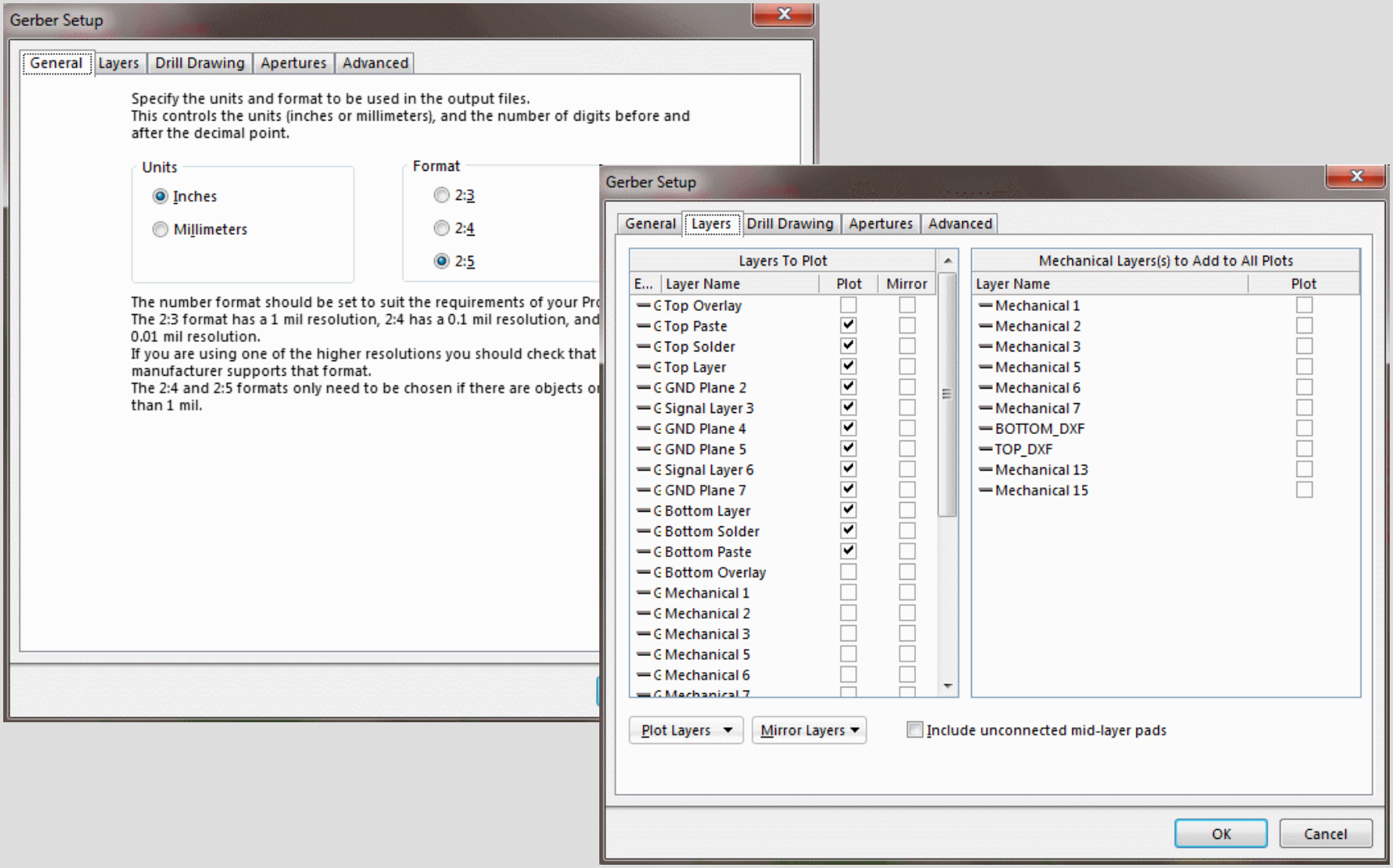
Interface can also be command line driven for scripting purposes. See final page for details.

Altium > Adiva Process

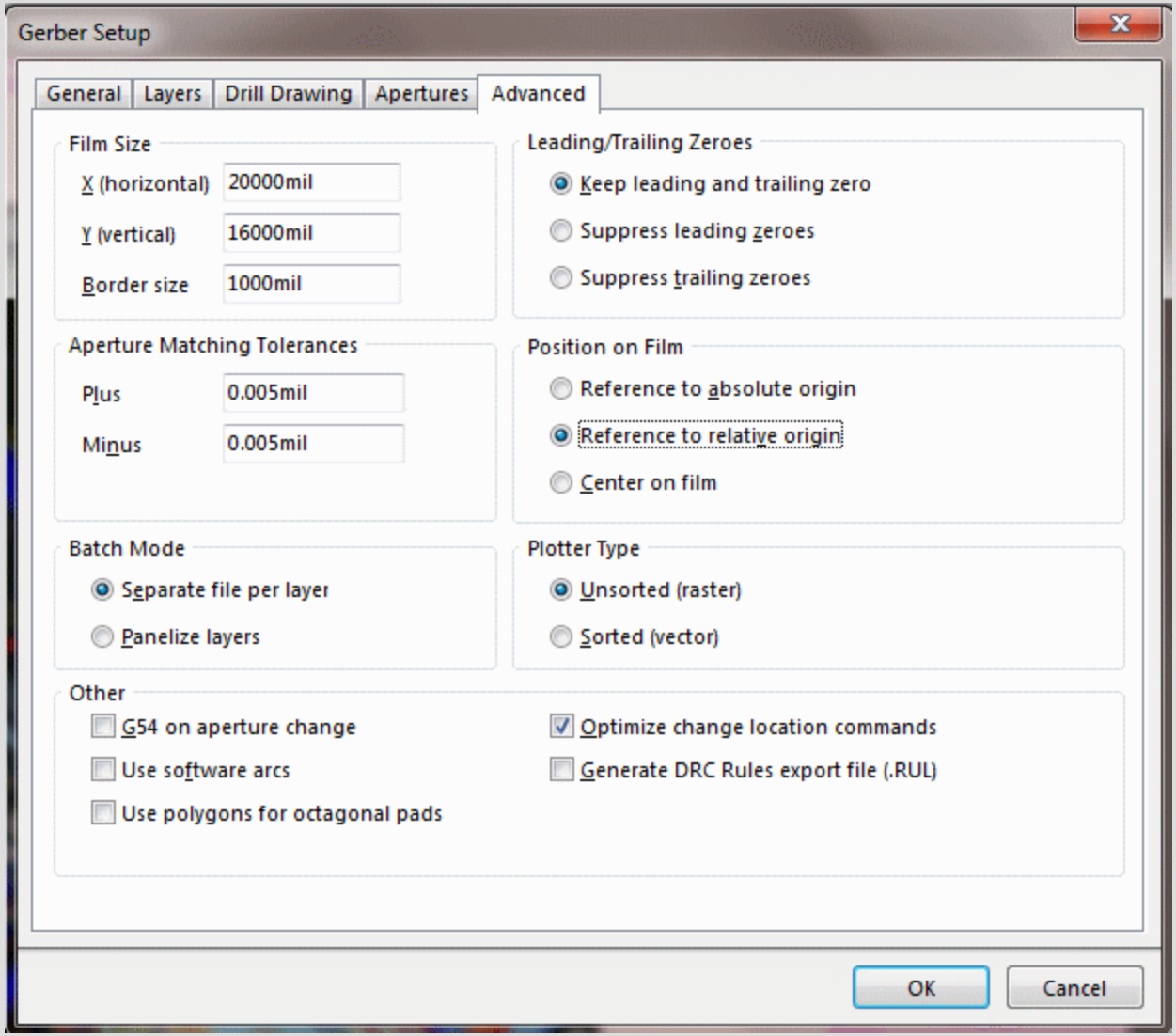
Basic Steps from Start to Finish

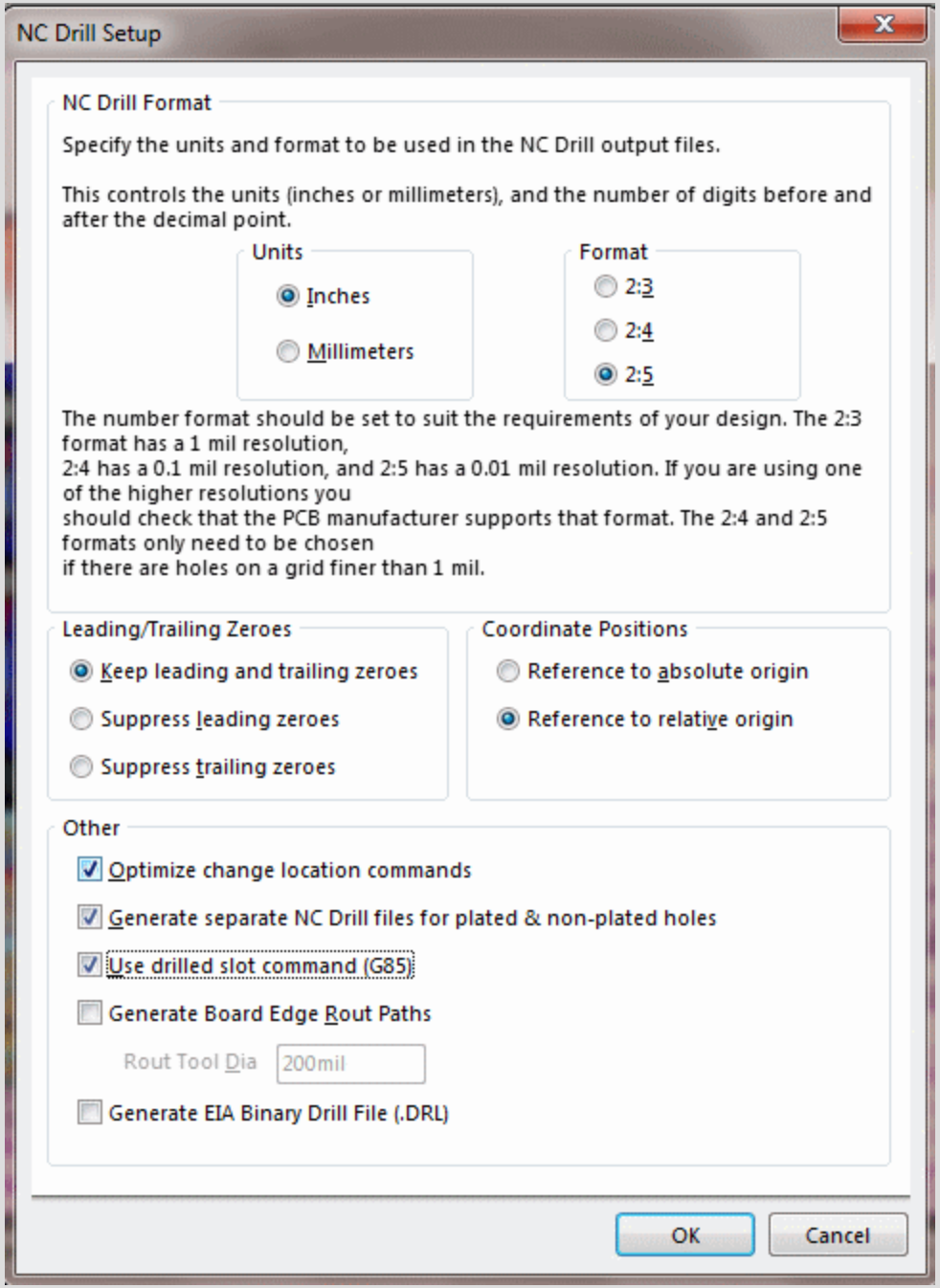
- **Copy** Gerber, Drill. .DRR, .EXTREP & IPC-356 files into a single directory
- Start **Altium to Adiva Interface**
- **Browse** to directory containing files and view layer listing
- **Adjust** Layer Selection, Assignments and Layer Number if required
- **Execute** the conversion process
- When Adiva launches, review Netlist Compare results
- Define Pad and Hole Classes
- Run further DRC Design Analysis

Output file setup for Adiva input is critical. The next two pages show the recommended settings for Gerber file output from Altium…



Output file setup for Adiva input is critical. This page continues the recommended settings for Gerber file output from Altium…





Output file setup for Adiva input is critical.

These are the recommended settings for Drill file output from Altium.

These values are critical to proper Drill file formation and interpretation by Adiva import tools.

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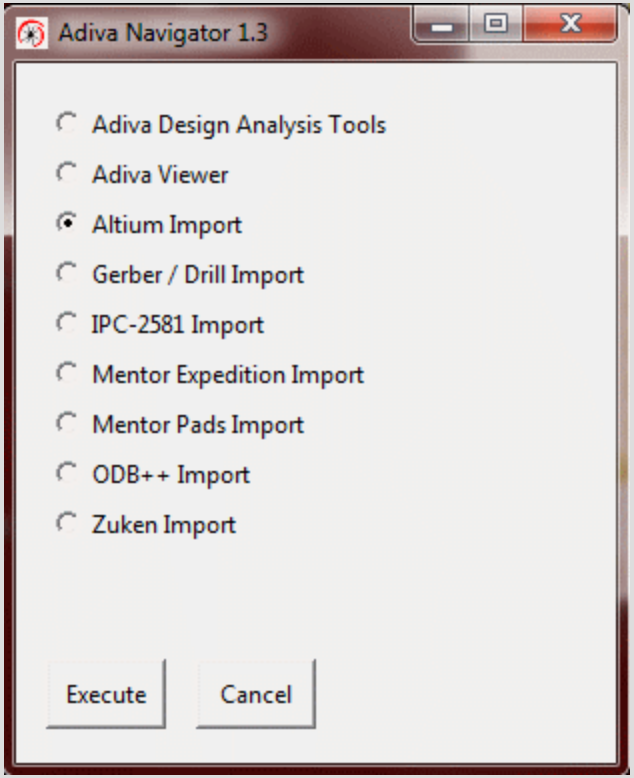
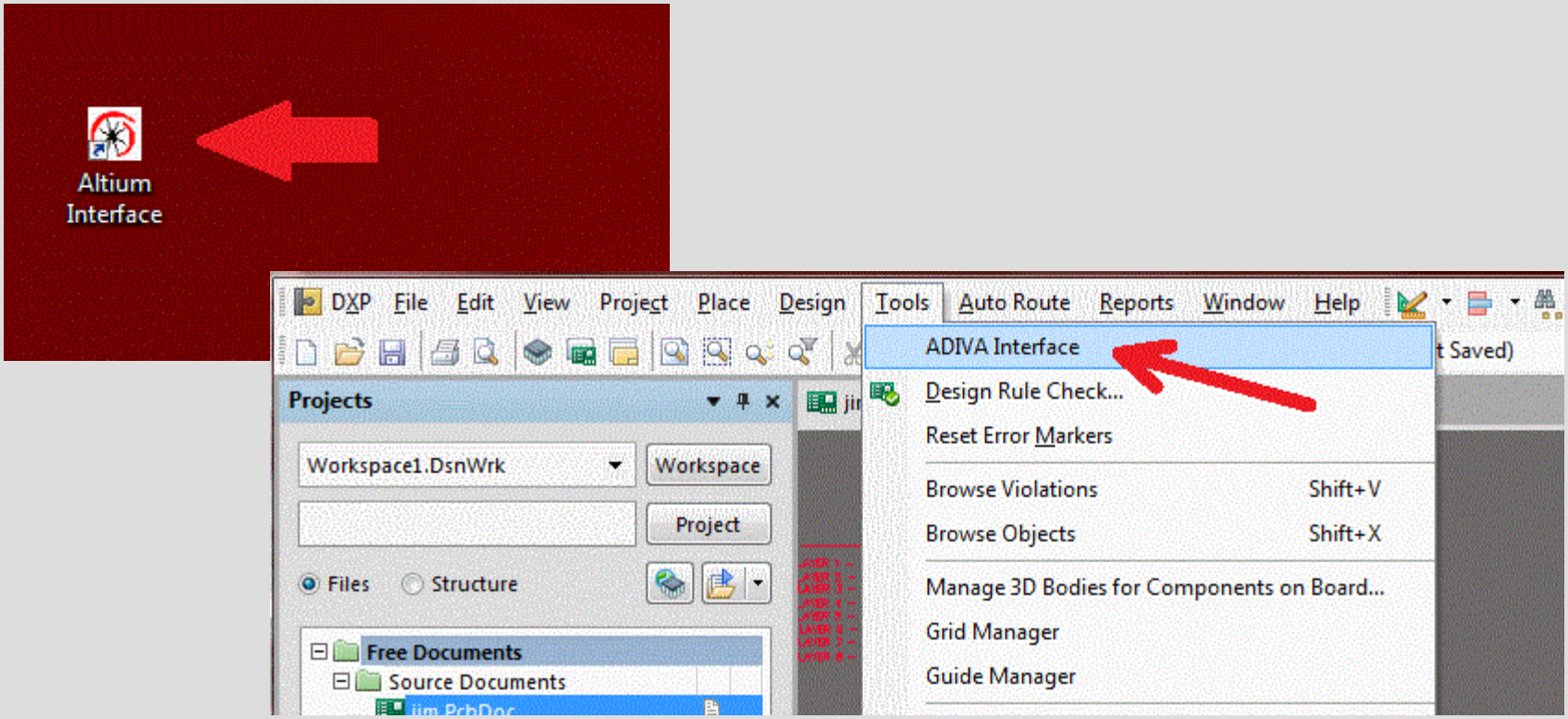
If data is in Metric units, make sure the data format is set to 4-4.

Once Gerber and Drill files are created, if the **Adiva Navigator** was used to startup the **Altium Import**…



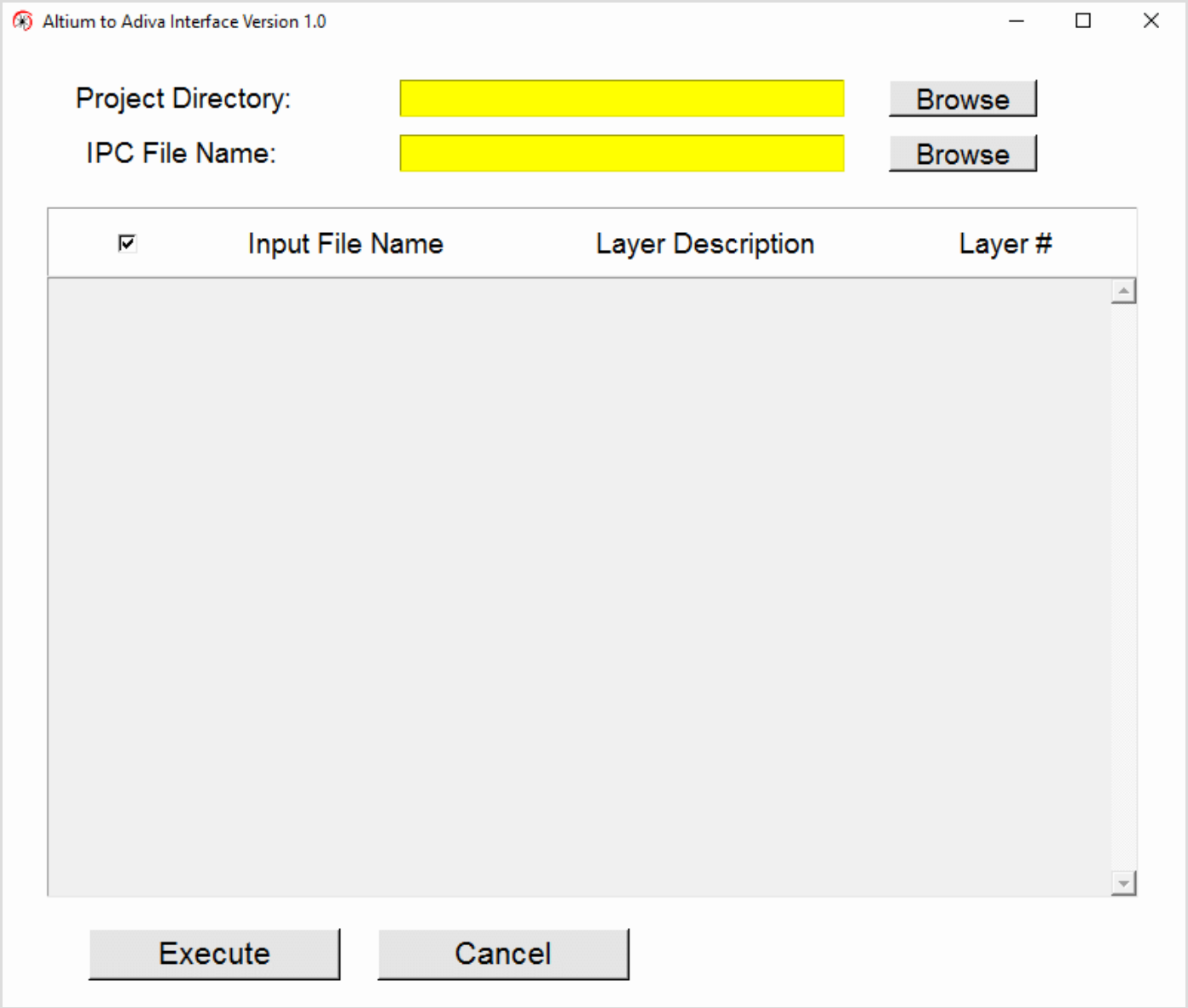
…the **Altium to Adiva Interface** will appear…
(See Page 10)

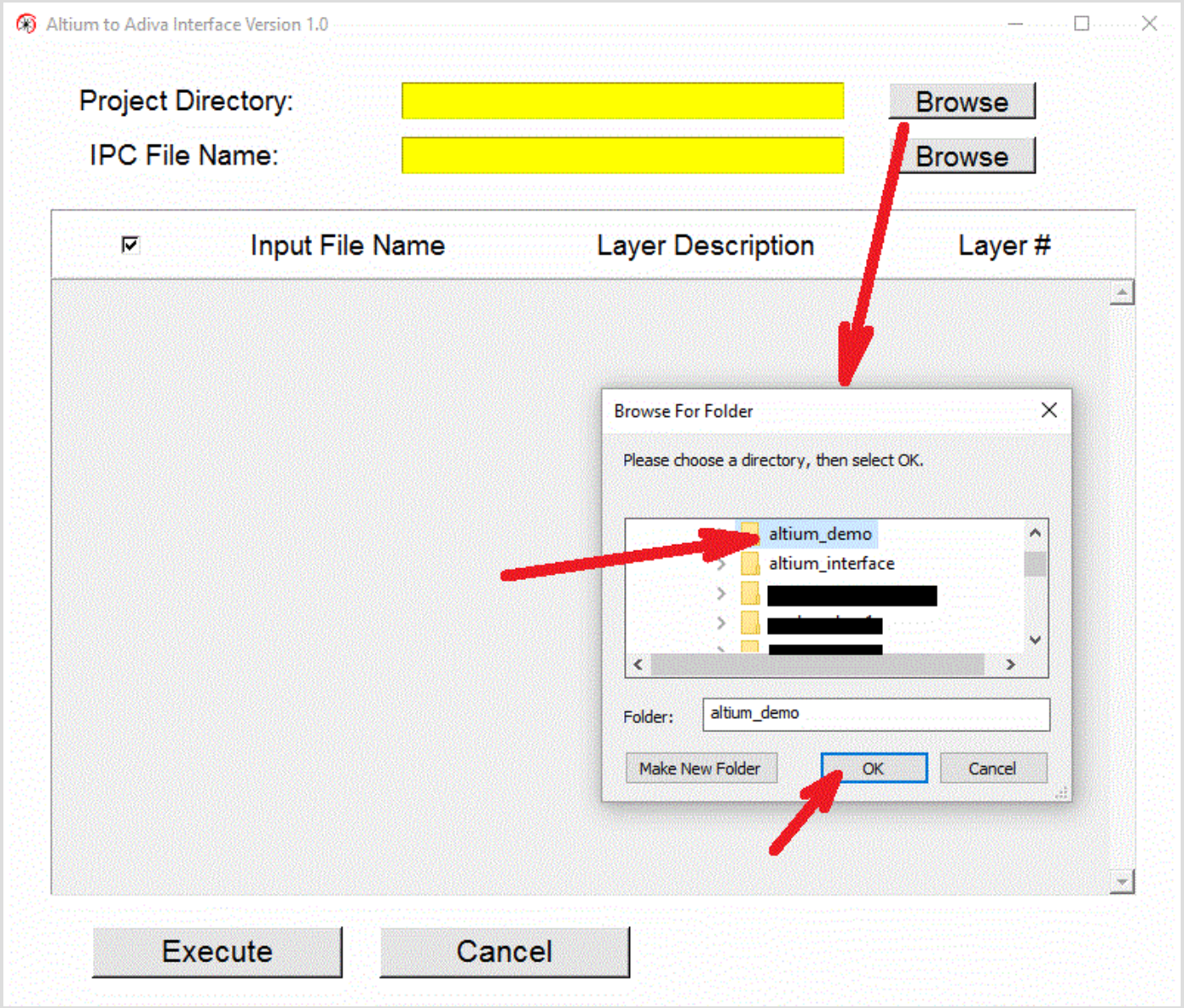
If not using the **Adiva Navigator**, once Gerber and Drill files are created, either double-click the **Altium Interface** Windows Desktop icon or (if installed) within Altium select the **Tools > Adiva Interface** menu selection…



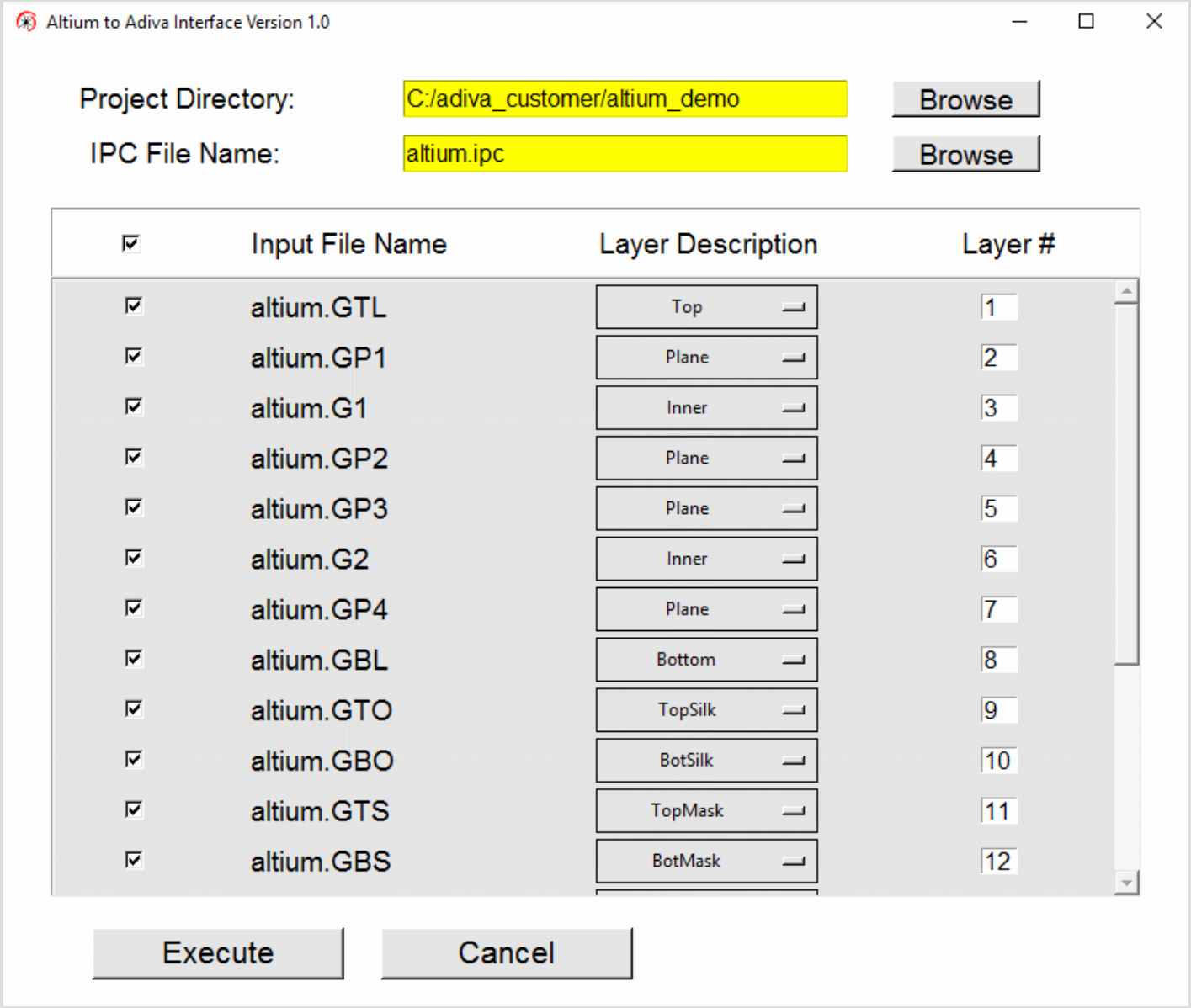
…the **Altium to Adiva Interface** will appear…
(See Page 10)

Altium to Adiva Interface

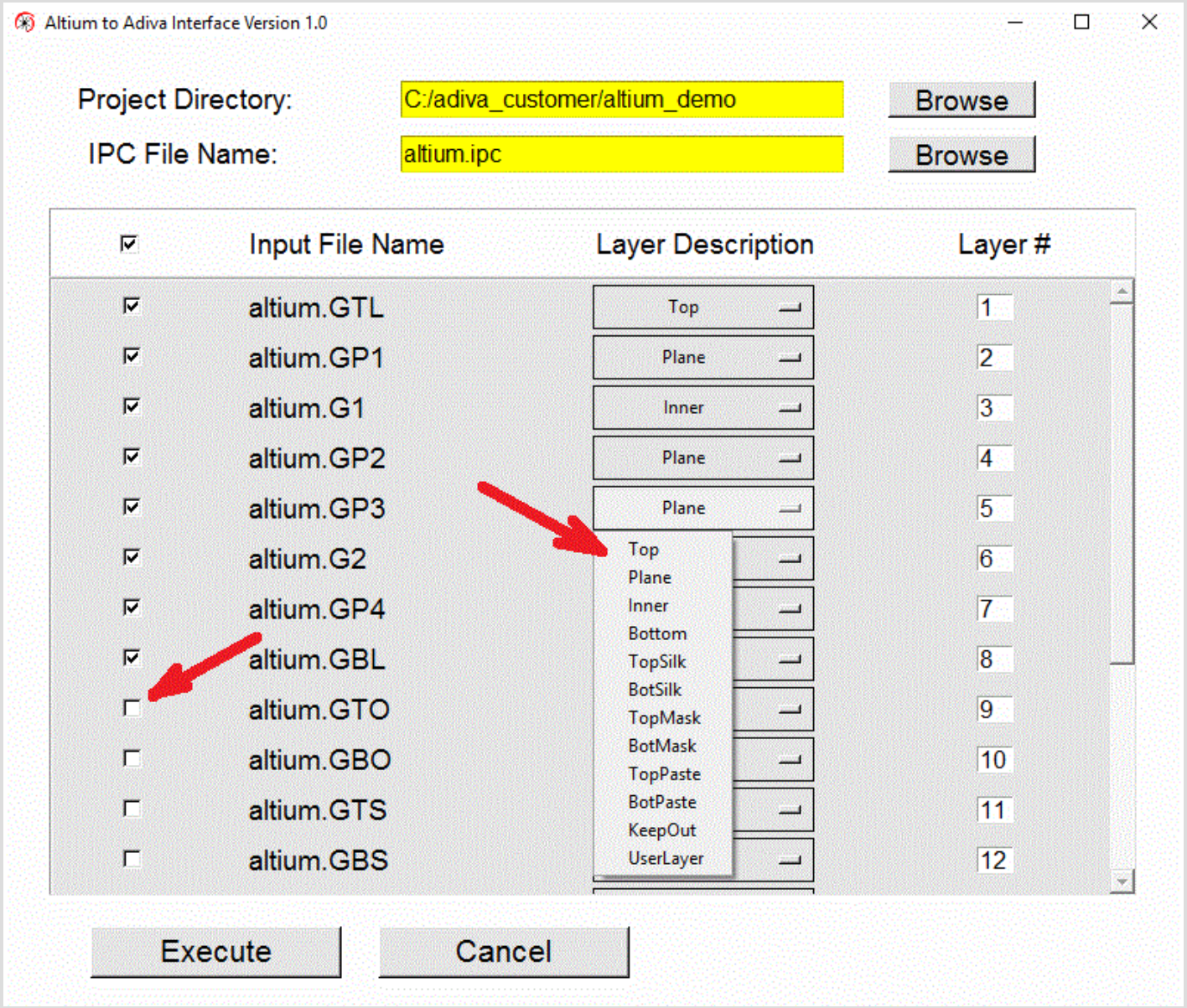




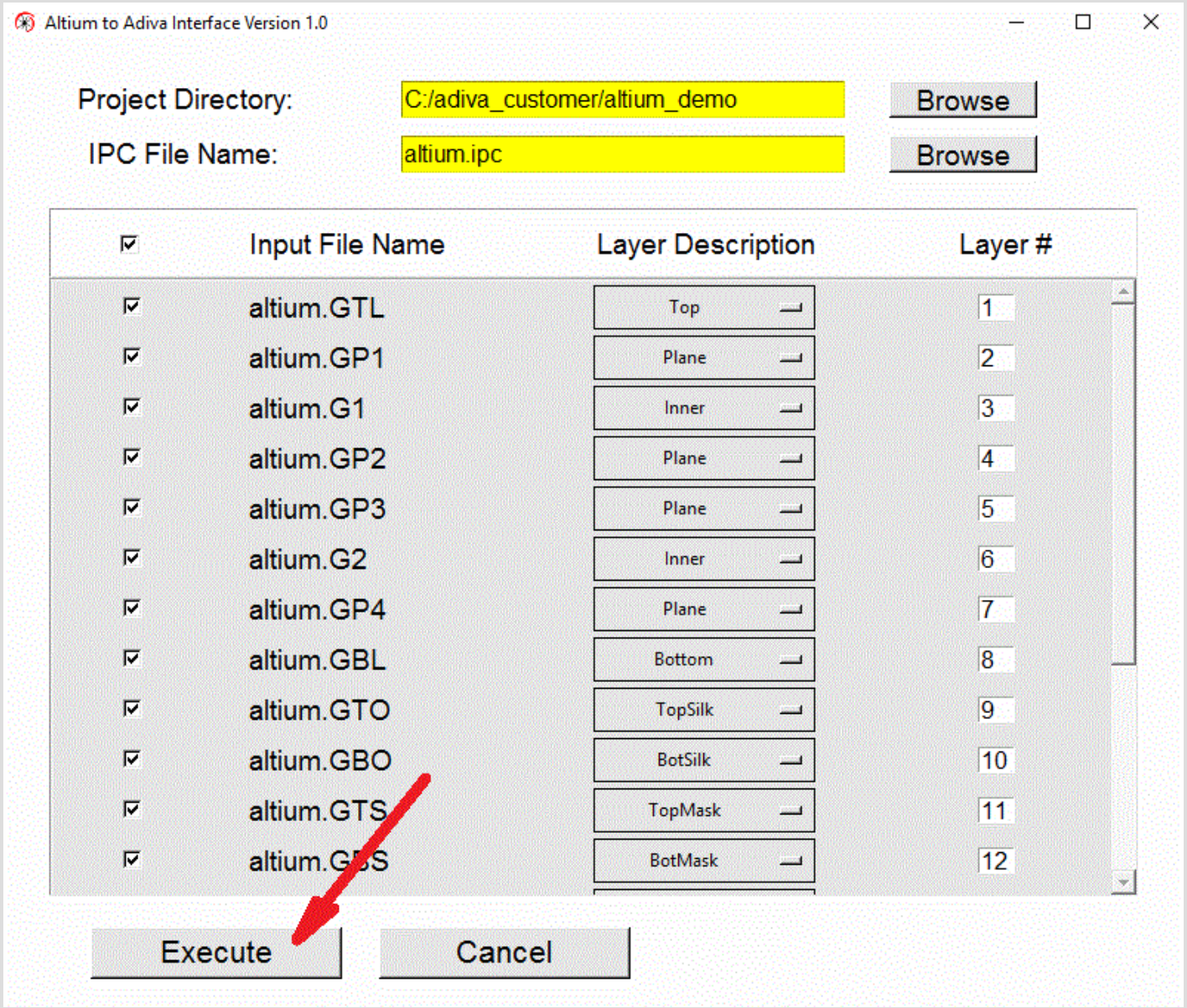
Select **Browse** then choose the directory containing your input data – then **OK**



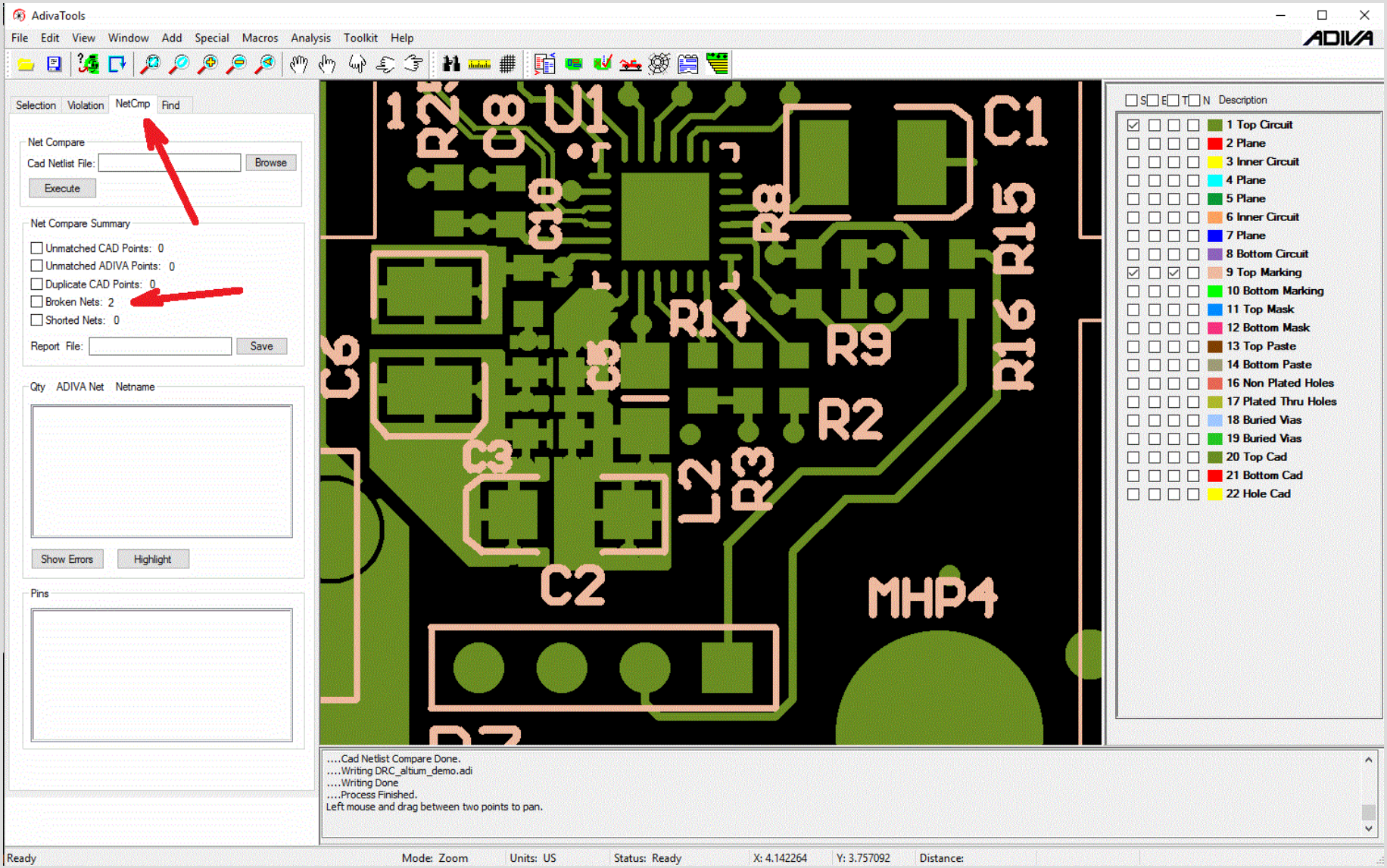
Notice the Project Directory and IPC netlist name will display and the Gerber / Drill files contained will be listed and described / assigned automatically for Adiva



Uncheck a file name to not convert a particular file into Adiva if desired. Change a layer's automatic description if also desired – but should not be necessary.



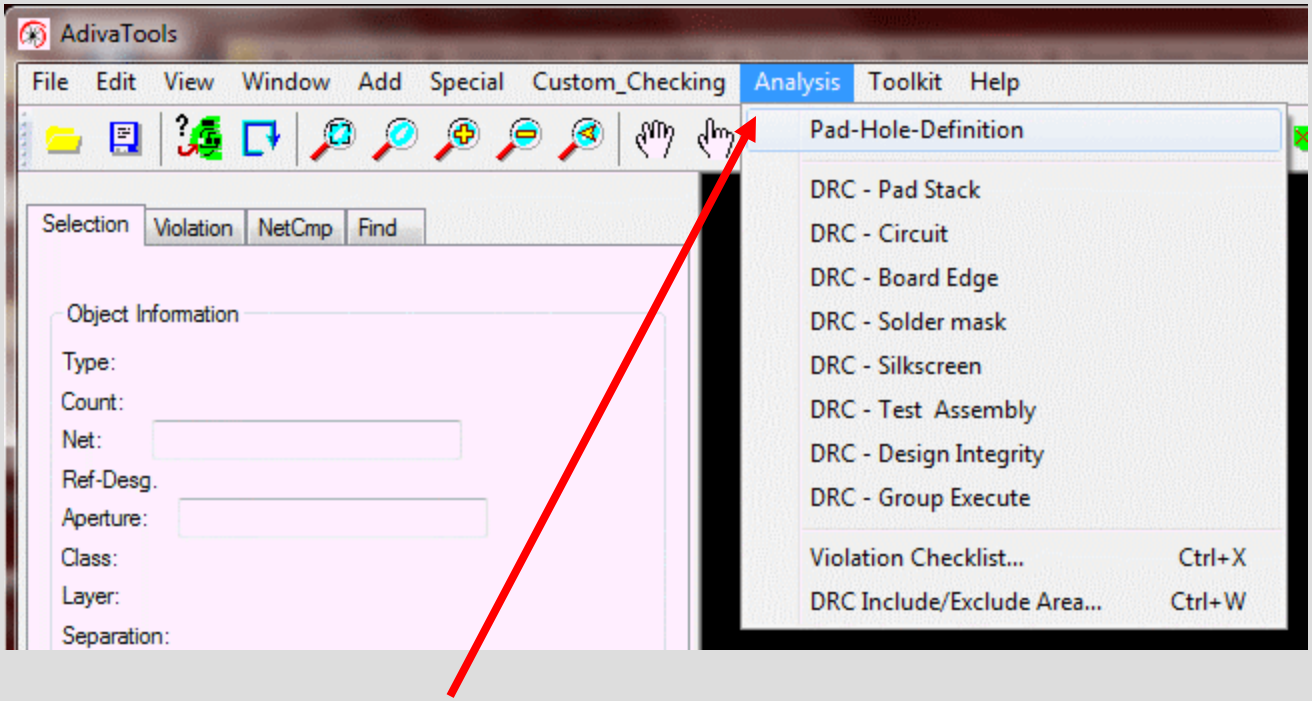
Select **Execute** to begin the conversion process into **Adiva Design Analysis**



Adiva will automatically start, display the data, extract a netlist and present **CAD Netlist Compare** results for review.

One final item before DRC checking…

Pad / Hole Definition is needed to identify Pad and Hole types so that various checks can be run accurately. **Pad / Hole Definition** will group pads and holes to create virtual “padstacks” and assign them a code. This code will be used for DRC checking so that checks can identify what are vias, smt pads, fiducials, etc…

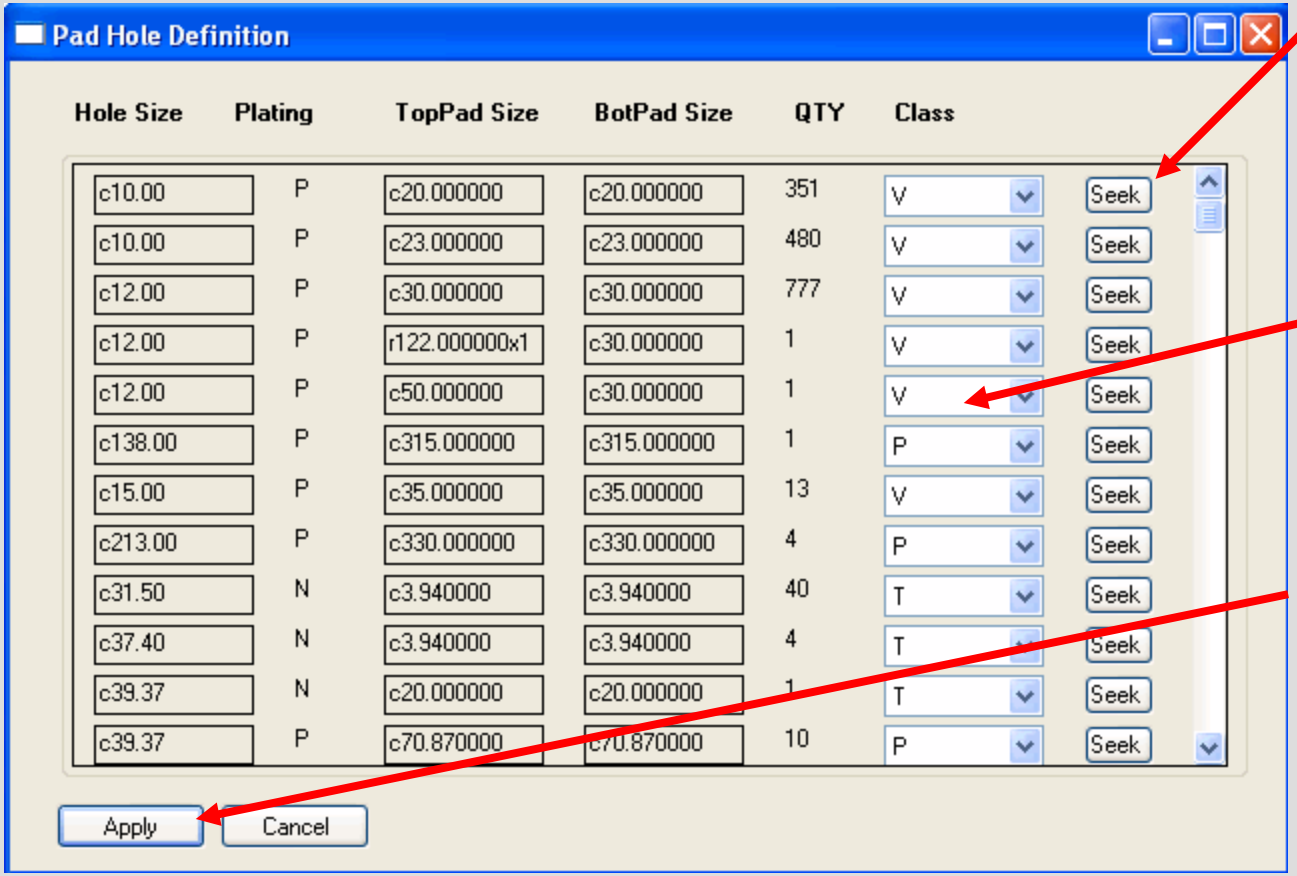


To get started, select **Analysis > Pad-Hole Definition** to start the function.
A listing dialog will appear showing all of the holes and the pads they match with…

Review the “padstacks” that are created by zooming in on Layer 1
And selecting the “Seek” button for each Padstack Type. Watch the screen jump to the next “seek”

NOTE: Only 1 or 2 “seeks” per padstack type is needed to determine if the Default choice is correct.

Do a quick glance at each one, adjust if needed (usually not needed) then move on to the next one – don’t let this process take more than a few minutes!



If default choice requires adjustment, adjust as needed to one of the following options…

V = Via
S = SMT
P = Pin -Thru hole
C = Cosmetic (no real function)
t = test point
T = Non-Plated Hole
F = fiducial

Select **Apply** to finish this routine then **Save** your Adiva database.

See DRC Checking User Guide for details in how to run DRC Checks and review results.

(optional) Command Line details…

The Altium to Adiva Interface can also be command line driven to aid in personal scripting of the interface. This can be an interactive interface startup or a "black box" functionality relying on specific files to be available for conversion.

Interactive Interface Startup:

On the command line, type the following…

>altium2adiva_5.0.pyw <dir_name> …or…
>altium2adiva_5.0_metric.pyw <dir_name>

…where <dir_name> is the name of the directory containing the input data files. This can be a direct subdirectory name or a path to the directory. The interface will open and list files as shown on page 8 awaiting user interaction.

"Black Box" Startup:

On the command line, type the following with the added **–B** …

>altium2adiva_5.0.pyw <dir_name> -B …or…
>altium2adiva_5.0_metric.pyw <dir_name> -B

…where <dir_name> is the name of the directory containing the input data files. This can be a direct subdirectory name or a path to the directory. The interface will read the input files from the directory and quietly build the Adiva database without user interaction.

END
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