ABB ATT-VZN Ability Smart Sensor Bluetooth SIM Card Gateway Installation Guide

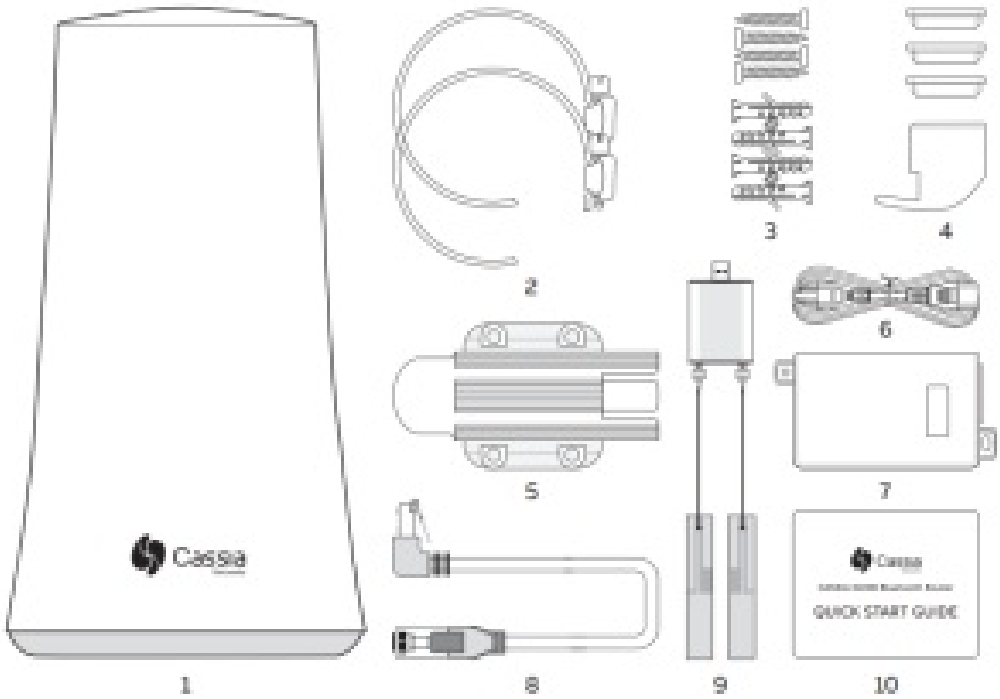
ABB Ability™ Smart Sensor Bluetooth®
ATT-VZN SIM card ready gateway
INSTALLATION MANUAL

Contents

General

The ABB Ability Smart Sensor ATT-VZN SIM card ready gateway is used to upload the Smart Sensor data automatically to the Smart Sensor portal. The gateway needs to be configured for Internet access before it can start reading the Smart Sensors. This gateway uses a 3G/4G Mobile network with the included USB dongle for internet connection.
The sales package includes:

- X1000 Bluetooth router, wall and pole mounting kits, and a quick guide.
- MultiTech Modem with antennas.
- PROCESS PoE Injector power supply, with power cord.
- 10 Ft. Cat 5 ethernet cable with 90-degree connector.



1. X100 router (1) 2. Pole mounting straps (2) 3. Anchors with screws (2×4) 4. Silicon plugs (4) 5. Mounting bracket (1)	6. Power cord (1) 7. Procet PoE injector (1) 8. Ethernet cable (1) 9. MultiTech modem with antennas (1) 10. Quick start guide (1)

For general information about the Cassia gateway, please refer to the Cassia User Manual on

https://www.cassianetworks.com/download/docs/Cassia_User_Manual.pdf

Installation

Prerequisites for installation
Internet connection:
The mobile network needs to have adequate signal strength.
AC – Access Controller

- Global: gw.smartsensor.abb.com

Smart Sensor Platform

- Global: smartsensor.abb.com

Power supply:
110/115 vac grounded outlet to accept P0E injector power cord.
SIM card:
ATT or Verizon Micro-SIM card (see next page for supported SIM cards)
Computer:

- A computer with a WIFI adapter is needed for gateway configuration. A tablet computer or mobile phone can also be used.
- Google Chrome web browser is recommended to be used.

Mounting:

- Flathead screwdriver for pole mounting.
- Phillips head screwdriver and a drill (if needed) for wall mounting.
- Mounting is not mandatory, but it is recommended to secure the gateway somehow to its intended place.

Recommended location

Height:
The recommended height for the gateway is 10-98 feet from ground level. Lower levels are also acceptable, but the gateway Bluetooth range might be shorter due to obstacles.
Orientation:
The gateway has the best reception in the direction where the Cassia logo is shown on its side. If the gateway has trouble connecting to a specific Smart Sensor, it is recommended to rotate the gateway to point in that direction.

Obtaining the correct SIM card

- Determine which of either ATT or Verizon cell services is best for your location.
- Obtain a SIM card that is compatible with CAT-1 devices from your service provider.
  – Supported AT&T SIM cards for the MTCM-LNA3 modem can be found on the following sites:
  › IoT LTE North America: https://marketplace.att.com/products/att-iot-dataplans-lte-north-America
  › IoT LTE North American (Shared): https://marketplace.att.com/products/iot-share-plan-lte-na
  – Supported Verizon SIM cards for the MTCM-LNA3 modem can be found in the following site:

https://thingspace.verizon.com/iot-marketplace/?gclid=CjwKCAiAnvj9BRA4EiwAuUMDf1YGPQyo569yrkmxNPatCVn2qtNWJHHShVQF-33hRG6g26yucz0lehoCtYoQAvD_BwE&gclsrc=aw.ds

– Please make sure to select “Cat 1 and above Triple-punch SIM card” to get the Micro-SIM (3FF) size cutout. Do not select the CAT-M options as those may not be compatible.

- Discuss SIM card data plan with a service provider (online or retail outlet).

  - You will need to provide them with the IMEI number of the modem. Each Modem has a unique IMEI number (the sticker of this number is on the packaging box and on the gateway cap).
- The Service provider will provide you with APN (Access Point Name) alpha or numeric number.

The MultiTech Modem uses a Micro-SIM-sized sim card, slightly larger than a nano sim card.

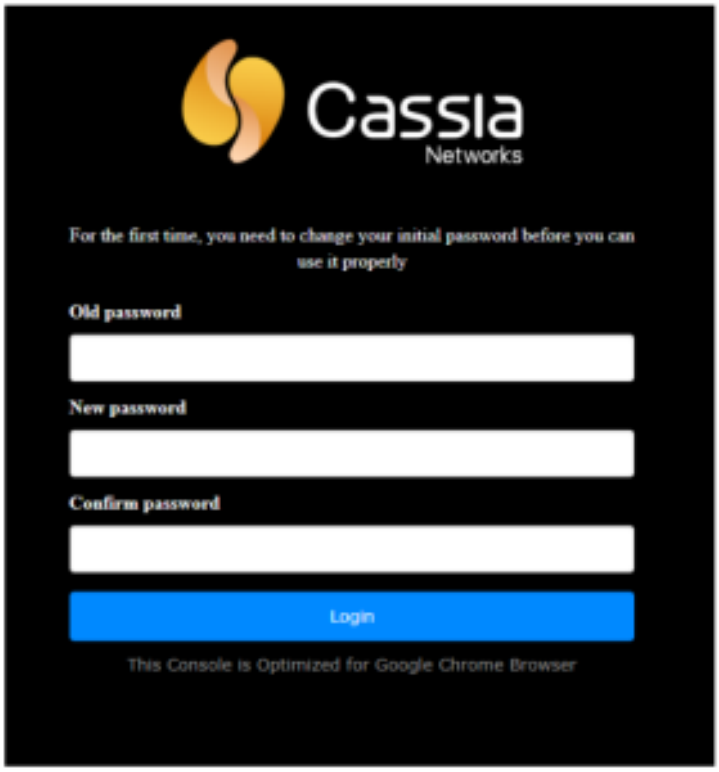
SIM card installation
The sim card is correctly installed when:

- Inserted, it depresses an internal spring until it clicks into place.
- The angled cut of the sim card is facing the right side of the modem.
- It is facing toward the slot into which it is to be inserted.
- The “logo” side (non-circuit side) of the SIM card is also facing outward toward the operator, the same as the label side of the modem.

Gateway configuration
When the gateway is powered on, the blue LED at the bottom of the gateway turns ON. After bootup, the gateway will turn on the configuration WIFI hotspot. The bootup takes about 30-60 seconds.
Configuration WIFI hotspot has SSID “cassia-XXXXXX”, where XXXXXX is the last 6 digits of the gateway’s MAC address. MAC address can be found at the bottom of the gateway. The password for this WIFI hotspot is the same as the SSID.
Connect to this WIFI hotspot with the device used for configuration (computer, phone, or tablet) and open the web browser. Type 192.168.40.1 to the web browser’s address field and press enter. Cassia configuration page will open. During the first login, the default password needs to be changed. Default credentials are:

- Login: admin
- Password: admin

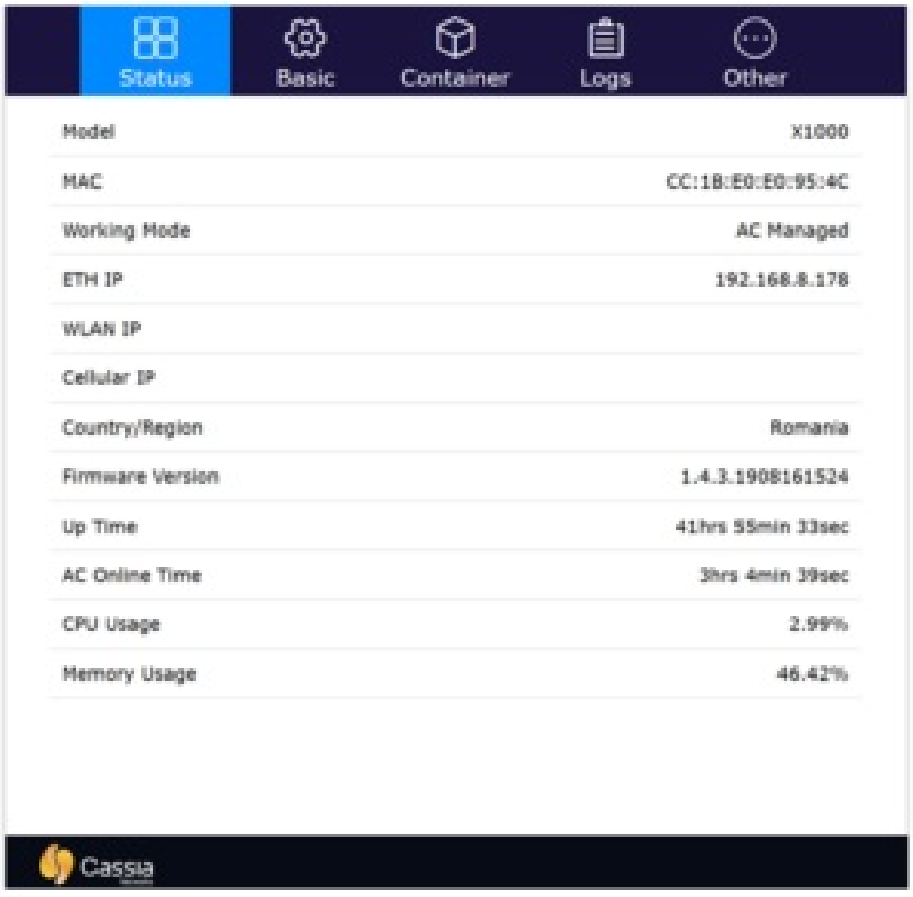
Cassia login page



It is recommended to replace the default credentials.
Once logged in, the Status Page is shown. This page shows the current operation mode and connection status of the gateway.AC Online Time shows how long the gateway has been connected to the AC (Access Controller) server. If no time is shown, it means that the gateway does not have a connection to the AC server.

⚠ Access Controller server connection is needed for the Smart Sensor data transfer.

Status page



The Basic Page is where the configuration is done. Following values are needed:

- AC Server Address: **gw.smartsensor.abb.com**
- Remote Assistance: ON
- Router Mode: AC Managed Router
- AC Router Comm. Ports: 5246, 5247

Connection Priority is where a priority connection method is selected.

Basic page

AT&T mobile network configuration

The following items are required for AT&T mobile network configuration:

- PROCESS PoE injector as the power supply (included in the sales package)
- MultiTech MTCM-LNA3-B03 USB modem (included in the sales package)
- AT&T SIM card (purchased) From the Gateway Basic Page:
- Select as Connection Priority: 3G/4G
- Select for USB Dongle Type: MultiTech MTCMLNA3-B03 for AT&T

- Type or confirm APN: 10569.MCS
- Type or confirm Service: UMTS
- Type or confirm Dial Number: *99***1#
- Type or confirm Device: /dev/ttyACM0
- Select Peer DNS: 1

Press Apply at the bottom of the screen.
From the Gateway another page:

- Scroll down to the Actions section.
- Click on the Reboot button.
- Wait for the reboot to finish.

NOTE! With a USB dongle, the gateway needs to be in a place where there is good network coverage.

AT&T mobile network configuration

Verizon mobile network configuration

The following items are required for Verizon mobile network configuration:

- PROCESS PoE injector as the power supply (included in the sales package)
- MultiTech MTCM-LNA3-B03 USB modem (included in the sales package)
- Verizon SIM card (purchased)

From the Gateway Basic Page:

- Select as Connection Priority: 3G/4G
- Select for USB Dongle Type: MultiTech MTCMLNA3-B03 for Verizon

- Type or confirm APN: VZWINTERNET
- Type or confirm Service: UMTS
- Type or confirm Dial Number: *99***1#
- Type or confirm Device: /dev/ttyACM0
- Select Peer DNS: 1

Press Apply at the bottom of the screen.
From the Gateway another page:

- Scroll down to the Actions section.
- Click on the Reboot button.
- Wait for the reboot to finish.

NOTE! With a USB dongle, the gateway needs to be in a place where there is good network coverage.

Verizon mobile network configuration

Gateway configuration confirmation
Confirm gateway is connected properly by contacting Smart Sensor support:

- By email in the US: **us-mptsensortechsupport@abb.com**
- By phone in the US: **+864-284-5700 Ext 6**
- Email outside the US: **support.smartsensor@abb.com**

You should see data moving automatically from your smart sensors in the range of your gateway to the Smart Sensor portal, within 60 – 90 minutes.

Troubleshooting

For AT&T configuration:
If 10569. MCS APN does not work, please try the APN: m2m.com.attz

For Verizon configuration:
If VZWINTERNET APN does not work, please try the APN: wyleslte.gw7.vzwentp

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Documents / Resources

	ABB ATT-VZN Ability Smart Sensor Bluetooth SIM Card Gateway [pdf] Installation Guide ATT-VZN, Ability Smart Sensor Bluetooth SIM Card Gateway