

How to use Broadwin with DVP28SV11R/T + DVPEN01-SL

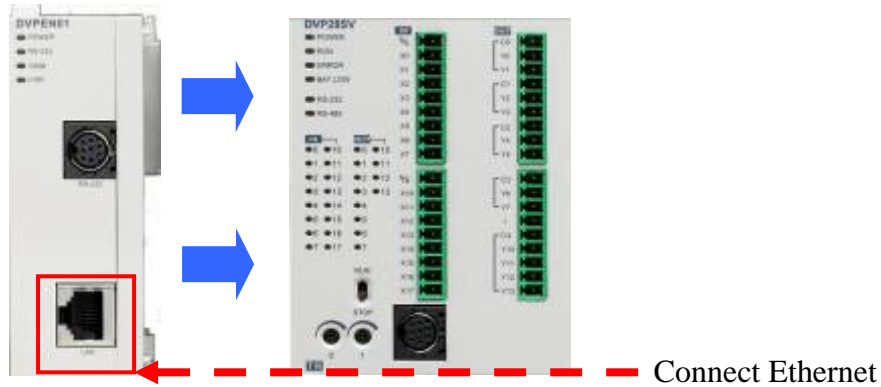
In this technical note, we cover the following topics.

1. How to connect DVP28SV and EN01
2. How to setup Broadwin communication with DVP28SV by EN01
3. How to setup Broadwin communication with DVP28SV by RS-485

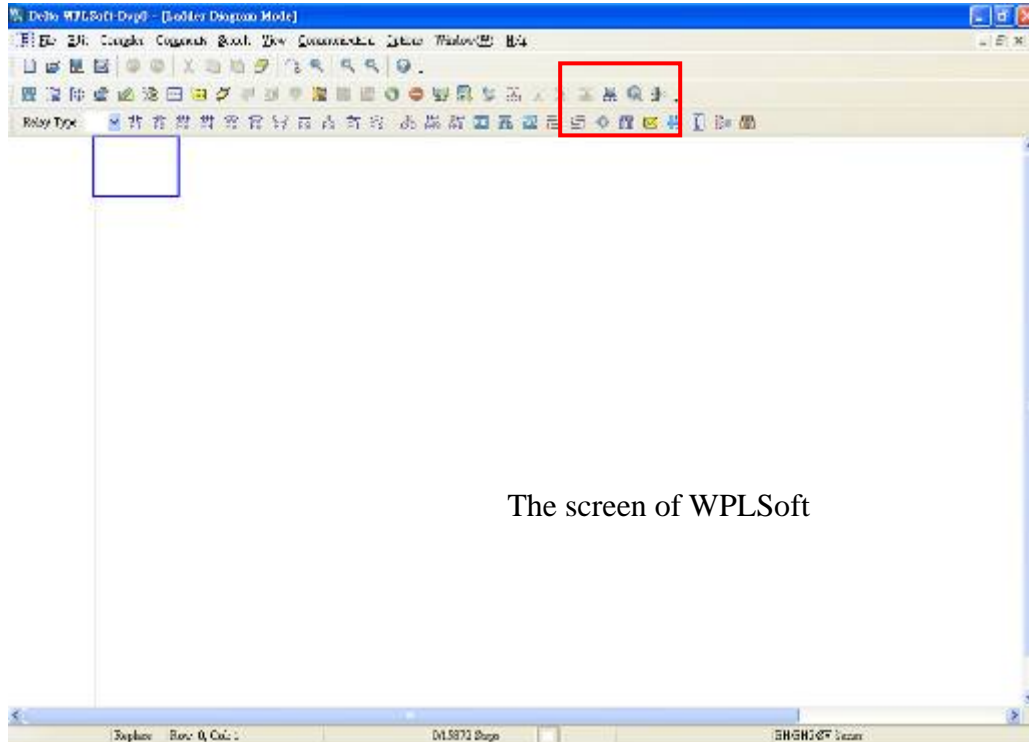
1. How to connect DVP28SV and EN01

1-1. Plug EN01 to 28SV left side.

1-2. Connect Ethernet via EN01 「LAN」 hole .



1-3. Open WPLSoft to configure EN01





: Looking for EN01 module via broadcasting.



: Looking for EN01 module via indicating IP address.

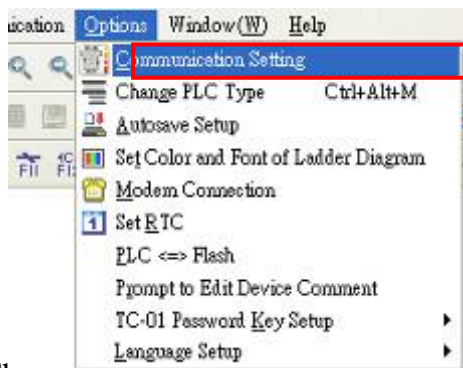


: Configuring EN01 via RS-232.(Doesn't need to connect to Ethernet)

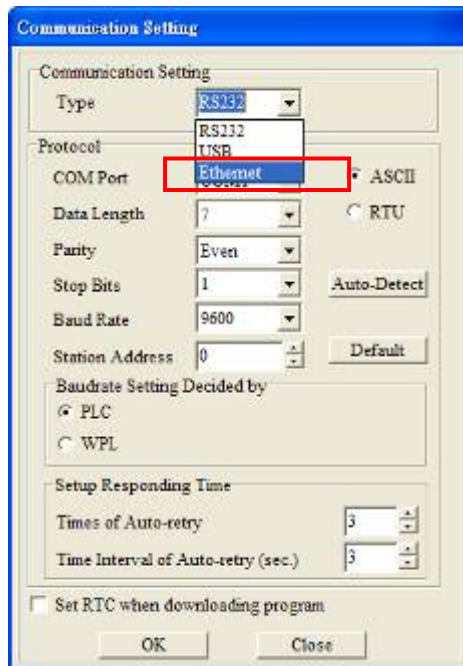
1-4. There is two way to search EN01 via Ethernet.

- Broadcast:

If this is the first time you connect EN01 to Ethernet and have no idea what's its IP address, then you can use "broadcast" to look for EN01 in the network.



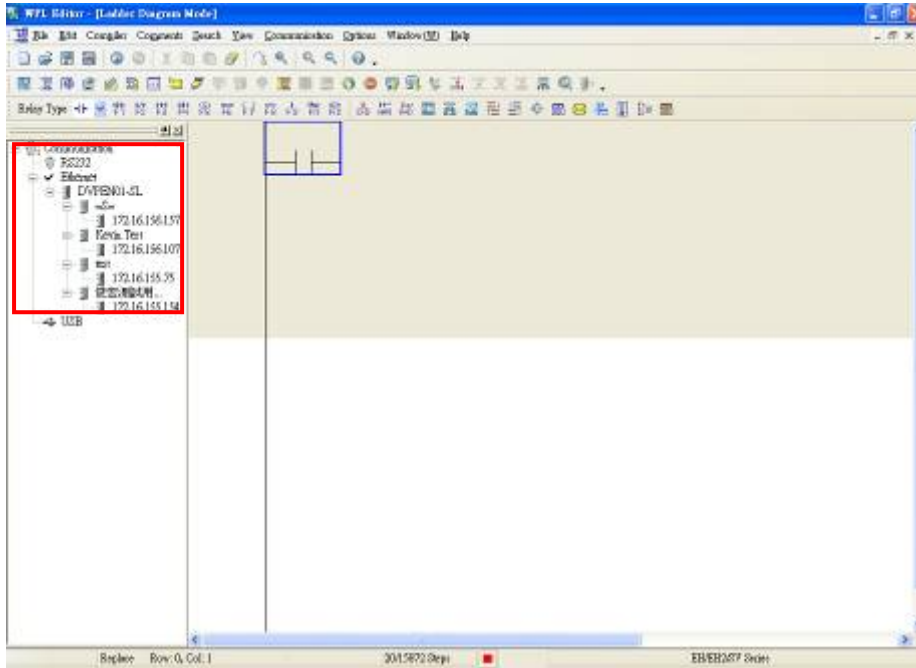
Choosing option "communication setting" to set PLC communication port.



Set "Ethernet " as your communication port.

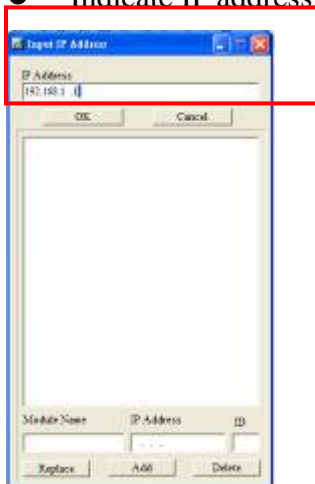


Press “Broadcast” button, then WPLSoft will start to search EN01 in the network.



If success, the left window will show all EN01 modules in the network.

● Indicate IP address:

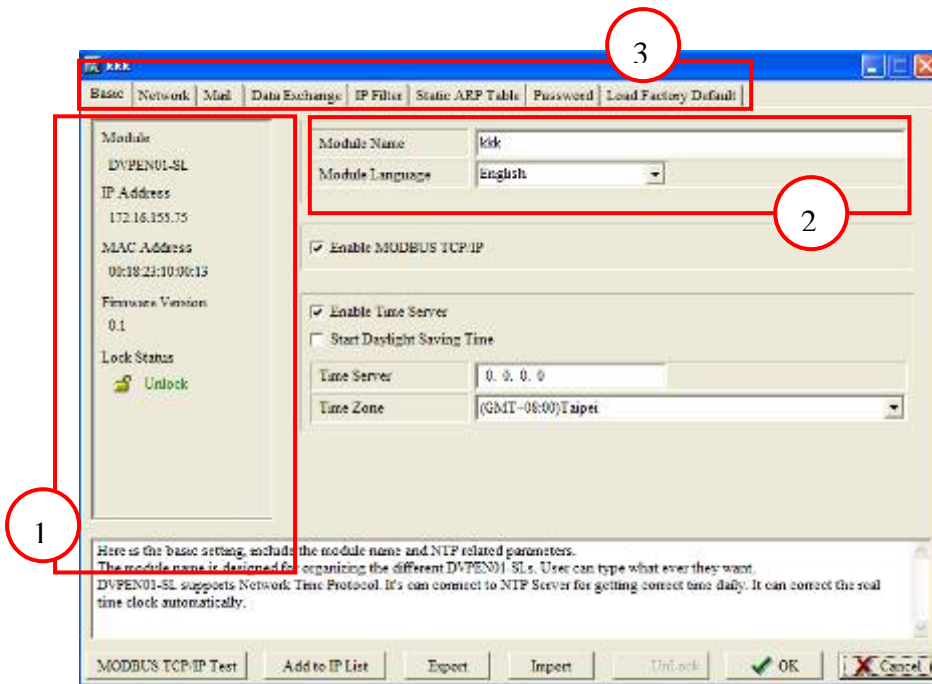


Press “IP search” button, then the input IP address window will pop out. User can type IP address in the upper space.

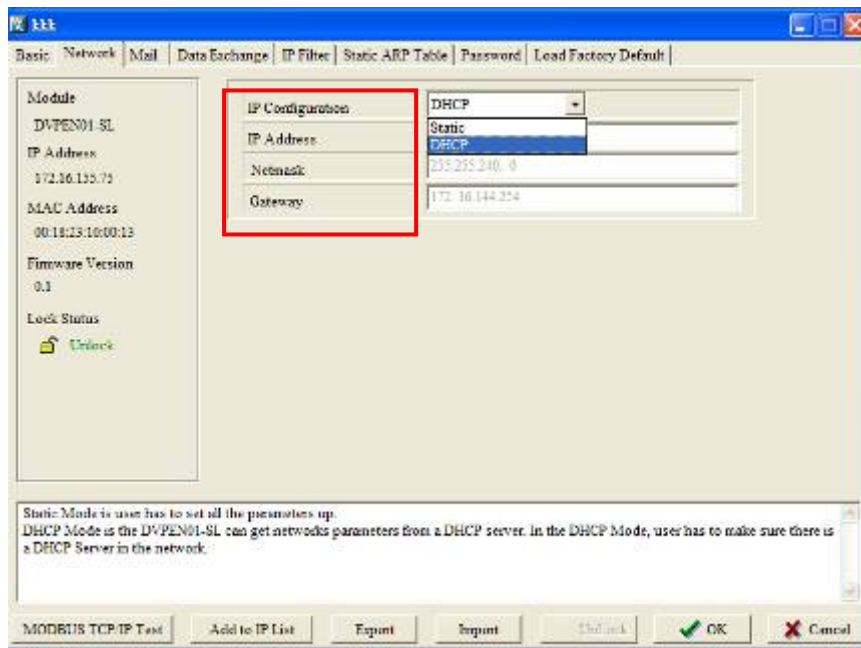
If success, the result will be just like the broadcast.

1-5. How to configure EN01.

- Double click the module in the left window.
- The configuration window will be pop out.




- ①. The basic information of EN01, includes IP address, MAC address, firmware version and so on.
- ②. Module name and language. (user define)
- ③. Option of EN01.



Network setting –IP configuration (Static/DHCP), IP address, Netmask, Gateway.

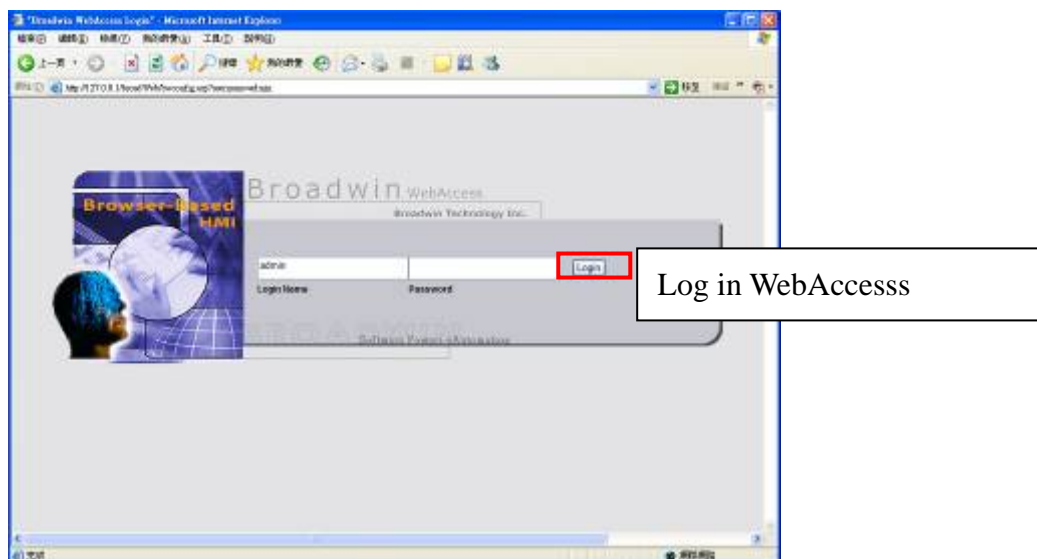
2. How to setup Broadwin communication with DVP28SV by EN01

2-1. After installing, icon would be created on the screen corner 

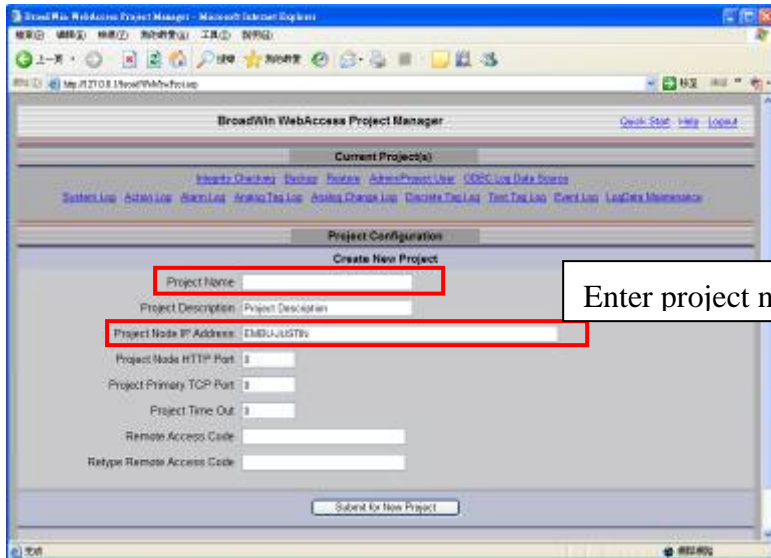
2-2. Open browser, and type 127.0.0.1 to enter the WebAccess



2-3. Log name : admin, password : none as default

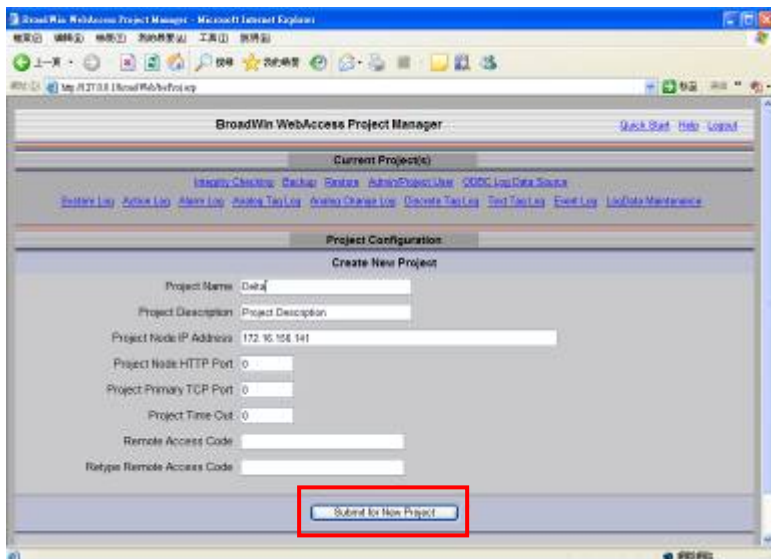


2-4. Enter the project manager page

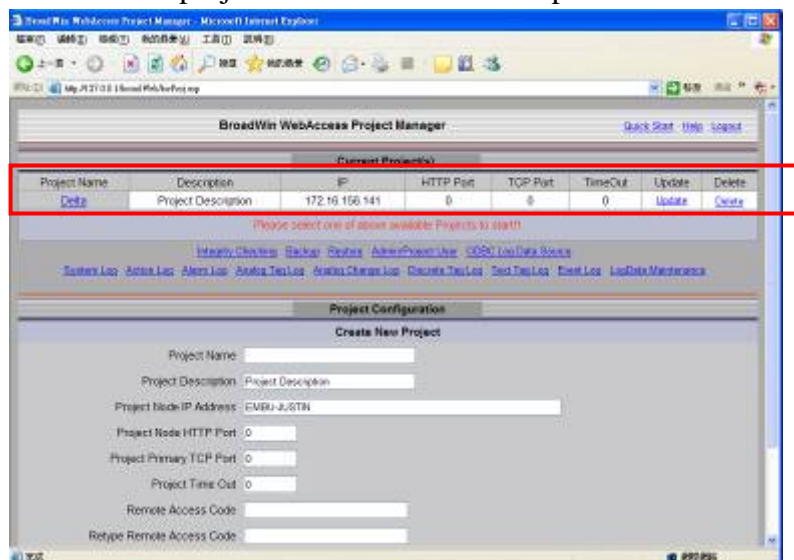


Enter project name and IP address of project

2-5. Select **Submit** to new Project after setting

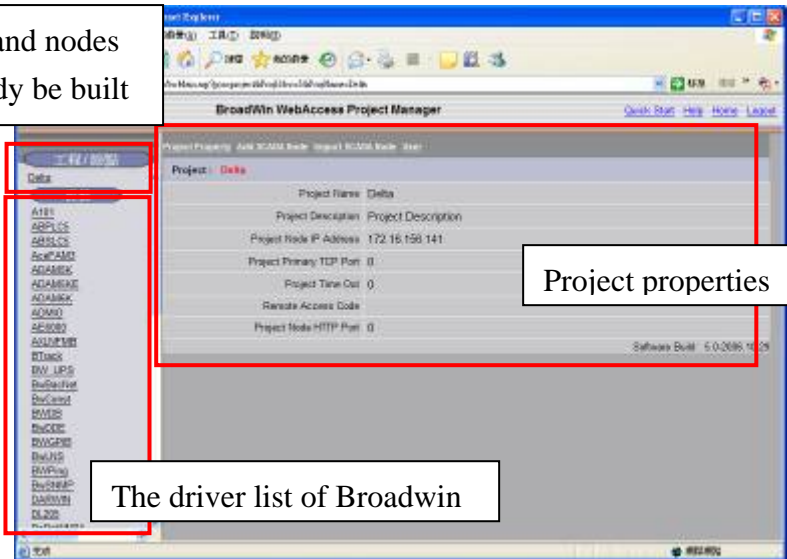


2-6. The created project would show on the top



2-7. Select project to enter project properties

The projects and nodes that has already be built

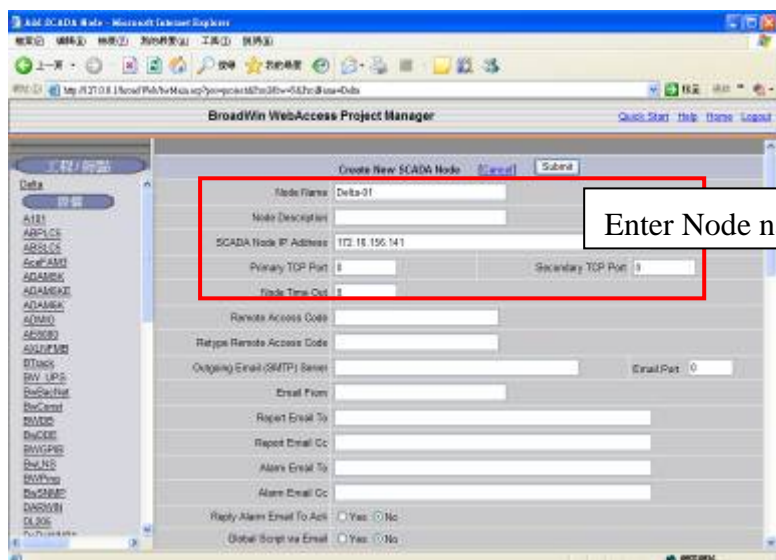


The screenshot shows the 'BroadWin WebAccess Project Manager' interface. On the left, a tree view lists various projects and nodes, with 'Delta' selected. The main area displays the 'Project: Delta' properties, including Project Name, Project Description, Project Node IP Address (172.16.156.141), Project Primary TCP Port (0), Project Time Out (0), Remote Access Code, and Project Node HTTP Port (0). A callout box points to the tree view, and another points to the properties area.

Project properties

The driver list of Broadwin

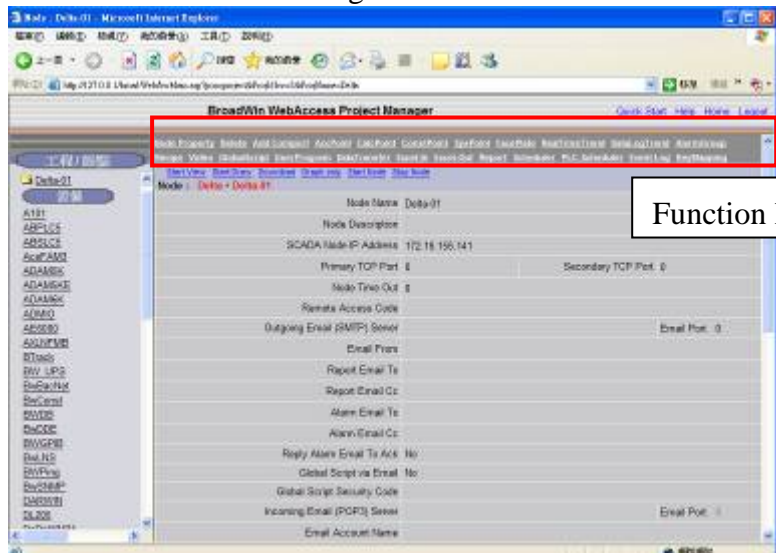
2-8. Select Add SCADA Node



The screenshot shows the 'Create New SCADA Node' dialog box. The 'Node Name' field is set to 'Delta-01' and the 'SCADA Node IP Address' is set to '172.16.156.141'. Other fields include Primary TCP Port (0), Secondary TCP Port (0), Node Time Out (0), Remote Access Code, Reply Remote Access Code, Outgoing Email (SMTP) Server, Email Port (0), Email From, Report Email To, Report Email Cc, Alarm Email To, Alarm Email Cc, Reply Alarm Email To Ack (Yes/No), and Global Script via Email (Yes/No). A callout box points to the 'Node Name' and 'SCADA Node IP Address' fields.

Enter Node name and SCADA node IP address

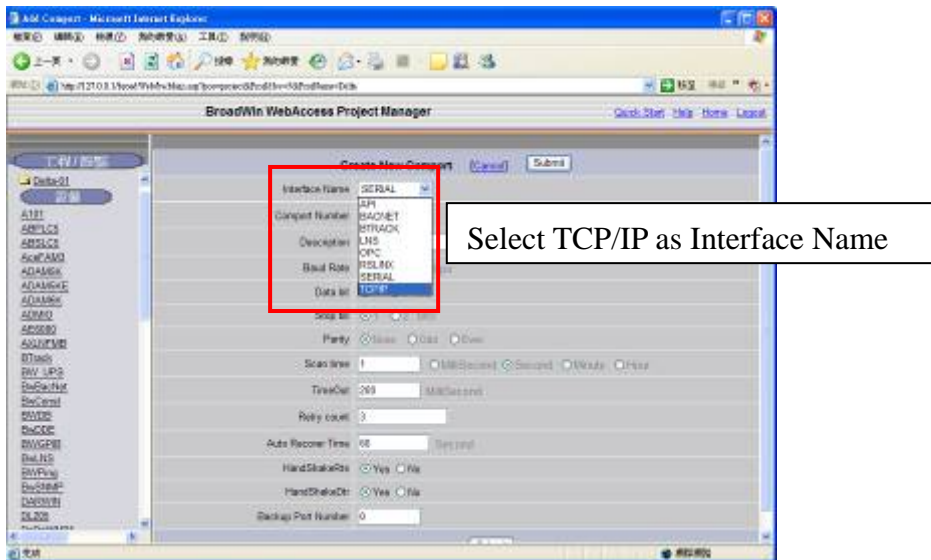
2-9. Select Submit after setting



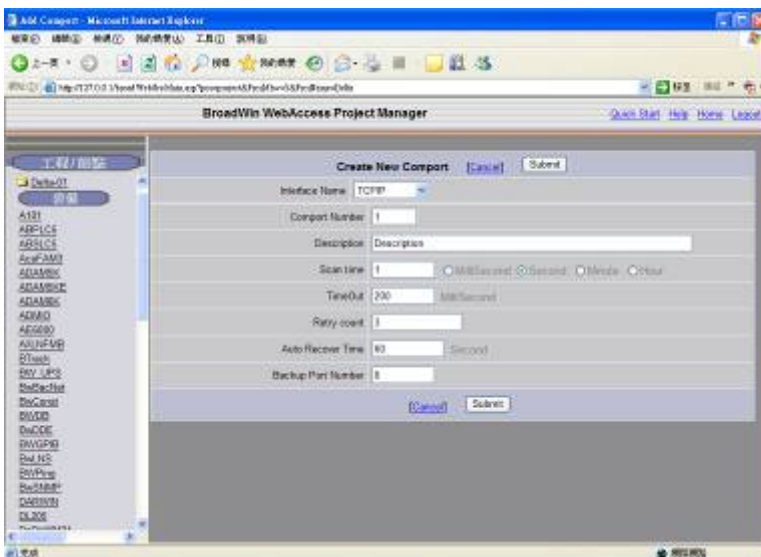
The screenshot shows the 'Function list' for the newly added node 'Delta-01'. The list includes fields for Node Name, Node Description, SCADA Node IP Address (172.16.156.141), Primary TCP Port (0), Secondary TCP Port (0), Node Time Out (0), Remote Access Code, Outgoing Email (SMTP) Server, Email Port (0), Email From, Report Email To, Report Email Cc, Alarm Email To, Alarm Email Cc, Reply Alarm Email To Ack (No), Global Script via Email (No), Global Script Security Code, Incoming Email (POP3) Server, and Email Account Name. A callout box points to the list.

Function list

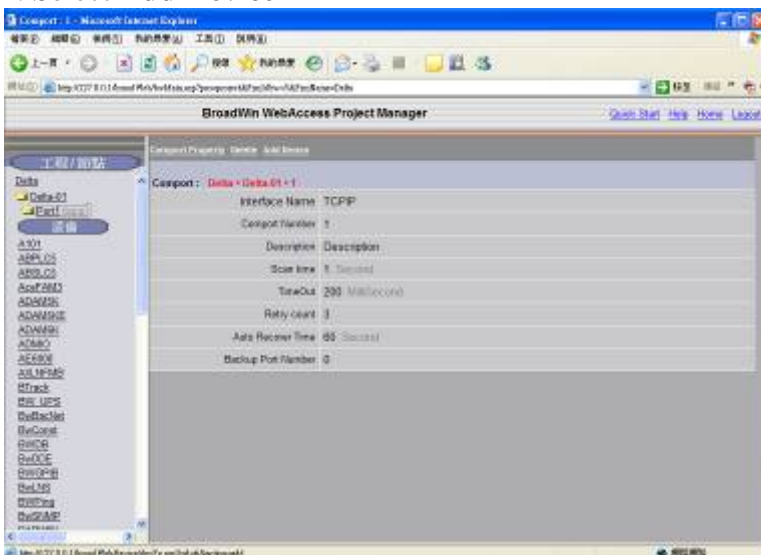
2-10. Select Add Comport



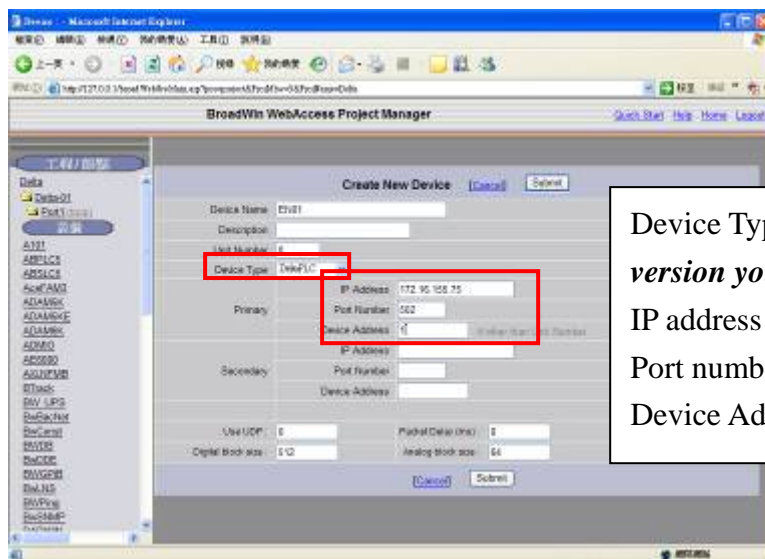
2-11. Select Submit after setting



2-12. Select Add Device

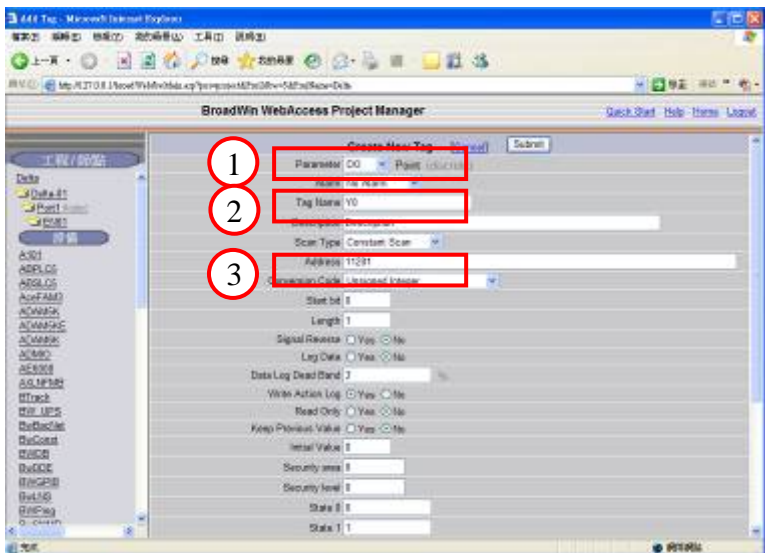


2-13. Enter Device Name, Device Type, and network properties



Device Type **DeltaPLC** (Select Modicon if the version you use not has Delta PLC yet)
 IP address **EN01** IP address
 Port number **502**
 Device Address **PLC Modbus station address**

2-14. Select **Submit** after setting and select **Add Tag**



- 2-15. ①. Parameter **DI**、**DO**、**AI**、**AO**
 ②. Enter Tag Name
 ③. Enter I/O points Modbus address, and users need to convert the original

Modbus address of devices of PLC to Broadwin
DI is 00001 , **DO is 10001** , **AI is 30001** , **AO is 40001**

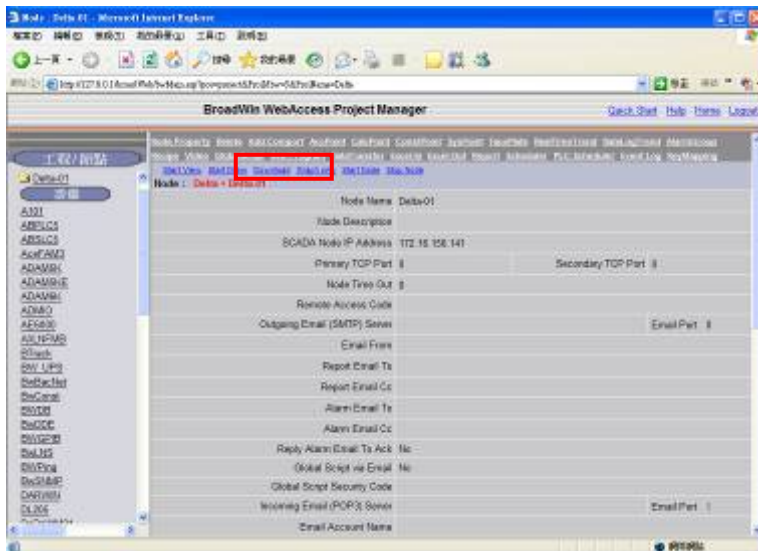
For example, if setting Y0 of PLC :

Parameter : DO

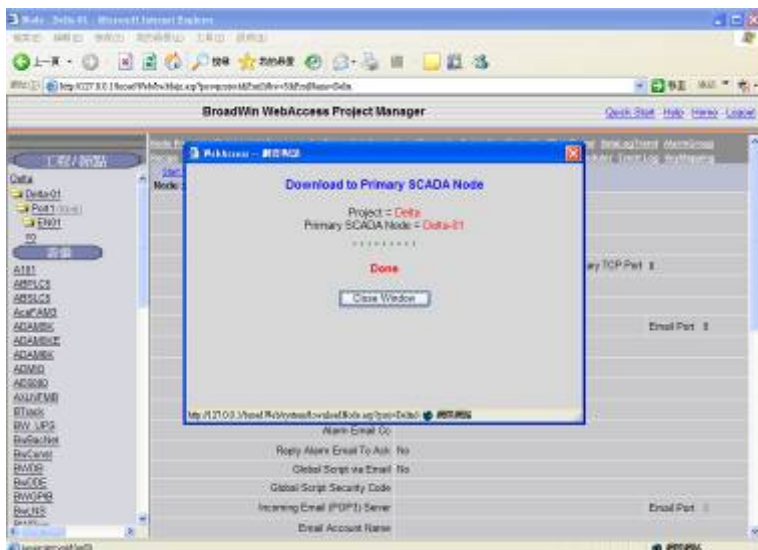
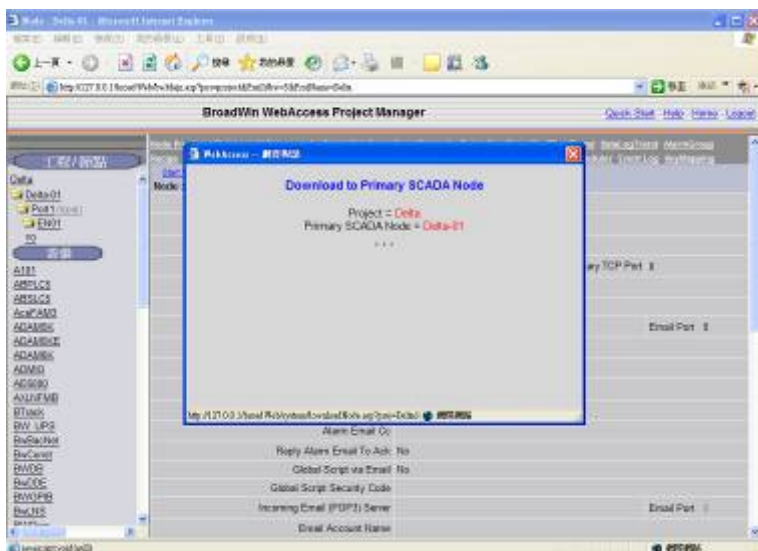
The Modbus of Y0 of Delta PLC is 1281, so the address in Broadwin would be 11281

(Please check Modbus address table in Appendix)

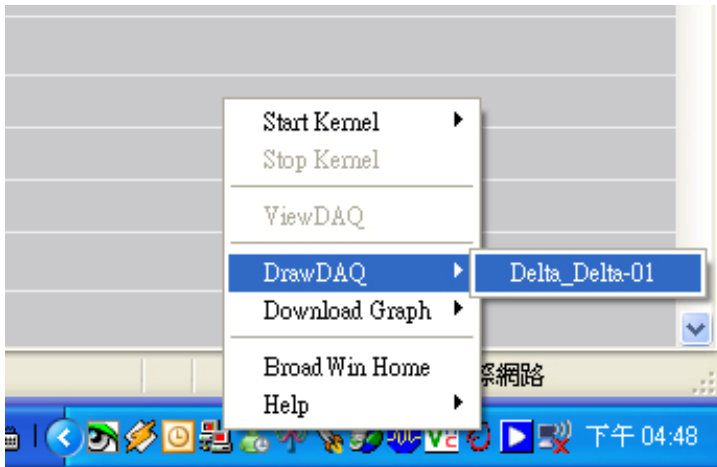
2-16. Select **Download** to download the setting to Webaccess



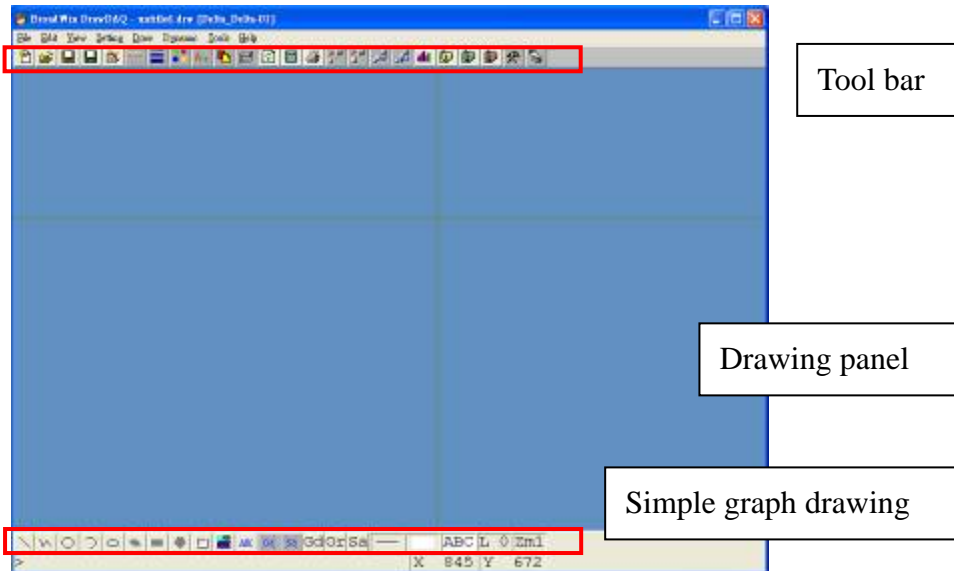
2-17. “Done” message would appear after downloading finished



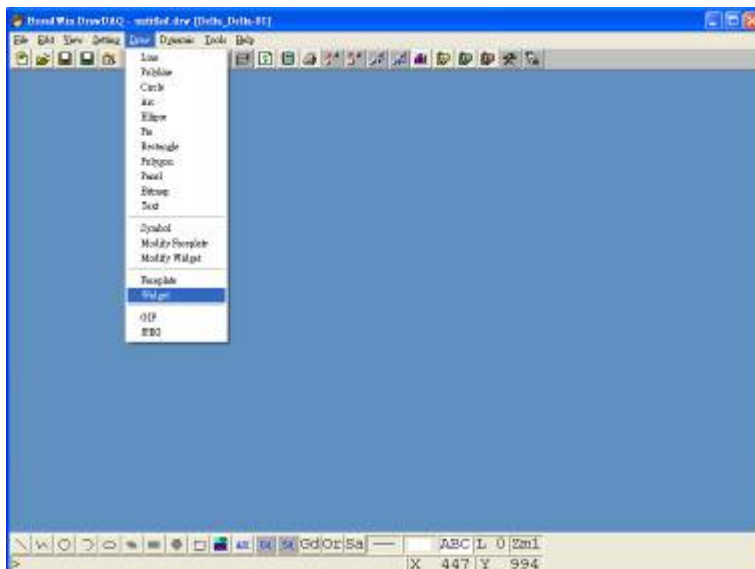
2-18. Right click on the WebAccess icon, and select **DrawDAQ** to choose the node you want to draw



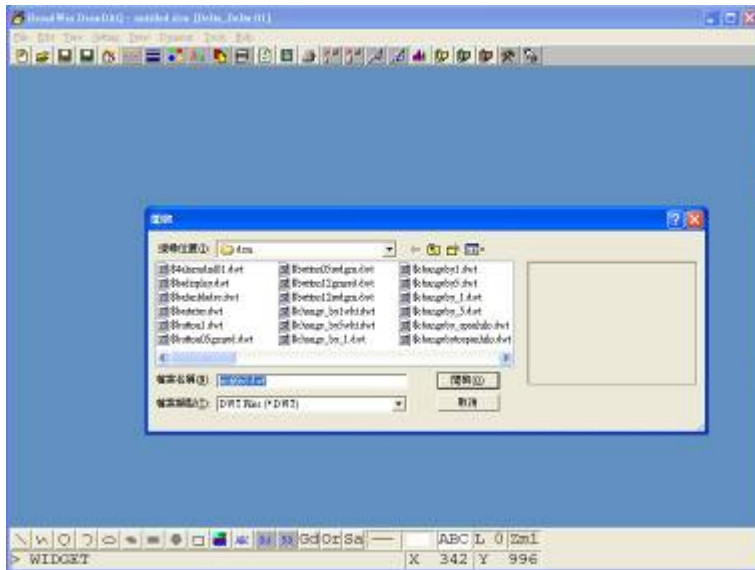
2-19. Edit window



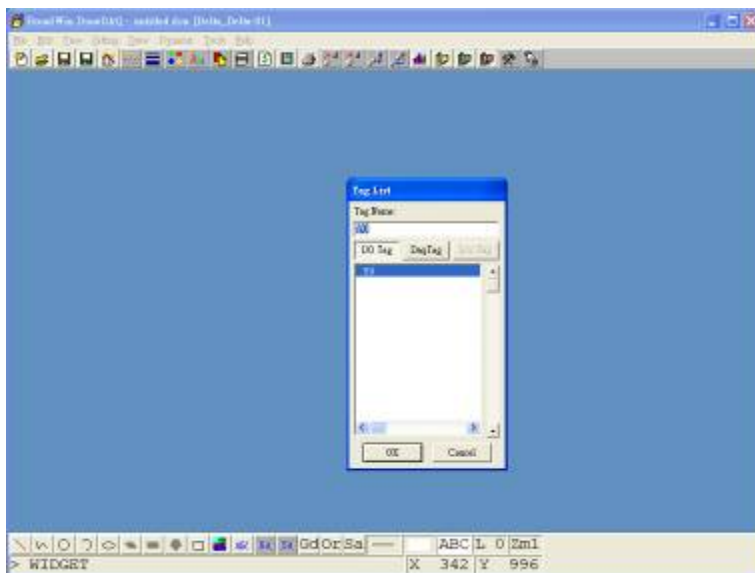
2-20. Select **Draw** → **Widget**



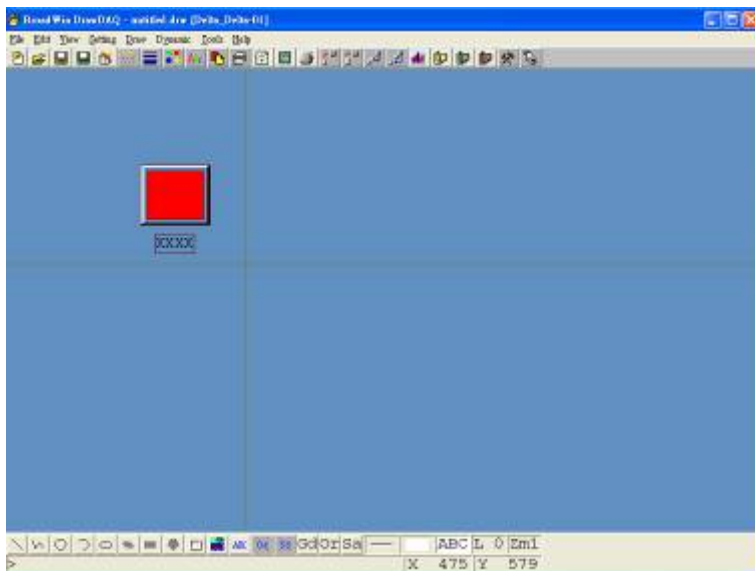
2-21. Choose the appropriate item, for example DI/O—button or indicator, AI/O—number



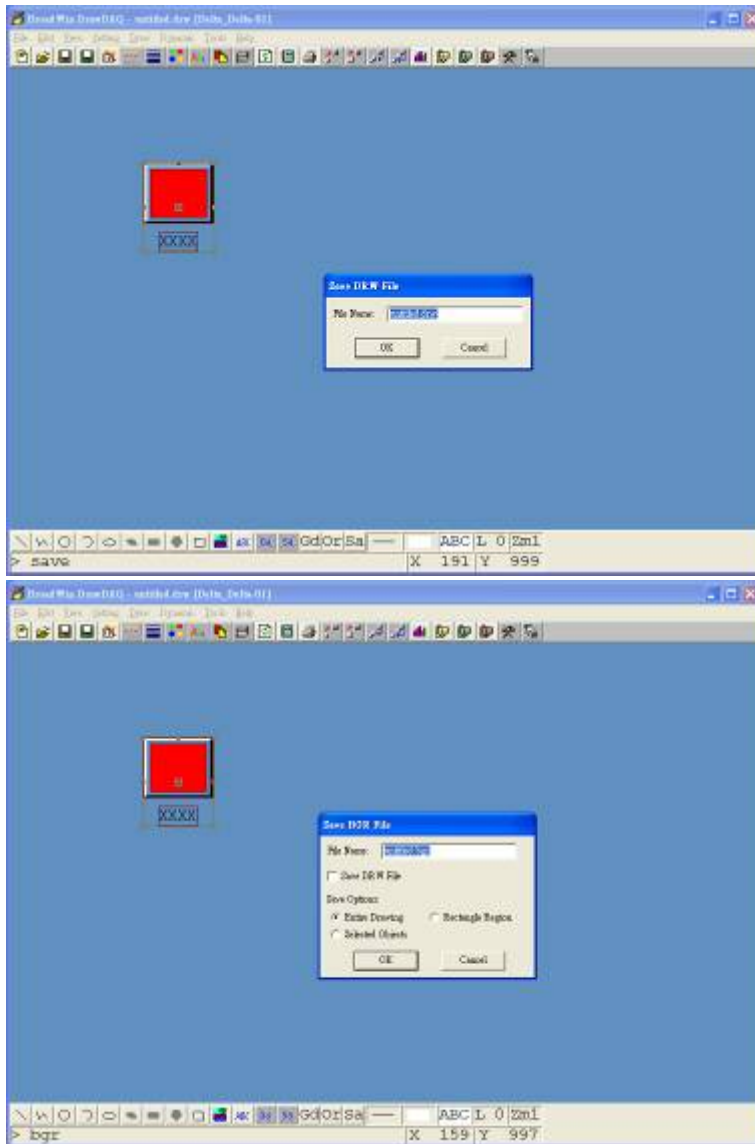
2-22. Select tag on tag list to connect item and tag



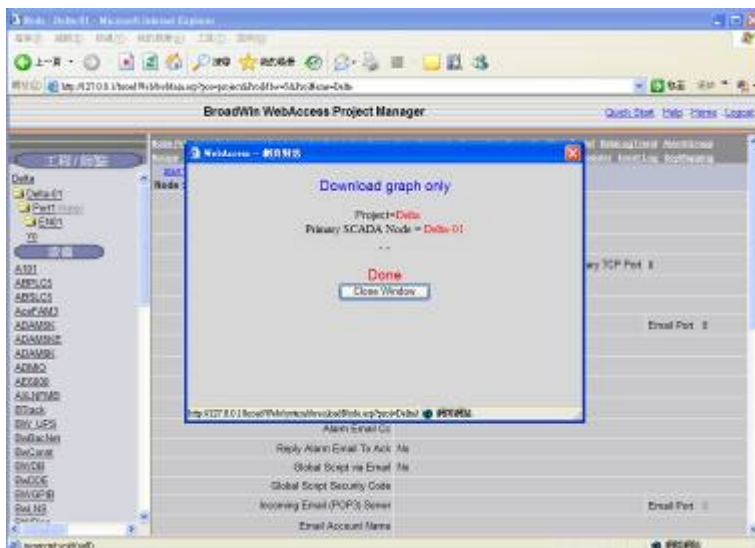
2-23. Put the item on edit panel



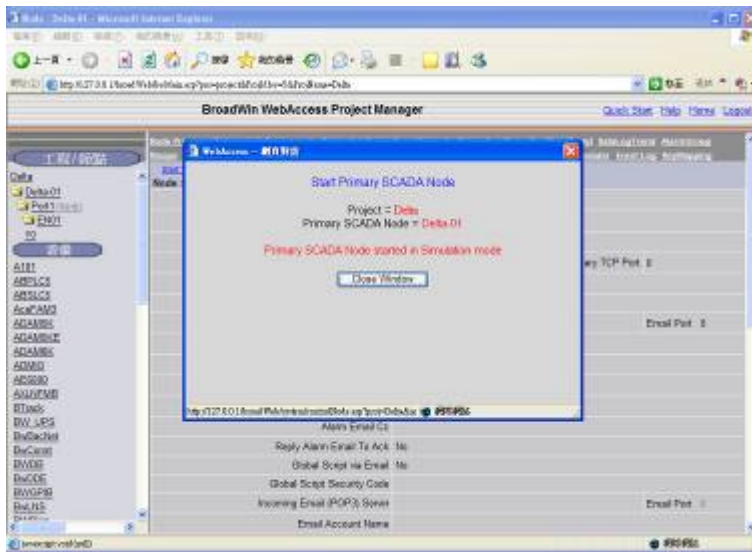
2-24. Select the icon on the top to save DRW and BGR files



2-25. Close the edit window and back to Project Manager and select **download graph only** to download graph to node



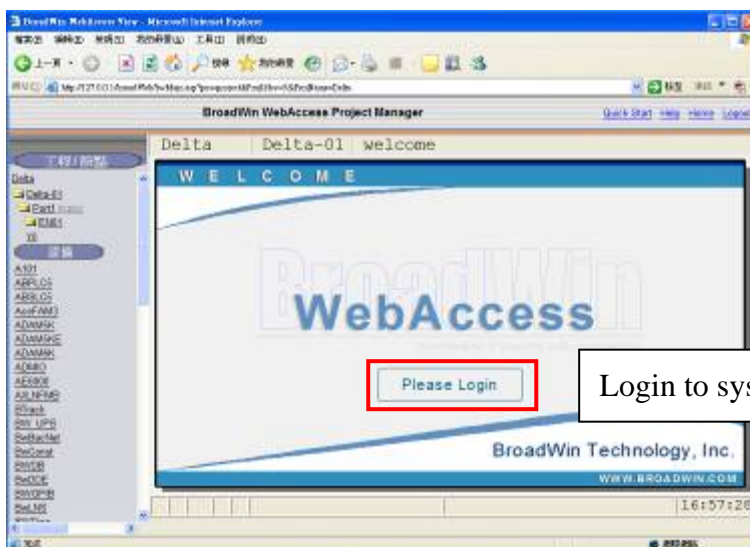
2-26. Select **Start Node**



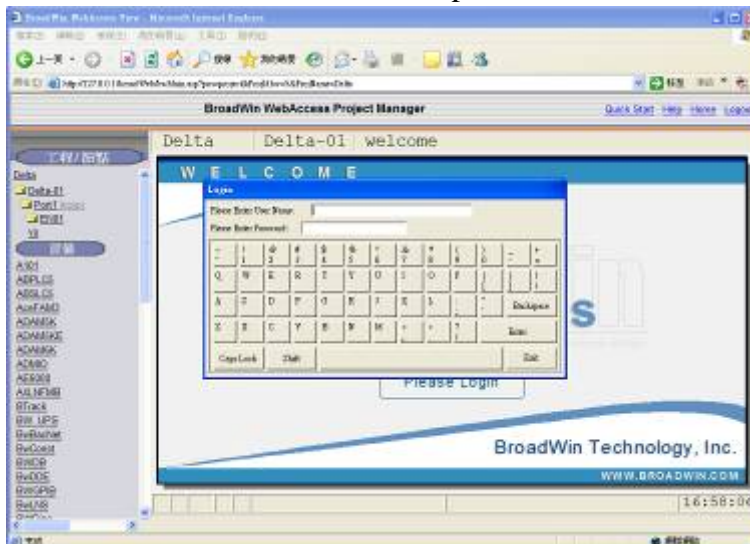
2-27. The icon on the screen corner would turn to green after starting successful



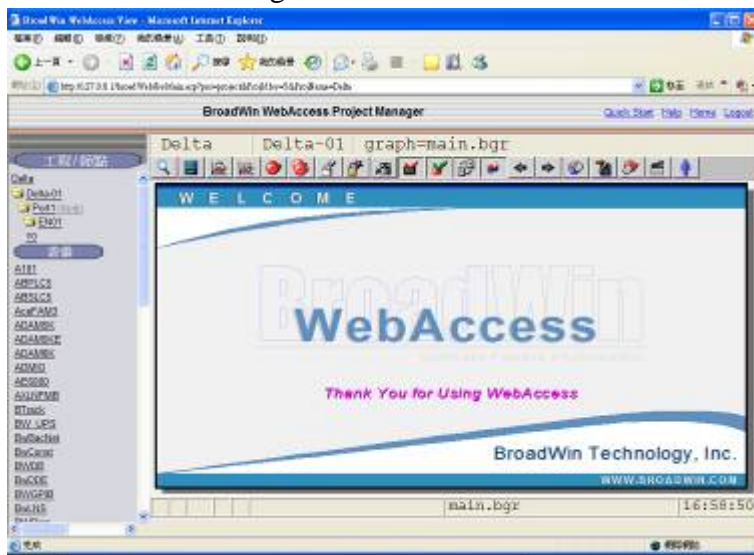
2-28. Select **Start View** to enter the monitor screen



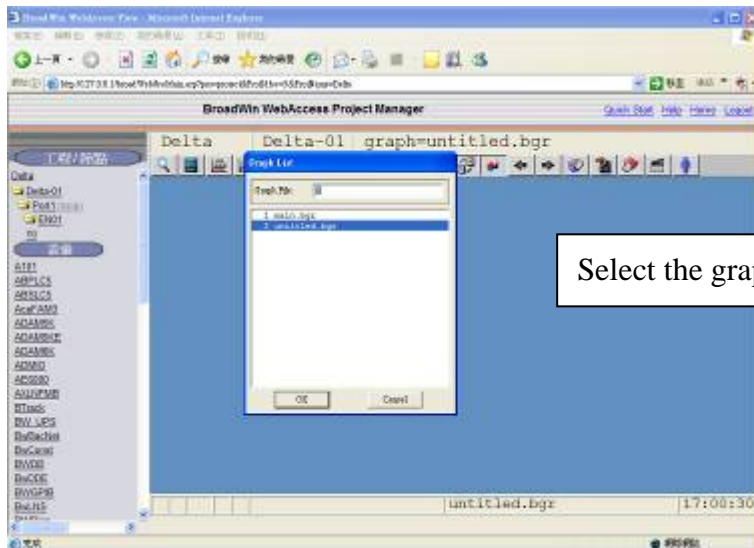
2-29. Default user name is admin, and password is none



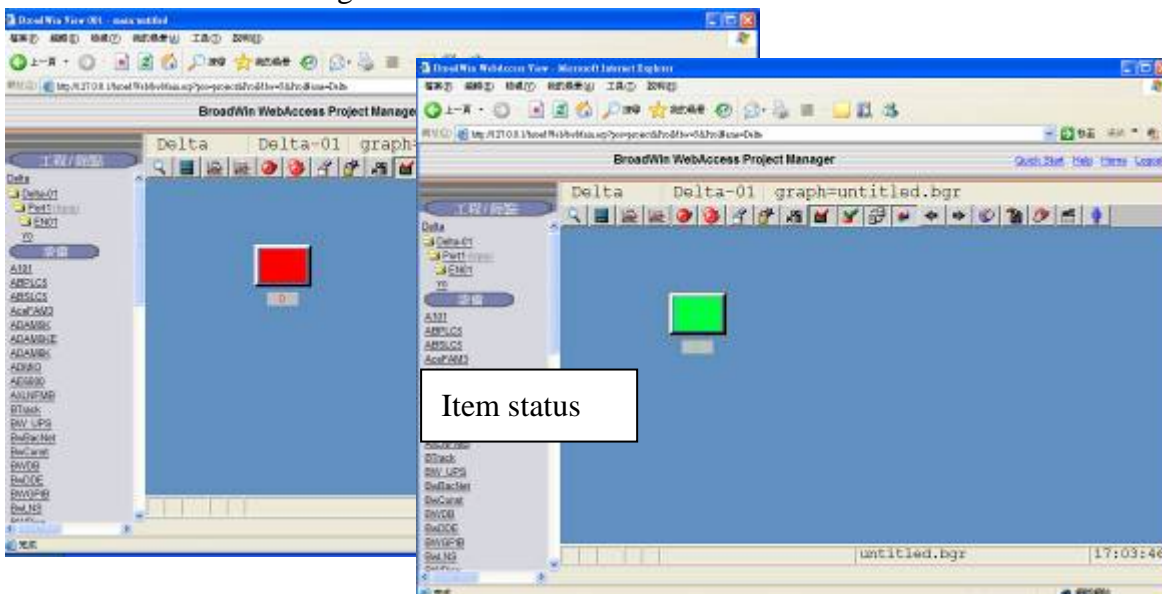
2-30. The screen after login



2-31. Select Graph on tool bar 



2-32. Monitoring screen



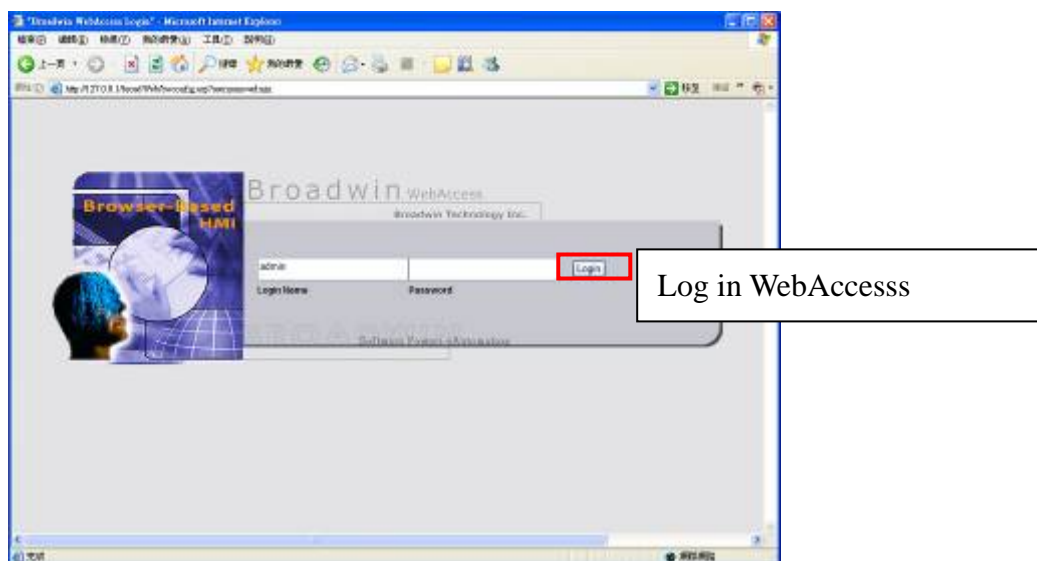
2. How to setup Broadwin communication with DVP28SV by EN01

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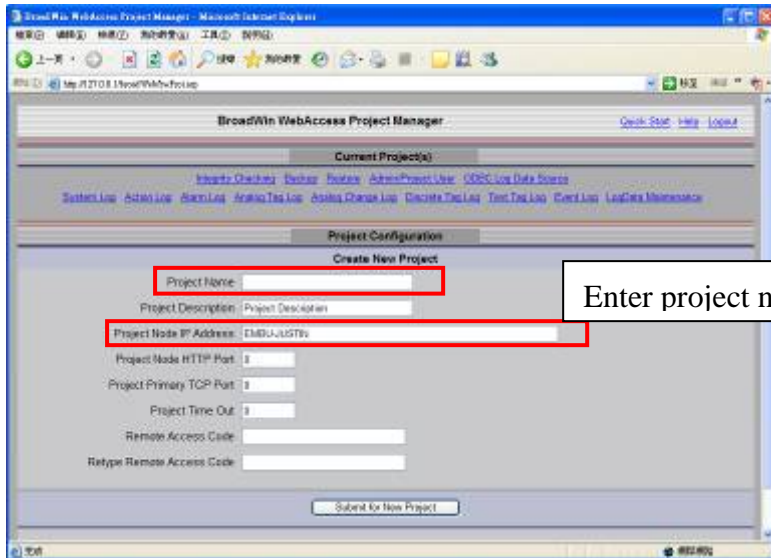
3-2. Open browser, and type 127.0.0.1 to enter the WebAccess



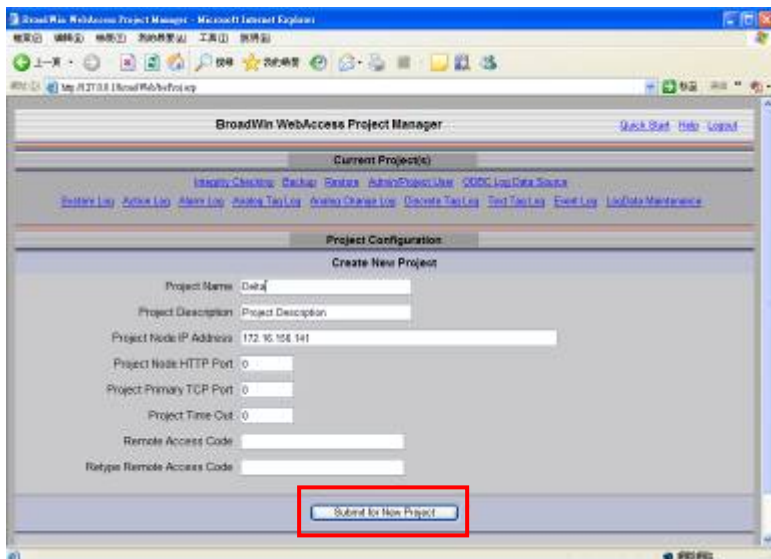
3-3. Log name : admin, password : none as default



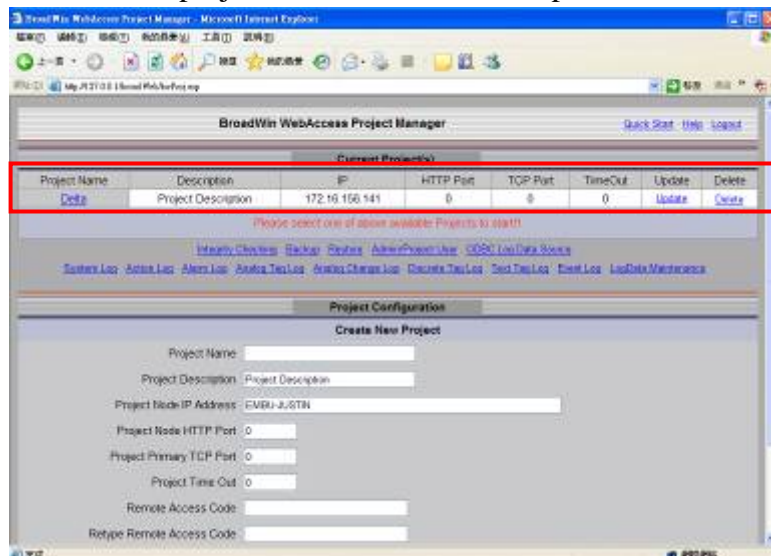
3-4. Enter the project manager page



3-5. Select **Submit** to new Project after setting

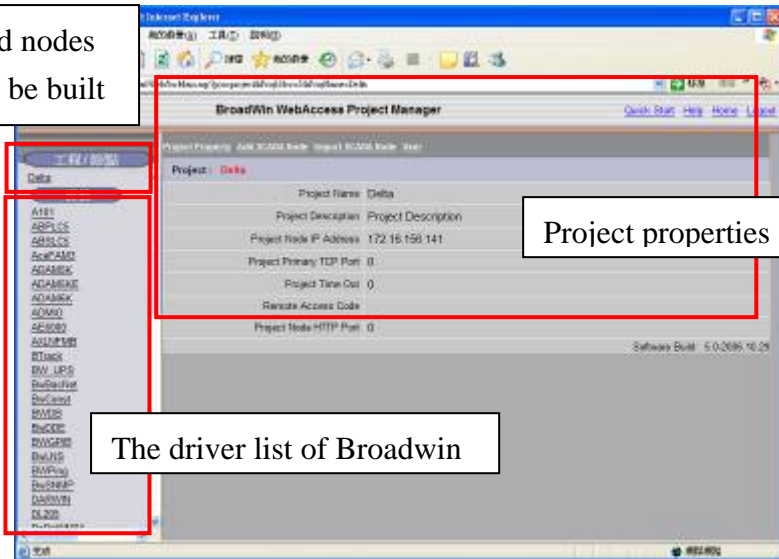


3-6. The created project would show on the top



3-7. Select project to enter project properties

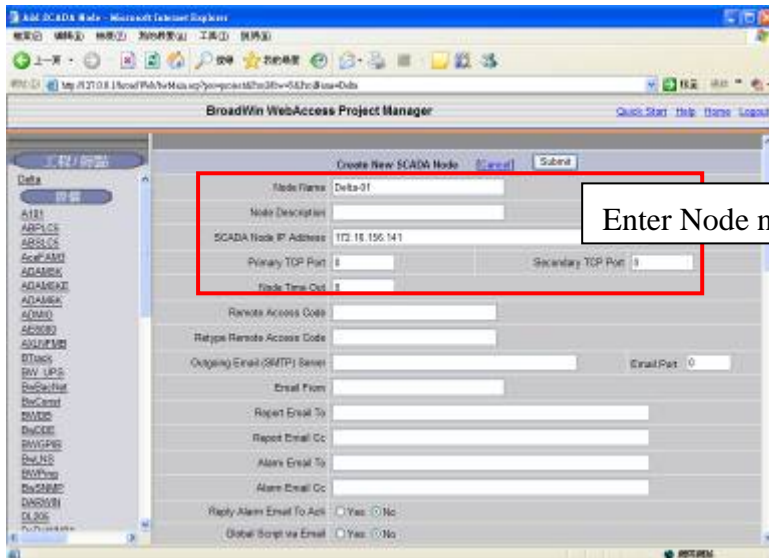
The projects and nodes that has already be built



Project properties

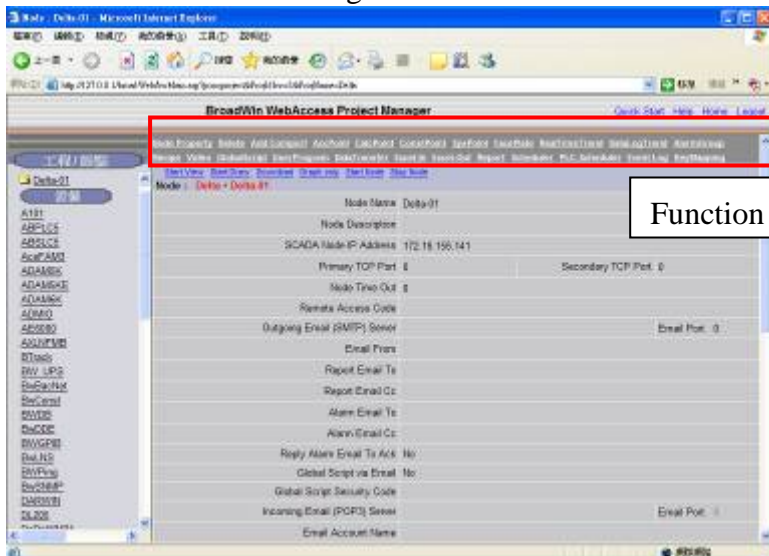
The driver list of Broadwin

2-8. Select Add SCADA Node



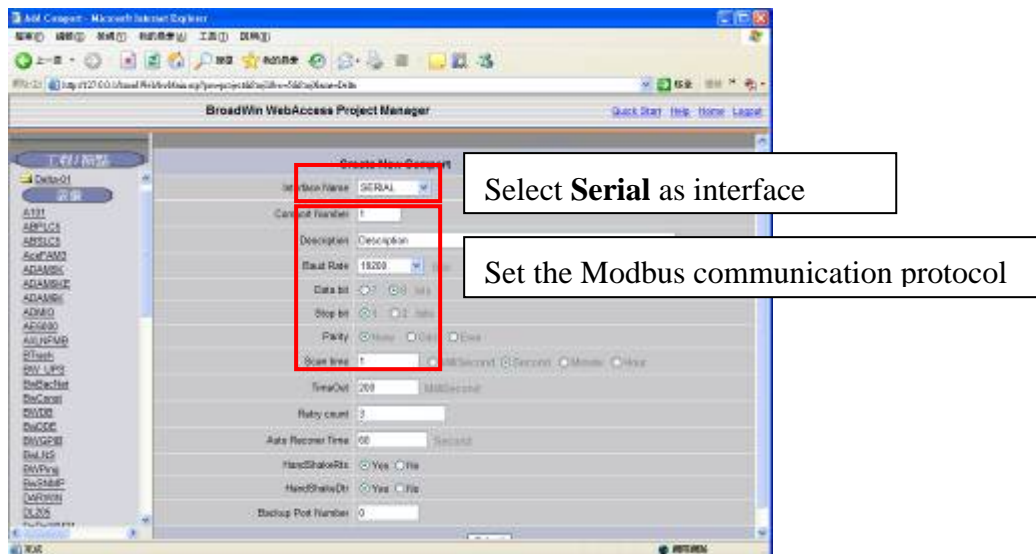
Enter Node name and SCADA node IP address

2-9. Select Submit after setting



Function list

3-10. Select **Add Comport**



3-11. Follow the procedure in Sec. 2-2 to 2-14 to create new tag and setup I/O

Appendix

Modbus address table of Delta DVP series PLC.

Device	Range	Type	DVP address (Hex)	Modbus address (Dec)	Effective			
					ES/EX/SS	SA/SX/SC	EH	
S	000~255	bit	0000~00FF	000001~000256	0~127	0~1024	0~1024	
S	256~511	bit	0100~01FF	000247~000512				
S	512~767	bit	0200~02FF	000513~000768				
S	768~1023	bit	0300~03FF	000769~001024				
X	000~377	bit	0400~04FF	101025~101208	0~177	0~177	0~377	
Y	000~377	bit	0500~05FF	001281~001536				
T	000~255	bit	0600~06FF	001537~001792	0~127	0~255	0~255	
		Word	0600~06FF	401537~401792				
M	000~255	bit	0800~08FF	002049~002304	0~1279	0~4095	0~4095	
M	256~511	bit	0900~09FF	002305~002560				
M	512~767	bit	0A00~0AFF	002561~002816				
M	768~1023	bit	0B00~0BFF	002817~003072				
M	1024~1279	bit	0C00~0CFF	003073~003328				
M	1280~1535	bit	0D00~0DFF	003329~003584				
M	1536~1791	bit	B000~B0FF	045057~045312	0~1279	0~4095	0~4095	
M	1792~2047	bit	B100~B1FF	045313~045568				
M	2048~2303	bit	B200~B2FF	045569~045824				
M	2304~2559	bit	B300~B3FF	045825~046080				
M	2560~2815	bit	B400~B4FF	046081~046636				
M	2816~3071	bit	B500~B5FF	046637~046592				
M	3072~3327	bit	B600~B6FF	046593~046848				
M	3328~3583	bit	B700~B7FF	046849~047104				
M	3584~3839	bit	B800~B8FF	047105~047360				
M	3840~4095	bit	B900~B9FF	046361~047616				
C	0~199	16-bit	bit	0E00~0EC7	003585~003784	0~127	0~199	0~199
			Word	0E00~0EC7	403585~403784			
	200~255	32-bit	bit	0EC8~0EFF	003785~003840	232~255	200~255	200~255
			Dword	0EC8~0EFF	403785~403840			

Device	Range	Type	DVP address (Hex)	Modbus address (Dec)	Effective		
					ES/EX/SS	SA/SX/SC	EH
D	000~255	Word	1000~10FF	404097~404352	0~1311	0~4999	0~9999
D	256~511	Word	1100~11FF	404353~404608			
D	512~767	Word	1200~12FF	404609~404864			
D	768~1023	Word	1300~13FF	404865~405120			
D	1024~1279	Word	1400~14FF	405121~405376			
D	1280~1535	Word	1500~15FF	405377~405632			
D	1536~1791	Word	1600~16FF	405633~405888			
D	1792~2047	Word	1700~17FF	405889~406144			
D	2048~2303	Word	1800~18FF	406145~406400			
D	2304~2559	Word	1900~19FF	406401~406656			
D	2560~2815	Word	1A00~1AFF	406657~406912			
D	2816~3071	Word	1B00~1BFF	406913~407168			
D	3072~3327	Word	1C00~1CFF	407169~407424			
D	3328~3583	Word	1D00~1DFF	407425~407680			
D	3584~3839	Word	1E00~1EFF	407681~407936	0~1311	0~4999	0~9999
D	3840~4095	Word	1F00~1FFF	407937~408912			
D	4096~4351	Word	9000~90FF	408913~409168			
D	4352~4607	Word	9100~91FF	436865~437120			
D	4608~4863	Word	9200~92FF	437121~437376			
D	4864~5119	Word	9300~93FF	437377~437632			
D	5120~5375	Word	9400~94FF	437633~437888			
D	5376~5631	Word	9500~95FF	437889~438144			
D	5632~5887	Word	9600~96FF	438145~438400			
D	5888~6143	Word	9700~97FF	438401~438656			
D	6144~6399	Word	9800~98FF	438657~438912			
D	6400~6655	Word	9900~99FF	438913~439168			
D	6656~6911	Word	9A00~9AFF	439169~439424			
D	6912~7167	Word	9B00~9BFF	439425~439680			

Device	Range	Type	DVP address (Hex)	Modbus address (Dec)	Effective		
					ES/EX/SS	SA/SX/SC	EH
D	7168~7423	Word	9C00~9CFF	439937~440192	0~1311	0~4999	0~9999
D	7424~7679	Word	9D00~9DFF	440193~440448			
D	7680~7935	Word	9E00~9EFF	440449~440704			
D	7936~8191	Word	9F00~9FFF	440705~440960			
D	8192~8447	Word	A000~A0FF	440961~441216			
D	8448~8703	Word	A100~A1FF	441217~441472			
D	8704~8959	Word	A200~A2FF	441473~441728			
D	8960~9125	Word	A300~A3FF	441729~441984			
D	9126~9471	Word	A400~A4FF	441985~442240			
D	9472~9727	Word	A500~A5FF	442241~442496			
D	9728~9983	Word	A600~A6FF	442497~442752			
D	9984~9999	Word	A700~A70F	442753~443008			