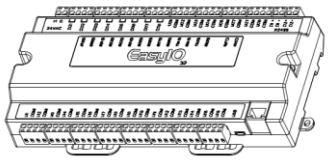
EasyIO FG Series FAQ



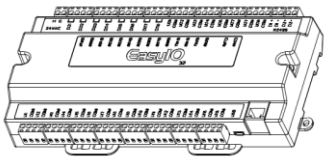
Document Change Log

16th May 2014
Document created.

28th Dec 2014
Bacnet limitation added.

28th Dec 2014
Edit doc.

26th Oct 2015
Details update for FG+ model.



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

EasyIO FG-32 is a product by EasyIO Holdings Pte Ltd

The EasyIO FG-32 was built on the Sedona Framework ®.

Sedona Framework is a trademark of Tridium, Inc.

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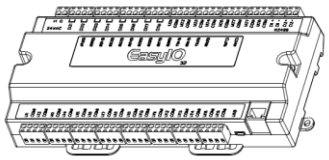

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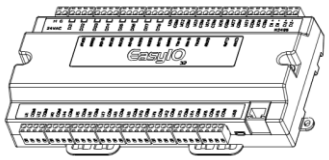
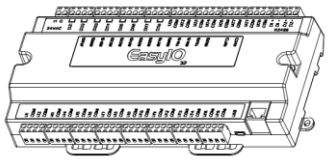


Introduction

This document is a quick reference to all most commonly asked questions.



Frequently Asked Questions

1) Default IP address.

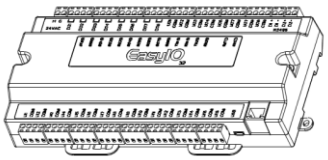
Below applies to both FG and FG+.
Default IP address : **192.168.10.11**
Default Subnet : **255.255.255.0**
Default Gateway : **192.168.10.1**

The above IP address is the IP address if a restore to factory setting carried out at the controller.

2) Commonly used login credentials for EasyIO FG Series

Below applies to both FG and FG+.

Function	Username	Password	Remarks
Sedona (sox)	**admin**	**No password** **(Leave it blank)**	Login to the Sedona sox protocol
Controller Web scripts (via file transfer client , FTP)	**webuser**	**123456**	Login to the webuser folder that contains web server default files system.
CPT graphics deployment	**webuser**	**123456**	Credentials for CPT graphics deployment
CPT graphics login via web browser	**admin**	**hellocpt**	Credentials for CPT web server
Micro SD card (if a micro SD card is insert)	**sdcard**	**123456**	Login to the SD Card file system where it contain the CPT deployed files.
SQL Lite browser administrative page	-	**123456**	Login to the SQL Lite Administrative Web Page. Link : http://192.168.10.11/sdcard/phpliteadmin.php



3) Default IP Ports for EasyIO FG Series

Below applies to both FG and FG+.

Protocol	Port	Type	Remarks
Sedona (sox)	**1876**	**UDP**	Sox connection
File Transfer Client (FTP)	**21**	**TCP**	Graphics Deploy , File Transfer via FTP Client
Modbus TCP	**502**	**TCP**	Modbus TCP Port
BACnet IP	**47808**	**UDP**	BACnet IP Port
Web Server	**80**	**TCP**	Build In Web Server port
Tcom	**5021**	**UDP**	Tcom Niagara Driver port

4) How do I upgrade the firmware for EasyIO FG Series controllers?

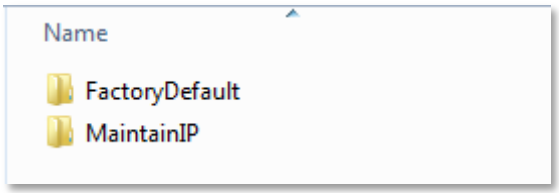
FG Series

There are two types of flashing files which are explained below. ***Both types*** will erase the Sedona apps in the controller, therefore please ensure a controller back up is performed before the flashing procedure otherwise the controller App will be lost.

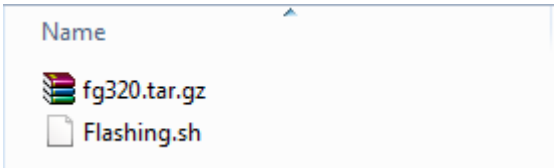
The process will take approximately 5 minutes. The RED LED will light constantly for 5 minutes. This is normal.

If the RED LED continues to light up for more than 8 minutes, the firmware file transferred into the SD card is corrupted.

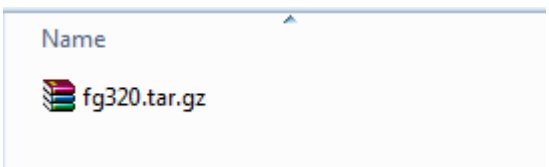
Type	Functions	Remarks
Factory Default	Firmware upgrade Restore back to factory default	Sedona apps will be erase IP address will restore back to default IP address IP address : 192.168.10.11
Maintain IP address	Firmware upgrade Remain the last IP address	Sedona apps will be erase IP address will remain the last valid IP address set.



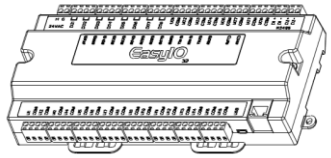
Get the required files from EasyIO technical support at support@easyio.com.
Depending on version, quantity of files may differ. See below.



V2.1.2.0.01 and below has 2 files



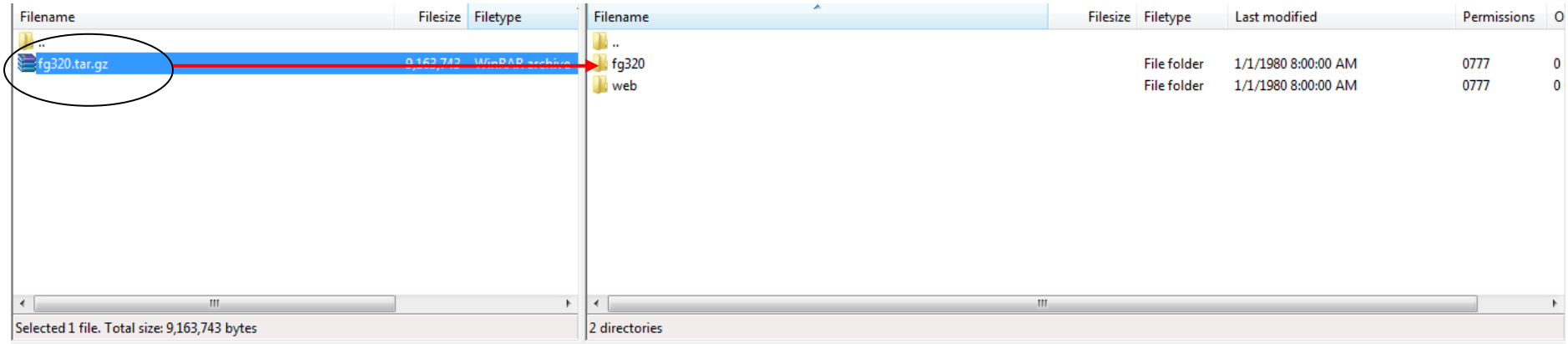
V2.1.2.0.02 and above has only 1 file



The firmware file which is ***fg320.tar.gz*** needs to be copied into the fg320 folder using a file transfer client or with a memory card reader plug into the computer. You can copy the files over into the SD card by dragging the file into the "***fg320***" folder if a file transfer client program is used.

Note*
You might need 2 files or 1 file depending to the current firmware version of the controller.

Important: Please check the file size and compare with the source file. Make sure the file size is correct.



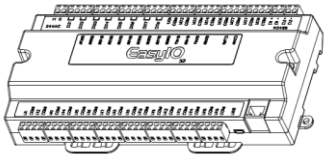
****3 Important Tech Tips if using file transfer client program****

1. **Files need to be transfer/copied into the "fg320" folder.**
2. **Files cannot be in the root directory of the SD card, they need to be copied into "fg320" folder.**
3. **If "fg320" folder is not seen, refer to Step 3 above.**

Login to the Sedona controller via Sedona workbench or the CPT tool and reboot the device.

****Tech Tip** - The watchdog jumper must be in the "ON" position for the controller to automatically reboot. By default the controller is shipped with the watchdog jumper in the *ON* position.

For detail explanation, please refer to ***04 EasyIO FG Series Firmware Upgrade.pdf.***



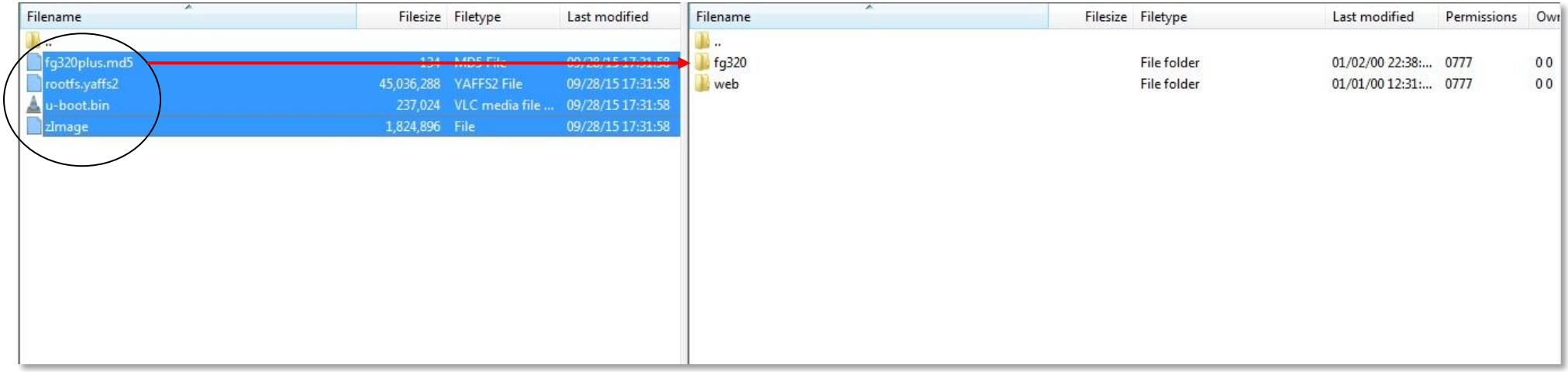
For FG+ series

For FG+ there are 4 files required.

Note*

You need 4 files for FG+ controller.

Important: Please check the file size and compare with the source file. Make sure the file size is correct



****3 Important Tech Tips if using file transfer client program****

1. **Files need to be transfer/copied into the "fg320" folder.**
2. **Files cannot be in the root directory of the SD card, they need to be copied into "fg320" folder.**
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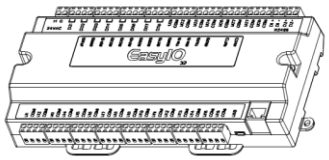


5) Restore to factory default.

Below apply to both FG and FG+

The new firmware release dated 1st August 2013 comes with “Restore Factory Settings”.

This function is done with just the by pressing the “Service” button while the controller is booting up.

A restore to factory settings will do the following;

1. Restore the IP address to the default which is ***192.168.10.11***
2. Clear the Sedona application in the Sedona VM back to default (default app is an empty app)
3. A default Sedona apps default login is admin, <no password>.

Below is a simple explanation. For detail explanation, please refer to ***03 EasyIO FG Series User Reference.pdf***

Step 1

Make sure you backup the Sedona apps if you have connection to the EasyIO FG32.

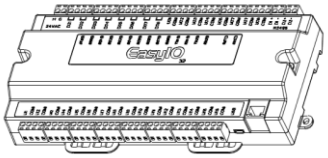
Step 2

Cycle power and within 5 seconds press and HOLD down the service button until the Error LED starts to flash approximately 2 Hz.

This process will take approximately 15 seconds before the error Led start to blink.

Step 3

Once the Red LED flashes, a momentary press of the service button will restore back the FG Series controller back to factory default state.



6) Micro SD Card

Each EasyIO FG Series comes with a micro SD memory card slot.

Specifications	Remark
Brand tested recommended	Transend, Kingston
Capacity tested	2GB, 4GB, 8GB, 16GB
Class	Class 4 Class 10

Please note that the Micro SD card in the EasyIO FG Series is optional and the controller does not complete with the SD Micro Card as standard. The SD Micro card can be purchased separately that have the following specifications.

Make sure the controller is power off before inserting the micro SD Card.

Above is a simple explanation. For detail explanation, please refer to ***01 EasyIO FG32 Installation.pdf***

7) EasyIO FG Series Modbus Master Driver limitation

Modbus RTU Master

Modbus only can run at Port 2.

Max. No. of MODBUS Serial Networks (per FG device)	1
Max. No. of MODBUS Serial Devices per Network	31
Max. No. of Points *per MODBUS Serial Device*	32

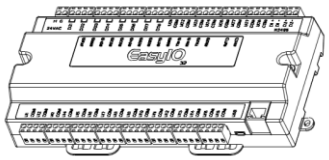
Modbus TCP Master

Max. No. of MODBUS TCP Networks (per FG device)	1
Max. No. of MODBUS TCP Devices per Network	31
Max. No. of Points *per MODBUS TCP Device*	32

Modbus TCP Gateway

Max. No. of TCP Gateway Networks (per FG device)	1
Max. No. of MODBUS Gateway Devices allowed	31
Max. No. of Points *per MODBUS Gateway Device*	32

For detail explanation, please refer to ***10 EasyIO FG Series Modbus Master.pdf***



8) EasyIO FG Series Modbus Slave Driver limitation

Modbus RTU Slave/ Modbus TCP Slave
Modbus only run at Port 2.

Max Network allowed	1 (of both drivers)
Max Discrete Point allowed	200 register address (total)
Max Coil Output allowed	200 register address(total)
Max Input Register allowed	200 register address, depending to data type. Integer data type occupy 1 register address Float data type occupy 2 register address Long data type occupy 2 register address
Max Holding Register allowed	200 register address, depending to data type. Integer data type occupy 1 register address Float data type occupy 2 registers address Long data type occupy 2 registers address

For detail explanation, please refer to ***EasyIO 11 EasyIO FG Series Modbus Slave.pdf***

9) EasyIO FG BACnet Server Limitation

BACnet IP Server (Information is correct at the time of document)
Bacnet MS/TP only run at Port 1.

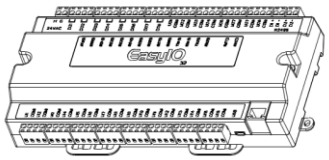
Objects supported	Analog Value , Read Only or Read Write Binary Value , Read Only or Read Write
Priority Array Supported	Yes
Writable Property	Present Value Only
Total Analog Value (AV)	128
Total Binary Value (BV)	128

For detail explanation, please refer to ***12 EasyIO FG Series Bacnet.pdf***

10) EasyIO FG BACnet Client Limitation

BACnet Client (Information is correct at the time of document)
Multistate objects need firmware b38 or higher and easyioBacnet kit 1.0.45.38.4 or higher
Bacnet MS/TP only run at Port 1.

Max devices	32 devices (combination of both IP and MSTP devices)
Max registers per device	31 BACnet objects (combination of all the supported BACnet objects below)
Objects supported	Analog Input Analog Output Analog Value , Read Only or Read Write Binary Input Binary Output Binary Value , Read Only or Read Write Multistate Input Multistate Output Multistate Value, Read Only or Read Write



Priority Array Supported	Yes
Writable Property	Present Value Only
Total Analog Value (AV)	32
Total Binary Value (BV)	32

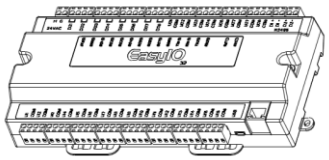
For detail explanation, please refer to ***EasyIO 12 EasyIO FG Series Bacnet.pdf***

11) EasyIO FG Series History storage

There is no metric for calculating memory size for a history data table.
Table below display an estimation memory size used. Result is by EasyIO bench testing.

Number of Table	Number of Column (Values)	Total records	Size on Disk
1	1	1000	40 KB
1	10	1000	132 KB
1	1	100,000	5,100 KB
1	32	100,000	27,000 KB

For detail explanation, please refer to ***14 EasyIO FG Series SQL Lite.pdf***



Technical Support

For technical support issues please contact technical support person as below;

Email: support@easyio.com