SA206 Unet 5.0 Repeater

General Introduction

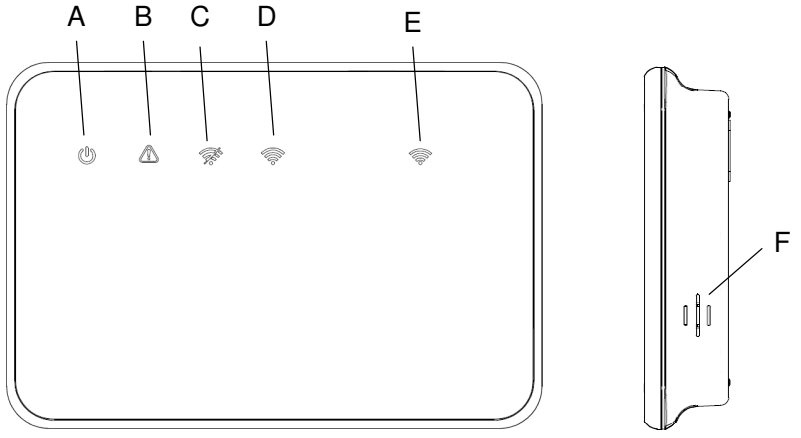
The SA206 is a signal Repeater to extend the range of U-Net wireless devices. It is fully compatible with any U-Net 5.0 enabled sensors and Controller.

The Repeater is designed to be installed by a system installer in cases where signal reception is poor or extended range is required. The Repeater does not alter the existing binding network between Controller and devices, in fact devices do not need to be physically removed from their mounting location when adding the Repeater. This allows the installer to service the user in the shortest time possible without disrupting to the home interior.

It comes with installer friendly feature such test mode to indicate signal strength using LED display and audible beeps for areas not in line of sight such as corners. Powered by backup battery, this allows the Repeater to be easily placed anywhere while searching for its optimum location.

Main Features:
- Setup by smartphone App, no need for pairing to sensors
- Rechargeable backup battery lasts over 48hrs
- Supports up to 2 level connection
- Test mode with beep sound to indicate signal strength
- Tamper detection
- Low battery alert for backup battery

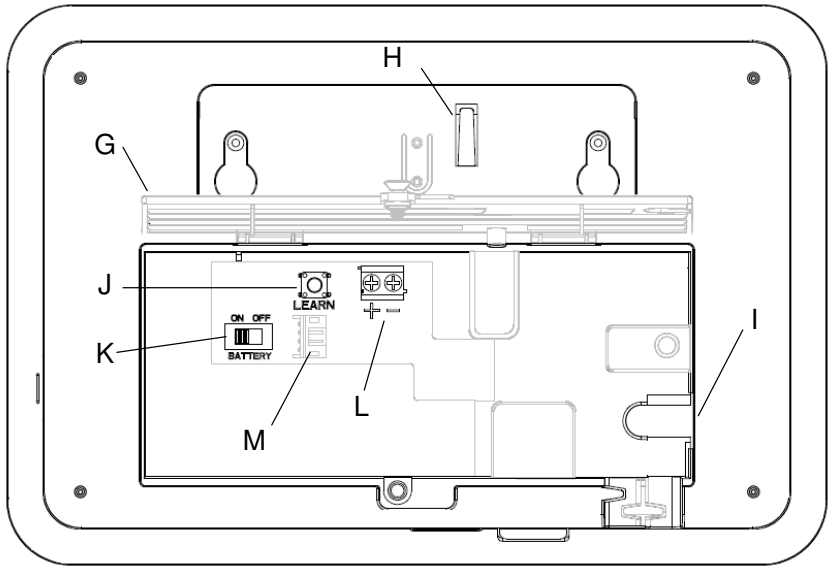
Product Overview



A.	Power LED
B.	Alert LED
C.	Controller Disconnect LED
D.	Factory test LED*
E.	RF strength test LED
F.	Buzzer

** for factory use*

Rear view with back cover lifted:



G.	Back cover
H.	Tamper switch
I.	DC Jack power input
J.	Binding button
K.	Backup Battery power switch
L.	External 12V power input
M.	Factory test connector*

**for factory use*

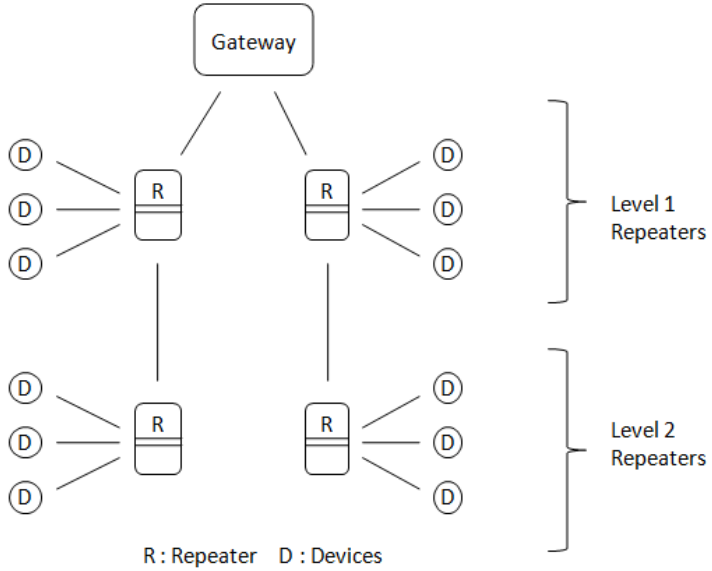
Pairing to Controller

1. Power on the Repeater by connecting the 12V power adapter.
2. Turn on the backup battery using switch “K” (see Product Overview)
3. Login to the VIAS app, and select which Controller to pair, which will then display the Controller’s main dashboard page.
4. Go to Menu (3-bar)> System Setup >Add device> choose SA206.
5. Follow the instruction on the APP to locate the Binding button “J” (see Product Overview) on the unit. When prompted, press and hold this button for more than 3 seconds until the Controller disconnect LED “C” flashes moderately, then release the button.
6. The LED should stop blinking indicating the pairing process is complete.
7. Follow the on screen instruction to set up the unit.

Operation

Overview

The role of the Repeater in a U-Net network can be summarized in the diagram below.



Level :
Repeaters are distinguished into Level-1 and Level-2, depending on how they are linked.

- Level-1: Repeater closest to the Controller. In most cases adding a Level-1 Repeater is sufficient to cover a wide range. A Controller can have more than one Level-1 Repeaters to branch out at different angles from the Controller.

- Level-2: Repeater to extend signal from Level-1 Repeater.
Note: Only one Level-2 Repeater can be added for each Level-1 Repeater.

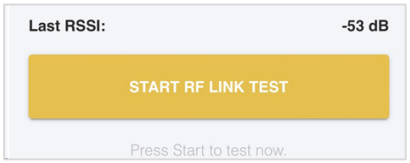
When Level-1 and Level-2 Repeaters are linked together, they define a unique signal path to the Controller. Signals from one set of pairs will not cross over to another pair set.

Choosing a location

The Repeater’s location is important because it will affect how it performs. When choosing a location the following points should be considered:

- indoor use in dry interior locations only.
- a nearby power outlet is available.
- it should be placed on the wall, at least 1.5m high from floor for improved reception
- must not be co-located or operated in conjunction with any other nearby transmitter or antenna.
- The Repeater should maintain good signal quality with the Controller. To check the signal quality:

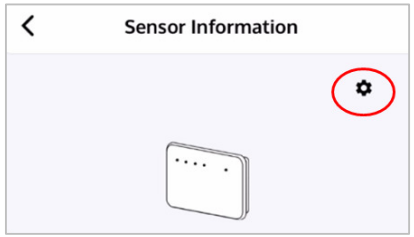
1. From the VIAS app, long press on the Repeater icon to enter its Sensor Information page.
2. Use the Start RF Link Test button. During the test, ensure the Last RSSI dB value is always displayed in black text.



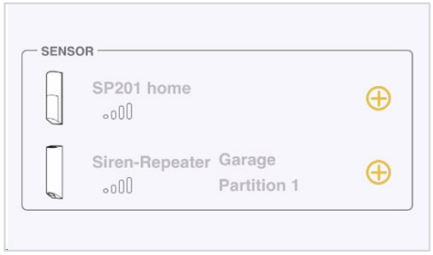
Adding a sensor

A maximum of 10 devices can be added to each Repeater.

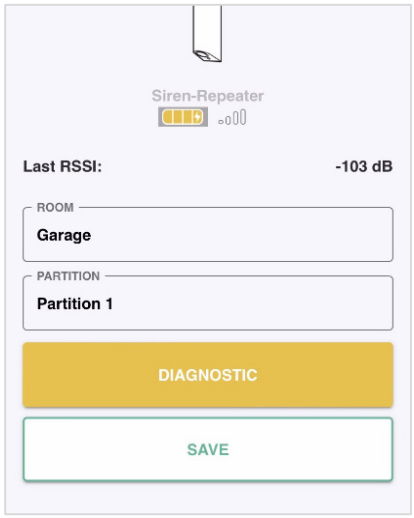
1. From the Sensor Information page of the Repeater, tap on the gear-shaped icon to enter the Advanced settings page.



2. Click on ADD button.
3. Choose from the sensor to by tapping its “+” button.



4. The Repeater will perform a signal diagnostic test before adding it permanently.





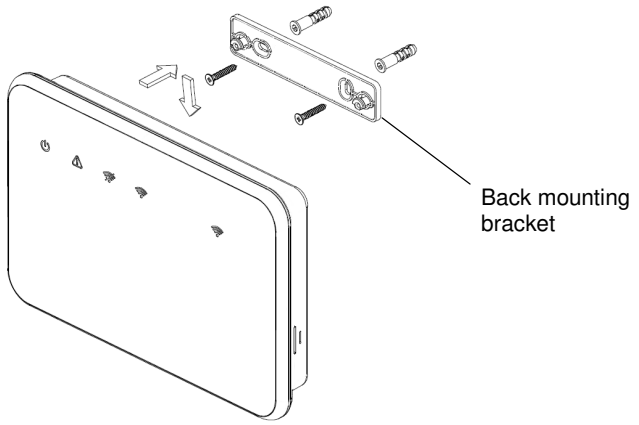
5. Tap on Save if the test is successful. The device will then be managed by the Repeater.

Linking a Level-2 Repeater

Follow the same steps above except select another Repeater instead of sensor.

Mounting

1. Remove the back mounting bracket off the Repeater and secure this bracket on the wall using wall anchors and screws.
2. Ensure the switch for the backup battery is turned on.
3. Once secured the bracket is secured, simply reattach the Repeater back to its mounting bracket by sliding it downwards.



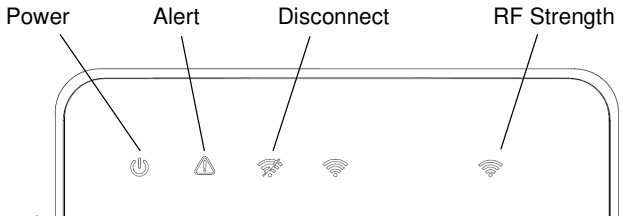
Maintenance

Low Battery: The Repeater will report to the Controller when its battery becomes low. When this happens, connect an external power source to recharge the internal backup battery.

Troubleshooting

LED indicator

Table below is a summary of the LED indicators on the Repeater.



LED	Behavior	Description
Power	White, On	Powered by DC jack or External power
	White, blink every 5 secs	Running on backup battery
	White, blinks 30 secs when power on	Battery switch not turned on
Alert	Red, On	Tamper detected or backup battery is running low
Disconnect	Red, Blinking	Used during pairing
	Red, On	Lost communication with Controller
RF Strength Note: Activate TEST Mode* by VIAS app	Green, blink 3 times	Signal from sensor is good
	Orange, blink 2 times	Signal from sensor is normal
	Red, blink 1 time	Signal from sensor is weak

** Convenient RF troubleshooting mode by only observing LED and listening to beep sounds without continuously checking the App*

Reset to Factory Settings

1. Press and hold the Binding button for 3 or more seconds, and the unit's "C" LED (see Product Overview) will start to flash. Release the button.
2. Press and hold the Binding button again, this time for longer than 6 seconds until the LED turns off. The device is now reset back to factory mode.

Specifications

Operating temperature	-10 °C to +45 °C
Environmental class	II (EN 50131-1 + A3:2020)
Humidity, max.	max. 85% RH
Power input	12 V DC-Jack, 12V / 1A external power terminal
Mounting height	> 1.5 m
Operating frequency	868 MHz (EU) , 923 MHz (US)
RF transmission power / range	max. 25 mW (14 dBm) / 1000m, open space
Number of radio devices	10
Operating voltage	Primary: DC power supply 12V / 2A, Secondary: LiPo battery 7.4V / 2,500mAh
Backup-Power Time	> 48 hrs
Security level	Grade 2 (EN 50131-1 + A3:2020)
Tamper detection	Removal from wall
Dimensions (W x H x D)	190 x 130 x 31 mm
Weight	325g

** Specifications are subject to change without prior notice.*

WARNING:
Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal free of charge.

CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

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. 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. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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.
This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body."

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.

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