Huntron Workstation HAT File Import Tutorial

Contents

Creating a HAT file for Import into Huntron Workstation2	
Opening Excel Template2	
Import Tab2	
Library Import	
Library Tab3	
Saving a HAT File4	
Create a Board database	
File Import5	
Import Options6	
Board Set Up7	
Completing the Test	
Appendix 1: HAT File Format8	

Huntron Workstation HAT File Import Tutorial

The tutorial will guide the user through the steps required to create a Huntron ASCII Text or HAT file. The HAT file is used to create component data in Huntron Workstation. These files contain Component reference designators and number of pins for creating a sequence of components to speed up data entry. This also allows someone that is not familiar with Workstation to do the data collection. This creates a Top and/or Bottom Sequence and adds the parts in the list.

Creating a HAT file for Import into Huntron Workstation

An Excel template is used to create a HAT File that can be read by Huntron Workstation to create a test database. This process describes how to create the HAT file. HAT files can also be created in a text editor (See Appendix 1 for the file format).

Opening Excel Template

Open the Huntron Hat File Template.xlsx file located in the "Program Files (x86)\Huntron Workstation 4.3\Documents" folder with Microsoft Excel. Save a copy of the file as an unmodified master. There are three tabs shown at the bottom of the Excel file. The first tab is the Import tab that is used for basic text entry of the component information. The Import tab spreadsheet allows you to manually add the components that will saved to a HAT text file. The second tab is the Library Import tab which is used for creating components with information that is drawn from the Library tab (third tab).

Import Tab

Component information added in the Import tab is used to manually create a HAT file and does not use information from the Import Library or Library tabs. In the Import tab, columns in red are required. These include **Component Name** and **Number Of Pins**. The other columns can be left blank. The Test column default is set to TRUE, FALSE is the other valid setting. The **Package** column defaults to Multi, other valid settings are the Both, DIP, Front, Probe, SIP, DIP 2X, SIP 2X, MultiSIP, DIP II, SIP II, Cable.

If you need to create components that are on specific sides of your circuit board you will need to add Top or Bottom to the **Side** column. This will create Top or Bottom Sequences and place those components on the indicated side.

Any columns left blank will use defaults values when imported into Huntron Workstation.

Example entries in the Import tab:

	Α	В	С	D	E	F	G	н	I	J	к	L	м	N	0	р	Q	
1	Component N	Number Of P	Order Number	Part Number	Test (defa	Package (Pin Spacir	Туре	Part Packa	Positive P	Negative	Part Value	Replacem	Supplier	Rotation	Side	Height	
2	C1	1	1	PN123	FALSE	Probe	0.15	Сар	603	0.5	0.1	200uF	PN456	Mfg	0	Тор	0.5"	
3	U1	20	2	PN789	TRUE	DIP	0.05	IC	SOIC				PN890	Mfg2	90	Тор	0.2"	
4																		
5																		
6																		

Library Tab

The **Library** tab is used to create a list of commonly used components that can be used when creating a HAT file in the **Library Import** tab. You can input components that key off on the **Part Number** to add data to the Library Import tab. It is best used when you have all the necessary parts input into the Library tab first before switching the Library Import tab to create your HAT file.

			INDEJ										
В	С	D	E	F	G	н	1	J	к	L	м	N	0
mber Number Of	Pins Test (de	Package (d	Pin Spacing	Туре	Part Package	Positive Part Tolera	Negative Part Toler	Part Value	Replacement	Supplier	Rotat	Side	Height
14		DIP	2540		TH DIP								
14		DIP	1720		SOIC								
	B mber Number Of 14 14	B C mber Number Of Pins Test (der 14 14	B C D mber Number Of Pins Test (del Package (d 14 DIP 14 DIP	B C D E mber Number Of Pins Test (del Package (de Pin Spacing 2540)) 14 DIP 2540 14 DIP 1720	B C D E F mber Number Of Pins Test (del Package (de Pin Spacing Type 14 DIP 2540 14 DIP 1720	B C D E F G mber Number Of Pins Test (del Package (d. Pin Spacing Type Part Package (d. Pin Spacing Type Package (d. Pin Spacing Type Part Package (d. Pin Spacing Type	B C D E F G H mber Number Of Pins Test (del Package (d: Pin Spacing Type) Part Package Positive Part Tolera 14 DIP 2540 TH DIP 14 DIP 1720 SOIC	B C D E F G H I mber Number Of Pins Test (del Package (d: Pin Spacing Type) Part Package Positive Part Tolera Negative Part Tolera 14 DIP 2540 TH DIP 14 DIP 1720 SOIC	B C D E F G H I J mber Number Of Pins Test (del Package (dr Pin Spacing Type Part Package Positive Part Tolera Negative Part Toler Part Value 14 DIP 2540 TH DIP 14 DIP 1720 SOIC	B C D E F G H I J K mber Number Of Pins Test (del 14 Package (de Pin Spacing 2540 Type Part Package Positive Part Tolera Negative Part Toler Part Value Replacement 14 DIP 2540 TH DIP SOIC Image: Compare the second s	B C D E F G H I J K L mber Number Of Pins Test (del Package (d: Pin Spacing Ving Ving Ving Ving Ving Ving Ving V	B C D E F G H I J K L M mber Number Of Pins Test (del Package (d/Pin Spacing Type Part Package Positive Part Tolera Negative Part Negative Part Tolera Negative Part Negative Part Negative Part N	B C D E F G H I J K L M N mber Number Of Pins Test (del Pin Spacing Type Part Package Positive Part Tolera Negative Part Toler Part Value

Library Import

The Library Import tab will add components to the list with information drawn from the Library tab. The columns in red are required and these include **Component Name** and **Number Of Pins**. The green column **Part Number** is used to look up the component values from the Library tab so if you input this value first the other columns will be populated automatically based on information in the **Library tab**. Cells in the green column contains formulas and should not be overwritten. Any columns left blank will use defaults values when imported into Huntron Workstation. The **Test** column defaults to TRUE, FALSE is the other valid setting. The **Package** Column defaults to Multi, other valid settings are the Both, DIP, Front, Probe, SIP, DIP 2X, SIP 2X, MultiSIP, DIP II, SIP II, Cable. The other columns can be left blank.

C	L *		$\times \checkmark f_x$	Order Numbe	rder Number													
	A		В	С	D	E	F	G	н	1	J	к	L	м	N	0	Р	Q
1	Component	Name	Number Of Pins	Order Number	Part Number	Test (de	Package	Pin Spacing	Туре	Part Pack	Positive Part Tol	Negative Part Tol	Part Valu	Replacer	Supplie	Rotation	Side	Height
466	U10		14		74LS04		DIP	2540		TH DIP								
467	U2		14		74HC14		DIP	1720		SOIC								
468																		

Saving a HAT File

Select the **Import** or **Library Import** tab that contains the information to be imported. Select **File->Save As**->Browse. Select the file location. Change the Save as type to Text (Tab delimited) (*.txt).

XII Save As		-		a longen ing	-	X
💮 🖓 - 🚺 « La	cal Disk (C:) → Users → csmith → My D	ocuments + Huntron +	▼ ⁴ 7	Search Huntron		٩
Organize 🔻 Ne	w folder					0
Microsoft Exce	Excel Workbook (*.xlsx) Excel Macro-Enabled Workbook (*.xlsm) Excel Binary Workbook (*.xlsb) Excel 97-2003 Workbook (*.xls) XML Data (*.xml) Single File Web Page (*.mbt* mbtml)					
Downloads	Web Page (*.htm;*.html) Excel Template (*.xltx) Excel Macro-Enabled Template (*.xltm) Excel 97-2003 Template (*.xlt)					
📜 Libraries	Text (Tab delimited) (*.txt)					
Documents	Unicode Text (*.txt)					
J Music	Microsoft Excel 5.0/95 Workbook (*.xls)					
Pictures	CSV (Comma delimited) (*.csv)					
Videos	Formatted Text (Space delimited) (*.prn) Text (Macintosh) (*.txt) Text (MS-DOS) (*.txt)					
Computer	CSV (Macintosh) (*.csv)					
🗸 Local Disk (C	CSV (MS-DOS) (*.csv) DIE (Data Interchange Format) (* dif)					
💬 BoardLearn (SYLK (Symbolic Link) (*.slk)					
Apps (U:)	Excel Add-In (*.xlam)					
Company (V	PDF (*.pdf)					
File name:	XPS Document (*.xps) Strict Open XML Spreadsheet (*.xlsx) OpenDocument Spreadsheet (*.ods)					
Save as type:	Excel Workbook (*.xlsx)					-
Authors:	Alan Howard	Fags: Add a tag		Title: Add a title		
	🔄 Save Thumbnail					
) Hide Folders			Tools 🔻	Save	Cance	el

Enter a filename and click **Save**.

Create a Board database

After starting the Huntron software the main menu is displayed. Select **File/New** from the menu bar.

dd New Boa	rd	_		
Name	06-3119 manual test	Manufacturer	Huntron	<u>о</u> к
Revision		Test Routine Number		<u>C</u> ancel
System		Unit of Measure	Microns	Buttons
Unit	LCD PCB	Data Source	User	
Top Name	Тор	Bottom Name	Bottom	<u>H</u> elp
Show In	structions			
F2B File	e Load F2B File R	emove F2B File		
🗖 XML Fil	e Load XML File	Remove XML File		
losts sctions	1			

The Add New Board window will be displayed. Type a name into the Name field. Adding information to the additional fields (i.e. revision, system, etc.) is not necessary to create a new board. Click **OK** to save the new Board information.

File Import

After creating a Board database, select **File/Import/Huntron HAT File** from the menu bar.



The HAT File Importer window will open where you will configure your settings for the new Sequence(s).

🖳 Huntron HAT Import 4.3.7072.12	301		-		×
HAT File: C:\Users\ahoward.HUNTI	RON\Desktop\Huntron HAT File Template.tx Top Side Slot	t Component Count: 2 Total Pin Count: 21 PreScan Completel		Brows	se
	Bottom Side Slot				
			Pro	lose	

The process for using the Workstation Importer for HAT files essentially works from top to bottom. Following is a description of each setting and how it is used.

HAT File: Browse to and select the **HAT** or **TXT** file created.

PreProcess button: Click this button when the HAT or TXT file is selected. Note that all of the fields and checkboxes below are greyed out until this step is completed. Once this step is completed successfully you can move on to the Import Options.

Import Options

Component Top Sequence checkbox:

Enable to add a Top side Component based Sequence to the Board

Component Bottom Sequence checkbox:

Enable to add a Bottom side Component based Sequence to the Board

Top Side Slot drop-down:

Select the Prober slot (Top, Middle, Bottom or Base) to be used when the Top side Sequence is created.

Bottom Side Slot drop-down:

Select the Prober slot (Top, Middle, Bottom or Base) to be used when the Bottom side Sequence is created.

When all of the Import settings are configured, click the **Process** button to import the selected CAD file based on your settings in the Import window. The Results area will show the Sequences as they are created into the Workstation database.

When the import is complete, click **Close** to return to the Huntron Workstation software.

Board Set Up

Once the HAT Import is closed, you are returned to the Huntron Workstation software. Notice that Sequence(s) have been created in the Sequences tab of the Tree pane. There should be a sequence for the sides (Top and/or Bottom) you designated in the Import Options earlier.

e Edit View	Actions Tools W	Indow Help										
19414	N R X X #		P	J 1 4 2	5.2							
e - Board: 06-311	9					Prober - Prober A	rcess Frame Grabb	er: Sensorav	2250			
quences Compo	nents Pins Ranger	s Component	Scans			Offset Align T	ach Teach Heigh	Realign	Panelize Ca	ameral Probe		
Name	Order Number	Туре	Side	Slot	Z Home Between Comp/Ne	al el el a			-	-	1	
BOTTOM	1	Components	Bottom	Middle	7		(Select>	-				
TOP	1	Components	Top	Middle		<u>•@•</u>						
						<u>x</u> + <u></u> +	Save					
						50800	Stored image					
						Current	Inner Direte 10			100		
							maye bispray ruc					
											-	
						MOUSE -	Auto Align				1000	
						A 1074-0.70						
						× 7467.605	C-5.1537 Tol: 10				1 3.26	
						Y 7467.605	C-5.1537 Tol: 10 (-0.4735 Tol: 10	2				
2						Y 7467.605 Auto Align ROI Box	C-5.1537 Tol: 10 C-0.4795 Tol: 10 Copy Auto Align In	÷				
Ĩ.]					Y 7467.605 Auto Align ROI Box	C-5.1537 Tol: 10 C-0.4735 Tol: 10 Copy Auto Align In	¢				
		And And			•	Y 7467.605 Auto Align ROI Box	C-5.1537 Tel: 10 (*0.4735 Tel: 10 Copy Auto Align In	¢				
ature – Tracker	Tracker 32005 Scann	ner: None	review		<u>,</u>	Y 7467602 Auto Align ROI Box	C-5.1537 Tol: 10 (20.4735 Tol: 10 Copy Auto Align In Copy Auto Align In	6	Gut			
ature – Tracker atures Scan	Tracker 32005 Scann Troublesheet Tracke	ner: None ar Scanner F	teview			Y 7467.600 Auto Align ROI Box	K-5, 1537 Tol: 10 (10, 47:45 Tol: 10 Copy Auto Align In ew PCB File L	fo	Grid			
ature – Tracker atures Scan rial Number	Tracker 32005 Scann Troublesheet Tracke Operator	ner: None rr Scanner F	feview		•	V 7467-608 Auto Align ROI Box CAD Image Vi CAD Components	K-5, 1537 Tol: 10 (10, 47:95 Tol: 10 Copy Auto Align In ew PCB File L	fo	Grid		·	Unisof
ature - Tracken atures Scan rial Number	Tracker 32005 Scann Troublesheet Tracke Operator	ren None ar Scanner F	teview]	Ţ		V 7467-608 Auto Align ROI Box	C-5, 1537 Tok: 10 (20,47,95 Tok: 10 Copy Auto Align In ew PCB File L File L File V	te Camera CAD Nets	Grid		•	Unisot
ature – Tracken atures Scan rial Number ime tart	Tracker 32005 Scann Troublesheet Tracke Operator Est	rer: None sr Scanner F	teview	т		Auto Alian RDI Box	C-5.1537 Tol: 10 Copy Auto Align In Copy Auto Align In ew PCB File L Tims	fo fo CAD Nets CAD Net N	Grid		•	Unisof Rotate Flip
ature Tracker atures Scan rial Number ime Rart Bapsed	Etracker 32005 Scann Troublesheet Tracke Operator Est Left	re: None r Scanner F	teview	т		Mage CAD Component CAD Component CAD Component	K-5.1537 Tol: 10 Copy Auto Align In ww.PCB File L ww.PCB File File L ww.PCB File File File File File File File File	CAD Nets	Grid		•	Unisot Rotate Flip
ature Tracker atures Scan rial Number ime itart Dapoed Component/Net	Tracker 32005 Scann Troubleaheet Tracke Operator Est Left	rer: None rr Scanner F	teview]	т		V 745750 V 745750 ROI Box CAD Image 1/0 CAD Component R CAD Component R CAD Vias	K-5.1537 Tol: 10 /*0.4795 Tol: 10 Copy Auto Align In ew PCB File L fins 	te Camera CAD Nets	Grid lodes			Unisof Rotate Flip Clear
ature – Tracker atures Scan rial Number Time Time Time Time Time Time Time Time	Tracker 30005 Scann Tracker 30005 Scann Tracker Tracke Operator Est Left Psss: 1	rer: None r Scanner F	teview	т		V 745765 V 745765 RDI Box CAD Component CAD Component CAD Component CAD Component CAD Component CAD Component	C-5.1537 Tol: 10 20.4795 Tol: 10 Copy Auto Align In ew PCB File L ins comp/Net	to Camera CAD Nets	Grid lodes		•	Unisof Rotate Flip Clear Zoom Bo
ature - Tracker natures Scan srial Number Time Start - Elapsed - Component/Net of - Stop On Failur	Tracker 32005 Scann Troubleshiet Tracke Operator Est Left Pess 1	ter: None Ir Scanner F	teview	т 	• • • • • •	A 1247-60 V 7467-60 ROI Box CAD Components CAD Components CAD Components CAD Components CAD Components CAD Components CAD Components	c-5,1537 Tot: 10 (20,2795 Tot: 10 Copy Auto Align In ew PCB File L with the second seco	to the comera	Grid			Unisoft Rotate Flip Clear Zoom Boo
atures Scan srial Number Time Start Elapsed Component/Net of Stop On Failurs Sequence	Tracker 32005 Scann Troublesheet Tracke Operator Est Est Left Pass [1 9 Can Continuous	ner: None Irr Scanner F	teview	т , , ,		A CAD Vias	c-5.1537 Toi: 10 20.2795 Toi: 10 Copy Auto Align In ev: PCB File L copy Auto Align In ev: PCB File L	CAD Nets	Grid			Unisoft Rotate Flip Clear Zoom Boo
ature - Tracker natures Scan rist Number Time Start - Elapsed Component Net of Stop On Failurs Stop On Failurs Sequence	Tracker 32005 Scann Tracker B2005 Scann Trackenheet Tracke Operator Est Left Left Left Pass 1 Pass 1 Scan Continuous T Use Scan List	rer: None rr Scanner F	teview	т • • •		A CAD Components CAD COMPONEN	c-5,1537 Tot: 10 (20,293 Tot: 10 Copy Auto Align In ew PCB File L ew PCB File L fins comp/Net	ic for the second secon	Grid lodes			Unisoft Rotate Flip Clear Zoom Boo Current V © Lett f C Rapt B
ature - Tracker satures Scan rial Number Time Based ComponentNet Stop On Failurs Sequence imulus:	Tracker 32005 Scant Troublesheet Tracke Operator Est Est Est Pass 1 Scan Continuous G Scan Continuous G Scan Continuous	ver: None r Scanner F	taview	т • • •	• • • • • •	Auto Align Auto Align ROI Box Image CAD Image VI CAD Components CAD Vise Sync Tre	<pre>c c top2bird=10</pre>	CAD Net N	Grid			Unisoft Rotate Flip Clear Zoom Boo Current V G Left J C Right J
ature - Tracker satures Scan srial Number Fime Rart - Baped - Component Net of - Stop On Failurs Sequence imulus: Stat - Stat	Tracker 3005 Scann Tracker 3005 Scann Trackeoner Tracke Operator Est. Let. Pess: [1 e Scan List Clas Continuous Clas Scan List Schue Tracklesh	ner: None ar Scanner F	teview	т 1 () 1		Auto Align ROI Box CAD Components CAD Components CAD Components CAD Components CAD Vias Sync Tre	<pre>ccs1537 to 10 /ccs2637 to 10 /ccs264 to</pre>	te camera CAD Nets	Grid Codes		*	Unisoft Rotate Flip Clear Zoom Boo Current Vi © Left F © Right F

Completing the Test

Finish building the test following the steps contained in other Huntron Workstation tutorials.

Appendix 1: HAT File Format

The format of the HAT file is a Tab delimited text file. The fields of the file match fields of the component in Huntron Workstation. The fields are separated by Tab characters and lines are ended with carriage return and line feed. The first row is a header row with column names.

Fields [additional info	ormation]:					
Component Name	[typically the component reference designator i.e. U1]					
Number Of Pins	[Access DH users – two pin devices (i.e.resistors) may be only 1 pin]					
Order Number	[leave blank in most cases]					
Part Number						
Test (default TRUE)						
Package (default Mul	ti) [Probers user will use DIP, MULTI, SIP or Probe]					
Pin Spacing	[Use the Units of Measure (i.e. microns) set at the Board level)]					
Туре	[typically the component part number used for cross referencing]					
Part Package						
Positive Part Tolerand	ce de la construcción de la constru					
Negative Part Tolerar	nce					
Part Value	[Typically expressed in units such as uF, ohms or uH]					
Replacement						
Supplier						
Rotation	[In degrees]					
Side	[TOP or BOTTOM; Needed for Prober users]					
Height						