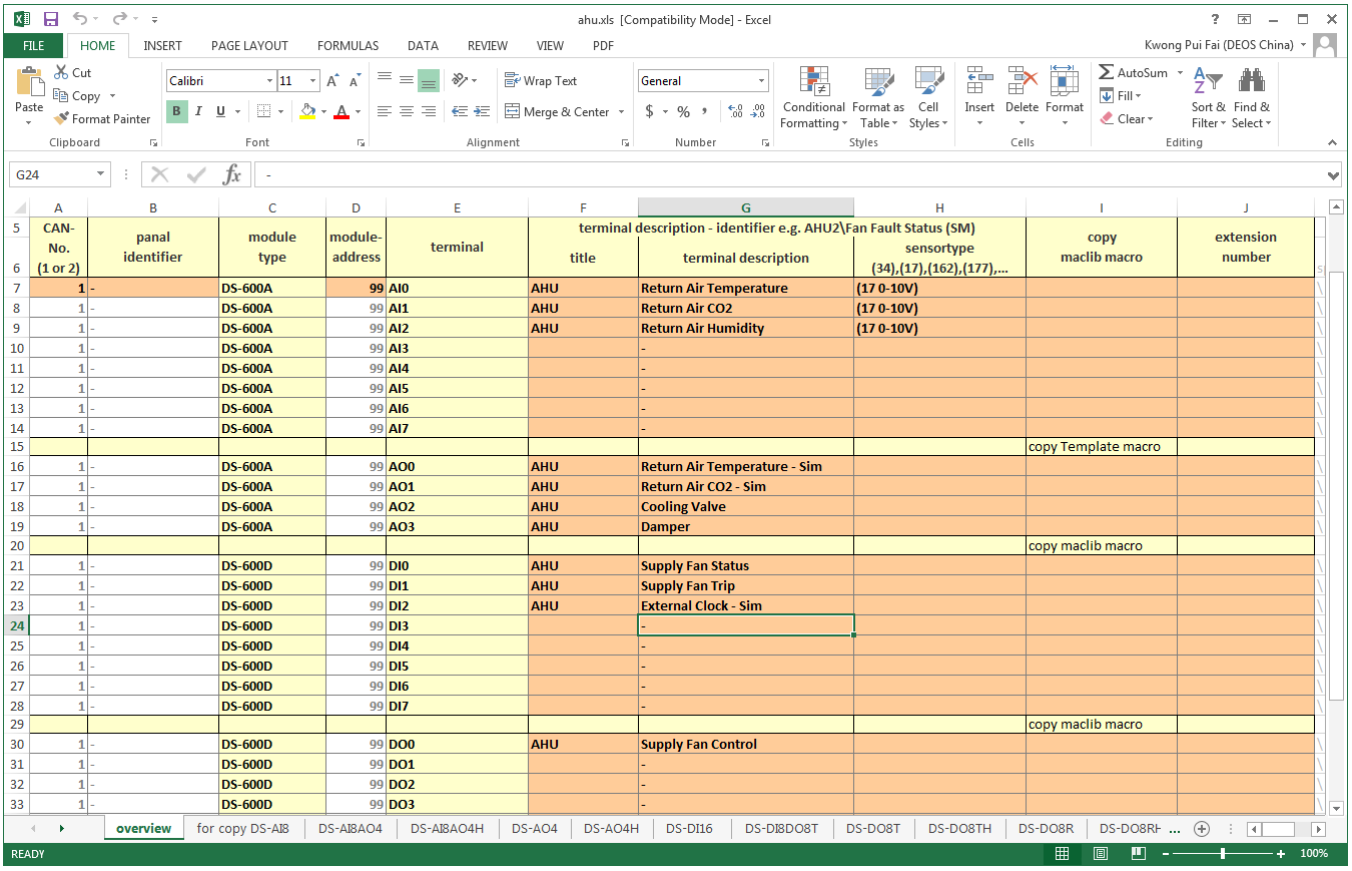
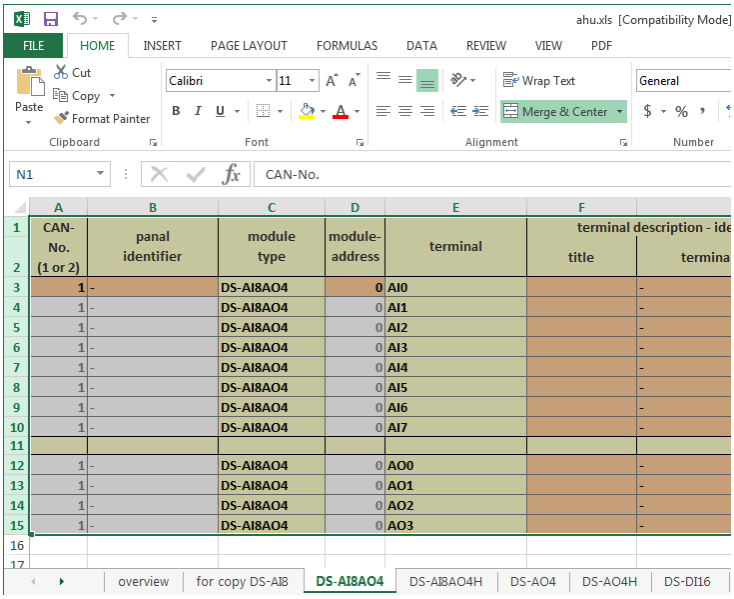
TT180801 - FUP - Create IO Points

1. We can use MS Excel to create the IO points and then import it into FUP. It is the most efficient way to create IO points for your controller. You can also manually select the IO modules macro in FUP to create the IO points
2. You can use the ahu.xls file from the training, as an example. In this example, we've already added the IO modules for the OPEN 600. You can use the "title" and/or "terminal description" as the point name (like below). For AI points, you need to select the sensor type, e.g. 0-10V, PT1000, etc.



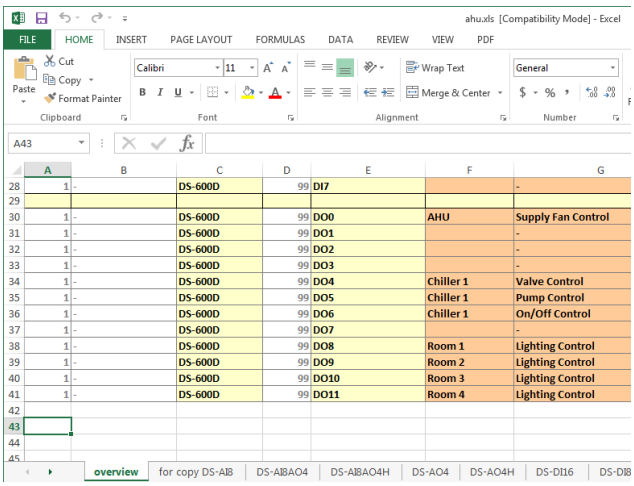
CAN-No. (1 or 2)	panal identifier	module type	module-address	terminal	terminal description - identifier e.g. AHU2\Fan Fault Status (SM) title	terminal description	sensortype (34),(17),(162),(177),...	copy maclib macro	extension number
1	-	DS-600A	99	AI0	AHU	Return Air Temperature	(17 0-10V)		
1	-	DS-600A	99	AI1	AHU	Return Air CO2	(17 0-10V)		
1	-	DS-600A	99	AI2	AHU	Return Air Humidity	(17 0-10V)		
1	-	DS-600A	99	AI3		-			
1	-	DS-600A	99	AI4		-			
1	-	DS-600A	99	AI5		-			
1	-	DS-600A	99	AI6		-			
1	-	DS-600A	99	AI7		-			
								copy Template macro	
1	-	DS-600A	99	AO0	AHU	Return Air Temperature - Sim			
1	-	DS-600A	99	AO1	AHU	Return Air CO2 - Sim			
1	-	DS-600A	99	AO2	AHU	Cooling Valve			
1	-	DS-600A	99	AO3	AHU	Damper			
								copy maclib macro	
1	-	DS-600D	99	DI0	AHU	Supply Fan Status			
1	-	DS-600D	99	DI1	AHU	Supply Fan Trip			
1	-	DS-600D	99	DI2	AHU	External Clock - Sim			
1	-	DS-600D	99	DI3		-			
1	-	DS-600D	99	DI4		-			
1	-	DS-600D	99	DI5		-			
1	-	DS-600D	99	DI6		-			
1	-	DS-600D	99	DI7		-			
								copy maclib macro	
1	-	DS-600D	99	DO0	AHU	Supply Fan Control			
1	-	DS-600D	99	DO1		-			
1	-	DS-600D	99	DO2		-			
1	-	DS-600D	99	DO3		-			

3. Save it and go to Step 8
4. If you have additional modules, you can select the corresponding TAB below, select all the ROWS, and use CTRL-C to copy it



CAN-No. (1 or 2)	panal identifier	module type	module-address	terminal	terminal description - ide title	termina
1	-	DS-AI8AO4	0	AI0		-
1	-	DS-AI8AO4	0	AI1		-
1	-	DS-AI8AO4	0	AI2		-
1	-	DS-AI8AO4	0	AI3		-
1	-	DS-AI8AO4	0	AI4		-
1	-	DS-AI8AO4	0	AI5		-
1	-	DS-AI8AO4	0	AI6		-
1	-	DS-AI8AO4	0	AI7		-
1	-	DS-AI8AO4	0	AO0		-
1	-	DS-AI8AO4	0	AO1		-
1	-	DS-AI8AO4	0	AO2		-
1	-	DS-AI8AO4	0	AO3		-

5. Then go back to the “Overview” TAB, go to the bottom, leave 1 blank line, and use CTRL-V to paste it



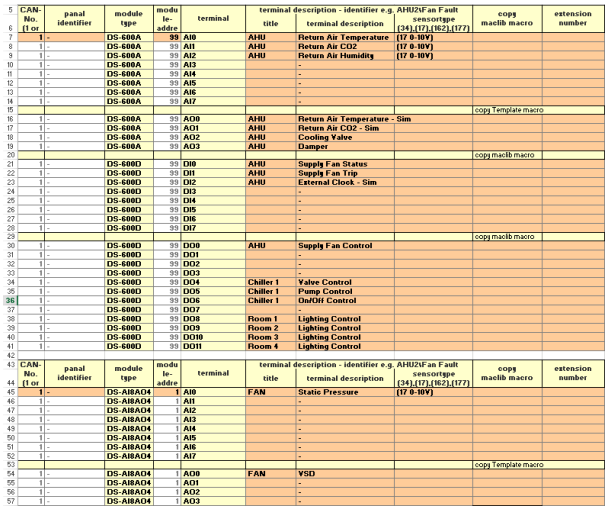
	A	B	C	D	E	F	G
28	1	-	DS-600D	99	DI7		-
29							
30	1	-	DS-600D	99	DO0	AHU	Supply Fan Control
31	1	-	DS-600D	99	DO1		-
32	1	-	DS-600D	99	DO2		-
33	1	-	DS-600D	99	DO3		-
34	1	-	DS-600D	99	DO4	Chiller 1	Valve Control
35	1	-	DS-600D	99	DO5	Chiller 1	Pump Control
36	1	-	DS-600D	99	DO6	Chiller 1	On/Off Control
37	1	-	DS-600D	99	DO7		-
38	1	-	DS-600D	99	DO8	Room 1	Lighting Control
39	1	-	DS-600D	99	DO9	Room 2	Lighting Control
40	1	-	DS-600D	99	DO10	Room 3	Lighting Control
41	1	-	DS-600D	99	DO11	Room 4	Lighting Control
42							
43							
44							
45							

overview | for copy DS-AI8 | DS-AI8AO4 | DS-AI8AO4H | DS-AO4 | DS-AO4H | DS-DI16 | DS-DI8

6. For all additional IO modules, you need to set the CAN IO address. This address must be the same as the address you set using the address switches on the IO module. To set this address, type the address in the “module-address” in the spreadsheet (the orange cell only). For OPEN 600, the address start from 1 to 5

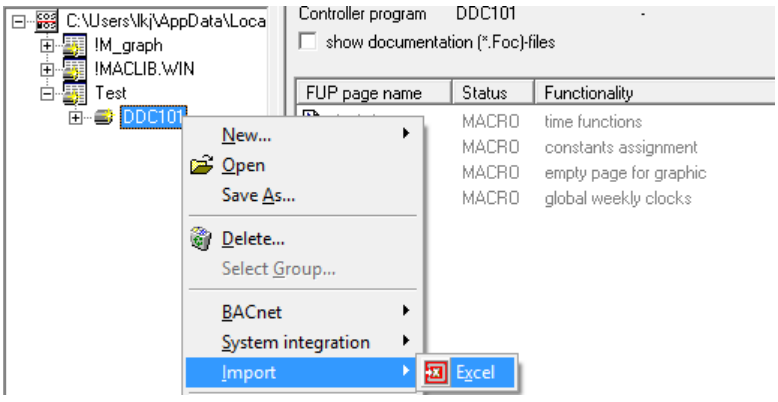
43	CAN-No. (1 or 2)	panal identifier	module type	module-address	terminal	terminal title
45	1	-	DS-AI8AO4	1	AI0	
46	1	-	DS-AI8AO4	1	AI1	

7. The finished one should looks like this. You can add more IO modules below, for up to 5 modules in OPEN 600

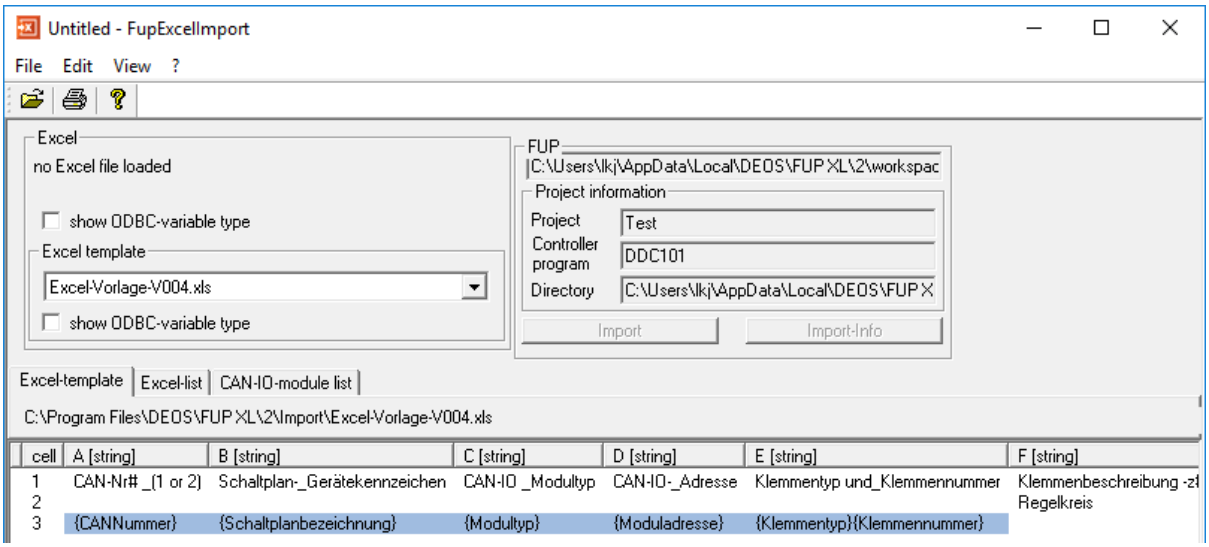


5	CAN-No. (1 or	panal identifier	module type	module-addre	terminal	terminal description - identifier e.g. title	terminal description	AHU2\Fan Fault sensortype (34),(17),(162),(177)	copy macro lib macro	extension number
6										
7	1	-	DS-600A	99	AI0	AHU	Return Air Temperature	(17 0-10V)		
8	1	-	DS-600A	99	AI1	AHU	Return Air CO2	(17 0-10V)		
9	1	-	DS-600A	99	AI2	AHU	Return Air Humidity	(17 0-10V)		
10	1	-	DS-600A	99	AI3		-			
11	1	-	DS-600A	99	AI4		-			
12	1	-	DS-600A	99	AI5		-			
13	1	-	DS-600A	99	AI6		-			
14	1	-	DS-600A	99	AI7		-			
15									copy Template macro	
16	1	-	DS-600A	99	AO0	AHU	Return Air Temperature - Sim			
17	1	-	DS-600A	99	AO1	AHU	Return Air CO2 - Sim			
18	1	-	DS-600A	99	AO2	AHU	Cooling Valve			
19	1	-	DS-600A	99	AO3	AHU	Damper			
20									copy macro lib macro	
21	1	-	DS-600D	99	DI0	AHU	Supply Fan Status			
22	1	-	DS-600D	99	DI1	AHU	Supply Fan Trip			
23	1	-	DS-600D	99	DI2	AHU	External Clock - Sim			
24	1	-	DS-600D	99	DI3		-			
25	1	-	DS-600D	99	DI4		-			
26	1	-	DS-600D	99	DI5		-			
27	1	-	DS-600D	99	DI6		-			
28	1	-	DS-600D	99	DI7		-			
29									copy macro lib macro	
30	1	-	DS-600D	99	DO0	AHU	Supply Fan Control			
31	1	-	DS-600D	99	DO1		-			
32	1	-	DS-600D	99	DO2		-			
33	1	-	DS-600D	99	DO3		-			
34	1	-	DS-600D	99	DO4	Chiller 1	Valve Control			
35	1	-	DS-600D	99	DO5	Chiller 1	Pump Control			
36	1	-	DS-600D	99	DO6	Chiller 1	On/Off Control			
37	1	-	DS-600D	99	DO7		-			
38	1	-	DS-600D	99	DO8	Room 1	Lighting Control			
39	1	-	DS-600D	99	DO9	Room 2	Lighting Control			
40	1	-	DS-600D	99	DO10	Room 3	Lighting Control			
41	1	-	DS-600D	99	DO11	Room 4	Lighting Control			
42										
43	CAN-No. (1 or	panal identifier	module type	modu le-addre	terminal	terminal description - identifier e.g. title	terminal description	AHU2\Fan Fault sensortype (34),(17),(162),(177)	copy macro lib macro	extension number
44										
45	1	-	DS-AI8AO4	1	AI0	FAN	Static Pressure	(17 0-10V)		
46	1	-	DS-AI8AO4	1	AI1		-			
47	1	-	DS-AI8AO4	1	AI2		-			
48	1	-	DS-AI8AO4	1	AI3		-			
49	1	-	DS-AI8AO4	1	AI4		-			
50	1	-	DS-AI8AO4	1	AI5		-			
51	1	-	DS-AI8AO4	1	AI6		-			
52	1	-	DS-AI8AO4	1	AI7		-			
53									copy Template macro	
54	1	-	DS-AI8AO4	1	AO0	FAN	VSD			
55	1	-	DS-AI8AO4	1	AO1		-			
56	1	-	DS-AI8AO4	1	AO2		-			
57	1	-	DS-AI8AO4	1	AO3		-			

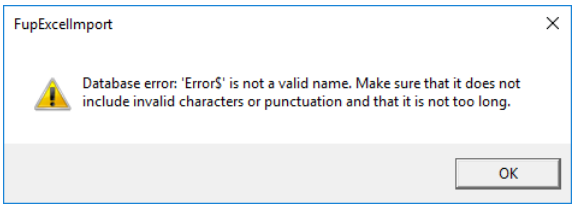
8. Start FUP, click on your controller, right click, click “Import”, “Excel”

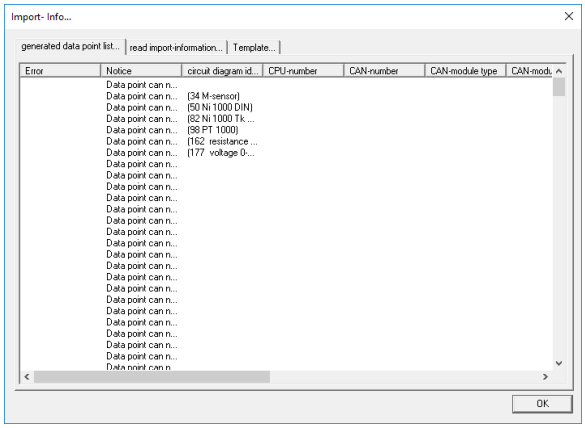


9. Click “File”, “Open”

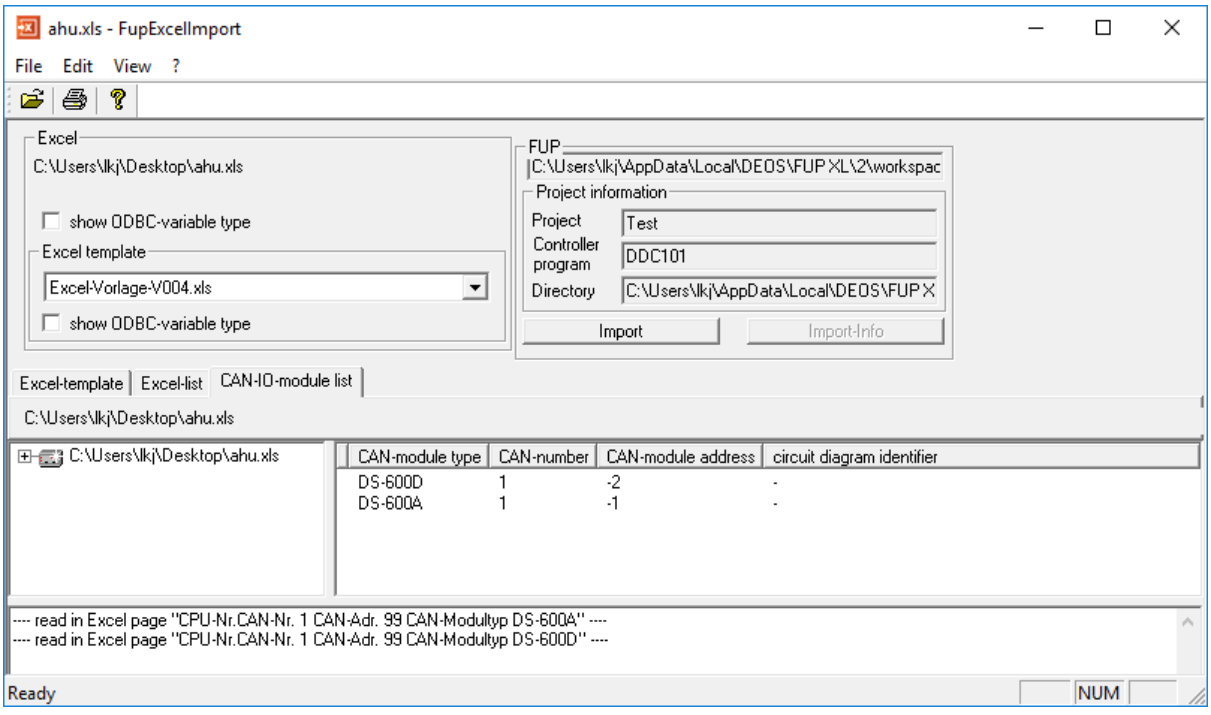


10. Select “ahu.xls”, click “Open”
11. Click OK when you see the dialog boxes below

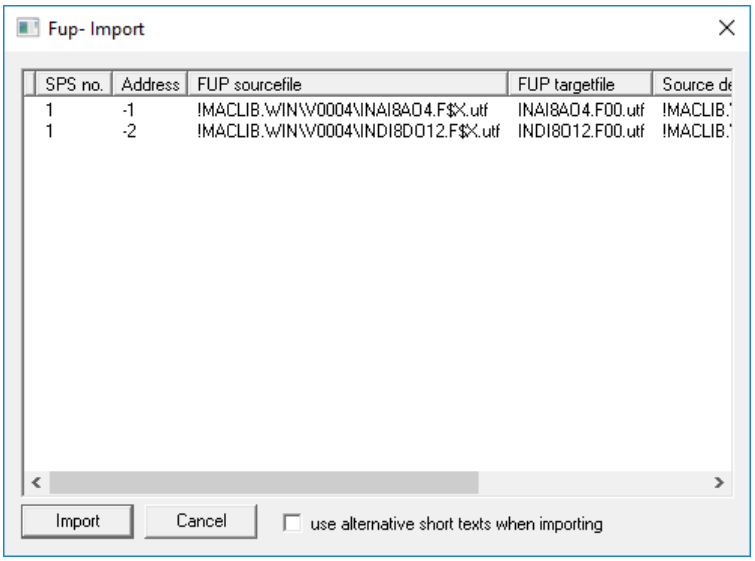




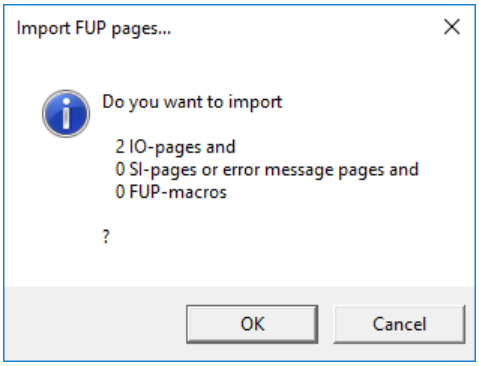
12. Now you can see the IO modules you added in the Excel spreadsheet. For OPEN 600 without additional module, you should see two modules (DS-600D, and DS600A), like below



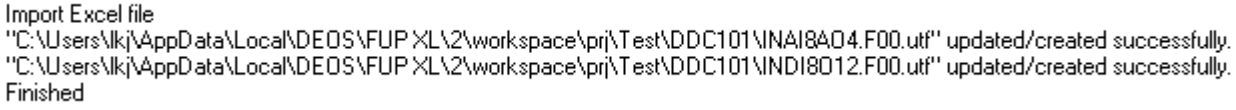
13. Click “Import” button, and click “Import” again when you see the dialog box below



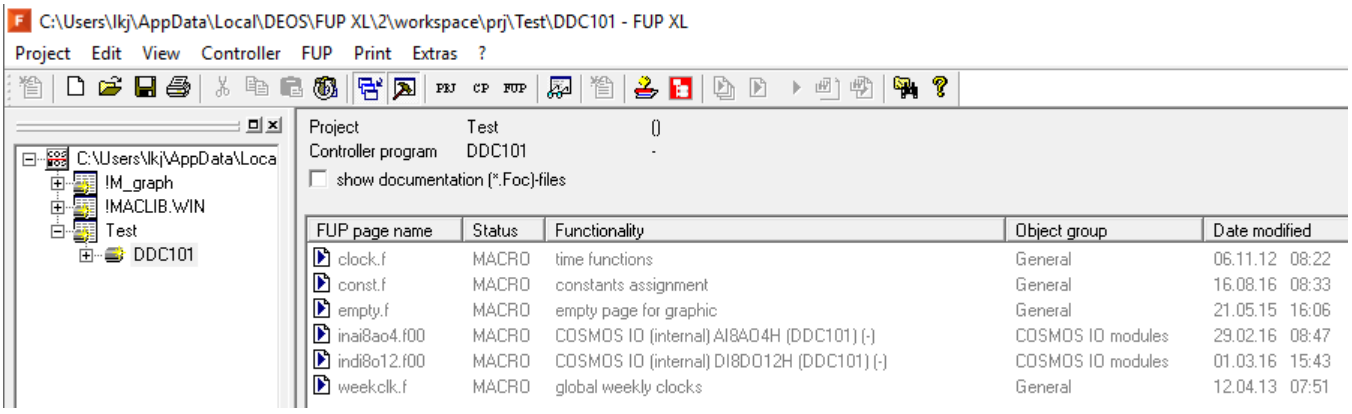
14. Click OK



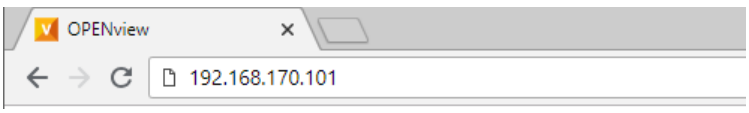
15. Close the “FUP Excel Import” window, when you see the below messages



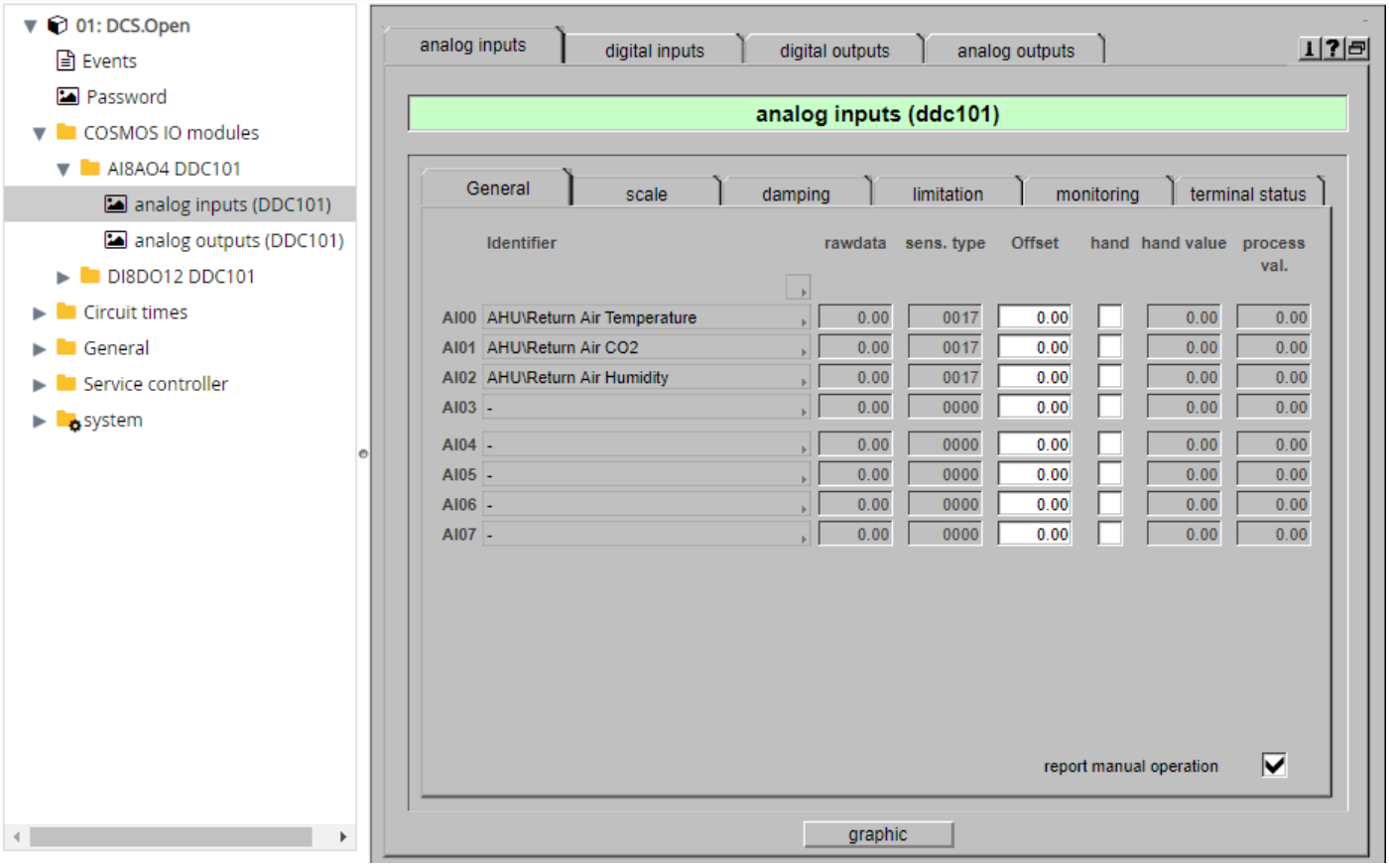
16. Now you’ve finished creating the IO points in FUP



17. Compile and upload the program to your controller
18. Now you can see your IO points using browser. Start Chrome, and type your controller IP. If this is a new controller, please remember to do a “Preset”



19. Click “COSMOS IO modules”, “AI8AO4”, “Analog Inputs”. The analog input page looks like this. You can change the “Offset” and also the scale, min/max values, etc. For analog output, you can change the 0-10V to 2-10V, min/max values, etc.



20. Click “COSMOS IO modules”, “DI8DO12”, “Digital Inputs”. The digital input page looks like this. You can change the LED color, NC/NO terminal, etc.