

◆ OrCAD Capture 切割大顆零件

當使用如 BGA 、FPGA 此種腳位數達數百支以上的大顆零件，若此顆零件未經分割為多個包裝而直接運用到圖紙中進行電路圖設計，可能導致連接電氣線時不方便或佔用過多圖紙空間。

如何快速將此類大顆零件分割為多個包裝形式零件，再依需求取用欲使用之包裝進行電路設計，請參考以下文件說明。

· **Date** : 2007/ 03 / 26

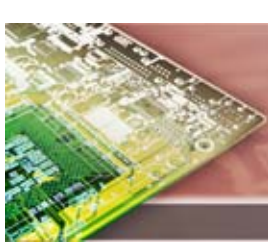
· **Author** : Stacy

· **Revision** : 1

· **Version** : 10.3 ,10.5 ,15.7

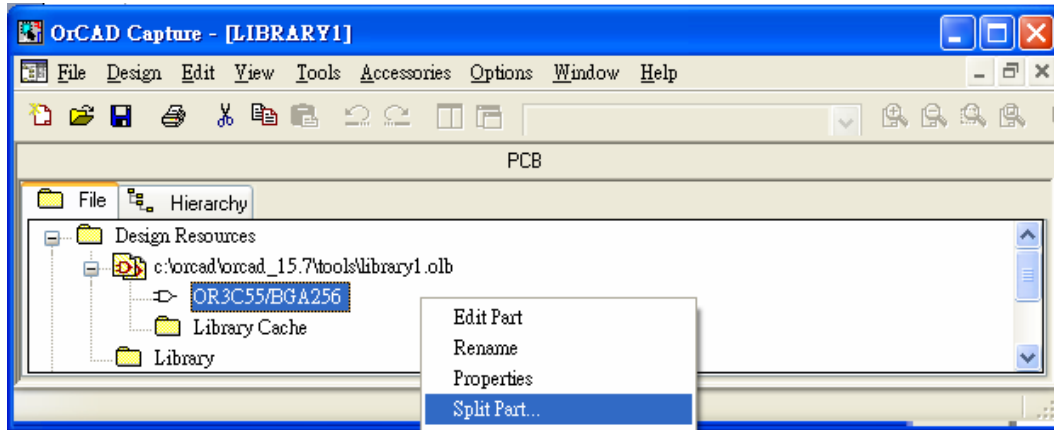
· **備註**:

Graser[®] <http://www.graser.com.tw>

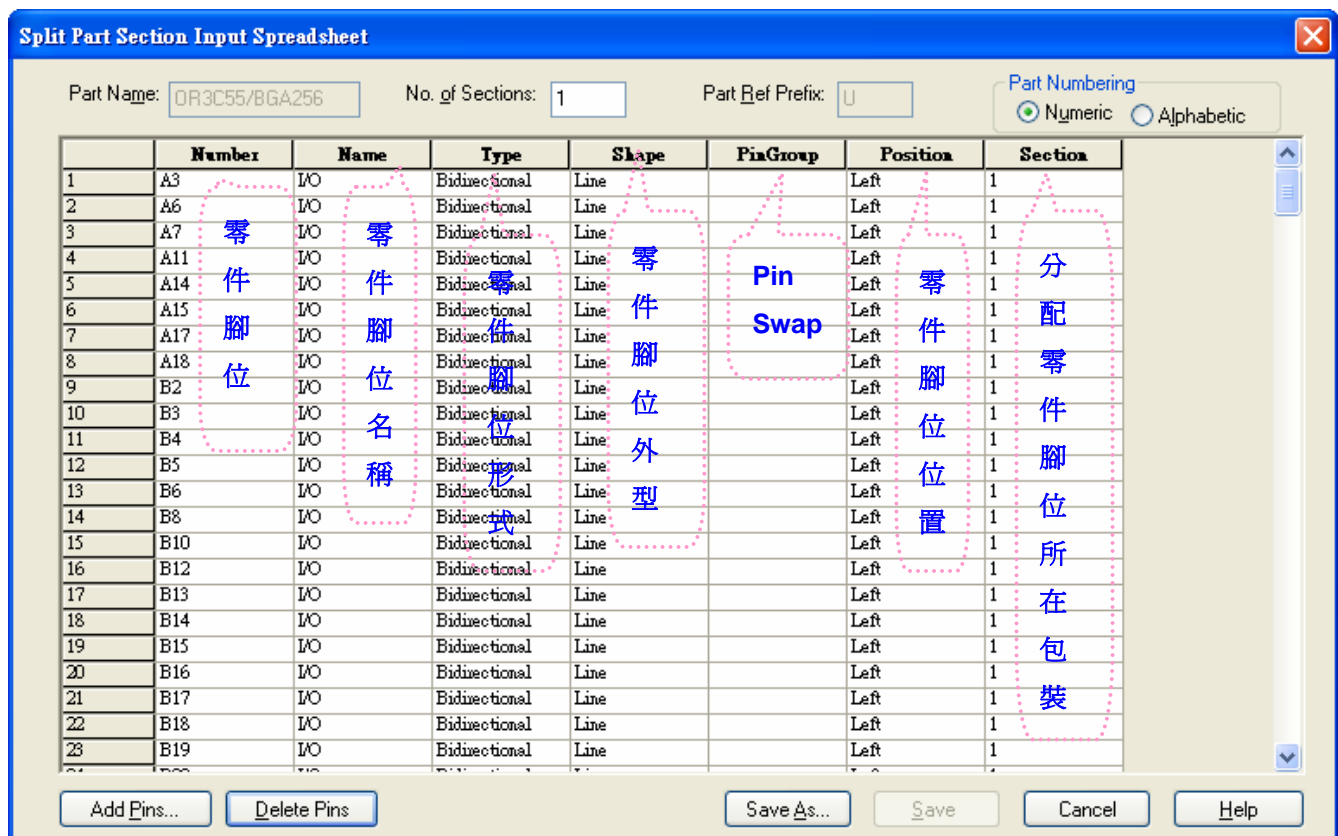


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一、開啓儲存此顆欲修改編輯零件之零件庫後，點選此顆零件 >> 滑鼠右鍵 >> Split part :



Split part 之表格視窗：



No. of section : 零件分割之總包裝數

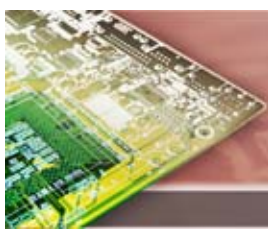
Part Numbering : 零件包裝序號顯示方式 Numeric : 以數字排序 Alphabetic : 以英文字母排序

Add Pins : 增加 PIN 數

Delete PINs : 刪除 PIN

Save As : 另存新檔

Save : 儲存修改



二、於 No. of section 中填入欲分割的總包裝數及修改 PIN 屬性後，在 section 中選擇欲分配 PIN 所在包裝：

Split Part Section Input Spreadsheet

Part Name: No. of Sections: Part Ref Prefix: Part Numbering: Numeric Alphabetic

	Number	Name	Type	Shape	PinGroup	Position	Section
217	W1	IOSECKLL	Bidirectional	Line		Right	B
218	A19	IOSECKUR	Bidirectional	Line		Right	B
219	A2	IOVCK	Bidirectional	Clock		Right	B
220	A5	IOVTDI	Bidirectional	Line		Right	B
221	A4	IOVTMS	Bidirectional	Line		Right	B
222	D19	IOVWRA	Bidirectional	Line		Right	B
223	C3	RDDATA/TDO	Output	Line		Right	B
224	Y1	CCLK	Bidirectional	Clock		Right	B
225	W11	ECLKB	Bidirectional	Clock		Right	B
226	K3	ECLKL	Bidirectional	Clock		Right	B
227	K18	ECLKR	Bidirectional	Clock		Right	B
228	B11	ECLKT	Bidirectional	Clock		Right	B
229	Y20	DONE	Bidirectional	Line		Right	B
230	B1	VCC	Power	Short		Top	C
231	D6	VCC	Power	Short		Top	C
232	D11	VCC	Power	Short		Top	C
233	D15	VCC	Power	Short		Top	C
234	F4	VCC	Power	Short		Top	C
235	F17	VCC	Power	Short		Top	C
236	K4	VCC	Power	Short		Top	C
237	L17	VCC	Power	Short		Top	C
238	R4	VCC	Power	Short		Top	C
239	R17	VCC	Power	Short		Top	C

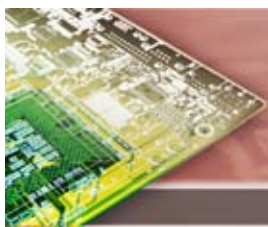
Add Pins... Delete Pins Save As... Save Cancel Help

三、修改完畢後，儲存零件時可選擇 SAVE AS 另存零件名稱，則可保存原始未修改之零件：

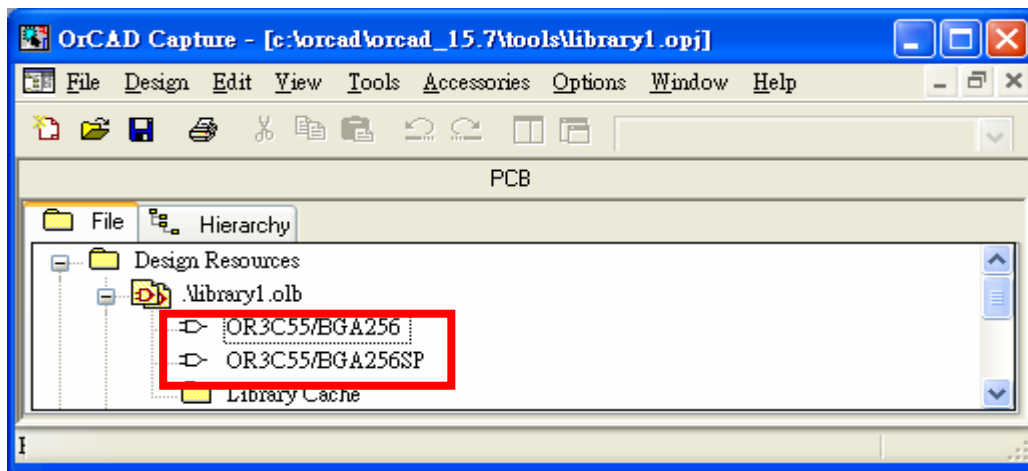
New Part Name

Enter Part Name

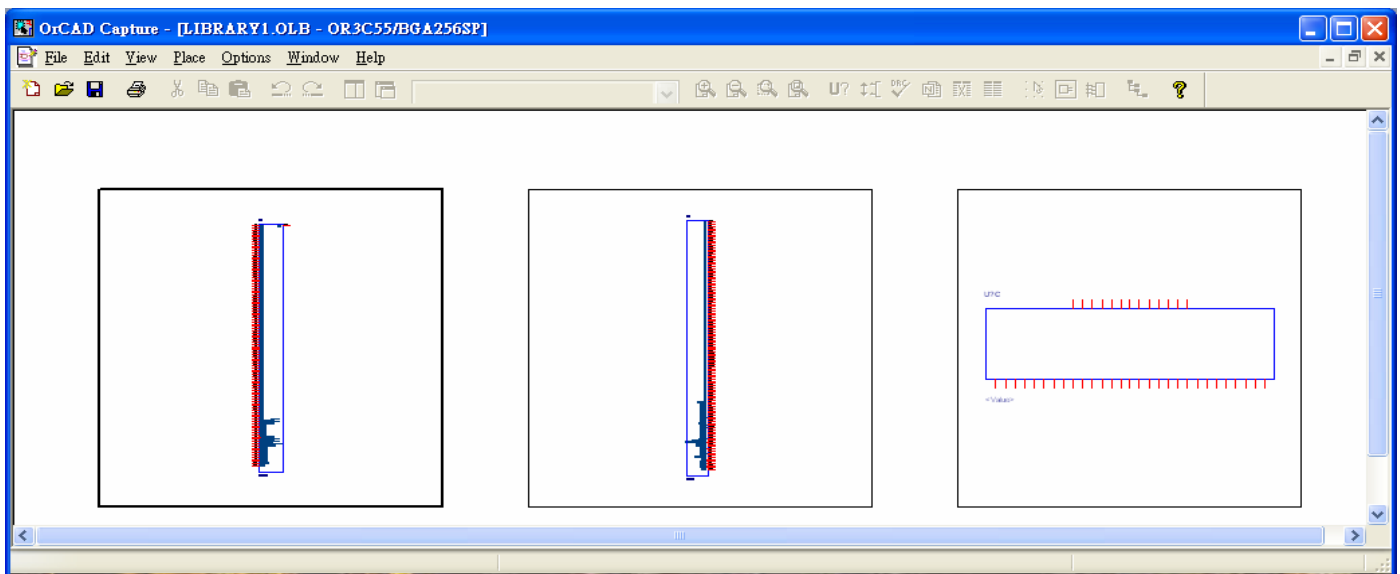
OK Cancel

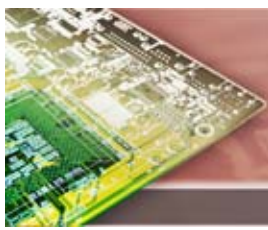


四、此類分割零件儲存位置同於原始零件之零件庫中：



五、觀看零件編輯視窗，零件已分割同如表格中編輯：

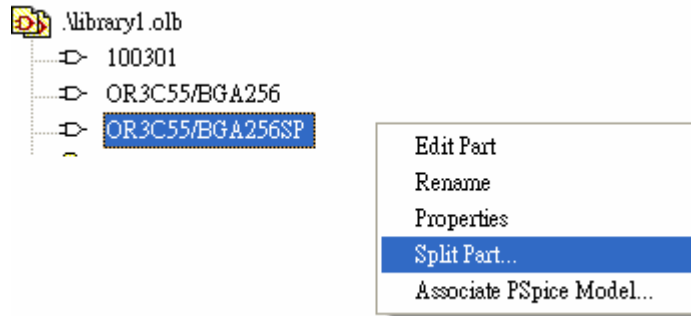




分割零件應用

凡利用 Spreadsheet 建立之零件及使用 Create Part 其 Part per pkg 為 1 之零件，都可使用分類零件功能。

【A】如下圖示，OR3C55/BGA256SP 在 Spreadsheet 中已利用 Split part 分割為三個包裝的新零件，此時亦可再利用 Split part 功能建立一新零件：



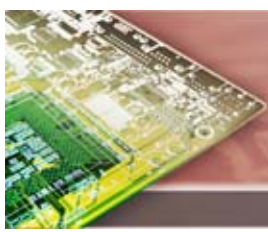
在 No. of section 中填入新欲分割的數值，再修改 PIN 屬性後，於 section 中選擇欲分配 PIN 所在包裝，選擇 SAVE AS 則為另一顆新零件：

Split Part Section Input Spreadsheet

Part Name: OR3C55/BGA256SP No. of Sections: 3 Part Ref Prefix: U Part Numbering: Numeric Alphabetic

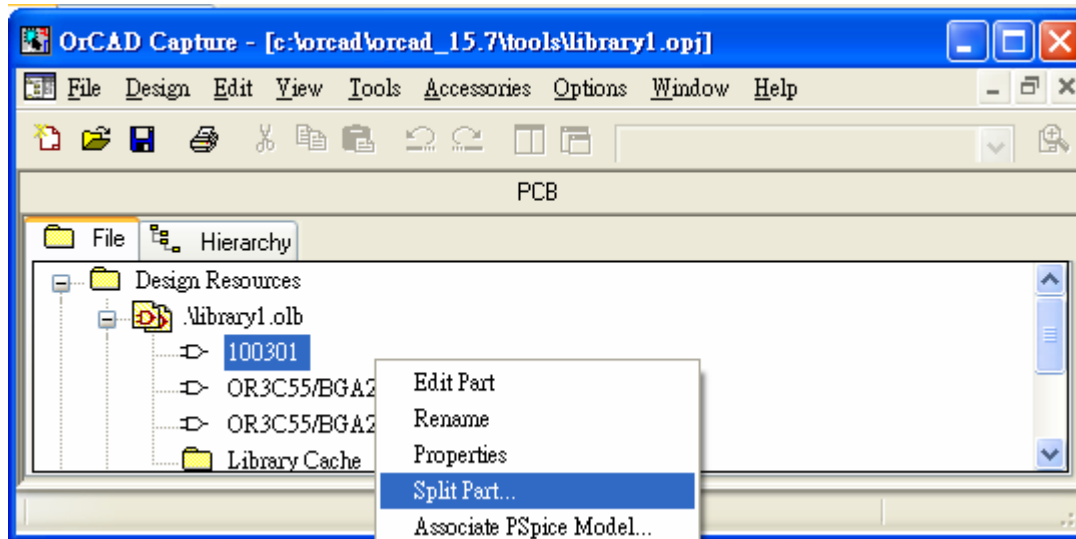
	Number	Name	Type	Shape	PinGroup	Position	Section
1	A3	I/O	Bidirectional	Line		Left	A
2	A6	I/O	Bidirectional	Line		Left	A
3	A7	I/O	Bidirectional	Line		Left	A
4	A11	I/O	Bidirectional	Line		Left	A
5	A14	I/O	Bidirectional	Line		Left	A
6	A15	I/O	Bidirectional	Line		Left	A
7	A17	I/O	Bidirectional	Line		Left	A
8	A18	I/O	Bidirectional	Line		Left	A
9	B2	I/O	Bidirectional	Line		Left	A
10	B3	I/O	Bidirectional	Line		Left	A
11	B4	I/O	Bidirectional	Line		Left	A
12	B5	I/O	Bidirectional	Line		Left	A
13	B6	I/O	Bidirectional	Line		Left	A
14	B8	I/O	Bidirectional	Line		Left	A
15	B10	I/O	Bidirectional	Line		Left	A
16	B12	I/O	Bidirectional	Line		Left	A
17	B13	I/O	Bidirectional	Line		Left	A
18	B14	I/O	Bidirectional	Line		Left	A
19	B15	I/O	Bidirectional	Line		Left	A
20	B16	I/O	Bidirectional	Line		Left	A
21	B17	I/O	Bidirectional	Line		Left	A
22	B18	I/O	Bidirectional	Line		Left	A
23	B19	I/O	Bidirectional	Line		Left	A

Add Pins... Delete Pins Save As... Save Cancel Help



【B】而使用 Create Part 其 Part per pkg 不為 1 之零件，代表此顆零件已做過分割為複合式包裝零件，則不需再做分割零件動作。

如下圖示，100301 為使用 Create Part 建立之複合式零件，欲進行分割零件功能：



出現以下提示視窗，提示此顆零件已為一顆三個包裝之複合式零件，不可進行分割功能：

