

CONTROLLER AMAX 80 FLECS Quick Installation Guide



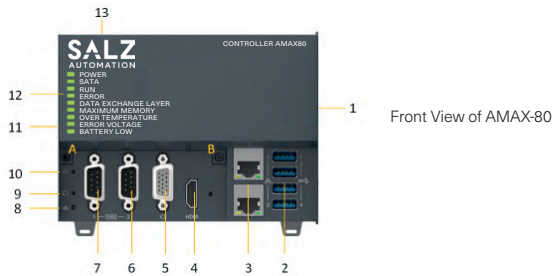
Manufacturer:
SALZ Automation GmbH
Bad Salzuffen, Germany
Email: support@salz-automation.com

1. Overview

Intel® Celeron® Control IPC, Linux based, with EtherCAT I/O modules and PCIe modules

Function
Intel® Celeron processor, 2.6 GHz with 4GB DDR4 memory, 128Gb SSD, 2xGbE, 4xUSB 3.0, 2xRS-232 /422/485, 1xVGA, 1xHDMI, Wireless mPCIe module support for 3G/LTE/Wi-Fi/GPS

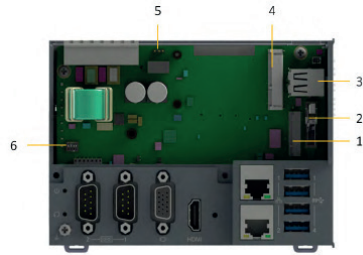
2. Frontview



Legend of Configuration for the AMAX-80 CPU Module

No.	Component	Description
1	EtherCAT Slices	Connection for EtherCAT Slice IO extension modules.
2	USB Interface	Interfaces USB for peripherals such as mouse.
3	RJ45 Ethernet	Connecting to local networks, internet or EtherCAT.
4	HDMI	Digital interface for a monitor with audio output.
5	VGA	Analogue interface for a monitor or panel.
6/7	DB9 Interface	Serial com. RS-232/ 422/485 selectable in BIOS.
8	Shielding	Screw to fix the shielding ground connection.
9	Reset Button	Hidden button for PC hardware reset function.
10	Power Button	Hidden button for PC power function.
11	PCIe Connection	Connection for PCIe extension modules.
12	Diagnostic LEDs	Diagnostic LEDs for CPU module.
13	Power Terminal	7-pin terminal for dual 24VDC power and alarm out.
A/B	Screws	Screws to open the front cover for i configuration.

3. Internal View

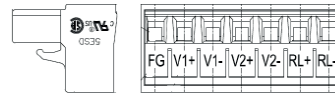


Legend of Internal configuration under the front cover of AMAX-80

No.	Component	Description
1	M.2 Connector (M Key)	128 GB M.2 SSD for SALZ Linux OS.
2	RTC Battery	Battery to keep RTC and BIOS settings.
3	Internal USB Interface	For peripherals such as USB dongle key.
4	PCIe-mini card slot	Slot for PCIe-mini cards, such as 3G/4G Module.
5	Jumpers	Jumpers for power alarm output (NO/NC).
6	DIP Switch	For VGA, USB, AT power setting.

4. Wiring Power Input

4.1 CONTROLLER AMAX 80-C with 7pin terminal block

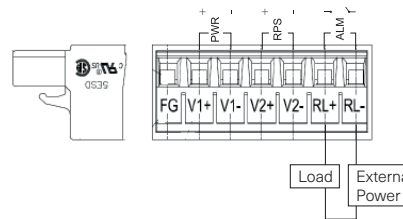


No.	Name	Function
1	FG	Field Ground Connection
2	V1+	Power Input 1 (Plus)
3	V1-	Power Input 1 (Minus)
4	V2+	Power Input 2 (Plus)
5	V2-	Power Input 2 (Minus)
6	RL+	Power Alarm Relay Output
7	RL-	Power Alarm Relay Output

To enhance the system availability, AMAX-5580 provides dual power input functions to support main power input and backup power input. If either power input encounters trouble it will trigger the alarms below:

1. The LED "ERROR VOLTAGE" turns "On"
2. The RL+ /RL- on the Power Input Terminal changes

4.2 Wiring the relay contact (RL)



The CONTROLLER AMAX-80-C has one set of relay alarm output to indicate the redundant power input. This relay contact uses two contacts of the terminal block on the top panel. NO/NC functionality can be set by internal Jumper (5).

Relay rating: 24V, 0.1A

5. Cabling RJ45

The controller has two RJ45 Ethernet ports.

It comes with the default IP-address setting on:

Port 1: DHCP and

Port 2: Static IP-address 192.168.221.10

6. DIP Switch Setting

DIP	Function	Status
1	Power for USB1&2 in standby mode	ON: USB supply 5V OFF: None (default)
2	Power for USB3&4 in standby mode	ON: USB supply 5V OFF: None (default)
3	VGA force output	ON: No output load OFF: Simulate output load (default)
4	Power AT mode	ON: Hardware AT mode OFF: Simulated AT mode (default)

7. Jumper Setting

This jumper sets the relay for power alarm output.

Position of Jumper	Status
PIN 1-2 short	Normal Open
PIN 2-3 short	Normal Close

8. LED discription

Name	Function
POWER	Controller ON
SATA	SATA communication
RUN	Start up phase
ERROR	Device Error status
DATA EXCHANGE LAYER	D.E.L. communication status
MAXIMUM MEMORY	SSD memory full
OVER TEMPERATURE	Internal temperature too high
ERROR VOLTAGE	Redundant power input not OK
BATTERY LOW	Internal RTC battery low

9. Environmental limits

Operating Temperature	-10 ... 60 °C @ 5 ... 85% RH with 0.7 m/s airflow
Storage Temperature	-40 ... 85 °C (-40 ... 185 °F)
Ambient relative humidity	10 ... 95% @ 40 °C (non condensing)

SALZ Automtion System: FLECS Quick Installation Guide

Overview

This quick installation guide will explain the operation of the software SALZ Automaiton System Software 'FLECS'.

'FLECS' is the software for the AMAX 80-C and AMAX 70 controllers from SALZ Automation. The FLECS version can be upgraded from 'PURE' version on the controllers and is easy to understand and work with. It can be accessed by using the specific IP in the internet browser on the PC. The GUI is user friendly, containing info-graphic components for optimal usage.

The 'FLECS' automation system adds an 'APP STORE' to 'PURE' version. Applications/Images/Containers can be deployed on the controller from this online store directly. And similar to 'PURE', applications can also be installed without internet as well using a USB flash drive or using locally stored files on your PC.

1. Accessing the Software

Once turned on, the controller can be accessed by ethernet ports. Connect the PC to the controller to one of the two ethernet ports.

Port 1: DHCP / Port 2: Static IP- address **192.168.221.10**

Open the internet browser to access the dashboard using the IP.

Default Credentials:

Username	admin
Password	changeme

2. User Options

User options can be found after clicking on the top right corner of the browser. You can 'Change User Password' and 'Manage User' in this window. 'User History' can also be accessed.

3. Dashboard

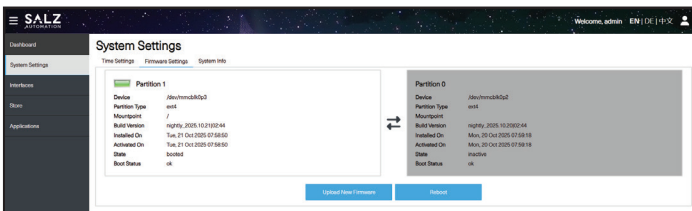
The Dashboard contains, CPU, Memory, and Disk usage. It also has a realtime graphical representation of the same.

App summary shows you the installed applications and their status.

System Information gives you the deatils of the firmware and the ability to manage/change it.

4. System Settings

Time Settings: This screen is where you set up the date, time, and time zone for your SALZ Automation device.



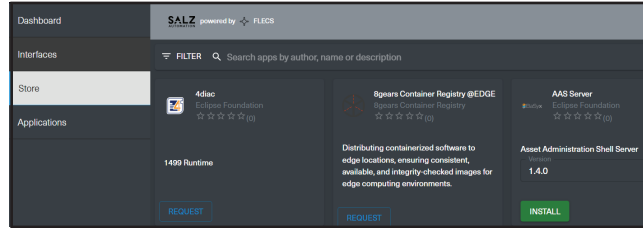
SALZ controllers have two memory partitions where two different verisons of firmware can be installed. Switching between the firmware is easy and can be done with only one click.

- A firmware update is uploaded on the active memory partition.
- The existing firmware version moves to the inactive memory partition once the new firmware is uploaded.

5. Interfaces

This section contains 'Network Connection Settings' where the configuration of Backplane, Port 1, and Port 2 of the controller can be edited.

6. Store



The applications can be installed using the 'STORE' option. This navigates to the FLECS Store online, where a wide variety of containerized applications are ready to install.

To install any application, simply click on **INSTALL** and the app is downloaded.

Other options are:

1. Help
2. Light/ Dark mode
3. Exit

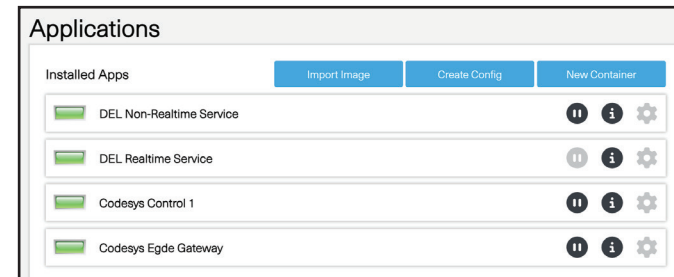


Points to remember:

- FLECS Store needs to be subscribed as it is an add-on for PURE version.
- PURE version is always available on the Controllers. Hence, the applications can always be installed using the foregoing offline method.

7. Applications

This section contains an overview of the installed applications on the controller.



- ⏸ This button lets you stop the application.
- ℹ This button gives you information of the individual apps.
- ⚙ This button lets is to edit the settings of the application.

7.1 Import Image Button

This option allows you to import the images of the applications (.tar files) on the container from your local device, USB etc.

The source of the images can be the SALZ Automation website or the dockerhub desktop application as well.

For more information on this visit:

[Learn about SALZ Software Center](#)

7.2 Create Config Button

This option lets you create configuration file (.json) for the image of your choice.

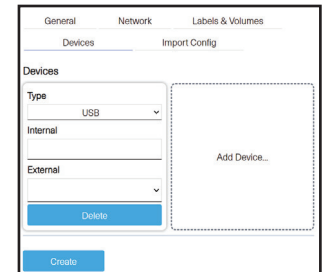
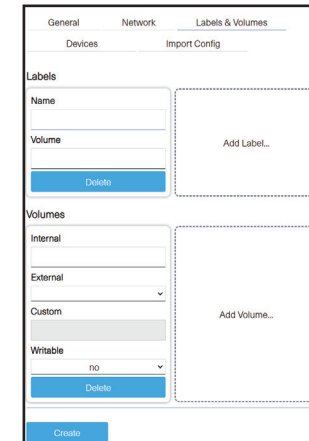


7.2.1- General: Select image, give it system and display name.

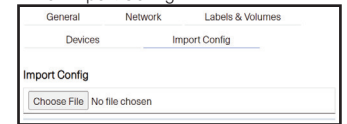
7.2.2- Network: Set the 'Ports' and 'Network' infrastructure.

7.2.3- Labels & Volumes:

7.2.4- Devices:



7.2.5- Import Config:



Steps 7.2.3 lets you set labels and volumes, 7.2.4 lets you set the device confurations, and with 7.2.5 you can easily import the configuration files customised by you.

7.3 New Container Button

This option allows you to create containers from the imported images. Multiple instances/containers can be created from one single image imported in the controller.

- 1: Select the image for which you want to create a container.
- 2: Create or import the configurations as shown in 7.2.
- 3: Click 'Create'.