



SDCxG Graphics Series Sedona Controllers (SDC-20G/SDC-32G) Application Note – Modbus Slave

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1 Introduction

All products in the SDC-xG Series are equipped with a built-in Boot Loader. This feature is very useful and saves time, when updating the Controller Firmware

- The Build bootloader can now be carried out remotely. No more manual service button needed is used.
- Firmware upgrading now can be done remotely and without any assistance.
- Transferring the firmware files is via a FTP client.

Third party FTP client software must be used. In this user guide, FileZilla is an open source FTP program for Windows.

You can use a standard off the shelf retail micro SD Card. Class 4 Micro SD and Class 10 Micro SD card are supported.

2 Compatibility

This user guide only applies to controllers shipped out starting from 1 August 2013. To check whether the device is compatible to run the firmware upgrades according to this user guide see below.

Firmware for SDC-32G and SDC-20G are the same. You can used it for both models.

Step 1

Login to the controller via Sedona Workbench or CPT tool.

Step 2

Go to the service folder and look at the details of the Platform object.

If the property "Version" is visible then firmware flashing using this method can be done.

If the property "Version" is not visible then firmware upgrade using this method is not compatible.

plat	
easyioFG::EasyIOPlatform	
Platform Id	easyio-fg-1.0.45.21
Mem Available	978878
Mac Address	38:D1:35:00:02:B3
Serial No	20000590
Host Id	F50B-8B6286B3-B16C
Version	V1.1:1.0

This controller above is compatible.

plat	
easyioFG::EasyIOPlatform	
Platform Id	easyio-fg-1.0.45.21
Mem Available	948625
Mac Address	38:D1:35:00:05:15
Serial No	20001200
Host Id	20001200

The controller above is not compatible.

If your device is not compatible please contact SyxthSense technical support at support@syxthsense.com for further assistance.

****Notes**

Existing firmware version v2.0.2.0

If you have firmware version V2.0.2.0 you will need to run the upgrade as below.

1. Upgrade the controller to V2.1.2.0.01. (contain 2 files)
2. Upgrade to V2.1.2.0.02 or later (contain 1 file)

Existing firmware version V2.0.2.0.01

1. Upgrade to V2.1.2.0.01 (contain 2 files)
2. Upgrade to V2.1.2.0.02 or later (contain 1 file)

Existing firmware version V2.1.2.0.02 and above

1. Reflash/Upgrade to V2.1.2.0.02 or later (contain 1 file)

3 Login Details for FTP

By default the SDC-xG Series controller's login details are as below. This login only allows for firmware upgrade. It will point to the "sdcard" directory.

FTP access

Username : sdcard
Password : 123456
Port : 21

Default IP address : 192.168.10.11
Default Subnet : 255.255.255.0
Default Gateway : 0.0.0.0

Note:

In order to login, the host PC (laptop) has to be in the same subnet. Example:

IP address : 192.168.10.123
Subnet : 255.255.255.0

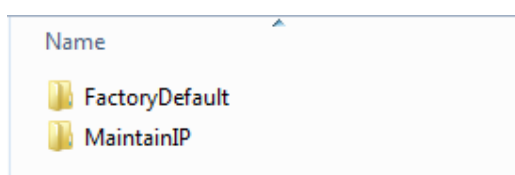
If user have change IP address for the controller, the FTP client will use the last changed IP address.

4 Precaution !!

There are two types of flashing files. Both types will erase the Sedona apps in the controller.

****Please make sure to backup the Sedona apps before running the firmware upgrade****

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



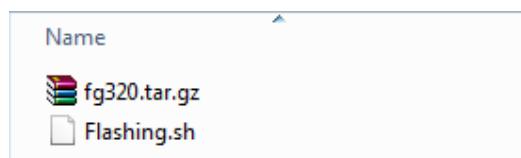
For firmware flashing please make sure power supply to power the SDC-20G/SDC-32G controller is either 24Vdc or 24Vac.

During firmware flashing, no power interruption is allowed. Any power interruption will damage the controller and it cannot be recovered.

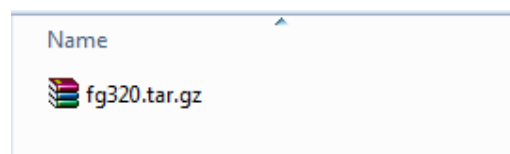
5 Firmware Upgrade Steps

Step 1

Get the required files from www.syxthsense.com Support section. Depending on version, quantity of files may differ. See below.



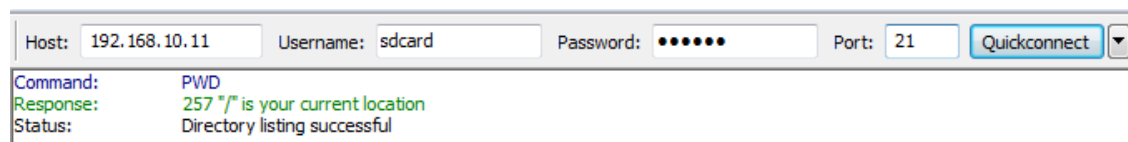
V2.1.2.0.01 and below has 2 files



V2.1.2.0.02 and above has only 1 file

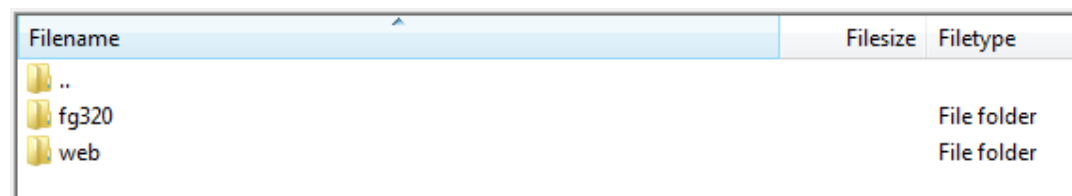
Step 2

Open FTP client software, in this case Filezilla. Key in the login details and connects.



Step 3

A successful session will show all the folders available as below. Go into "fg320" folder.

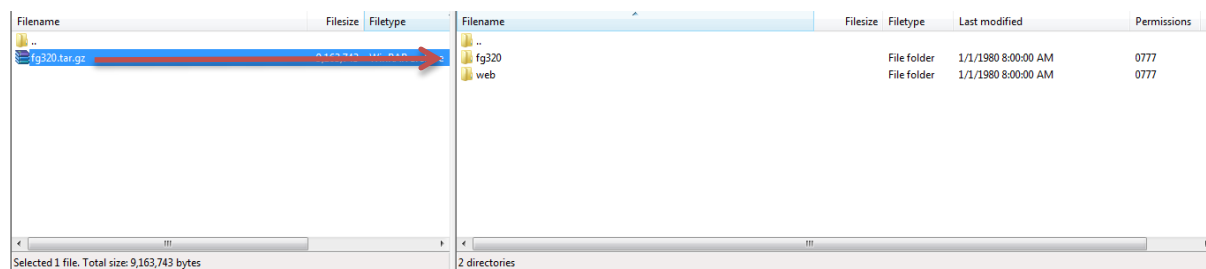


****If a new SD memory card is used, create the 2 folders manually in the SD memory card root directory. The folder name has to be exact as above. Case sensitive. ****

Step 4

Drag the files you received into this "fg320" folder. Please note that there are 2 files. Drag and drop both files.

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



Notes:

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

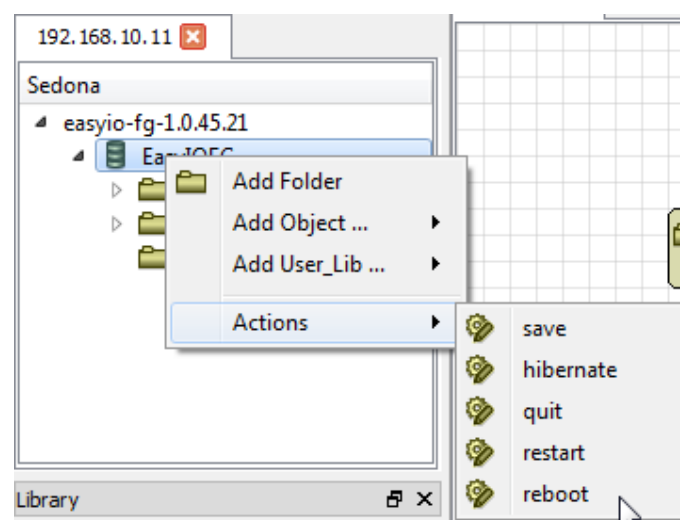
Step 5

This is a critical step. After the files are successfully transferred, please wait for at least 1 minute before proceeding to the next step. This is the time period the OS needs for writing the files from cache memory to the SD card.

Step 6

Cycle power of the controller. A press at the reset button can be substitute as well.

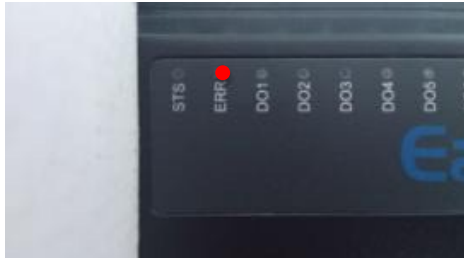
If controller is in a remote location, login to the Sedona controller via Sedona workbench or CPT tool and reboot the device. Make sure the watchdog jumper is in the ON position for the controller to automatically reboot.



Reboot the controller via the CPT tool.

Step 7

The controller will reboot and the process of firmware flashing/upgrade will start. The controller Error LED will light up steadily ON during this period.



Have some patience and let the process to complete. Wait for the Error LED to turn off before powering off/connecting to Sedona and etc.

The process will take approximately 4 minutes.

Failure to follow the precaution will damage the controller and it needs to be shipped back to factory.

**** IMPORTANT : DO NOT LOSE POWER DURING THIS PERIOD OR ELSE THE CONTROLLER WILL DAMAGE. ****

Step 8

Once the controller has finish upgrading the firmware, the "Error" LED will goes OFF and it will run the Sedona VM.

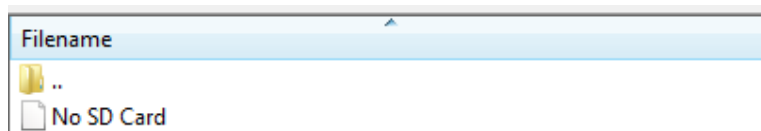
Step 9

To check if the controller has been updated, login to the Sedona and look at the "platform" in the service folder.

plat	
easyioFG::EasyIOPlatform	
Platform Id	easyio-fg-1.0.45.21
Mem Available	947922
Mac Address	38:D1:35:00:05:A8
Serial No	20001347
Host Id	EE10-90759DA8-AD77
Version	V2.1.2.0.02

6 Troubleshooting

1. If the ftp client shows “No SD Card”, check the controller SD card slot and make sure there is a micro SD card is inserted. After a micro SD card is inserted power down the controller for 5 seconds and power up again.
2. If the ftp client shows “No SD Card” where a SD card is inserted, power down the SDC-xG controller for 5 seconds.



3. Controller does nothing when a power cycle after files being transfer. This is most probably because the files are not in the “fg320” folder. Files need to be in “fg320” folder.

7 Document Control

<i>Version</i>	<i>Date</i>	<i>Change History</i>
0.1	29-Dec-2013	Original Release



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