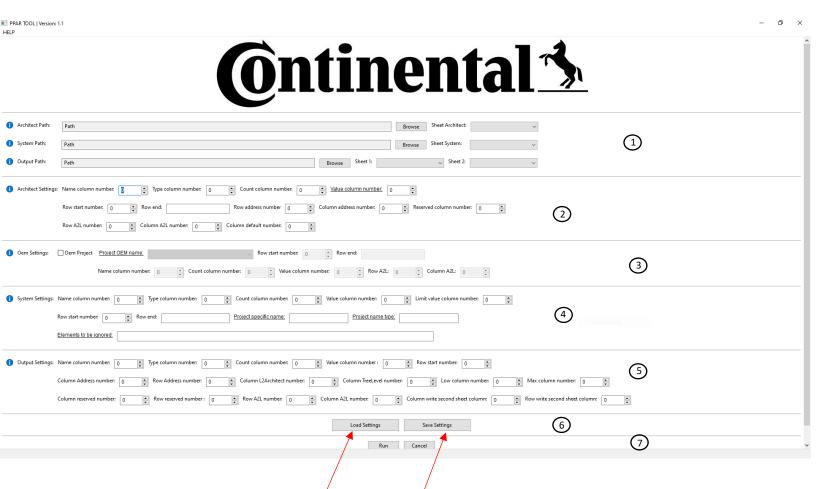
Why the **PPAR Generator Tool** exists?

To generate PPAR .mot and .a2l files for one project a manual fill in of data needs to be made from 2 Excels files provided by architect and system responsible. This manual process is obviously prone to human errors that will impact production parameters generation.

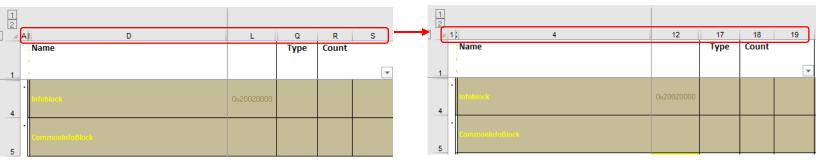
The purpose of this tool is that automatically analysis the types, size, values of each parameters from both Excels. The not matching information is signaled. The tool is correctly merging the 2 system and architecture files into another Excel that is used to generate the .mot and .a2l files.



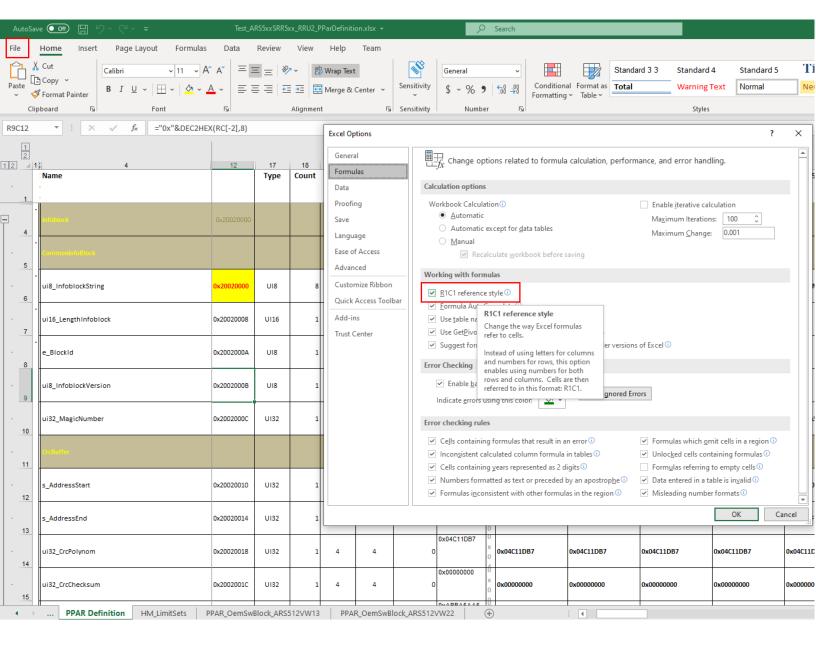
As we can see, the interface is a large interface with loads of inputs needed for that Tool to work properly, fortunate, the **Load Settings** and the **Save Settings** buttons are there to solve this problem. Most inputs will be the same from one project to another, but there needs to be all the inputs on the GUI to accomplish importance of the Future Proof.

Pressing the Load Settings button will send the user to select a .txt file with all the data needed for section (2) to (5). Pressing the Save Settings button will send the user to enter the name of the .txt file with all the data from the currently interface from section (2) to (5).

You will need to set **R1C1 reference style** in the excels to help you easily see the number of columns instead of letters.



File -> Options -> Formulas -> R1C1 reference style





Every single static text from the GUI has more information about the selected parameter. If the user hovers the text, information will appear and its very helpful, the user doesn't need to search the documentation for only one parameter.

0	Architect Settings: Name column number: 4 Type column number: 17 Count column number: 18 Value column number: 27
	Row start number: 4 Row end: PPAR_SECTION_END Row address number 4 Column address number: 10 Reserved column number: 20 This is a special column used only for the reserved values because sometimes the reserved value doesn't have name, type, count or value. When a number is in this column the program is creating automatically the reserved parameter.
0	Oem Settings: Oem Project Project OEM name: PPAR_OemSw8lock_ARS512VW13 Row start number: 3 Row end: a_Reserved In generally this column is the right side of the total size from Architect excel.
0	Architect Settings: Name column number: 4 Type column number: 17 Count column number: 18 Value column number: 27 Type column number: 27 Type column number: 18 Type column number: 19 T
	Row start number: 4 Row end: PPAR_SECTION_END Row address number 4 Column address number: 10 Reserved column number: 20
	Row A2L number: 6 Column A2L number: 9 Column default number: 23
0	Oem Settings: Oem Project Project OEM name: PPAR_OemSwBlock_ARS512VW13 Set the column number where the program will read the default numbers If the value from the selected project is None, the program will take this value instead.
	Name column number: 2 Count column number: 10 Value column number: 15 Row A2L: 3 Column A2L: 4



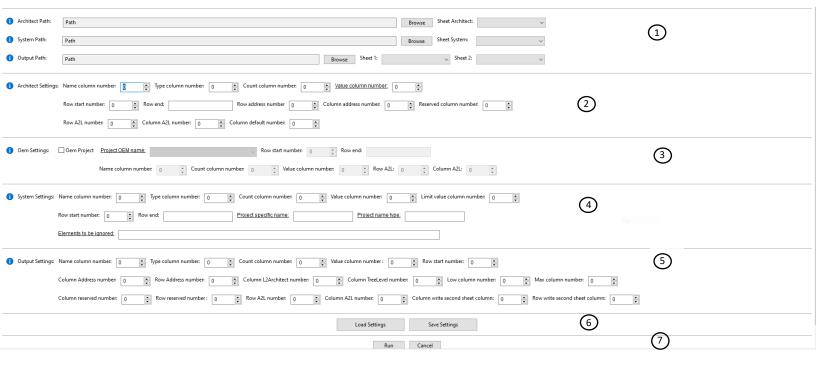
Some text is <u>underlined</u> in the interface, these values need to be updated from one project to another. These values are very important to be verified before the start of the program and double checked!

How to use the PPAR Generator Tool?

The user interface is fragmented in separately sections:

- 1. Path section.
- 2. Architect Settings.
- 3. OEM Settings.
- 4. System Settings.
- 5. Output Settings.
- 6. Load and Save Settings Buttons.
- 7. Run and Cancel Buttons.

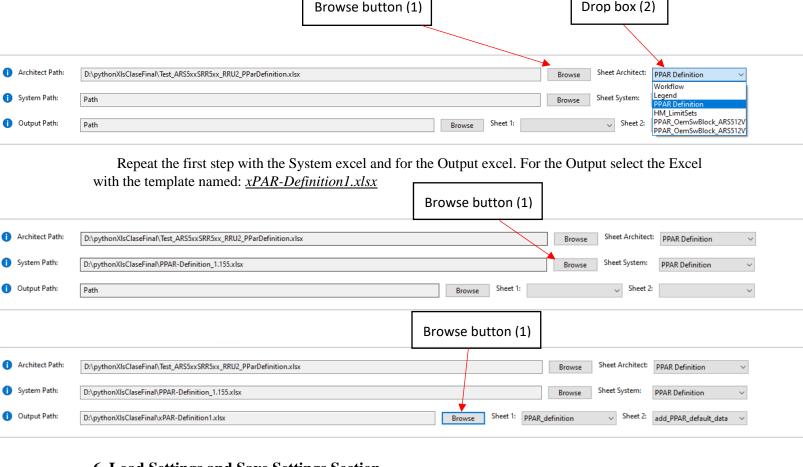
Let's take every section individually and explain what these means for the user.



1. Path section.

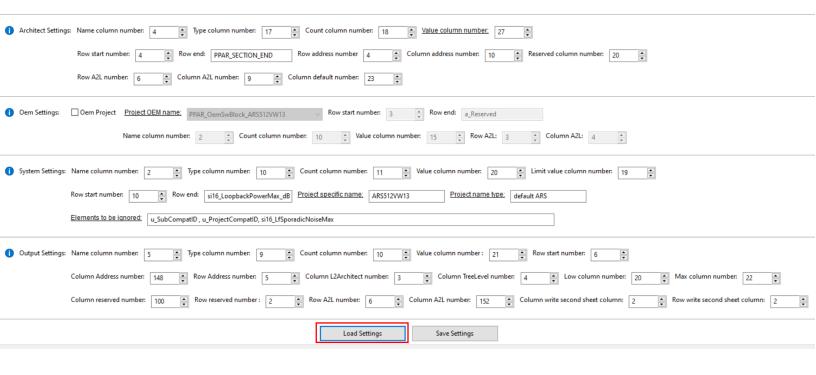


Firstly, we need to select the Architect excel by pressing the *Browse* button (1). This excel can be anywhere in your personal computer, the Tool will work with the path given. The sheet that the program needs to read data is selected automatically, but the user can choose different sheet if needed from the *drop box* (2). The content of the drop box loads after the Architect excel is loaded.

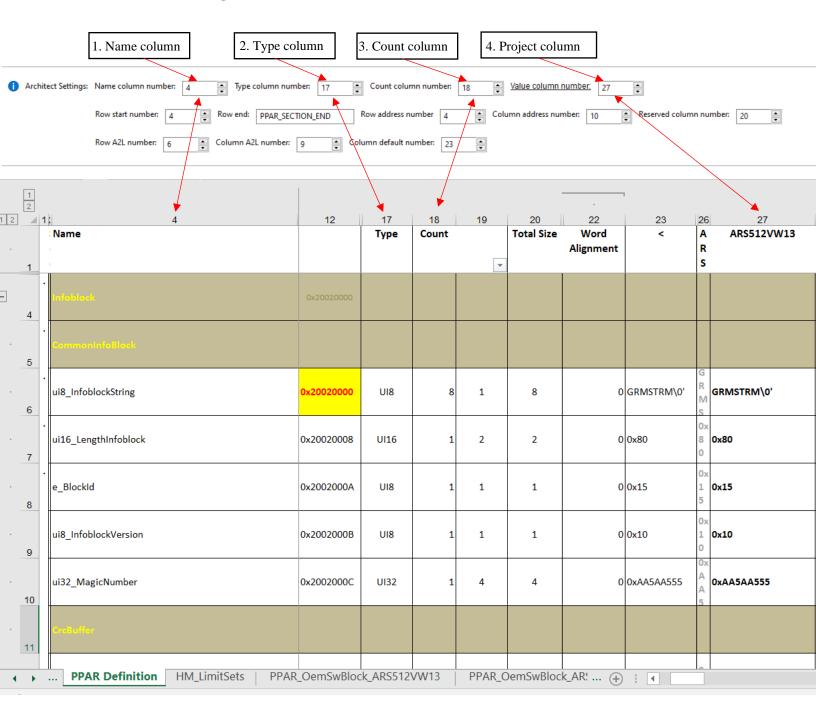


6. Load Settings and Save Settings Section

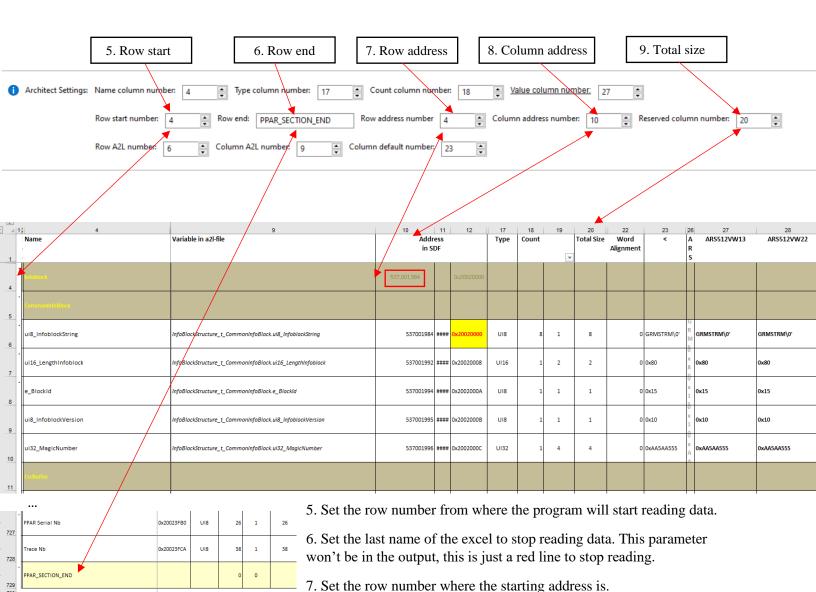
To save time and to understand the sections (2) - (5) let's load one .txt file <u>RRUR_ars512VW13.txt</u> by pressing the Load Settings Button. This .txt file has all the interface inputs for the project <u>ARS512VW1</u>.



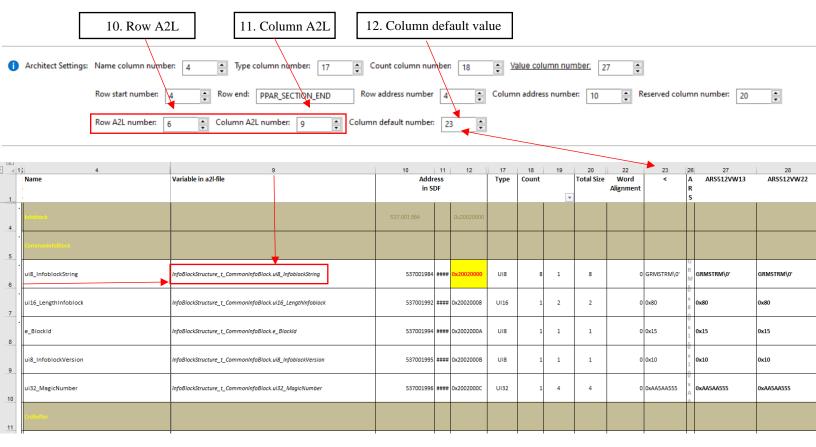
2. Architect Settings Section



- 1. Set the column number from where the program will read names of the parameters.
- 2. Set the column number from where the program will read type of the parameters.
- 3. Set the column number from where the program will read count of the parameters.
- 4. *Set the column number from where the program will read values of the parameters of the wanted project. Depending on the wanted project, this column number will need to be set manually. The column number 27 is corresponding to the project ARS512VW13!



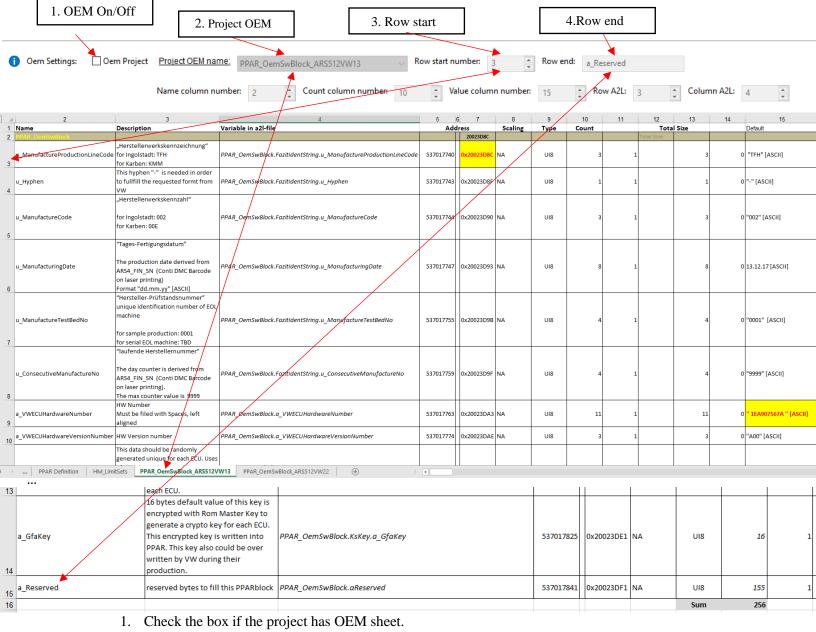
- 8. Set the column number where the starting address is, in decimal.
- 9. Set the column number from where the program will read how much of the memory occupy by the parameter. This number is calculated by the formula *Count* * *bytes*.



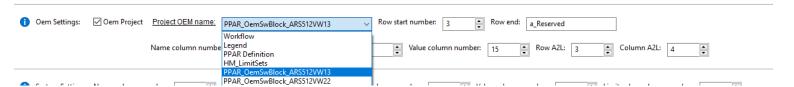
- 10. Set the row number where the first a2l value is.
- 11. Set the column number where a2l values are.
- 12. Set the column number where are the default values. If a parameter doesn't have written a value in the selected project, the value will be set from this column. Example:

	4	9	10	11	12	17	18	19	20	22	23	26	27
	Name	Variable in a2l-file	Addre	Address			Count		Total Size	Word	<	Α	ARS512VW13
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1	Control of the Contro							~				S	
	HM_Country_Selector	PPAR_Homologation.HM_CountrySelector	537004016	####	0x200207F0	UI8	1	1	1	1	OxFFFF	Н	→
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	align1	PPAR_Homologation.align1	537004017	####	0x200207F1	UI8	3	1	3	0	0xFFFF		
106													
	HM_allowCOM	PPAR_Homologation.HM_AllowCOM	537004020	####	0x200207F4	UI32	1	4	4	0	Oxffff 4		-
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3. OEM Settings Section

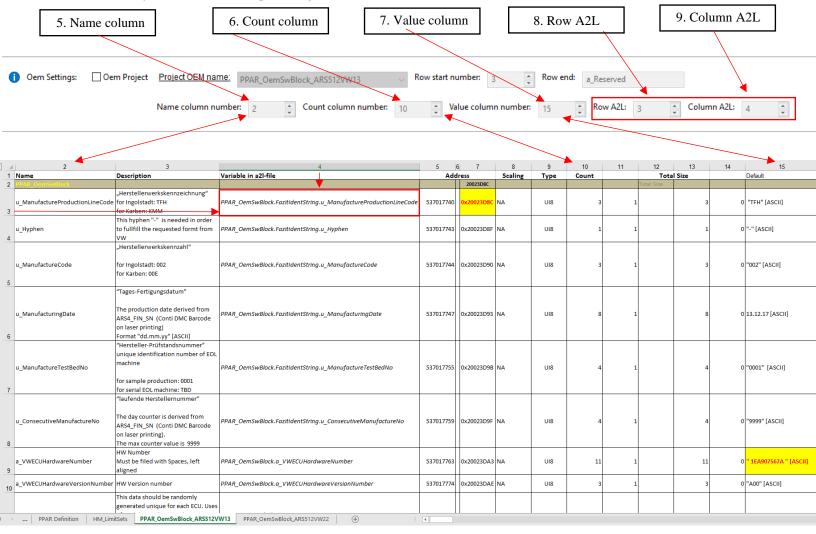


2. *Select the OEM project from drop box. This filed is important and will be different from one project to another.



3. Set the row number from where the program will start reading data

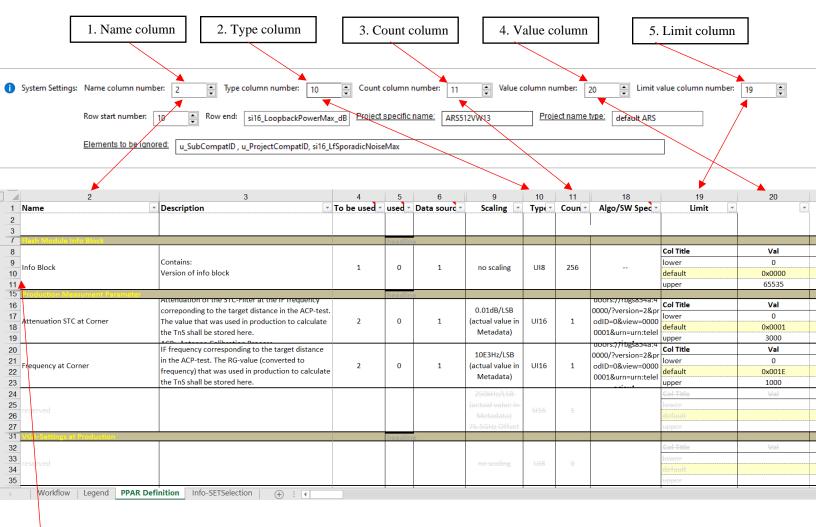
4. Set the last name of the excel to stop reading data. This parameter won't be in the output, this is just a red line to stop reading.



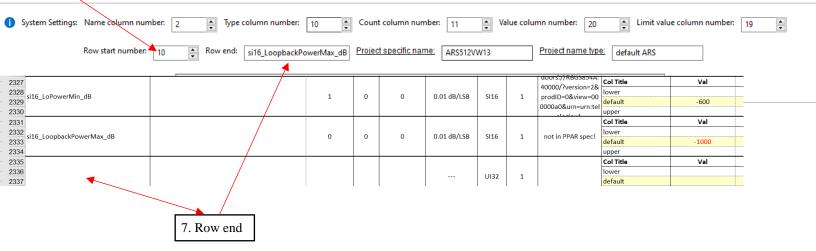
- 5. Set the column number from where the program will read names of the parameters.
- 6. Set the column number from where the program will read count of the parameters.
- 7. Set the column number from where the program will read values of the parameters.
- 8. Set the row number where the first a2l value is.
- 9. Set the column number where a2l values are.

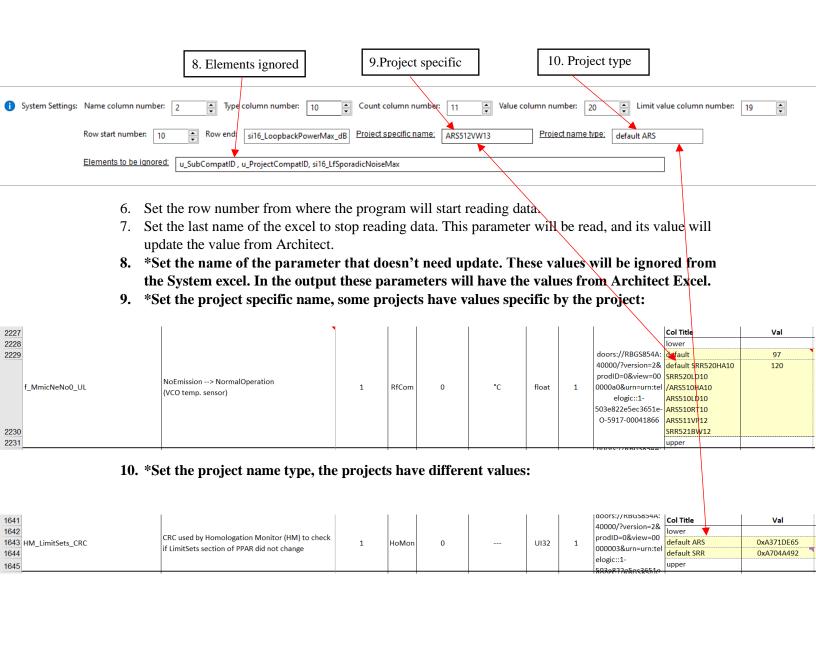
4. System Settings Section

6. Row start

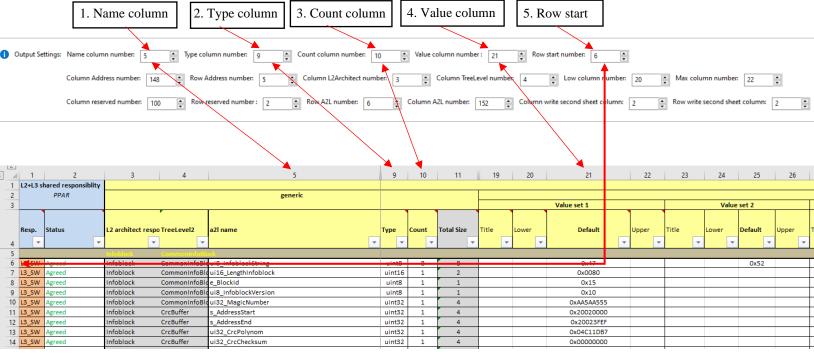


- 1. Set the column number from where the program will read names of the parameters.
- 2. Set the column number from where the program will read type of the parameters.
- 3. Set the column number from where the program will read count of the parameters.
- 4. Set the column number from where the program will read values of the parameters.
- 5. Set the column number from where the program will read limits of the parameters.

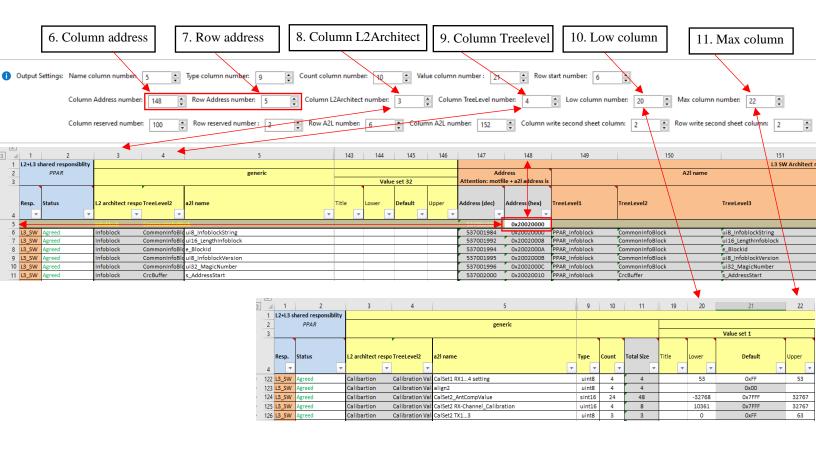




5. Output Section



- 1. Set the column number where the program will write names of the parameters.
- 2. Set the column number where the program will write type of the parameters.
- 3. Set the column number where the program will write count of the parameters.
- 4. Set the column number where the program will write count of the parameters.
- 5. Set the row number from where the program will start writing data.



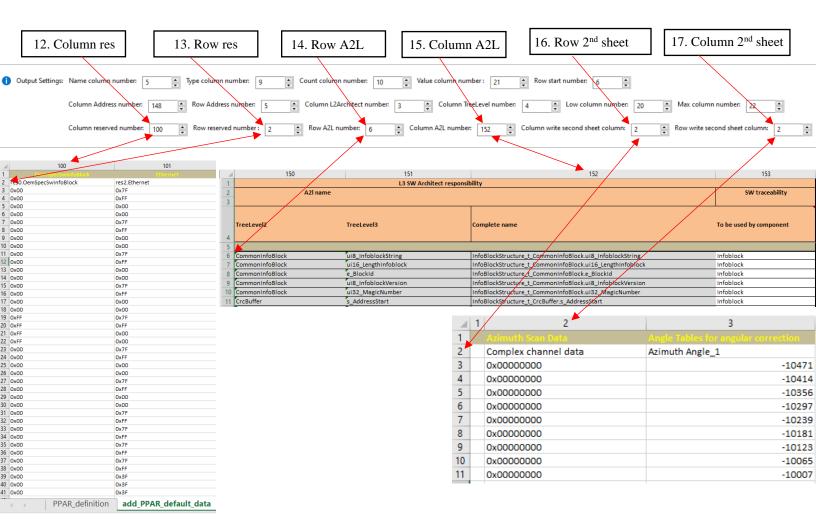
- 6. Set the column number where the program will write the first address.
- 7. Set the row number where the program will write the first address.
- 8. Set the column number where the program will write the section name. One section contains more subsections, this helps when the user is searching for parameters from one section/subsection.
- 9. Set the column number where the program will write the subblocks name.

	1 2			3	4		5	143	43 144		5 146	147	148	14	9	150	151			
		L2+L3 shared responsiblity PPAR															L3 SW Architect r			
2							generic						Address			A2l name				
3									Value set 3			Attention: m	otfile + a2l addres	s is						
			1																	
	Recn	Status	- 1.	2 architect r	respo TreeLevel2	a2l name		Title	Lower	Defaul	t Upper	Address (dec)	Address (hex)	TreeLevel1	TreeLe	vel2		TreeLevel3		
		_		z architect i			_			Delaul			Address (flex)	Heereveit	liteete	VEIZ		TreeLevels		
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6	L3_SW	Agreed	Ţ	nfoblock	Commoninfo	Blc ui8_InfoblockString	3					537001984	1 0x2002000			onInfoBlock		ui8_InfoblockString		
		Agreed	Ir	nfoblock	Commoninfo	Blc ui16_LengthInfoblo	ck					537001992	0x2002000			onInfoBlock		ui16_LengthInfoblock		
		Agreed	Ir	nfoblock	Commoninfo	Blc e_BlockId						537001994	1 0x2002000	A PPAR_Infoblo		onInfoBlock		e_BlockId		
9	L3_SW	Agreed	Ir	nfoblock	Commoninfo	Blc ui8_InfoblockVersi	on					537001995	0x2002000	B PPAR_Infoblo	ock Comm	onInfoBlock		ui8_InfoblockVersion		
1	L3_SW	Agreed	Ir	nfoblock	Commoninfo	Blc ui32_MagicNumber	r					537001996	5 0x2002000	C PPAR_Infoblo	ock Comm	onInfoBlock		ui32_MagicNumber		
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10. Set the column number where the program will write the lower limit of the parameter. The program is reading this parameter from the System Excel. The values are written in decimal.

11. Set the column number where the program will write the upper limit of the parameter. The program is reading this parameter from the System Excel. The values are written in decimal.

	3	-4	- 1		2	3	4			5			9	10	11	19	20	2	21	22	2
	1 L2+L3 shared responsiblity				ponsiblity																
		2		PPAR																	
		3																			
	Resp. Status					L2 architect res	ame 1					Count	Total Size	Title	Lower	Default		Upper	г		
		4	-		-		· -					-	-	-	~	-				~	~
	- 122 L3_SW Agreed Calibartion Calibration Val CalSet1 RX14 setting									uint8	4	4		53	0)	FF	53	3			
		123	L3_SW	Agreed		Calibartion	Calibration Val	align2					uint8	4	4		_	Ox.	00		
		124	L3_SW	Agreed		Calibartion	Calibration Val	CalSet2	_AntCompValue				sint16	24	48		-32768	0x7	FFF	327	67
		125	L3_SW	Agreed		Calibartion	Calibration Val	CalSet2	RX-Channel_Cal	libration	ı		uint16	4	8		10361	Qx7	FFF	327	67
	· 126 L3_SW Agreed Calibartion Calibration Val CalSet2 TX13								uint8	3	3		0	0)	TE	63	3				
						VGA gain of RX channels. Standard definition: all RX have the same gain 1 ,RHC 1										0000/?vers	g\$854a:4 ion=2≺	Col Title lower		RX1	
Set1 RV1 4 setting					Standard de						no s	caling	UI8	1	odID=0&vi 0001&urn=		default		0xFf		
																ogic	- 1	upper		0x35	5



- 12. Set the column number where the program will start writing the reserved space with values bigger than 32 bytes. All reserved values bigger than 32 bytes are written in the second sheet called "add_PPAR_default_data", these values are written after column 100.
- 13. Set the row number from where the program will start writing values of the reserved space bigger than 32 bytes.
- 14. Set the row number from where the program will start writing A2L names.
- 15. Set the column number where the program will write A2L names.
- 16. Set the row number from where the program will start writing parameters with values bigger than 32 bytes.
- 17. Set the column number where the program will start writing the parameters with values bigger than 32 bytes. All values bigger than 32 bytes are written in the second sheet called "add_PPAR_default_data", these values are written after column 2.

7. Run and Cancel buttons Section

After filling up all the interface, press the Run button and wait for the program to finish execution. If an error occurs during this time, the full description of the error will be written in the log file and the user will have a friendly message description.

PPAR TOOL Version: 1.1	
ELP	
Row start number: 4 Row end: PPAR_SECTION_END Row address number 4 Column address number: 10 Reserved column number: 20 Row A2L number: 6 Column A2L number: 9 Column default number: 23 Column A2L number: 9 Column default number: 23 Column A2L number: 23 Column A2L number: 24 Column A2L number: 25 Column A2L number: 25 Column A2L number: 26 Column A2L number: 27 Column A2L number: 28 Column A2L number: 28 Column A2L number: 29 Column A2L	
Oem Settings: Oem Project Project OEM name: ppar OemSwBlock ARS512VW13 Row start number: 3 Row end: a_Reserved Name column number: 2 Count column number: 15 Row A2L: 2 Column A2L: 4 Progress PPAR Tool	
System Settings: Name column number: 2 Type column number: 10 Count Row start number: 10 Row end: si16_LoopbackPowerMax_dB Project Elements to be ignored: u_SubCompatID, u_ProjectCompatID, si16_LfSporadicNois Elapsed time: 0:00:13 Estimated time: 0:00:00	
Output Settings: Name column number: 5 Type column number: 9 Count column number: 10 Value column number: 21 Row start number: 6 Column Address number: 148 Row Address number: 5 Column L2Architect number: 3 Column TreeLevel number: 4 Low column number: 20 Max column number: 22 Column reserved number: 100 Row reserved number: 2 Row A2L number: 6 Column A2L number: 152 Column write second sheet column: 2 Row write second sheet column: 3 Row write second sheet column: 4 Row write second sheet	
Load Settings Save Settings	
Run Cancel	