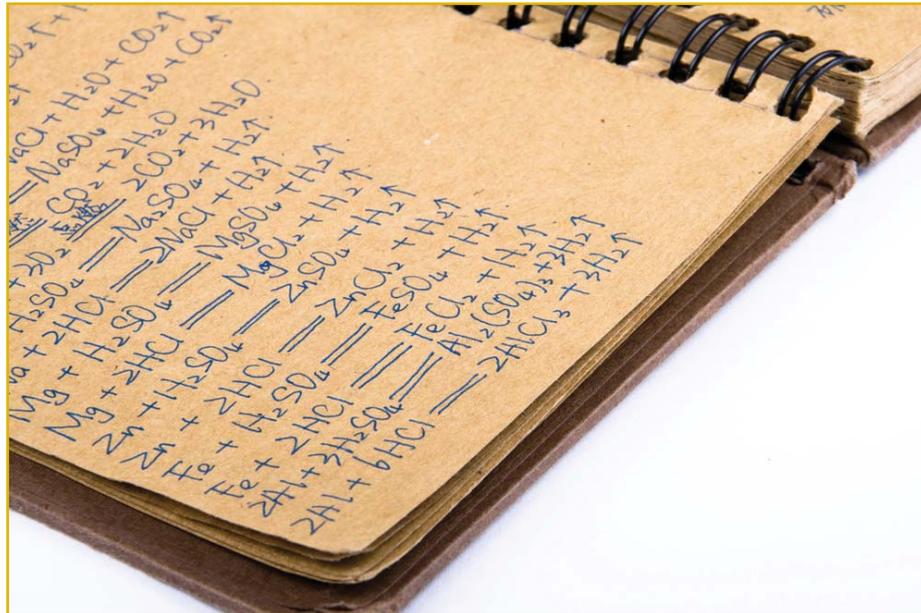# CAMCAD "Cheat Sheet" for Agilent's AXI Products

Application Note

Introduction

CAD translation and manipulation is a key foundation for success in any inspection environment. This 'cheat sheet' is designed to provide a quick reference guide covering the CAD translation process as it relates to Agilent's *Medalist* Automated X-ray Inspection products.
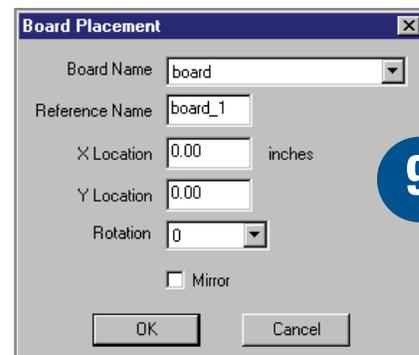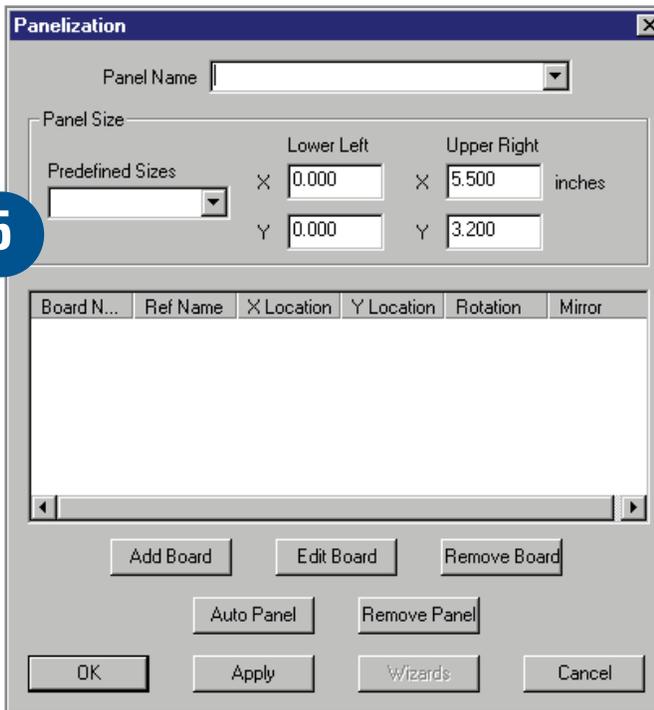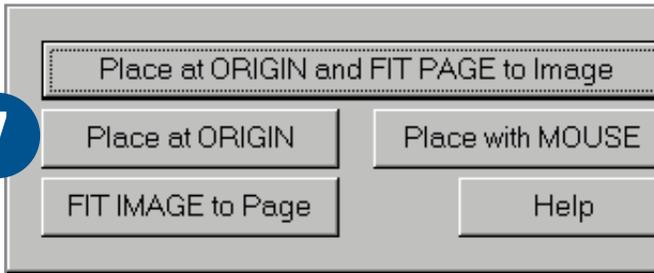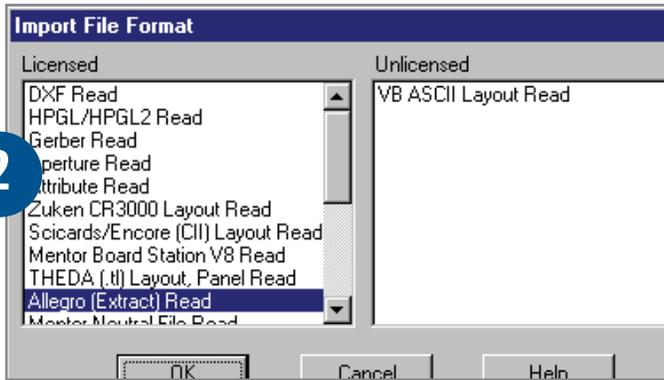
Procedure

Launch CAMCAD.

Select Start>Programs>Router Solutions>CAMCAD for HP TEST

Import CAD data.

1. Select File>Import.
2. From the Import File Format Dialog Box, select the CAD format you need
3. Click Ok.
4. Open the CAD file
5. Close notepad.
6. In some cases CAMCAD gives you options on how to import the data. Use the defaults. Alternately, just Drag and Drop the CAD file into CamCad.
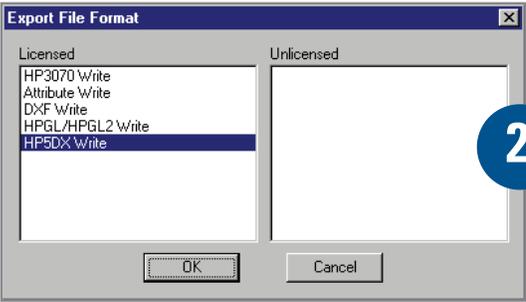7. Click on "Place at ORIGIN and FIT PAGE to Image"

Manipulate CAD data

1. Select Tools>PCB>Auto Board Origin
2. If you get a error message "No Board Outline found", please proceed to the section entitled "No Board Outline" then restart this section.
3. Select Tools>PCB>Delete Generic Graphic
4. Select Tools>PCB>Delete Traces, Vias
5. Select Tools>Panelization.
6. Enter the Panel Name.
7. The panel size defaults to the board size.
8. Click Add Board.
9. Select a Board Name from the pick list.
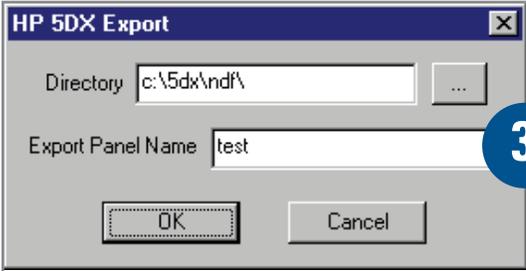10. Click Ok.
11. Click Ok again.
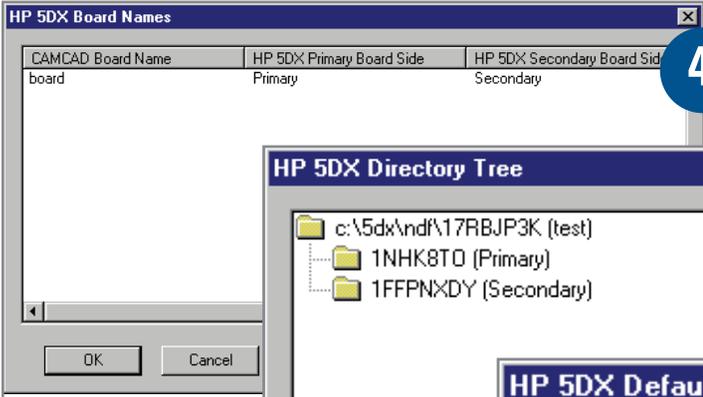
Export the NDF files

1. Select File>Export
2. Select HP5DX Write and Click OK.
3. Click OK.
4. Click OK.
5. Click OK.
6. Click Proceed.
7. Click Proceed.
8. Notepad launches with details of some manipulations CAMCAD had to do during the export.
9. Close Notepad.
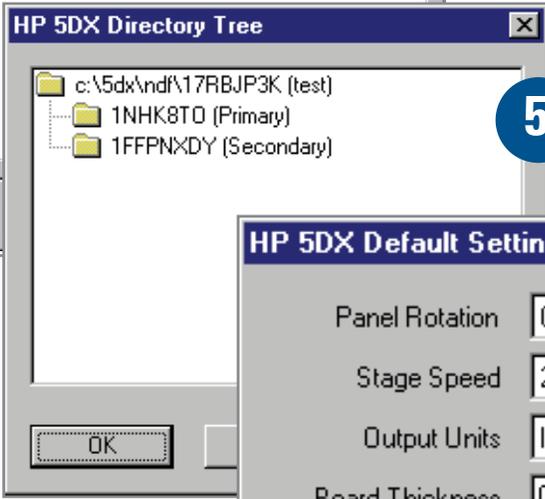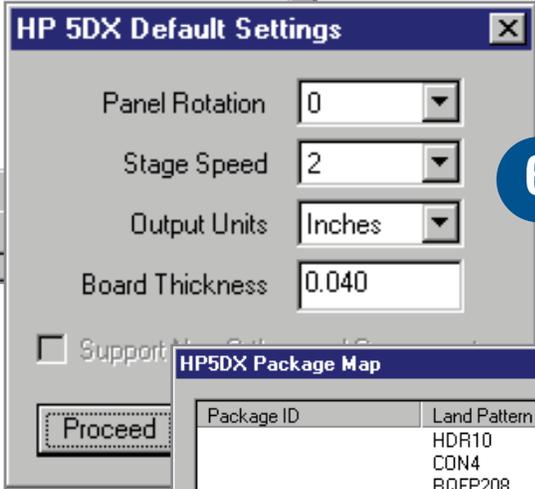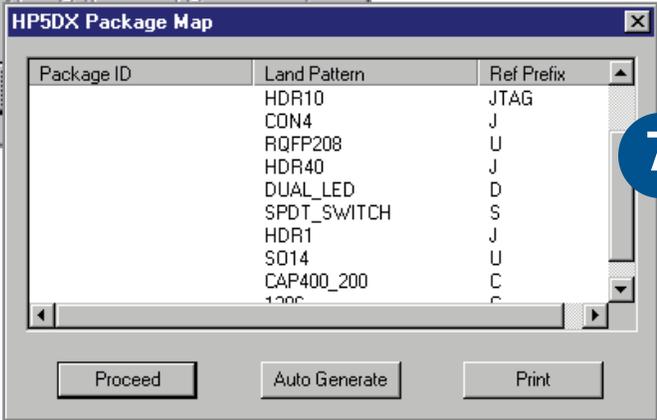10. You may now proceed to develop the program using the TDW.

Export File Format

Licensed	Unlicensed
HP3070 Write	
Attribute Write	
DXF Write	
HPGL/HPGL2 Write	
HP5DX Write	

OK   Cancel

②

HP 5DX Export

Directory: c:\5dx\ndf\   ...

Export Panel Name: test

OK   Cancel

③

HP 5DX Board Names

CAMCAD Board Name	HP 5DX Primary Board Side	HP 5DX Secondary Board Side
board	Primary	Secondary

OK   Cancel

④

HP 5DX Directory Tree

c:\5dx\ndf\17RBJP3K (test)
  1NHK8TO (Primary)
  1FFPNXDY (Secondary)

OK

⑤

HP 5DX Default Settings

Panel Rotation: 0
Stage Speed: 2
Output Units: Inches
Board Thickness: 0.040

☐ Support

Proceed

⑥

HP5DX Package Map

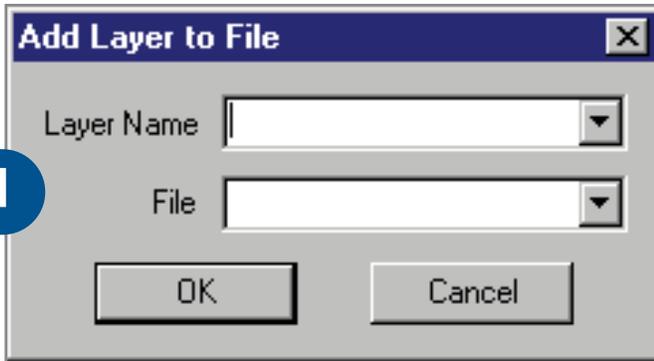| Package ID	Land Pattern	Ref Prefix
	HDR10	JTAG
	CON4	J
	RQFP208	U
	HDR40	J
	DUAL_LED	D
	SPDT_SWITCH	S
	HDR1	J
	SO14	U
	CAP400_200	C

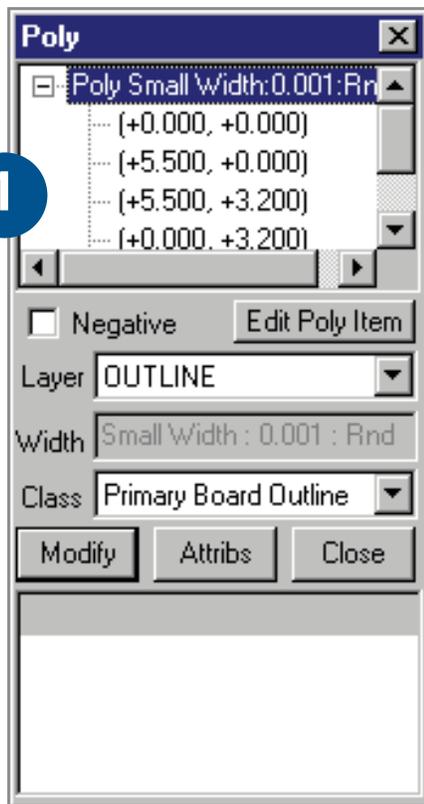Proceed   Auto Generate   Print

⑦

Add layer dialog box

Edit/query entity dialog box

No Board Outline

There are three possible reasons why CAMCAD did not find the board outline.
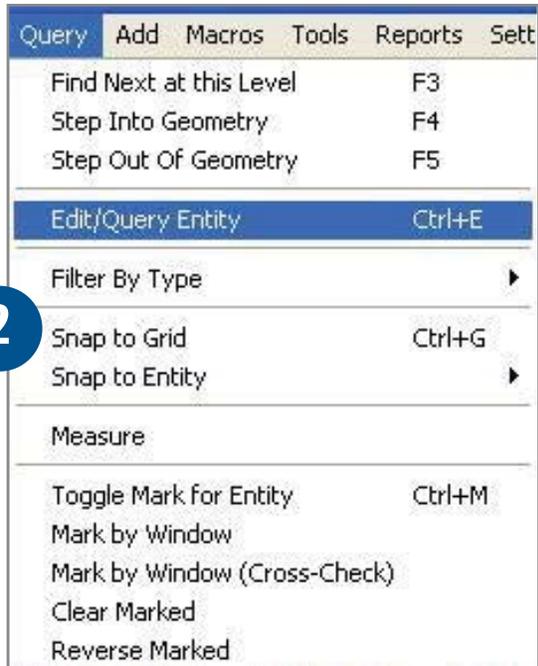
A primary board outline does not exist for your board.

1. Select Add>Layer.
2. Enter Primary_Board_Outline as the Layer Name.
3. Select Board from the File pick list.
4. Click Ok.
5. Select Add>Line>Polyline
6. Draw the line with your mouse and press ESC to finish drawing.
7. Select the line you just drew with your mouse.
8. Select Query>Edit/Query Entity
9. Select Primary Board Outline from the Class pick list.
10. Click Modify.
11. Click Close.

A board outline exists, but is not classified properly as Primary Board Outline.

1. Select the polyline that surrounds the board.
2. Select Query>Edit/Query Entity
3. Select Primary Board Outline from the Class pick list.
4. Click Modify.
5. Click Close.

The board outline is placed on the board as an inserted geometry instead of a standard polyline.
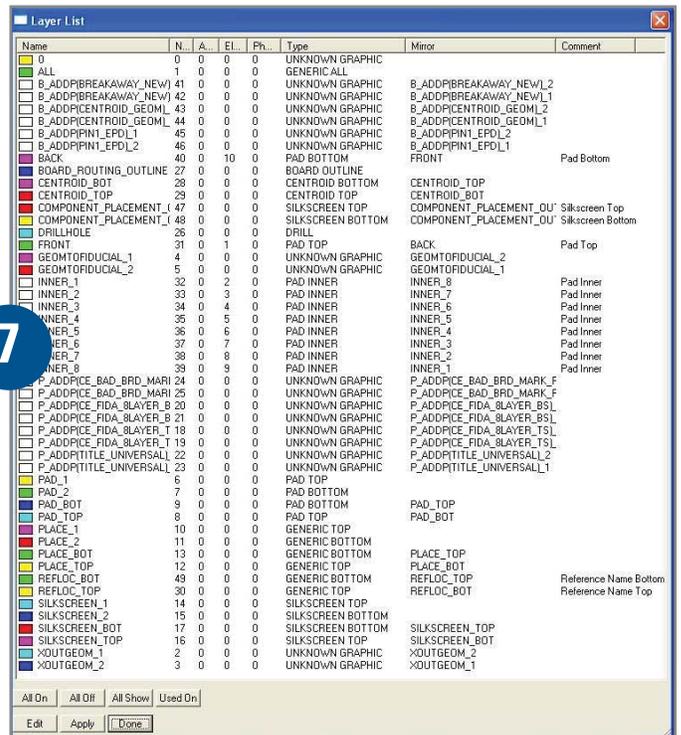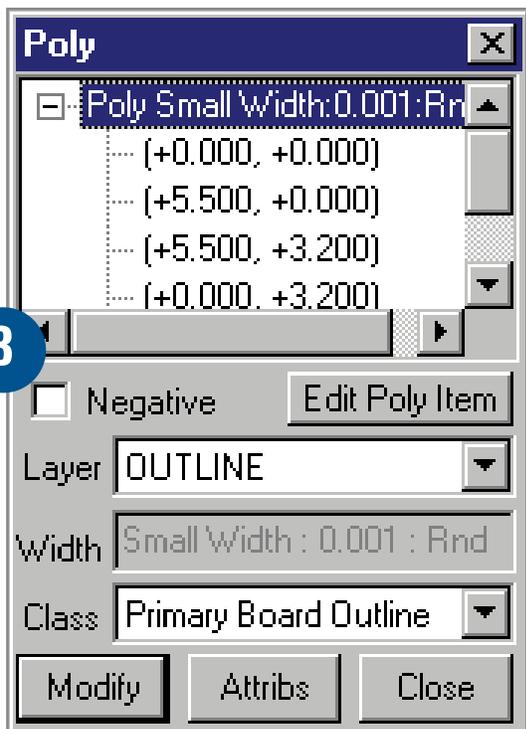
1. Select the geometry.
2. Select Edit>Edit Geometry>Explode Selected Geometries.
3. Select the line again.
4. Select Query>Edit/Query Entity
5. Select Primary Board Outline from the Class pick list.
6. Click Modify.
7. Click Close.

Layers

How to check Layers and to turn Layers On or Off.

1. Select the component / line in question.
2. Select Query > Edit/Query Entity; Or Ctrl + E; Or press the blue icon with the white "i" in the top left
3. You will be able to read the Layer of that component / line
4. Close the Query box
5. Select Tools > Layers > Layer List
6. You will be able to see all the Layers in the Drawing
7. The Layers that can be seen have a color associated with it. The hidden layers have no color. Layers can be hidden or seen by toggling the color box associated with each Layer

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