EasyIO 30P
Frequently Asked Questions

Document Change Log

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Remove Non Sedona content
Update documents name

Disclaimer

EasyIO 30P is a product by EasyIO Holdings Pte Ltd

The EasyIO 30P was built on the Sedona Framework ®.

Sedona Framework is a trademark of Tridium, Inc.

Contents

Frequent Ask Questions – DDC: Main Plant Control, AHU Control and Unitary control

Related to EasyIO-30P series, EasyIO-DEM-5 and EasyIO-LT-D5

General

1) What is the power consumption for EasyIO products?

	Power Supply Rating
EasyIO-30P	24VDC: 320mA
EasyIO-DEM-5	24VAC/VDC: 150mA

All EasyIO products' power consumption is stated in all of our catalogues. For further details, please refer to our products catalogue.

2) Can EasyIO-30P share 24VAc transformer with non EasyIO products?

It is not advisable to share transformer with EasyIO products, as our power supply are half wave power supply.

3) Can EasyIO-30P share transformer with EasyIO-DEM-5?

Yes. Please mind the polarity. Make sure the 24G and 24H are correct.

4) How many EasyIO-30P can be connected to a 2A transformer?

As per our power rating, a 2A transformer can power up to 6 EasyIO 30P. Each EasyIO30P's peak power consumption with full load is at 320mA @ 24VAC.

5) What protocol does EasyIO-30P support?

EasyIO-30P supports BACnet, Modbus and Sedona.

Getting Started – Hardware

1) What input type does a Universal Input (UI) support?

EasyIO 30P supports Voltage Free Contact as digital input

EasyIO 30P supports resistance, voltage, current as well as common RTD.

Analog Input Temperature Table Selection

Temperature Table Index	Type of Temperature Sensor
1 – 8	User defined Table 1 – 8 (default = table 9 – 16)
9	10K shunt (11K) Thermistor in Degree C
10	10K Thermistor in Degree C
11	1K Balco in Degree C
12	1K Platinum in Degree C
13	10K shunt (11K) Thermistor in Degree Fahrenheit
14	10K Thermistor in Degree Fahrenheit
15	1K Balco in Degree Fahrenheit
16	1K Platinum in Degree Fahrenheit

2) What output type does an Analog Output (AO) support?

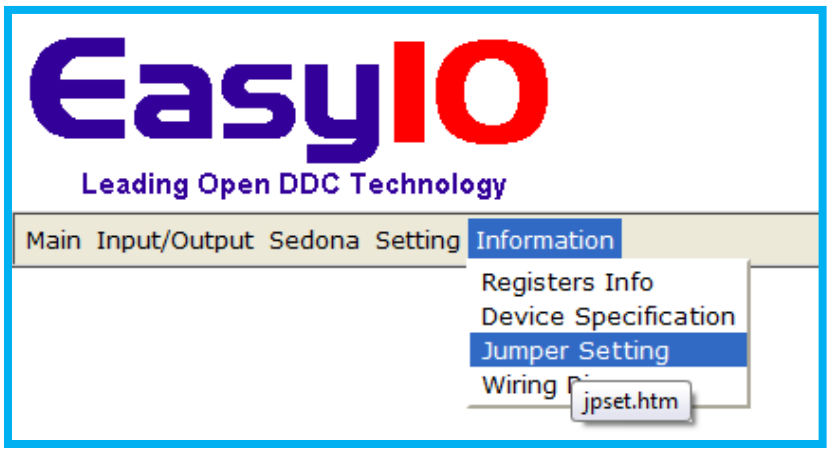
EasyIO 30P supports current and voltage analogue output(AO).

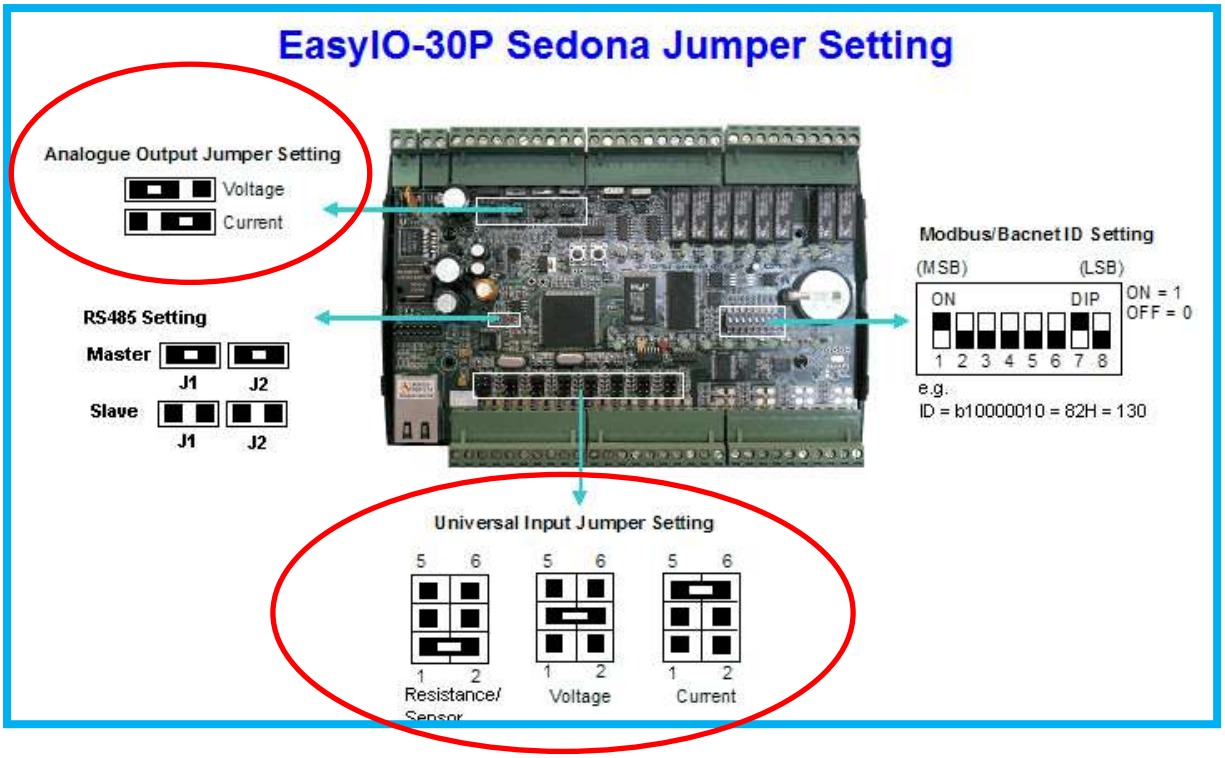
3) Can EasyIO-30P directly drive 240V equipment?

No. Although EasyIO does come 240VAC 5A relays, we do not recommend to directly driving a 240VAC equipment. It may cause backfire to the controller and causes damage/damages.

4) What are the jumper settings on EasyIO-30P board?

For jumpers settings please refer to our online Information Help. Go to Information>Jumper Setting.





5) How many EasyIO-30P can be connected in a single RS485 bus?

Modbus RTU = 31nos

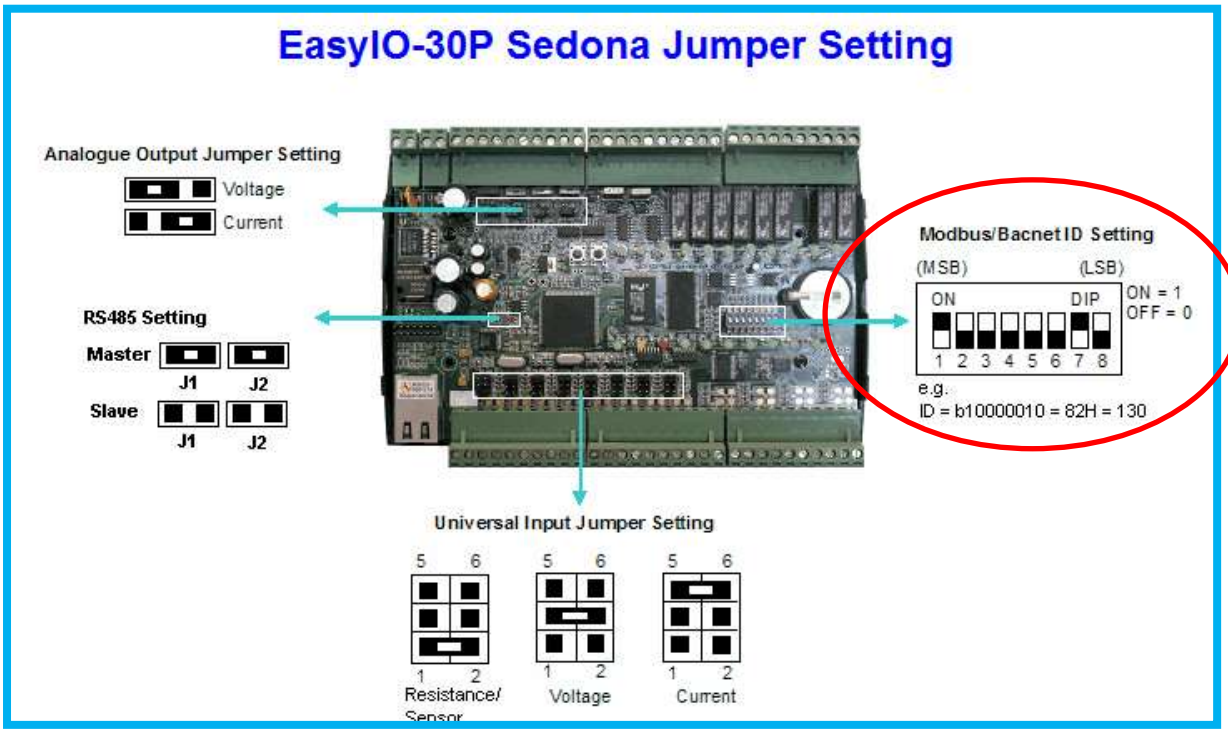
BACnet MS/TP = 31nos

6) How to use EasyIO-30P digital outputs? As a triac output or a relay contact output?

EasyIO 30P digital output is a contact output. It is not a triac output.

7) How to set the serial address?

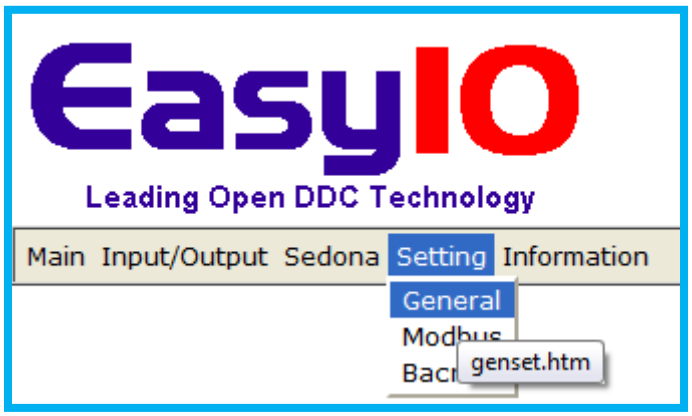
Please refer to our online Information Help. Go to Information>Jumper Setting.

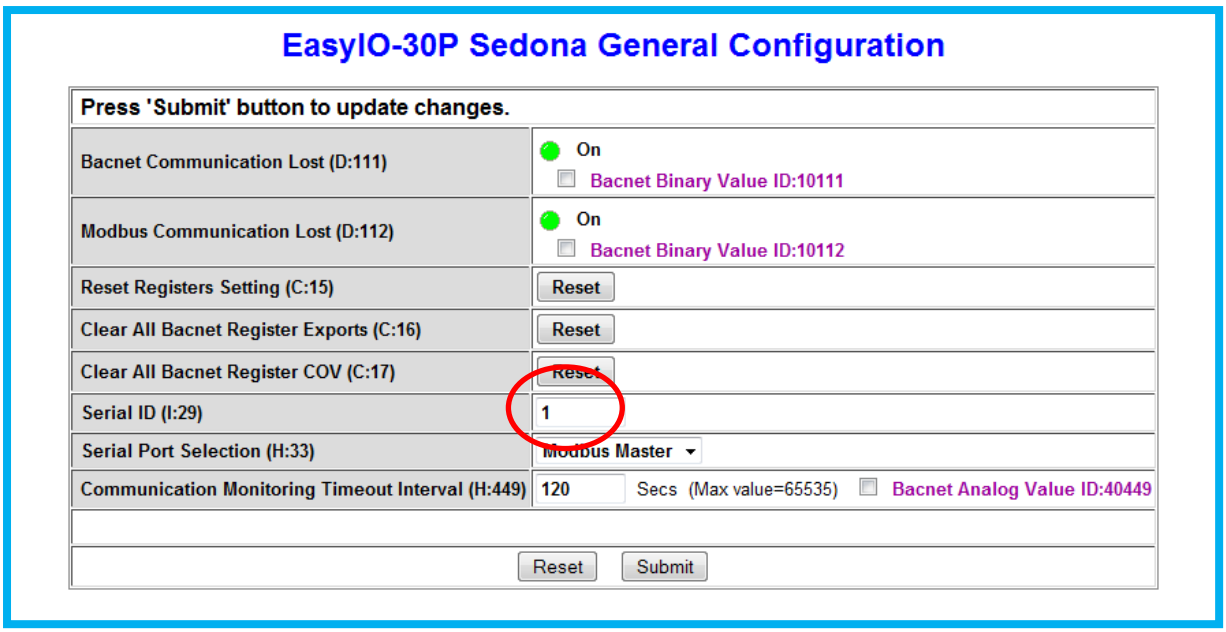


Serial addressing is using the binary code. Please note that the LSB is on the right and MSB is on the left.

8) How to confirm the serial address that was set?

User can confirm or double check on the serial addressing via web browser. Go to Setting>General tab.





9) What is the maximum serial address EasyIO-30P support?

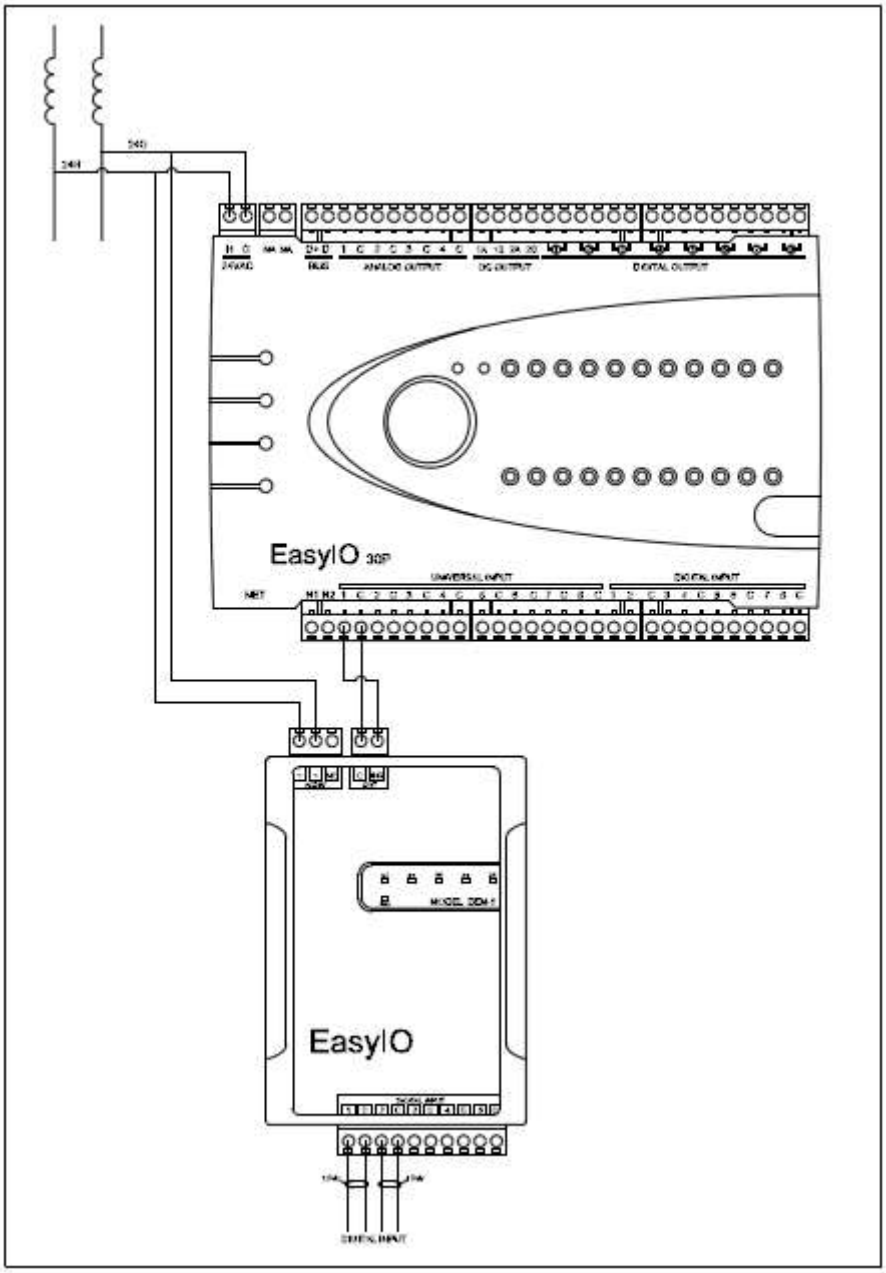
It supports up to 254 addressing. Address 0 and 255 should not be used.

10) If EasyIO-30P RS485 port is damaged is the Ethernet port still able to communicate?

Yes. The damaged RS-485 comm port will not affect the Ethernet port in the EasyIO-30P if there is no other component burned during the RS-485 comm port surge.

11) How to connect EasyIO-DEM-5 to EasyIO-30P's Universal Input?

An EasyIO-DEM5 only can be connected any one of the 8 Universal Inputs. An EasyIO-DEM5 needs power in order for it to work.



12) How many does a DEM5 does a EasyIO30P support?

One EasyIO-30P can support up to 8 nos of EasyIO-DEM5.

Getting Started – Software General

1) What is the default login name and password for EasyIO-30P?

Default login credentials is as below,

Username : **admin**

Password : **1234**

2) What is the default IP address for EasyIO-30P?

Default IP address and subnet mask is as below,

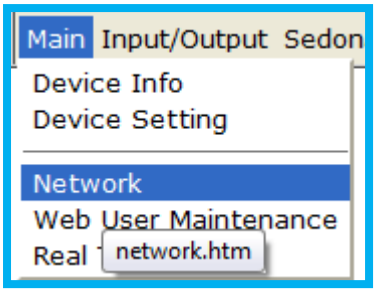
IP address : 192.168.10.10

Subnet mask : 255.255.255.0

3) How to change the EasyIO-30P's IP address?

a. Login to the EasyIO-30P via web browser.

b. Go to Main>Network tab.



c. An example of changing the IP address as below.

Existing IP address : 192.168.10.10

Existing subnet mask : 255.255.255.0

Existing default gateway: null

New IP address : 192.168.1.10

New subnet mask : 255.255.255.0

New default gateway : 192.168.1.1

It is a must to key in the default gateway, otherwise it will not allow to change the IP address.

4) How to recover the lost IP address for EasyIO-30P?

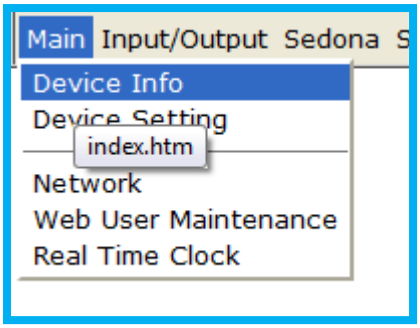
Please refer to documents as below.

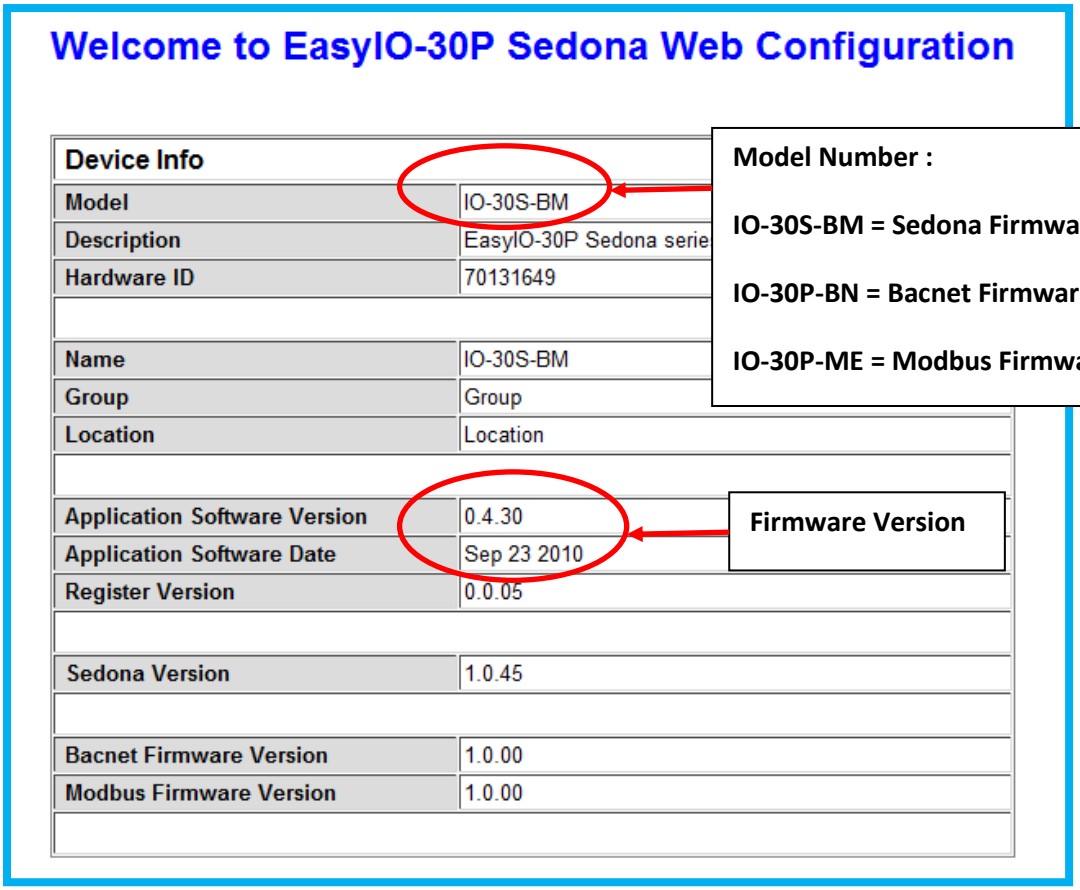
a) EasyIO Basic 02 – Recover Lost IP and Login Crendentials User Guide

b) EasyIO Basic 03 – Terminal Mode User Guide

5) How to check the EasyIO-30P's firmware type and version?

Go to Main>Device info tab.




Welcome to EasyIO-30P Sedona Web Configuration
Device Info
Model
IO-30S-BM
Description
EasyIO-30P Sedona serie
Hardware ID
70131649
Name
IO-30S-BM
Group
Group
Location
Location
Application Software Version
0.4.30
Application Software Date
Sep 23 2010
Register Version
0.0.05
Sedona Version
1.0.45
Bacnet Firmware Version
1.0.00
Modbus Firmware Version
1.0.00
Model Number :
IO-30S-BM = Sedona Firmware version
IO-30P-BN = Bacnet Firmware Version
IO-30P-ME = Modbus Firmware Version
Firmware Version

6) How to upgrade the EasyIO-30P's firmware?

There are a few ways of doing it.

1. Hyper terminal into Boot Loader Mode via Ethernet connection
2. Hyper terminal into Boot Loader Mode via Serial connection
3. Use EasyIO firmware tool.

   Please refer to document ***EasyIO Basic 01 - Firmware Flashing User Guide***.

7) Why the red banner appeared after hitting 'Submit' button in the web page of EasyIO-30P?

This may be cause from corrupted programming or flash. This can be resolved by formatting the EasyIO-30P using the format firmware. Then flash it again to the desire firmware.

Please use the EasyIO30PFormatV1.00.bin file.

This action will clear all the memory. Please back up whatever necessary.

Please refer to document ***EasyIO Basic 01 - Firmware Flashing User Guide***.

8) How to perform firmware flashing for EasyIO-30P?

Please refer to document ***EasyIO Basic 01 - Firmware Flashing User Guide***.

9) How to get the latest EasyIO-30P firmware?

It is available in our ftp site.

Website : ftp://www.easyio.com

Username : support@easyio.com

Password : user

10) What are the different between boot loader mode and terminal mode in EasyIO-30P?

Boot Loader mode is for firmware upgrading, flashing and formatting the flash memory.

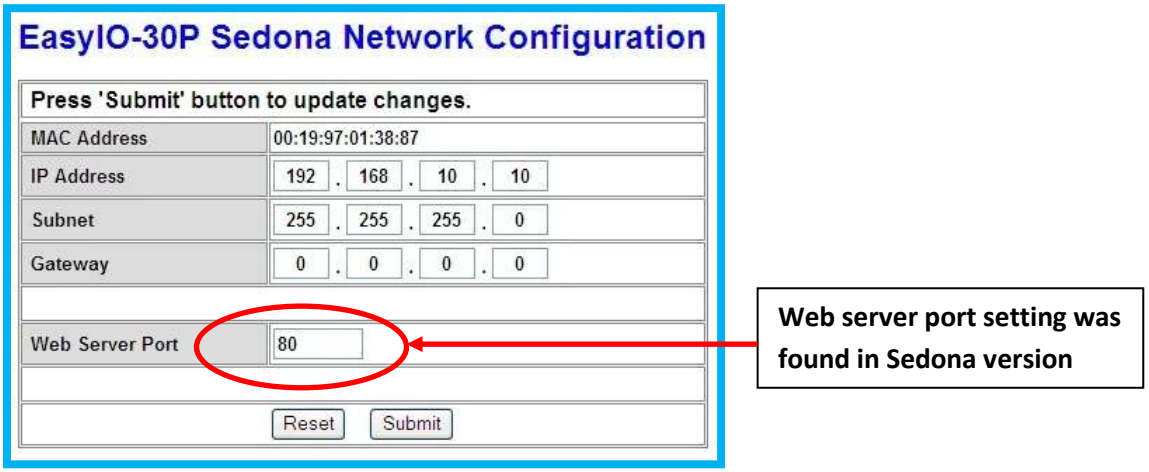
Terminal mode is for IP address recovery, serial connection settings.

11) What is the maximum user can access the EasyIO-30P via web browser concurrently?

Maximum 5 users can access concurrently. Higher than that, the performance will be sluggish.

12) Can the web server port number (default is 80) be changed from EasyIO-30P's web interface?

The web server port number can be configured with Sedona firmware version



Getting Started – Software Bootloader

1) What are the requirements/equipment needed to connect into Boot Loader mode?

a. Ethernet Cable

b. RS-485 connection. If PC does not have COM port, you may need a USB to Rs-485 converter.

c. Telnet program. For Windows XP user, the built-in hyper terminal is good enough.

2) How to get into EasyIO-30P's boot loader mode?

Boot loader can be connecting via Ethernet or Serial COM.

Please refer to document ***EasyIO Basic 01 - Firmware Flashing User Guide***.

3) What are the settings for EasyIO-30P's bootloader mode?

Please refer to document ***EasyIO Basic 01 - Firmware Flashing User Guide***.

4) What is the IP address for EasyIO-30P Boot Loader mode?

The default IP address for EasyIO-30P boot loader mode is 192.168.10.10.

This IP address is not the same with the web browser IP address. If user has changed the username and password via web browser, that username and password cannot be used for boot loader mode.

5) For Windows Vista or Windows 7, the third-party hyper terminal software can be used to communicate with EasyIO-30P?

Yes. You can use any telnet program that is available.

6) If the login name and password was changed at the EasyIO-30P web server, does this affect the boot loader's login name and password?

No. The login credentials for web browser and boot loader is different. The login credentials for terminal mode and web browser is the same.

Getting Started – Software Terminal Mode

1) What are the requirements/equipment needed to connect into Terminal mode?

a. RS-485 connection. If PC does not have COM port, you may need a USB to Rs-485 converter.

b. Telnet program. For Windows XP user, the built in hyper terminal is good enough.

2) How to get into EasyIO-30P's terminal mode?

Terminal mode only can be connected via serial COM. A RS-485 converter would be needed if hardware does not support RS-485 communication.

3) What are the settings for EasyIO-30P's terminal mode?

Please refer to document ***EasyIO Basic 03 - Terminal Mode User Guide***.

4) Why can't get into EasyIO-30P's terminal mode? BACnet firmware is using.

If you are running EasyIO-30P with BACnet firmware , most likely the RS-485 COM is broadcasting BACnet MS/TP messages. This will jammed up the RS-485 port when trying to connect via RS-485.

You need to disconnect the RS-485 cable at the controller, get into boot loader mode then only connect the rs-485 cable to the controller.

Sedona version (IO-30S-BM)

1) What is the minimum requirement in order to connect a Sedona Controller?

a. Niagara AX workbench , version 3.4.55 and above

b. Sedona Installation kit from Tridium and EasyIO

c. EasyIO-30S-BM , with Sedona Firmware version 0.4.23 and above

2) How to program EasyIO-30P-SF? It is same with EasyIO BACnet or EasyIO Modbus?

Sedona Framework is a new protocol and it has to be programmed via Niagara Workbench equipment with Sedona Workbench.

3) EasyIO-30P-SF supports what protocols?

EasyIO-30S-BM support BACnet IP, BACnet Ethernet, BACnet MS/TP, Modbus TCP, Modbus RTU and also Modbus Master and Salve.

4) What is the default login credentials for Sedona Web Browser?

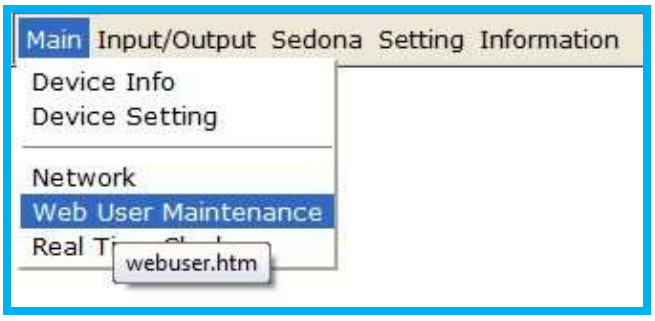
Username : admin

Password : 1234

Web Port : 80

5) How to change/add/edit Sedona Web Browser login credential?

User can change/add/edit login credentials via web browser. Go to Main>Web User Maintenance.



This is only for web browser credentials. It is not the same with Sedona Workbench login credentials.

6) What is the default login credentials for Sedona Web Browser?

Username : admin

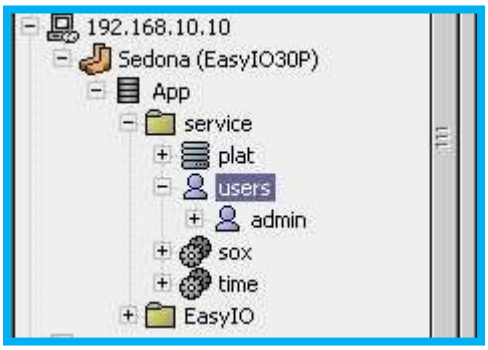
Password : <blank>

TCP Port : 1876

7) How to change/add/edit Sedona workbench login credential?

Users can change/add/edit login credentials via Sedona Workbench. Open the Sedona Workbench via Niagara Workbench.

Go to **Sedona/App/Service/Users**

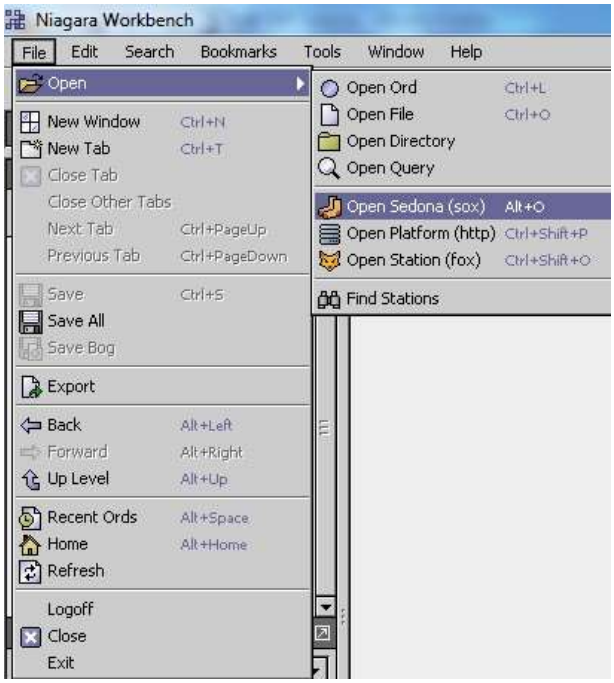


This login credentials can be reset back to factory settings by re-installing and restart Sedona VM from the web browser. Please refer to item *9)*

8) How to connect into Sedona Workbench?

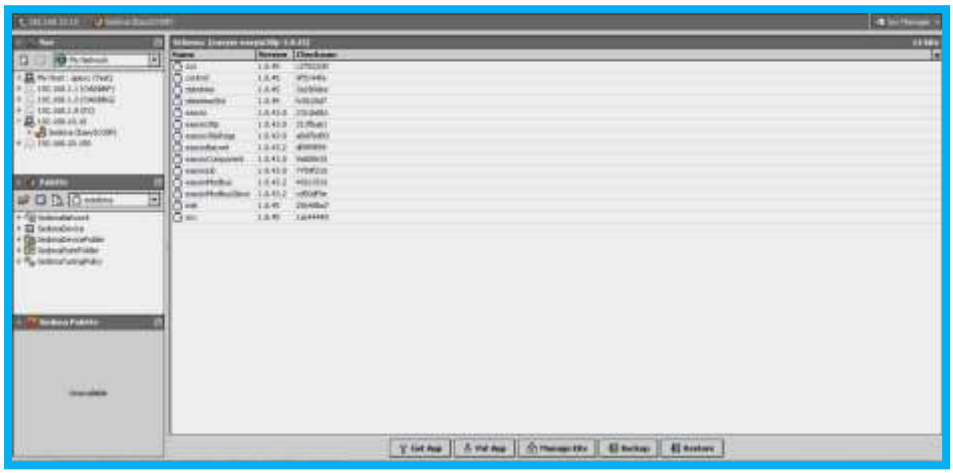
a. Open Niagara Workbench.

b. Go to File>Open>Open Sedona



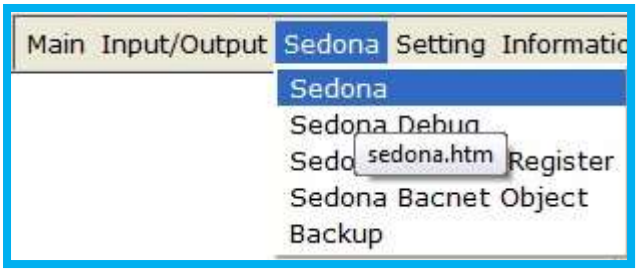
c. Key in the login credentials as item *6)*

d. You will get connected if the login credentials are correct.

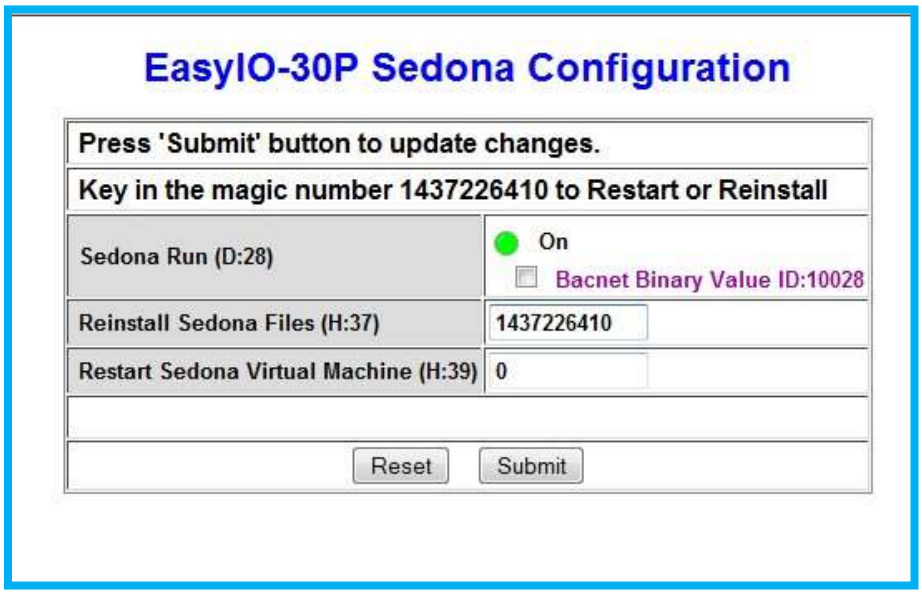


9) How to clear the installed Sedona applications?

Login to the EasyIO-30S-BM via web browser, go to Sedona>Sedona Tab.



Key in the magic number provided. This is re-install all Sedona VM into the controller to default and will also restart the Sedona VM.

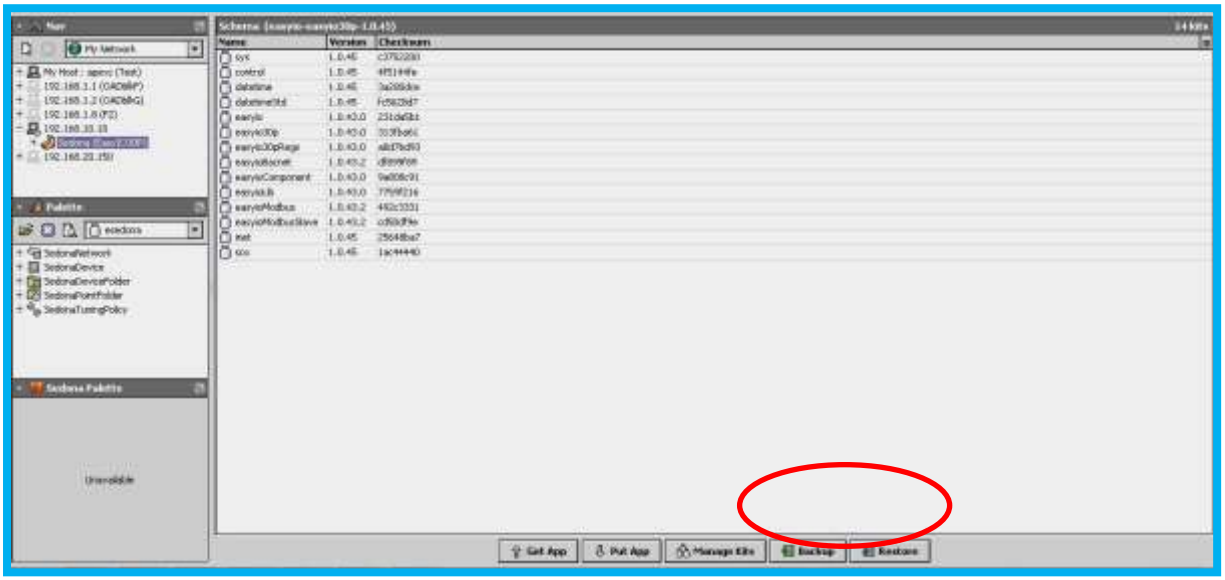


This step will also clear all the login credentials created previously to default.

10) How to do the backup and restore for Sedona applications?

To backup and restore Sedona Apps is via Sedona Workbench. Connect to the Sedona Controller , hit backup and it will prompt to save into PC.

You could restore a backup copy to another EasyIO Sedona Controller



11) Is it advisable to change the settings from EasyIO-30P-SF's web server?

No. It is not advisable to change settings from the web browser except for

a. Modbus Serial Settings.

b. BACnet serial settings and BACNet device ID.

c. Temperature Table.

Changing settings via web browser such as AI settings will get overwrite or restore back to default if any power cycle occur.

12) How to define the temperature table?

Please refer to EasyIO Advanced 07 – Temperature Table User Guide

13) I cannot connect into Sedona with the Sedona Platform

a. Make sure the Sedona VM is running.

b. Make sure you have all the kits used in the Sedona Apps installed in your local machine.

c. Make sure you have the correct platform manifest.

Please refer to Release Checklist for details.

14) I try to clear the apps but the Sedona Virtual Machine is not running after doing the magic number.

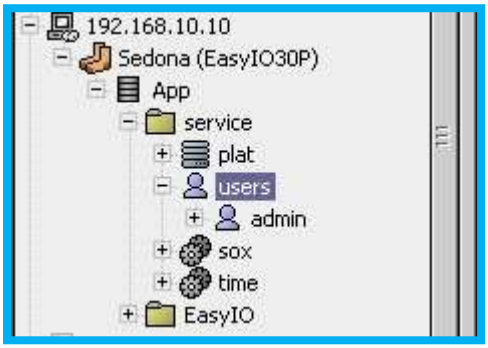
Please flash it with format firmware. Reset the controller, let it run for at least 5 sec then flash it back to Sedona firmware.

Please refer to document ***EasyIO Basic 02 – Recover Lost IP and Login Credentials User Guide.***

15) How to change/add/edit Sedona workbench login credential?

User can change/add/edit login credentials via Sedona Workbench. Open the Sedona Workbench via Niagara Workbench.

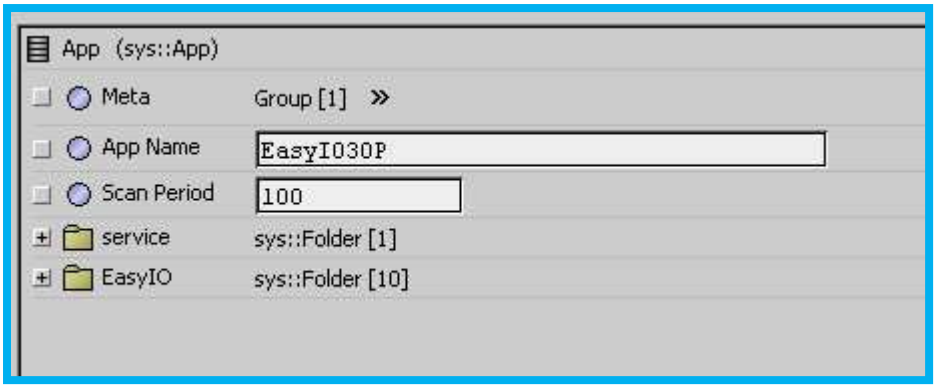
Go to **Sedona/App/Service/Users**



This login credentials can be reset back to factory settings by re-installing and restart Sedona VM from the web browser. Please refer to item ***9)***

16) Why is the performance slow down after I have complete building my logic inside the controller?

EasyIO-30S-BM has limited memory resource. If you encounter problem with pages refresh rate or lagging, you can increase the "scan period" under "App" folder to higher number (example 1000) to speed up the page loading time during engineering period.



Please remember to change it back to “100” after engineering is complete.

The rule of thumb is not putting too much blocks in a single page, separate it under different folder and simplify the control by putting the complex logic into single kit.

Bear in mind that EasyIO is a low speed controller and can't be used for too complicated task, must be verified first.

17) How to create history in the Sedona Controller?

Please refer to ***EasyIO Adv 07 – Temp Table User Guide***

18) How to archive history that is stored in the Sedona Controller into Niagara Fox?

Please refer to Sedona history document for step by step or click on the link below.

19) What is the max memory allocated for history in a Sedona Controller?

Total memory for history is 32,768 (32MB) for history storage.

This allocated memory can trend up to almost 4000 records depending on the configurations.