SC109 VIAS Controller

1. General Introduction

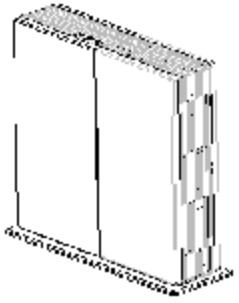
VIAS (Video IOT Alarm System) is an all-in-one solution for Alarm, Surveillance and Home Automation. The VIAS solution consists of the SC109 Controller, the Cloud platform and the U-net wireless sensors. This manual covers only standalone operation without connection to the VIAS cloud platform.

The VIAS Controller is the central control hub to wirelessly control and monitor U-net family of accessories. When connected with the VIAS cloud platform on the internet, the system will send you alerts during events and provide access to control your smart home system.

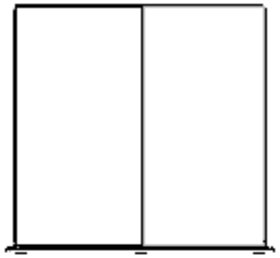
Main features:

- Home security and Home automation function.
- Manage/supervise wireless network of sensor and devices
- Alerts security provider of alarm events via SIA-IP
- Harddrive compartment for local storage of 24hrs/7days recorded video
- Alarm Video verification
- Connects to router by Ethernet
- Built-in GSM/GPRS as backup connection
- Optional 3G/4G LTE connection
- Rechargeable backup battery
- Tamper protection for housing open and removal from wall

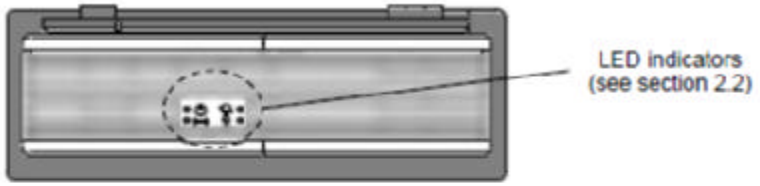
1.1 Product Layout



FRONT VIEW

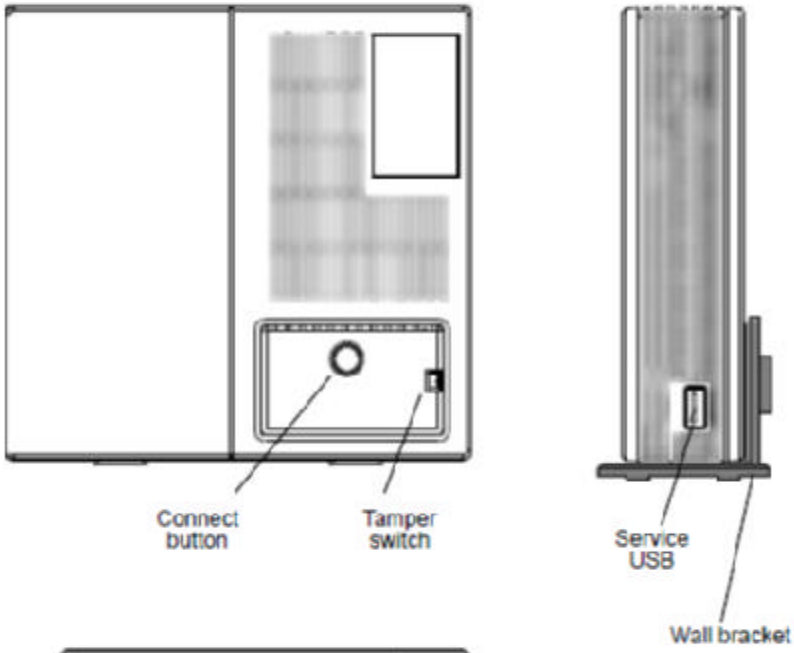


TOP VIEW



REAR VIEW
(with wall bracket removed)

SIDE VIEW



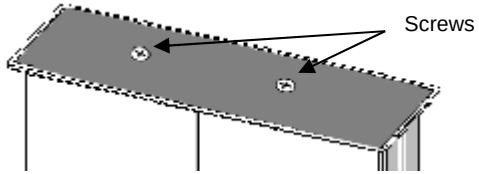
Wall bracket (rear view)

2. Controller hardware setup

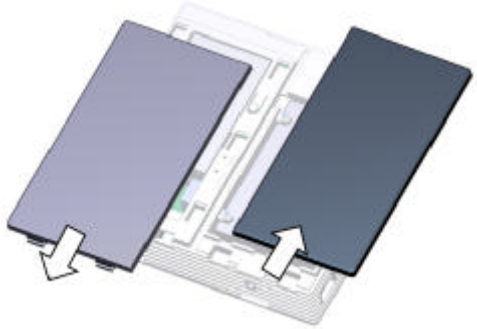
2.1 Internal connection

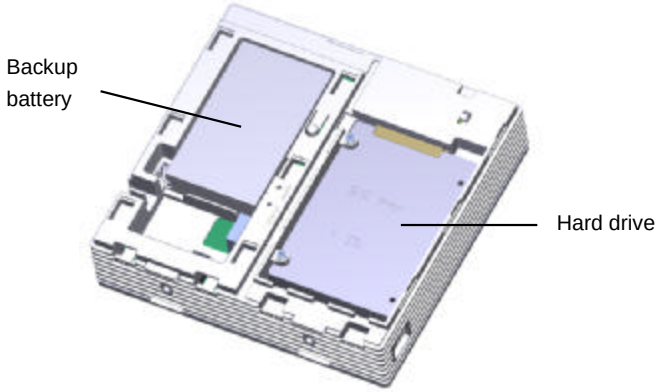
To access the internal connectors, first remove the wall bracket followed by the top cover.

1. Remove the wall bracket by removing its bottom screws.

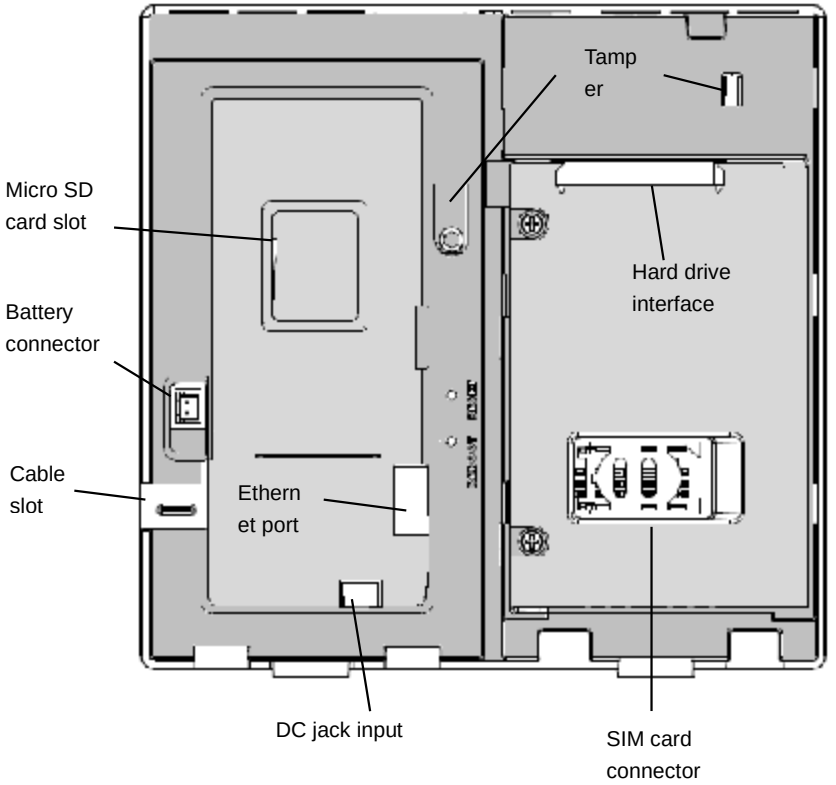


2. Slide open the front covers. For the left cover, lift the clips and pull downwards; for the right cover, push it upwards.



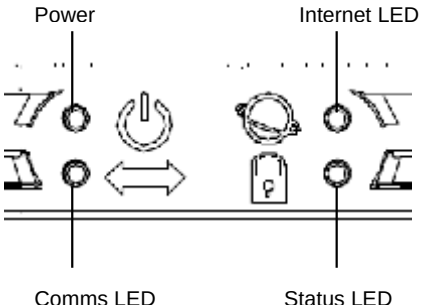


3. Remove the battery and hard drive to reveal the connectors.



Note: Before installing a SIM card, micro SD card or Harddrive, please ensure all power is removed from the Controller. This includes the backup battery well.

2.2 LED definition



Power LED: Shows the power status and also as error indicator.

Color	Meaning
Green	DC power
Red	Battery operation
Orange	Firmware upgrade

Comms LED : shows the type of external connection

Color	Meaning
Green	Connected by Ethernet
Orange	Wi-Fi connection established
Red	2G/3G/4G connection established

Internet LED: Shows status of external connection and RF binding.

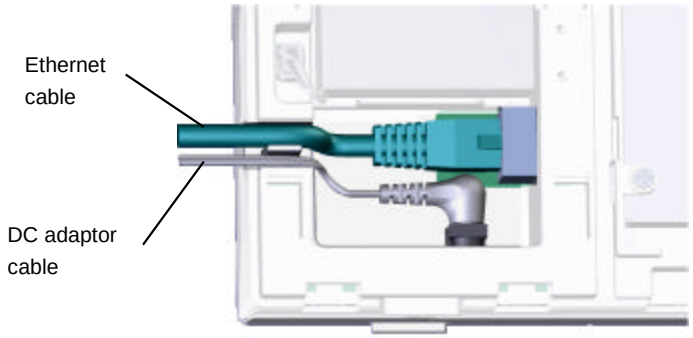
Color	Meaning
Green	Connected to server
Red	DHCP error : IP not assigned
Blinking green	RF binding mode

Status LED : shows alarm status

Color	Meaning
Red	System Arm
Orange	System Partial 1 or 2
Green	System Disarm

2.3 Powering up

1. Connect the Ethernet cable and the provided DC adaptor to the Controller to power it on.



2. Wait until the Internet LED on the Controller turns green (this may take some time around 30 secs to be connected at first time.
3. Tuck the cables into the cable slots.
4. Attach back the left cover on the Controller.
5. When the internet is connected on-line, the internet LED turns Green when connected to server, and there are two leds on Ethernet port. The left one turns steady orange when Ethernet cable plugged in and the right one will flashes in green flashes when network data is being transmitted through the port.
6. If the internet is disconnected, it will send the notification out after 3mins and it will immediate send notification when it's back to on-line.

7. Connect the back-up battery to the gateway can ensure the alarm working during the power is cut off. The duration of power back up last for 12hrs. The APP will receive the notification when alarm is triggered when 4G communication is enabled.

2.4 Connection on 4G

Place the SIM card in the slot for the internet to control the system in 4G connection.

Please turn off the PIN code before insert the SIM card.

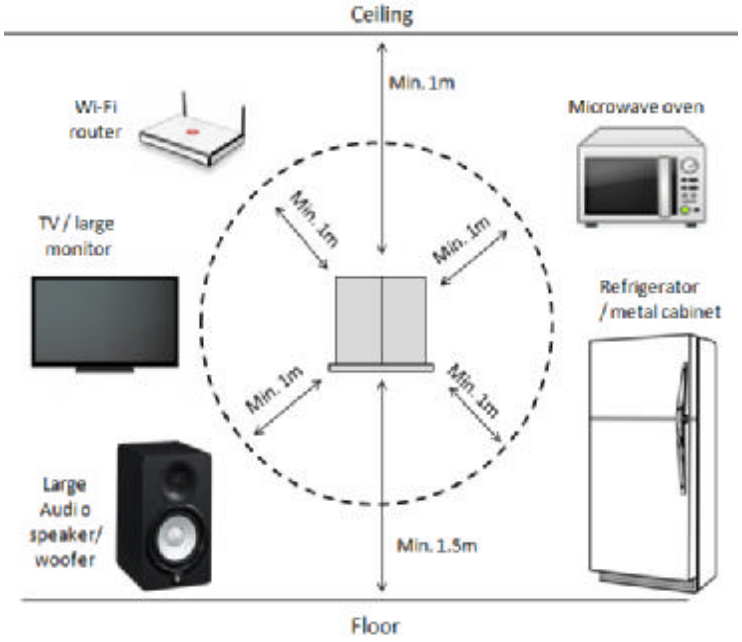
The related settings, please refer to APP Gateway configuration> Settings> Modem.The settings are different from telecom operators.

Please check the information provided from contracted provider.

3. Mounting the Unit

3.1 Attention on choosing the location

Ideally the Controller should be mounted on the wall at 1.5m height. Do not place the Controller near large electrical appliances, large metallic objects or devices emitting radio frequency such as routers and microwave oven, as these



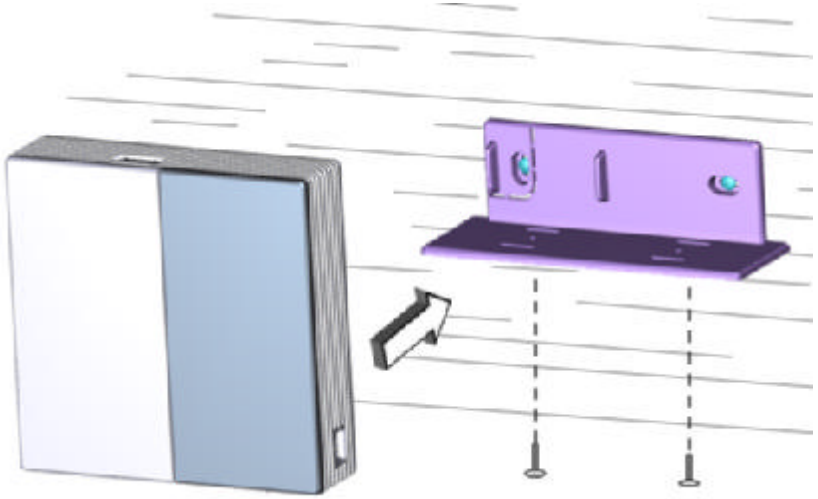
may interfere with its RF performance. A minimum clearance of 1m radius around the Controller is recommended as illustrated below.

3.2 Mounting

1. Before mounting the controller, first secure its wall bracket onto the wall using the screws provided.

2. Once the wall bracket is firmly secured, place the controller on its wall bracket and screw the bottom screws to lock it place.

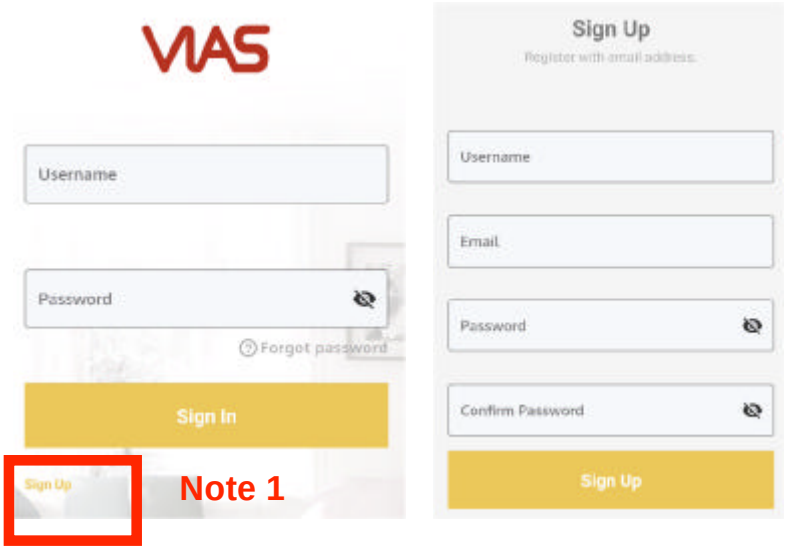
   Note: Removing the controller from its wall bracket will trigger a tamper event, causing any wireless siren to sound.



4. Account Setup

1. Scan the QR code below to download the iOS/Android app and install it.

2. Start the app and tap SIGN UP (Note 1) to register a new account.



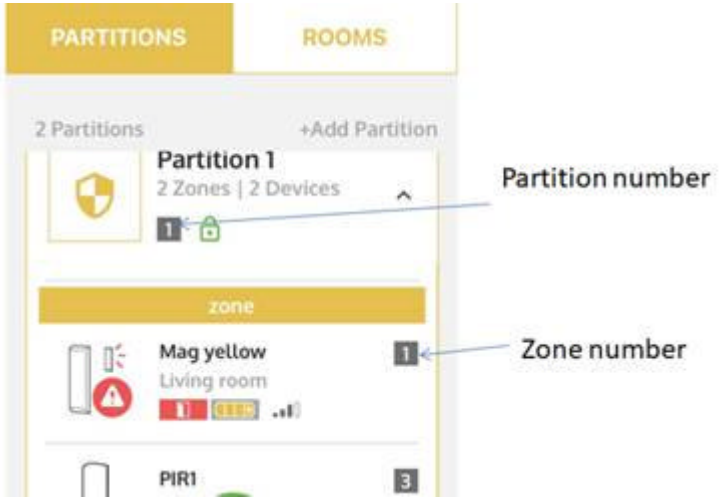
The verification email will be sent to the email address you entered in the SIGN UP page. Click the link in that verification email to complete the registration.

3. Return to the log in page and enter the User name and password created earlier. Tap SIGN IN to enter the Gateway List page.
4. If you forget the password after registration, please use “Forgot Password” on the log in page. After input the Username, a verification code will be sent to your email when you press “Forgot Password.” Please input the verification code and reset with a new password.

5. VIAS Alarm System Overview

In a typical installation, each gateway controls several Partitions, under which consists of several zones. **One device will be assigned a zone number when added.**

1. **Homepage separate into Partition and Room tab. Concept below**:



More complex configurations can be achieved, for example by creating a Common zone between Partitions to protect common shared areas such as lobby, corridors, elevator waiting areas, parking lots, etc..

2. **Room tab:**
   - **sub-tab ‘Room’: display devices by rooms**
   - **sub-tab ‘Devices’: display all the devices**

6. Firmware upgrade

1. The icon for firmware update will show up automatically on top of dashboard if there is new version of firmware available for the controller. Press the icon will start performing the update procedure.
2. The power led will be flashing in orange during firmware update.

3. Please do not power off the gateway during upgrading to avoid the error occurred in operation.
4. After update is completed, the gateway will be restarted again. Please wait until 4 leds on the top to light on Green again. This procedure takes around 30 secs. There will be push notification to notify when gateway is back on-line.
5. For checking the firmware version, please go to Menu>Gateway Configuration> press the firmware to see the current version.

7. Reset to Factory Default or reboot the Controller

The factory default button can clean the previous settings reset the controller to original status. The reboot button can restart the controller
Please press the reset button for 10secs then release. The four led indicators on the top will all goes off for around 30secs then turns on again. Please wait until 4 leds turn back to light on means the process is completed. There will be push notification to notify when gateway is back on-line and power on.

10. Specifications

System	Processor	High performance embedded CPU
Indicators	LED indicators	Power LED, Internet LED, Comms LED, Status LED
Buttons/ switches	External	Connect button,
	Internal (inside housing)	Reboot button, Reset to factory default button,
	Tamper switches	1 x Wall-remove tamper 2 x housing-open tamper
Slots/ Connector	External	USB port
	Internal (inside housing)	DC-jack, RJ45(LAN), 1 SATA connector, SIM card slot, Micro SD slot
	Module slot	1 Mini PCI-E socket
Power	Primary power	DC adaptor 12V, 2A.
	Backup power	LiPO battery, 7.4V 2500mAh
Sensor & devices network	Network type	Wireless U-Net 2-way communication
	Frequency	SC109-1 (EU) : 868MHz SC109-2 (US) : 923 MHz
	4G	(Optional) LTE CAT-1
	GSM/GPRS	(Optional) 850/900/1800/1900MHz
	Ethernet	1 port 10/100 LAN
Storage	SSD interface	1 port SATA2 for Videos
	SD card	Micro SD slot, supports SD-XC format
	Protocol by IP	SIA DC09
Operating environment	Operating Temperature	-10° till +40°C
	Operating Humidity	Max. 85% RH
Mechanical	Dimension	165.4mm(W) X 61.2mm(D) X 165mm(H)
	Weight	596 g (including backup battery, without hard drive)
Installation	Location	For indoor use only
	Placement type	Wall mount with bracket, or tabletop
FCC ID	FU5SC109-2	
IC	23210-SC1092	

*** Specifications are subject to change and improvement without notice.*

Federal Communication Commission Interference Statement

FCC warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Industry Canada statement:

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RF radiation exposure limits set forth for an uncontrolled environment.

Ce matériel est conforme aux limites d'exposition aux rayonnements rf de ic énoncés dans un autre environnement.

Ce matériel doit être installé et exploité à une distance minimale de 20 cm entre le radiateur et votre corps.