ECAD Part Wizard
(EPW)
Quick Start Guide

The ECAD Part Wizard has been developed by RS Components and SamacSys to provide a range of highly accurate ECAD models, offering schematic symbol and PCB footprint information for electronic components.

The ECAD Part Wizard (EPW) gives engineers full control of the symbol fracturing and symbol pin positions (left, right, top, bottom).

ECAD Symbols & footprints can be downloaded directly from within the EPW application or from manufacturer and RS Component websites around the world. These .epw files are then loaded into the ECAD Part Wizard.

If the model you require is not yet available you may request it from within EPW and it will be created for you, free of charge.

The ECAD Part Wizard is available free of charge, look out for the EPW icon:

Having fractured the symbol and placed the pins as required models may be exported from EPW to any of the supported ECAD tool formats:
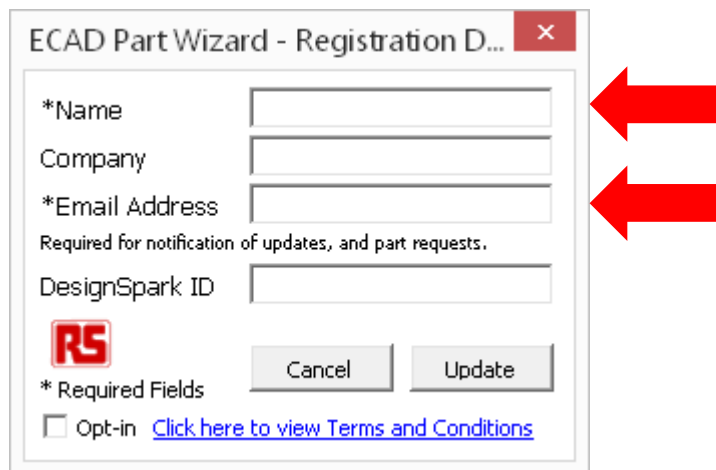
Developed by:

Registering EPW

On first open of EPW you will need to enter your registration details. If you want to change the details later you can do this using the "User Details" button on the tool ribbon.

➢ **Please enter in your full name and email address as a minimum.**

➢ **You can enter in your company name if you want to.**

➢ **If you have a DesignSpark ID then feel free to enter it into the last box.**

➢ **By ticking the Opt-in box you are agreeing to EPW terms and conditions.**

➢ **You can view the terms and conditions by clicking on the link highlighted in blue.**

➢ **Once you have finished all these steps click 'Update' and you'll be registered and able to use EPW immediately.**

Download an example .epw model file

The ECAD Part Wizard format (.epw) is supported by many of the leading companies in the electronics industry. Being supported by all of these companies means you will find the required model easily on multiple websites and can downloaded it in seconds.
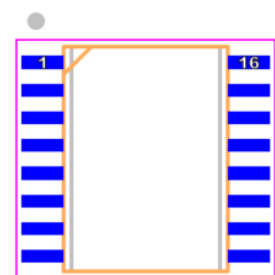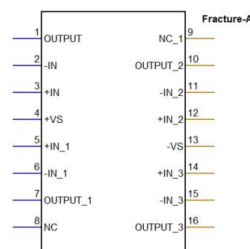
Once the .epw file is downloaded it may be loaded into the EPW application for immediate use.

- ➢ **Download an example .epw file from: CLICK HERE then unzip.**

- ➢ **To load the .epw file, open the ECAD Part Wizard and click the 'open' button which looks like this:**
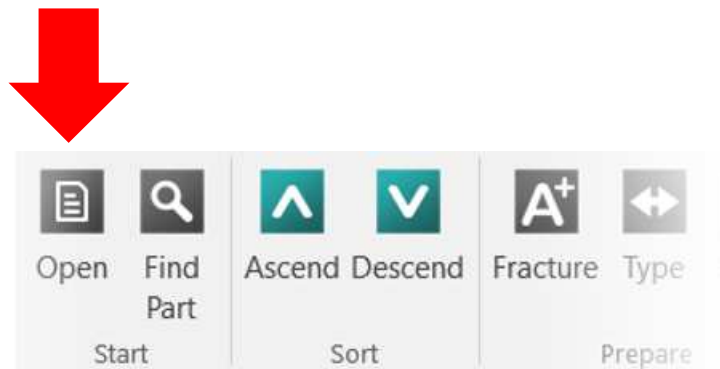
- ➢ **Select the file that you downloaded which after unzipping will have a ".epw" extension.**

- ➢ **Once you have opened the file it will load into the EPW application :**
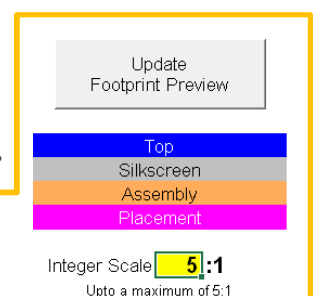

| Pin information | Symbol | PCB Footprint |

- ➢ **Select each view in turn by clicking the required tab at the bottom of the spreadsheet.**
    - ➢ **Click the Update button on each page to view the Symbol / Footprint.**

- ➢ **The displayed size of the footprint can be altered by selecting a magnifying factor between 2-5 and click the "Update Footprint Preview" button.**
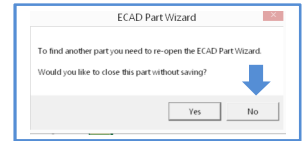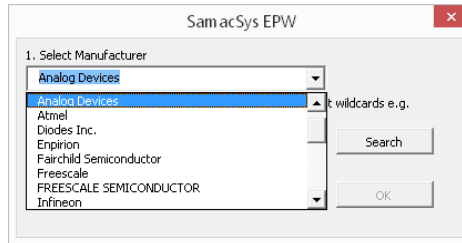
Downloading models from within EPW.

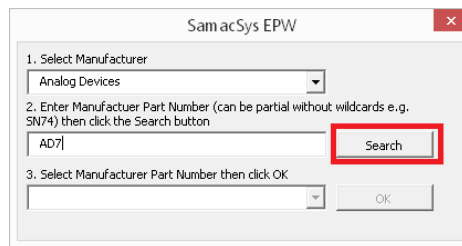The EPW has a unique feature which allows you to search and download models from within the application.

➢ **Click the find part button:** (Re-invoke EPW without saving if prompted)
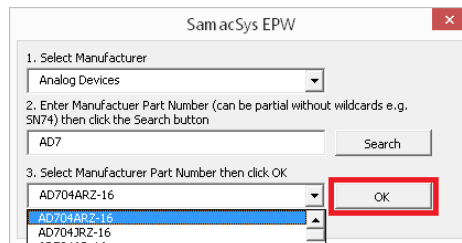

➢ **Select Manufacture Analog Devices:**

➢ **Type "AD7" into the search box - you can use either a full part number or a part of a number then click search:**

➢ **Now choose part number "AD704ARZ-16" and click the OK button:**

You will now have downloaded this part into the ECAD Part Wizard:

Fracture a device by bank.
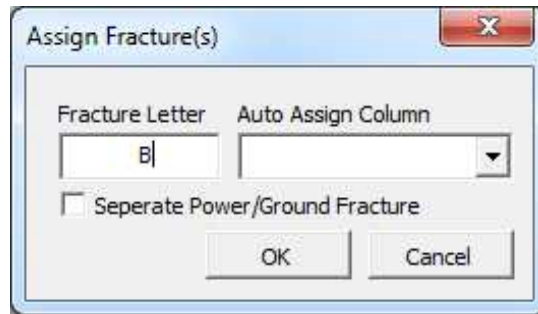
Fracturing a model by bank manually can take hours, with EPW it takes seconds!

➢ **Search & download the ST Micro Electronics part Number: STM32F429BI**
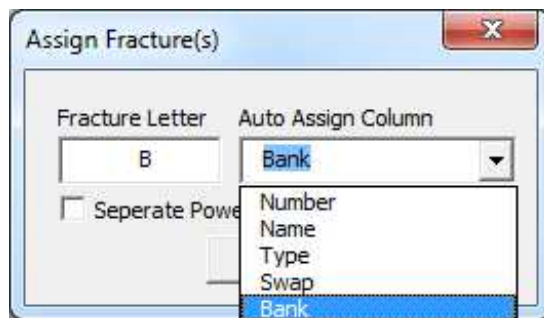
➢ **Click the 'Fracture' button:**

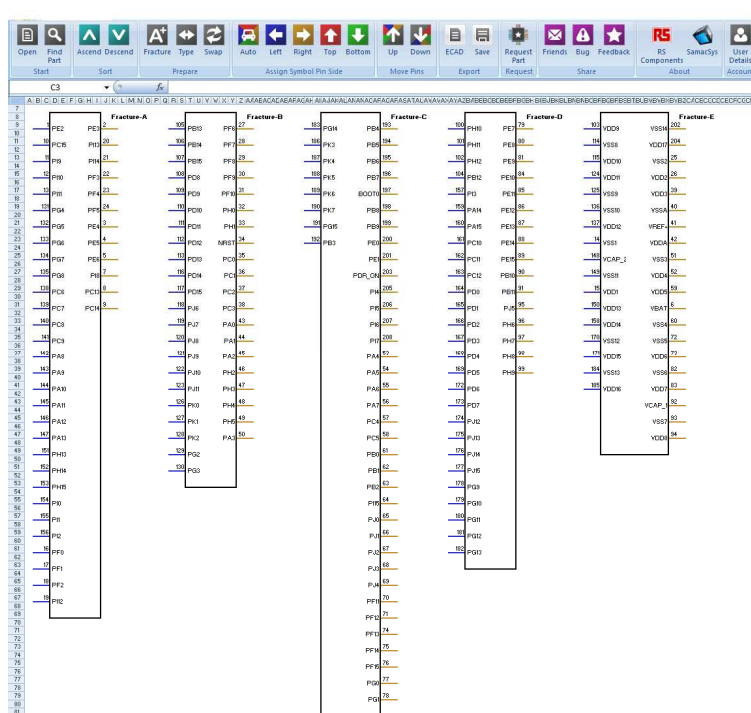➢ **The box below should appear:**

➢ **Use the drop down box to select 'Bank':**
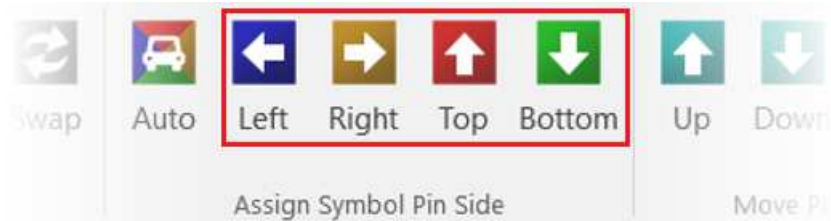

➢ **Once selected, press OK.**

➢ **Select the 'Symbol Preview' tab at the bottom to view your updated fractures:**
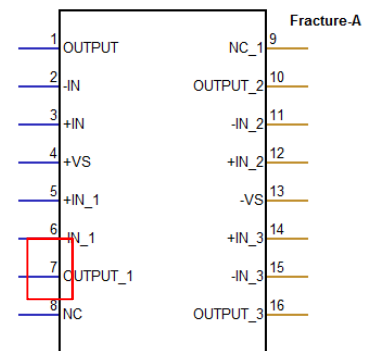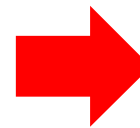
Arranging pins around fracture manually

Arranging pins around a fracture is simple with EPW. You can do this either manually or automatically.

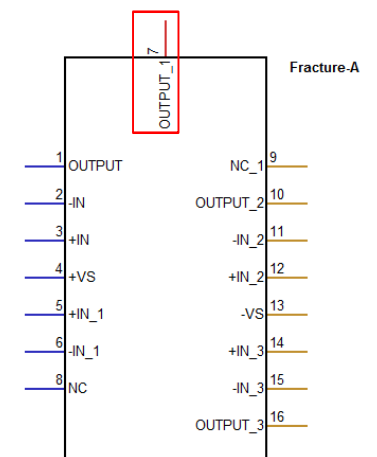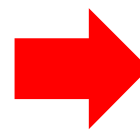➢ **There are 4 buttons which you can use to change the pins position on a fracture:**

➢ **Select which pin you would like to move buy left mouse clicking in the Fracture Column:**

Fracture	Number	Name	Type	Swap	Bank	Seq.
Fracture-A	1	OUTPUT	Output	0	0	
Fracture-A	2	-IN	Input	0	0	
Fracture-A	3	+IN	Input	0	0	
Fracture-A	4	+VS	Undefined	0	0	
Fracture-A	5	+IN_1	Input	0	0	
Fracture-A	6	-IN_1	Input	0	0	
Fracture-A	7	OUTPUT_1	Output	0	0	
Fracture-A	8	NC	Undefined	0	0	
Fracture-A	9	NC_1	Undefined	0	0	
Fracture-A	10	OUTPUT_2	Output	0	0	
Fracture-A	11	-IN_2	Input	0	0	
Fracture-A	12	+IN_2	Input	0	0	
Fracture-A	13	-VS	Undefined	0	0	
Fracture-A	14	+IN_3	Input	0	0	
Fracture-A	15	-IN_3	Input	0	0	
Fracture-A	16	OUTPUT_3	Output	0	0	

➢ **You can move the pin from the left (Blue) to either the right (Yellow), top (Red) or bottom (Green) side of the fracture.**

Fracture	Number	Name	Type	Swap	Bank	Seq.
Fracture-A	1	OUTPUT	Output	0	0	
Fracture-A	2	-IN	Input	0	0	
Fracture-A	3	+IN	Input	0	0	
Fracture-A	4	+VS	Undefined	0	0	
Fracture-A	5	+IN_1	Input	0	0	
Fracture-A	6	-IN_1	Input	0	0	
Fracture-A	7	OUTPUT_1	Output	0	0	
Fracture-A	8	NC	Undefined	0	0	
Fracture-A	9	NC_1	Undefined	0	0	
Fracture-A	10	OUTPUT_2	Output	0	0	
Fracture-A	11	-IN_2	Input	0	0	
Fracture-A	12	+IN_2	Input	0	0	
Fracture-A	13	-VS	Undefined	0	0	
Fracture-A	14	+IN_3	Input	0	0	
Fracture-A	15	-IN_3	Input	0	0	
Fracture-A	16	OUTPUT_3	Output	0	0	

To view the updated symbol select the "Symbol(s) Preview" tab and press update.
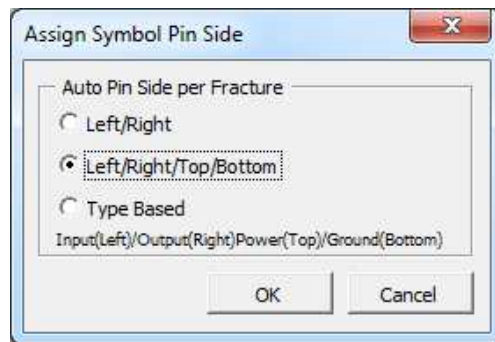
Arranging pins around a fracture automatically

Arranging pins around a fracture automatically takes less time and can be completed on large pin count devices in seconds. The EPW allows you to automatically position your pins to different sides in just a few clicks.
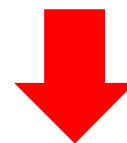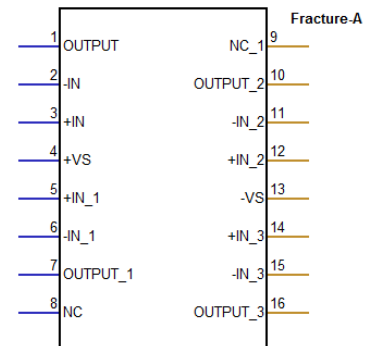
➢ **Click the 'Auto' button:**
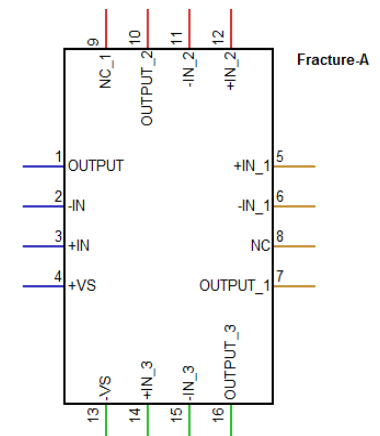
➢ **The box below should appear:**

➢ **This box allows you to select which side you want the pins to be positioned. Tick the second box "Left/Right/Top/Bottom" and hit OK.**

Fracture	Number	Name	Type	Swap	Bank	Seq.
Fracture-A	1	OUTPUT	Output	0	0	
Fracture-A	2	-IN	Input	0	0	
Fracture-A	3	+IN	Input	0	0	
Fracture-A	4	+VS	Undefined	0	0	
Fracture-A	5	+IN_1	Input	0	0	
Fracture-A	6	-IN_1	Input	0	0	
Fracture-A	7	OUTPUT_1	Output	0	0	
Fracture-A	8	NC	Undefined	0	0	
Fracture-A	9	NC_1	Undefined	0	0	
Fracture-A	10	OUTPUT_2	Output	0	0	
Fracture-A	11	-IN_2	Input	0	0	
Fracture-A	12	+IN_2	Input	0	0	
Fracture-A	13	-VS	Undefined	0	0	
Fracture-A	14	+IN_3	Input	0	0	
Fracture-A	15	-IN_3	Input	0	0	
Fracture-A	16	OUTPUT_3	Output	0	0	

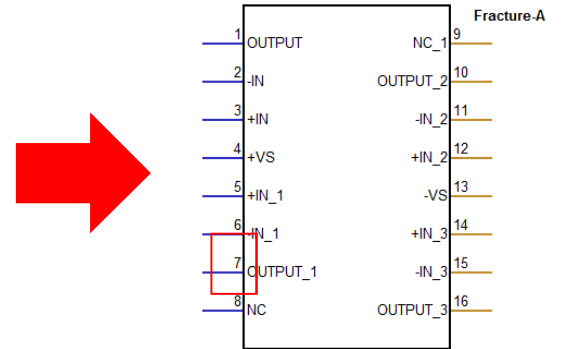| Fracture	Number	Name	Type	Swap	Bank	Seq.
Fracture-A	1	OUTPUT	Output	0	0	
Fracture-A	2	-IN	Input	0	0	
Fracture-A	3	+IN	Input	0	0	
Fracture-A	4	+VS	Undefined	0	0	
Fracture-A	5	+IN_1	Input	0	0	
Fracture-A	6	-IN_1	Input	0	0	
Fracture-A	8	NC	Undefined	0	0	
Fracture-A	7	OUTPUT_1	Output	0	0	
Fracture-A	9	NC_1	Undefined	0	0	
Fracture-A	10	OUTPUT_2	Output	0	0	
Fracture-A	11	-IN_2	Input	0	0	
Fracture-A	12	+IN_2	Input	0	0	
Fracture-A	13	-VS	Undefined	0	0	
Fracture-A	14	+IN_3	Input	0	0	
Fracture-A	15	-IN_3	Input	0	0	
Fracture-A	16	OUTPUT_3	Output	0	0	

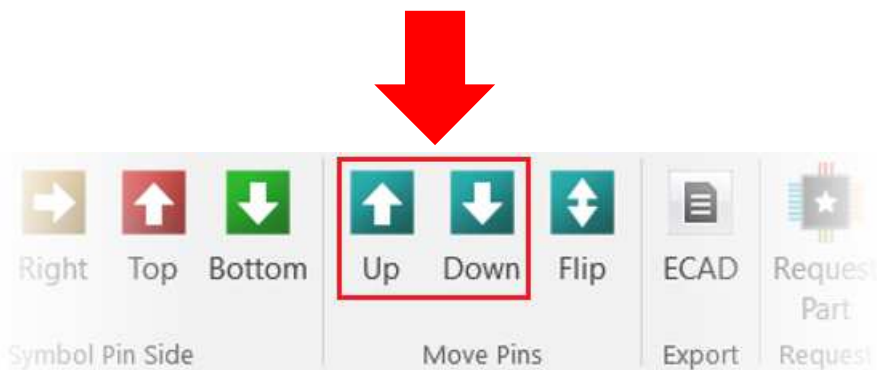# Manually moving pins to different locations on a Fracture

Moving pins to a different location on a fracture is similar to the last 2 steps but has a different outcome. If you want to move a pin from the bottom to the top of a side this is how you do it.

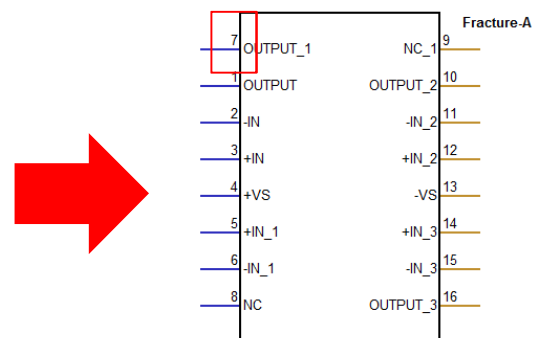➢ **First select what pin you want to move from the "Fracture column" on the Template page:**

➢ **Once selected, click on the 'Up' button until the pin is at the top of the table (fracture):**

Exporting models to your ECAD tool.

As EPW is linked with and supported by many of the top electronic companies around the world, it's easy to export your models to many electronic design software platforms such as, DesignSpark PCB, Mentor Graphics, Altium Designer, Cadence and Zuken CADSTAR.

➢ **Click on the 'ECAD' button:**
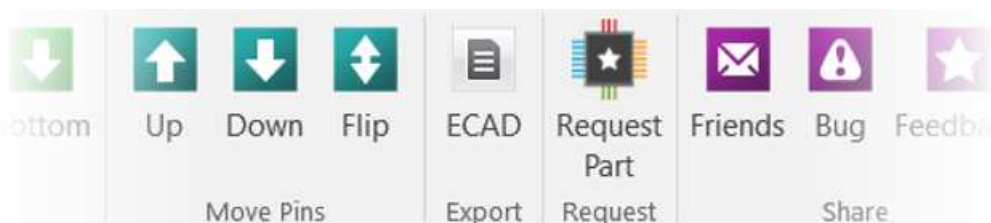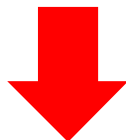
➢ **Clicking the 'ECAD' button will allow you to select the ECAD system you would like to export your schematic symbol and footprint to:**
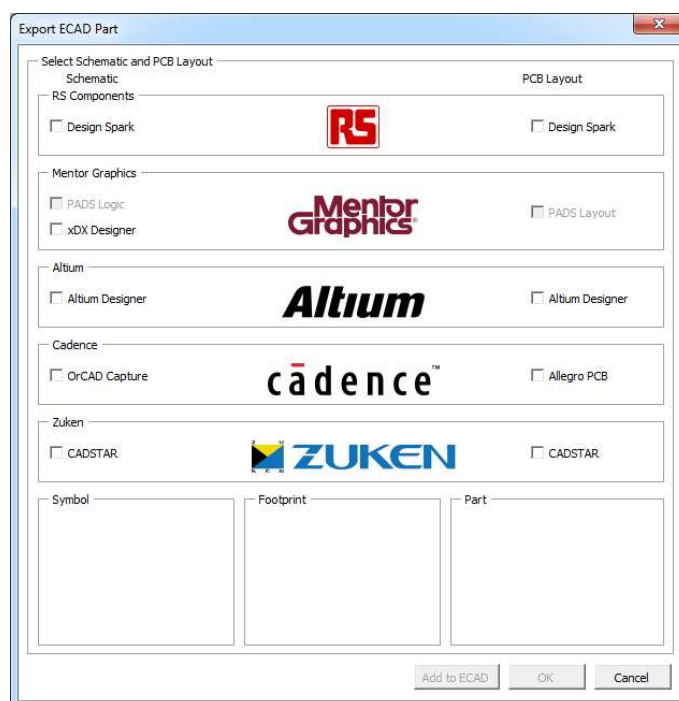
➢ **Visit http://www.samacsys.com/epw-ecad-exports/ to see import steps to the supported ECAD systems.**

If you liked EPW please tell your friends:

Requesting a Part

Another unique feature of the EPW is that you can request a part if it isn't already within the EPW database. The part will be created and checked as quickly as possible and you will be notified via email when it is ready for you.
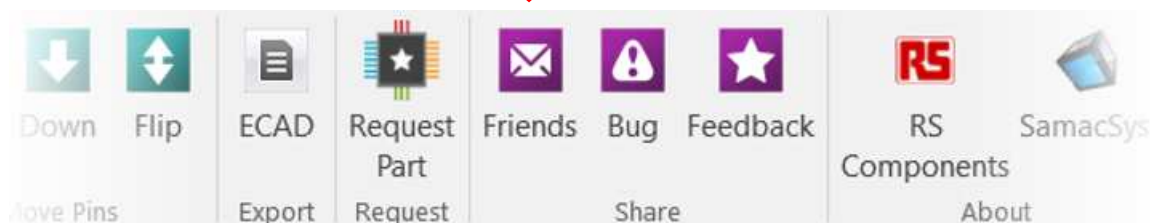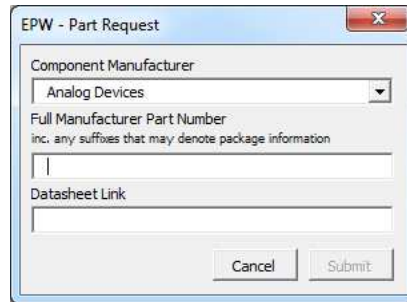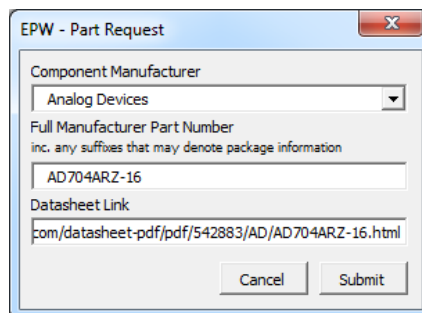
➢ **Click on the 'Request Part' button**:

➢ **Use the drop down box to find Analog Devices:**

EPW - Part Request

Component Manufacturer
Analog Devices

Full Manufacturer Part Number
inc. any suffixes that may denote package information

Datasheet Link

Cancel   Submit

➢ **Then enter the full part number for your part "AD704ARZ-16":**

EPW - Part Request

Component Manufacturer
Analog Devices

Full Manufacturer Part Number
inc. any suffixes that may denote package information
AD704ARZ-16

Datasheet Link

Cancel   Submit

➢ **The last box allows you to enter in the Datasheet Link:**

EPW - Part Request

Component Manufacturer
Analog Devices

Full Manufacturer Part Number
inc. any suffixes that may denote package information
AD704ARZ-16

Datasheet Link
com/datasheet-pdf/pdf/542883/AD/AD704ARZ-16.html

Cancel   Submit

Once you have entered in all of these details click 'Submit'. The part will be with you asap. Once you have been notified the part has ben created load it into the EPW as previously described.

Fracture	Number	Name	Type	Swap	Bank	Seq.
Fracture-A	1	OUTPUT	Output	0	0	
Fracture-A	2	-IN	Input	0	0	
Fracture-A	3	+IN	Input	0	0	
Fracture-A	4	+VS	Undefined	0	0	
Fracture-A	5	+IN_1	Input	0	0	
Fracture-A	6	-IN_1	Input	0	0	
Fracture-A	7	OUTPUT_1	Output	0	0	
Fracture-A	8	NC	Undefined	0	0	
Fracture-A	9	NC_1	Undefined	0	0	
Fracture-A	10	OUTPUT_2	Output	0	0	
Fracture-A	11	-IN_2	Input	0	0	
Fracture-A	12	+IN_2	Input	0	0	
Fracture-A	13	-VS	Undefined	0	0	
Fracture-A	14	+IN_3	Input	0	0	
Fracture-A	15	-IN_3	Input	0	0	
Fracture-A	16	OUTPUT_3	Output	0	0	

Fracture-A

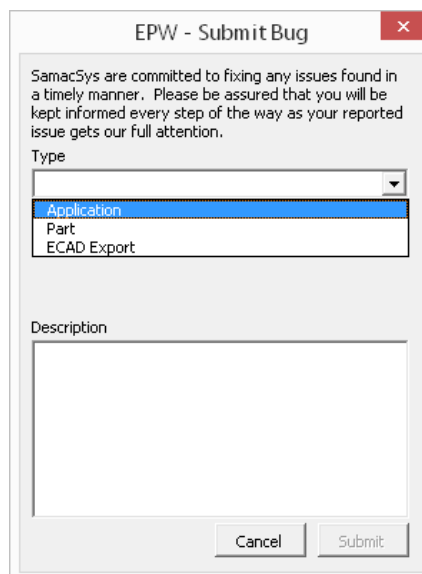|			
1	OUTPUT	OUTPUT_2	10
2	-IN	-VS	13
5	+IN_1	OUTPUT_3	16
6	-IN_1	OUTPUT_1	7
8	NC	-IN_2	11
12	+IN_2	+IN_3	14
3	+IN	+VS	4
9	NC_1	-IN_3	15

1   16

Reporting Issues

If you find any bugs or issues either with a particular model or the EPW application itself please don't hesitate to tell us. We are VERY serious about EPW being the best it can be and resolving issues receives the highest priority. Obviously we hope you don't find any!

➢ **Click on the 'Bug' button:**
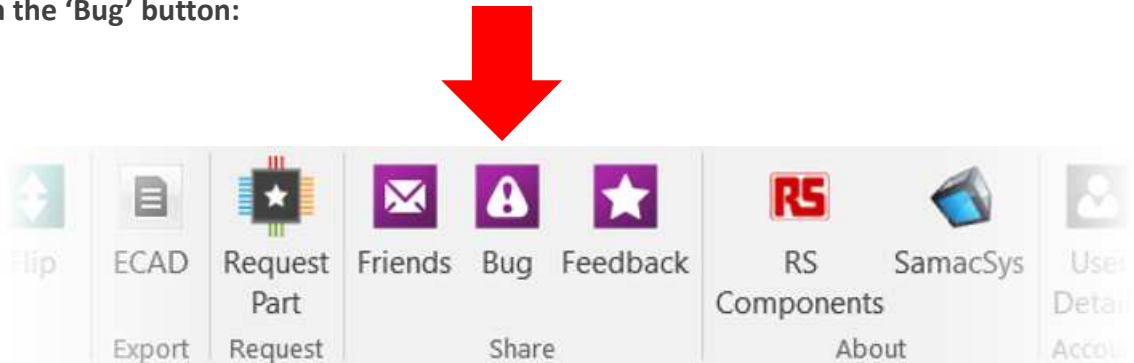
➢ **Once clicked, you can set what type of bug you find plus a description to help us replicate it:**

➢ **You will get emailed updates as your bug passes through our system.**