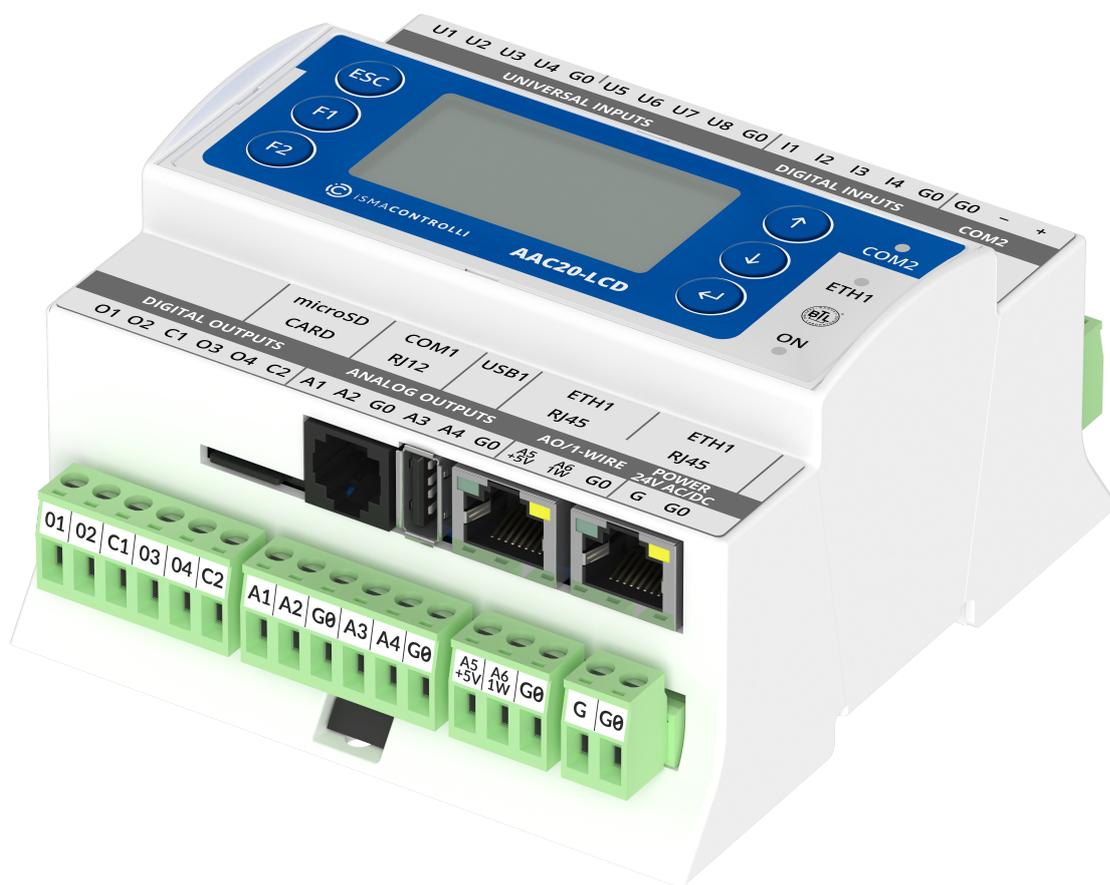


iSMA-B-AAC20

User Manual

AAC20 Updater



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sedona
FRAMEWORK™

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1 Introduction

AAC20 Updater is a software designed to administer an operating system of the iSMA-B-AAC20 controller. The software is free and can be obtained from iSMA distribution partner or downloaded from the iSMA CONTROLLI website: [iSMA CONTROLLI Download Center](#). The software allows to perform the following actions:

- **Send File:** sends a file to the device, displays the transfer progress bar at the bottom of the window, correct transfer is confirmed with a message "Transfer complete";
- **Reload Firmware:** uploads a firmware file–this operation must be preceded by a transfer of an adequate firmware files to the device. Upon update, the device shall be rebooted;
- **Device Reboot:** reboots the device;
- **Default Settings:** sets default values of IP address, RS485 parameters, and platform password;
- **Console:** displays the operating system console.

AAC20 Updater communicates with the device in two ways:

- **Modbus TCP:** using the Ethernet port;
- **Modbus RTU:** using the RS485 port–this type of communication requires the device to be in the bootloader mode.

The software allows to connect using the IP connection, RS485 port, or USB A-to-A cable connection (USB only for power supply or/and diagnostic to read console).

1.1 Revision History

Rev.	Date	Description
1.0	19 Jun 2024	First edition

Table 1. Revision history

2 Connections

2.1 IP Connection

To connect to the device using the IP connection, open the AAC20Updater.exe tool, and click the Modbus TCP button. Activity under the IP connection does not require the device to be in Bootloader mode—it is enough to enter the device’s IP address (default 192.168.1.123), Modbus TCP/IP port number (default 502), and the device’s Modbus Address (default 1).

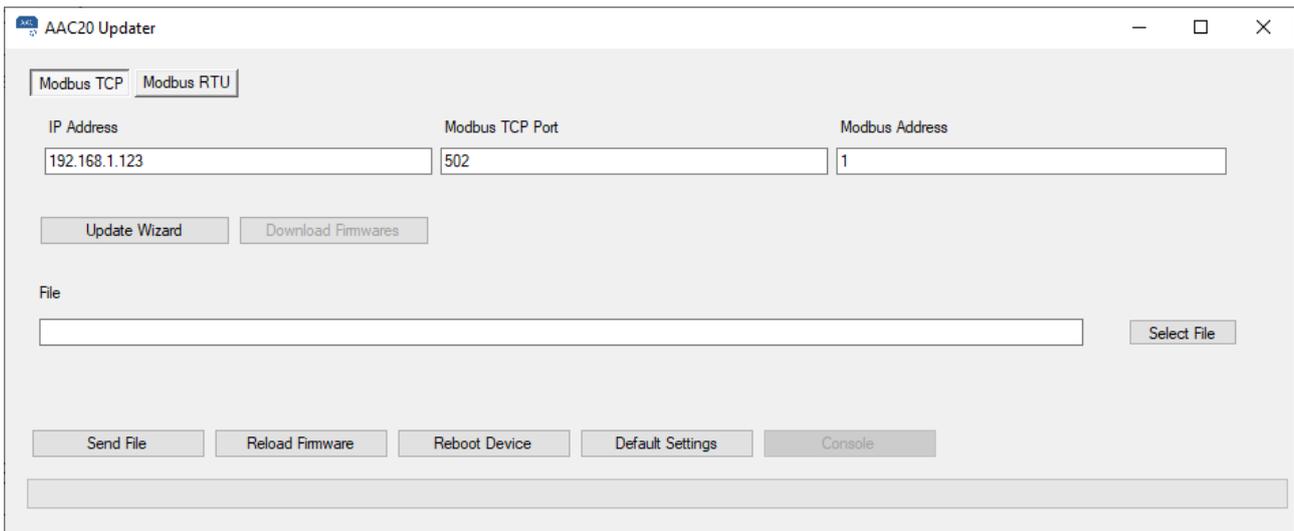


Figure 1. AAC20 Updater

2.2 RS485 Connection

To connect to the device using the RS485 connection, run the AAC20Updater.exe tool, and click the Modbus RTU button. In the COM Port text field, enter the RS485 port number of the PC, set the baud rate (default 115200), and the device’s Modbus Address (default 1).

In order to operate using the RS485 port connection, the device must be in Bootloader mode.

2.2.1 Bootloader in LCD Hardware Type (iSMA-B-AAC20-LCD)

Step 1: Disconnect the power and wait for the device to fully shut down.

Step 2: Hold the Esc button down, and turn the power on again. The screen should now display “Bootloader”.

Step 3: Restart the device (restarting exits the Bootloader mode and returns to normal operation).

2.2.2 Bootloader in Basic Hardware Type (iSMA-B-AAC20)

Step 1: Disconnect the power and wait for the device to fully shut down.

Step 2: With the device off, take the cover off, and move the DIP switch no. 8 to ON position, turn the power on again. Activation of the Bootloader mode is confirmed by alternating power and communication LEDs.

Step 3: To exit the Bootloader mode, move the DIP switch no. 8 to OFF, and restart the device.

2.3 Sending Files to Device

The files can be sent to the device using Modbus TCP protocol over the IP connection. This is the recommended method, as it does not require switching the device into the Bootloader mode, and provides the fastest way to transfer data.

If the files are sent using the RS485 port, the device must be first switched into the Bootloader mode, as described above. Then, using the Select File button, select a file to upload. The upload is performed through selecting the right protocol (Modbus TCP/ Modbus RTU) and approving the process by pressing the Send File button. Progress of the transfer is indicated by a progress bar at the bottom of the screen. After a successful upload, a Transfer Complete pop-up message is displayed.

3 Restoring Default Settings

Pressing the Default Setting button restores the factory settings such as:

- **IP address:** 192.168.1.123;
- **Mask:** 255.255.255.0;
- **Default gateway:** 192.168.1.1;
- **Modbus TCP/IP protocol port:** 502;
- **The password for the platform user:** 1000.

4 System Console

The system console shows system logs of the controller operating system. There are two options to view the system console:

- by web page;
- by USB connection.

4.1 Web Page

To view the system console by the web page, enter the controller's IP address in web browser and log in to the system (default user: platform, default password: 1000). After logging in go to the Device Management section and press a Refresh Log button. All system logs will be displayed in the window below.

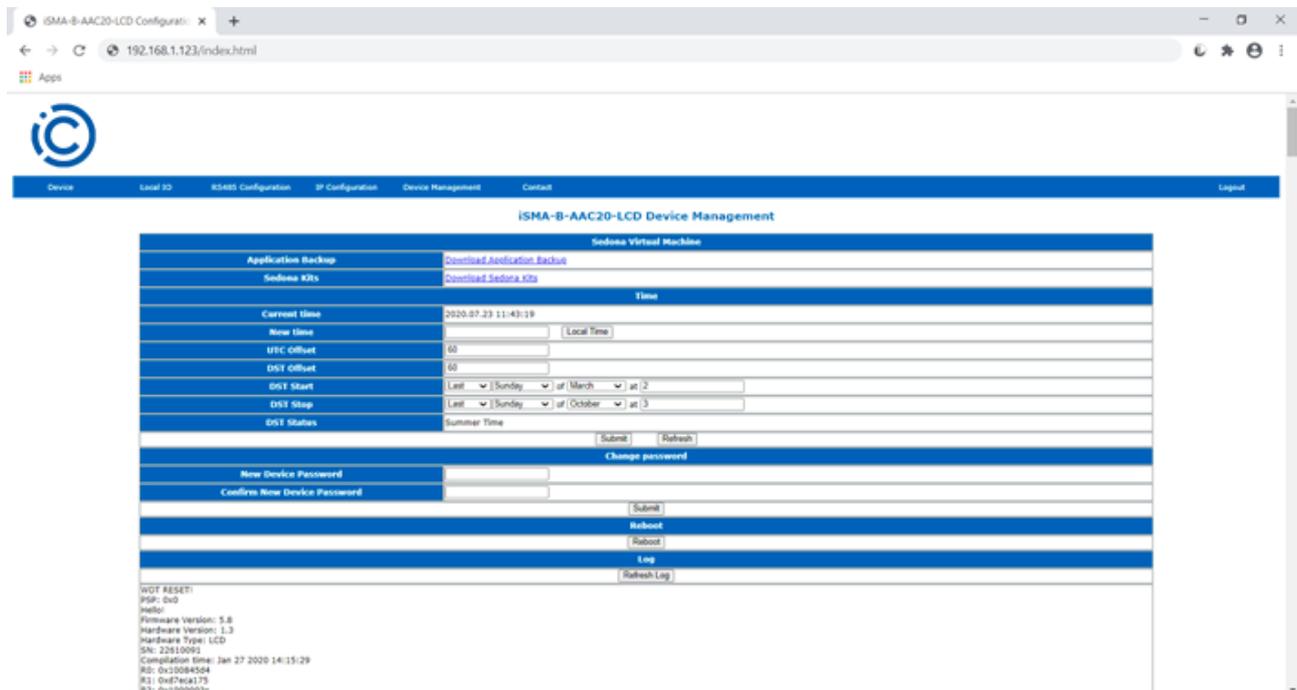
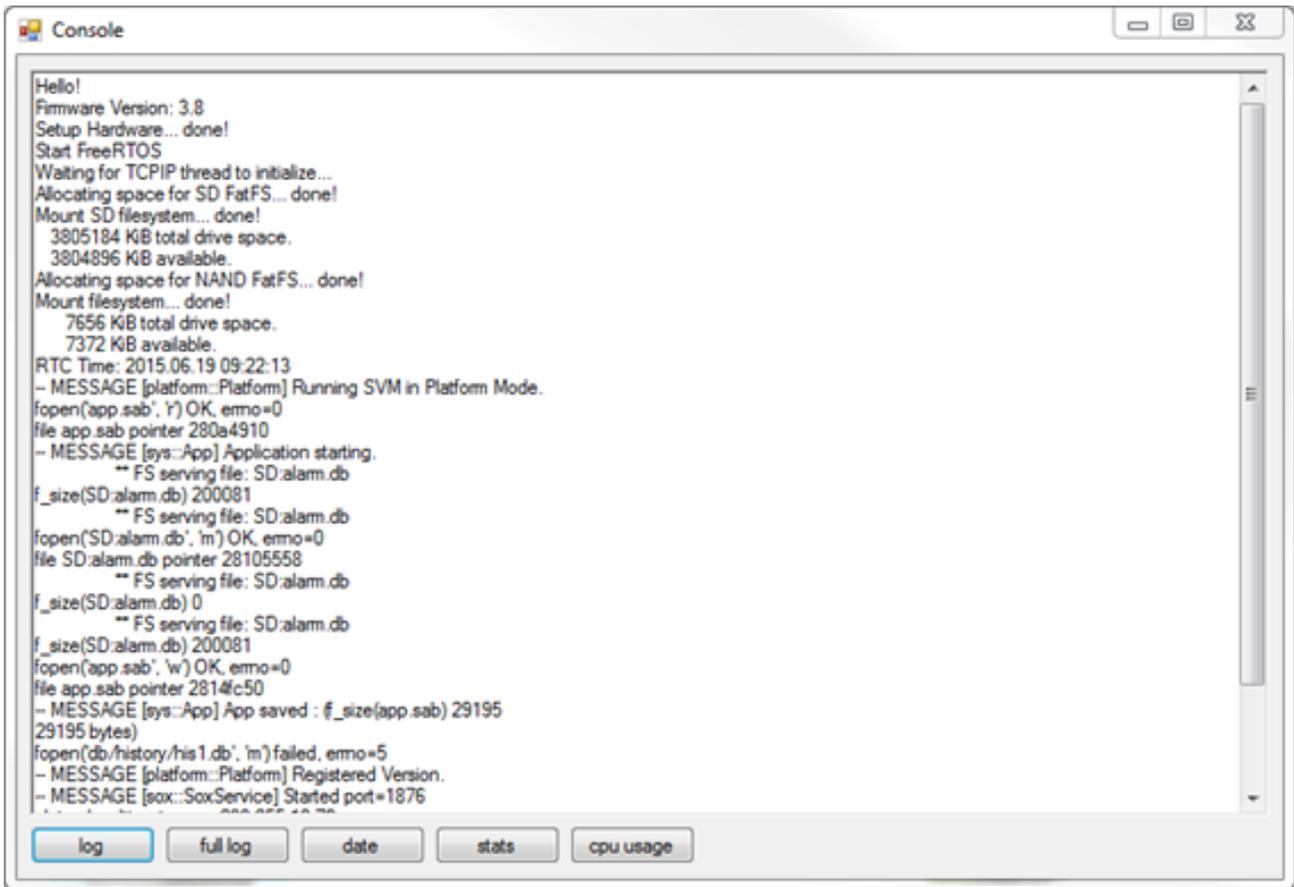


Figure 2. AAC20 web page Device Manager

4.2 USB Connection

To view the logs using the USB connection, use the AAC20Updater.exe software, and connect the device to the PC using the A-A USB cable. After connection the system automatically recognizes the controller without installing additional drivers (HMI driver is a default one), and the Console button becomes active. Open the system console window by pressing the Console button. The following options are available in the system console:

- Log: print only last written data;
- Full log: print all log memory;
- Date: print controller current date;
- Stats: displays a list of all running task and amount of processing time that has been used by each task;
- CPU usage: displays a current CPU usage.



```

Hello!
Firmware Version: 3.8
Setup Hardware... done!
Start FreeRTOS
Waiting for TCPIP thread to initialize...
Allocating space for SD FatFS... done!
Mount SD filesystem... done!
 3805184 KiB total drive space.
 3804896 KiB available.
Allocating space for NAND FatFS... done!
Mount filesystem... done!
 7656 KiB total drive space.
 7372 KiB available.
RTC Time: 2015.06.19 09:22:13
- MESSAGE [platform::Platform] Running SVM in Platform Mode.
fopen('app.sab', 'r') OK, errno=0
file app.sab pointer 280a4910
- MESSAGE [sys::App] Application starting.
  ** FS serving file: SD:alarm.db
f_size(SD:alarm.db) 200081
  ** FS serving file: SD:alarm.db
fopen('SD:alarm.db', 'm') OK, errno=0
file SD:alarm.db pointer 28105558
  ** FS serving file: SD:alarm.db
f_size(SD:alarm.db) 0
  ** FS serving file: SD:alarm.db
f_size(SD:alarm.db) 200081
fopen('app.sab', 'w') OK, errno=0
file app.sab pointer 2814c50
- MESSAGE [sys::App] App saved : f_size(app.sab) 29195
29195 bytes)
fopen('db/history/his1.db', 'm') failed, errno=5
- MESSAGE [platform::Platform] Registered Version.
- MESSAGE [sox::SoxService] Started port=1876
  
```

log full log date stats cpu usage

Figure 3. Sedona Updater console view

The USB connection method is recommended if the user cannot connect using the IP or RS485 ports or does not know the connection parameters, for example, the IP address.

5 Firmware - Upgrade and Versions

5.1 Firmware Upgrade

The controller's firmware can be updated by uploading a new firmware file to the device. The following files are necessary to upgrade the firmware (all files are available on the iSMA CONTROLLI website: ismacontrolli.com):

- AAC20Updater.exe: the software sends files to the controller and performs system actions;
- Firmware file: binary file with a firmware code;
- The latest kits: all kits must be updated to the current version, they can be downloaded and imported as one bundle .zip file;
- Default app.sab file: (optional) default Sedona application file, adapted to the current firmware version;
- Default kits.scode: (optional) default Sedona kits image, adapted to the current firmware version.

Step 1: Download files from the iSMA CONTROLLI website, [iSMA CONTROLLI Download Center](#), to local PC drive.

Step 2: Upgrade kits' files in the iSMA Tool.

Step 3a: Send files using the IP connection (the controller will automatically run in the bootloader mode).

Open AAC20Updater.exe and set up communication parameters :

- Modbus TCP;
- IP address (default for new devices 192.168.1.123);
- Modbus TCP/IP port (default 502);
- Modbus address (default 1).

Step 3b: Send files by RS485 connection.

WARNING! Using RS485 port, the controller must be manually switched to the Bootloader mode (see section [RS485 Connection](#)).

Open SedonaUpdater.exe and set up communication parameters :

- Modbus RTU;
- COM port–PC RS485 COM port number;
- Baud rate–controller's RS485 port baud rate (default 115200);
- Modbus Address (default 1).

Step 4: Select the firmware file (.bin file) using the Select File button, and send it to the controller using the Send File button. After successful upload a "Transfer OK" pop-up message is displayed.

Step 5 (optional): Send default app.sab and kits.scode files to the controller.

WARNING! This operation will erase controller's application. It is not recommended if the application cannot be deleted from the controller. In order to avoid data loss back up the application on the PC drive.

Select the app.sab file and send it to the controller. Once a Transfer OK message is displayed, select the second file, kits.scode, and send it to the controller.

Step 6: Reboot the controller using the Reload Firmware button. The controller will load new firmware and restart.

Step 7: Check the controller's firmware version.

5.2 Firmware Version

There are three options to check the controller's current firmware version:

- using the iC Tool;
- using the web page;
- using the LCD menu (applicable only for iSMA-B-AAC20-LCD, iSMA-B-AAC20-LCD-M, iSMA-B-AAC20-LCD-D).

5.2.1 iC Tool

To verify the current firmware version using the iC Tool, log in to the device, and go to the Plat component. The Plat component is located in the Service folder, directly below the App component (Device -> App -> Service -> plat). The Plat component contains the Firmware Version slot, which identifies the working firmware version.

5.2.2 Web Page

To verify the current firmware version using the web page, open a browser, enter the controller's IP address into the address bar, and log in to the service (enter the username "platform" and 4 digits password—default password is 1000, it can be changed in Sedona -> App -> Service -> plat component in the Device Password slot). The firmware version is displayed in the Device tab in Basic Information.

5.2.3 LCD System Menu

To verify the current firmware version with the LCD system menu, log in to the system menu by holding the F1 button (enter the "platform" username on the LCD and the 4 digits password—default password is 1000, it can be changed in Sedona -> App -> Service -> plat component in the Device Password slot), and open the Info page.