

16.5.2018

Smart Sensor Gateway

Installation guide

Gateway installation

Prerequisites

Internet connection:

- Customer needs to have an internet connection available without VPN authentication
- Internet connection can be PoE (Power over Ethernet), ethernet cable or WIFI

Power Supply:

- In case PoE connection is not available, customer also needs a power supply for the gateway (PoE injector). This is not supplied with the gateway

Ethernet cable:

- 1 ethernet cable is needed for PoE or for WIFI connection (not supplied with the gateway)
- 2 ethernet cables in case of ethernet cable connection (not supplied with the gateway)

Computer:

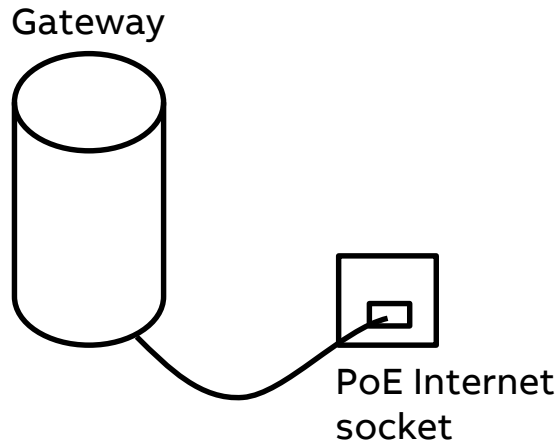
- Computer with WIFI adapter is need to configure the gateway for customer network

Gateway installation

Hardware configuration

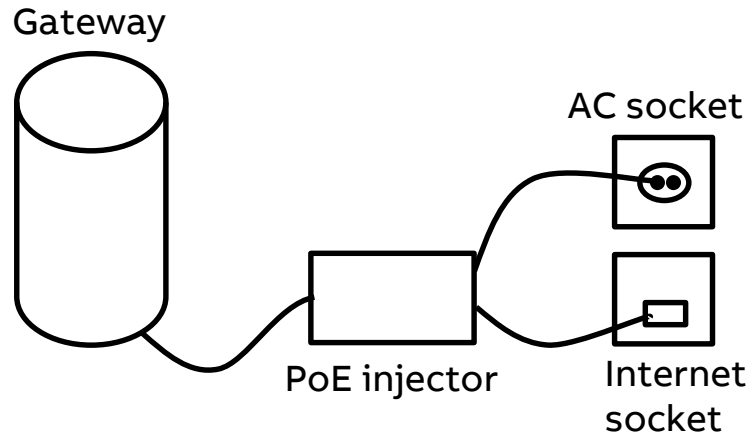
PoE network

Connect ethernet cable between gateway and PoE (Power over Ethernet) socket.



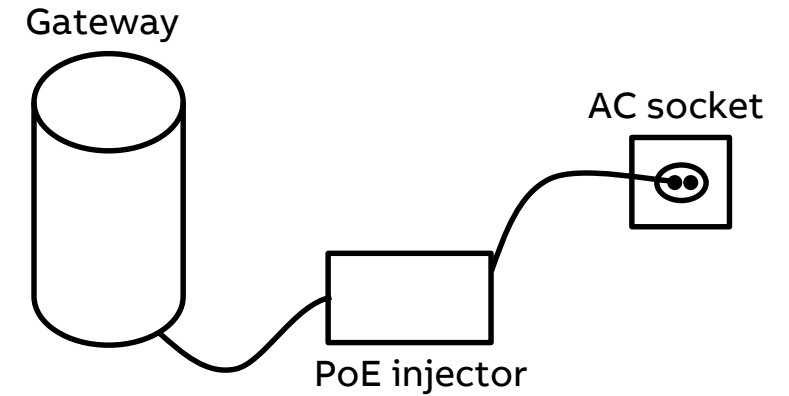
Ethernet network

Connect ethernet cable between gateway and PoE injector (power supply). Connect another ethernet cable between PoE injector and network socket. Connect power supply to AC power socket.



WIFI network

Connect ethernet cable between gateway and PoE injector (power supply). Connect power supply to AC power socket.



Gateway installation

Login to gateway

1. WIFI access point

When Cassia X1000 gateway is powered it will automatically generate WIFI access point for configuration. Generated access point SSID is:

cassia-XXXXXX

where XXXXXX is the last 6 digits of the gateway MAC address (can be found at the bottom of the gateway).

Password for the WIFI network is the same as SSID.

2. Connect the gateway

Connect to gateway WIFI access point with computer.

To access the configuration page open the WEB browser and go to the address:

192.168.40.1

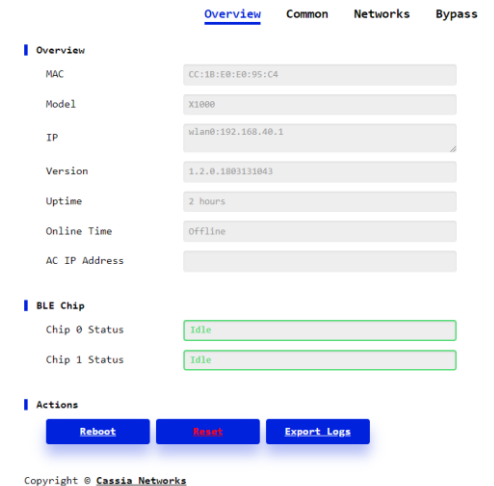
For security reason the default password needs to be changed first. Default credentials are:

Login: admin

Password: admin

3. Front page

After login the configuration front page is shown. It will inform e.g. the gateway Uptime (power on time) and Online Time (connection to internet status)



Gateway installation

Gateway configuration – Common page

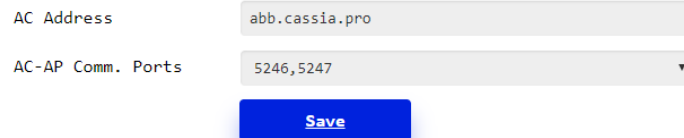
1. AC Address

AC Address needs to be placed here. For ABB Smart Sensor the address is:

abb.cassia.pro

Press: Save

If customer network has a firewall then the firewall needs to be configured to have open communication ports 5246 and 5247 for communication to **abb.cassia.pro** (13.126.172.231).



AC Address: abb.cassia.pro

AC-AP Comm. Ports: 5246,5247

Save

2. Local RESTful API

Local RESTful API needs to be set to ON



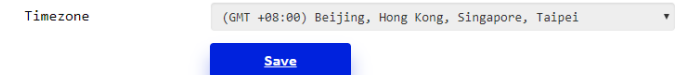
Local RESTful API: ON

Save

Press: Save

3. Set the Timezone

Select the correct timezone



Timezone: (GMT +08:00) Beijing, Hong Kong, Singapore, Taipei

Save

Press: Save

Gateway installation

Gateway configuration – Networks page, Cable connection (PoE or Ethernet)

1. Connection Priority

Select internet connection priority.

Priority

Save

Press: Save

2. Cable connection

Select IP allocation DHCP or Static if IP allocation is known.

IP Allocation

Save

or

IP Allocation

IP:

Netmask:

Gateway:

DNS1:

DNS2:

Save

Press: Save

3. Checking the online status

Once the setup is done the gateway goes online and starts to read the sensors within it's range roughly once per hour. For first measurement it might take 2-3 hours.

Online status can be checked from the front page of the gateway configuration page.

Gateway installation

Gateway configuration – Networks page, WIFI connection

1. Connection Priority

Select internet connection priority.

Priority ▼

Press: Save

2. WIFI information

Mode: client

SSID: Customer WIFI SSID

Password: Customer WIFI Password

IP Allocation: DHCP or Static if IP allocation is known.

Mode ▼
SSID
Password
IP Allocation ▼
DNS1:
DNS2:
Country ▼

Press: Save

3. Checking the online status

Once the setup is done the gateway goes online and starts to read the sensors within it's range roughly once per hour. For first measurement it might take 2-3 hours.

Online status can be checked from the front page of the gateway configuration page. DHCP has allocated a new IP address for the gateway and this needs to be found out to access the gateway again. Local IT department can do it by accessing the customer WIFI access point or by scanning the network for devices.

Gateway installation

Check if the Smart Sensors are within the gateway range

There are 2 possibilities to check if the gateway can see the Smart Sensors it is intended to see.

1. With IP address (tested with Chrome WEB browser ver67.0.3396.99)

- Connect with a computer to same network which the gateway is connected
- Go to following web page <http://XXX.XXX.XXX.XXX/gap/nodes/?event=1>, where XXX.XXX.XXX.XXX is the gateway IP address
- Gateway starts to scan Bluetooth devices continuously. Page will list all Bluetooth device MAC addresses found.
- Check if Smart Sensor MAC address is listed.

2. With the Smart Sensor portal data

- Smart Sensors are read for new data roughly one hour interval. For the first time it can take few hours to read all new Smart Sensors.
- Smart Sensor portal will automatically show the latest data and Smart Sensors showing updated data has been read by the gateway meaning the Smart Sensor is within the gateway range.

Gateway installation

Installation tips

Gateway location:

- Best location for the gateway is 2-3m above the ground and in the middle of the sensors furthest away from each other.
- Range depends on obstacles (e.g walls, doors, shelves) between the gateway and Smart Sensor. In open air with direct line of sight the range can extend up to 100m.

Internet connection without VPN authentication:

- If there is no internet connection available without VPN authentication or the gateway needs to be located into place where no internet connection is available it is recommended to use e.g. 3G/4G/LTE WIFI router.
- Data amounts transmitted per Smart Sensor are only some hundreds of kilobytes daily.

Gateway reset:

- Gateway can be reset by pressing the reset button at the bottom of the gateway for 10 seconds.
- This will restore everything (including the password) to factory default values.

Gateway installation

Troubleshooting

Gateway is not creating the WIFI access point for configuration.

- Check the power supply for the gateway. There is a blue light at the bottom of the gateway when it is powered.

Gateway is not reading the Smart Sensor data.

- For the first time it can take few hours for the gateway to read the Smart Sensor data.
- If new Smart Sensor is installed within the existing gateway range it can take up to 1 day to get first measurements from the new Smart Sensor. After this data is read more frequently.
- Make sure the Smart Sensor is within the range of the gateway. Range depends on obstacles between gateway and Smart Sensor. Best range is to front direction of the gateway where the Cassia logo is.
- Check the internet connection.

To get more support, please contact Smart Sensor support: support.smartsensor@abb.com



ABB