Sensor Id U04 ETH 11 Discovery Gate Ethernet Demo Software User Manual

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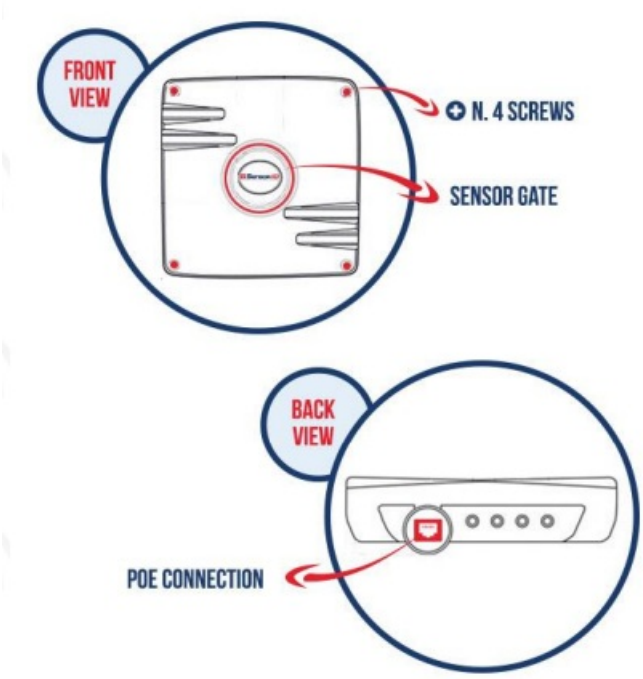
Hardware description

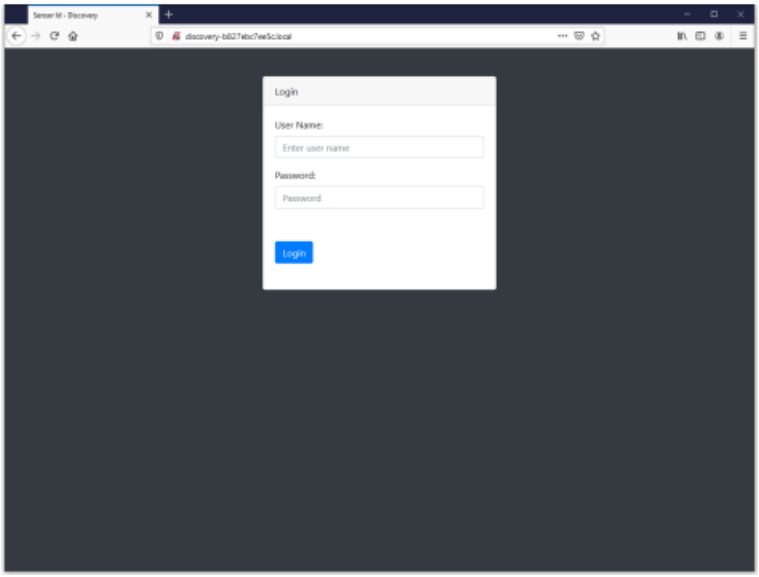


Antenna power supply

The antenna power supply is obtained through the PoE (Power over Ethernet) according to IEEE 802.3af standard (up to 15.4 W of DC power).

Access to Discovery Gate

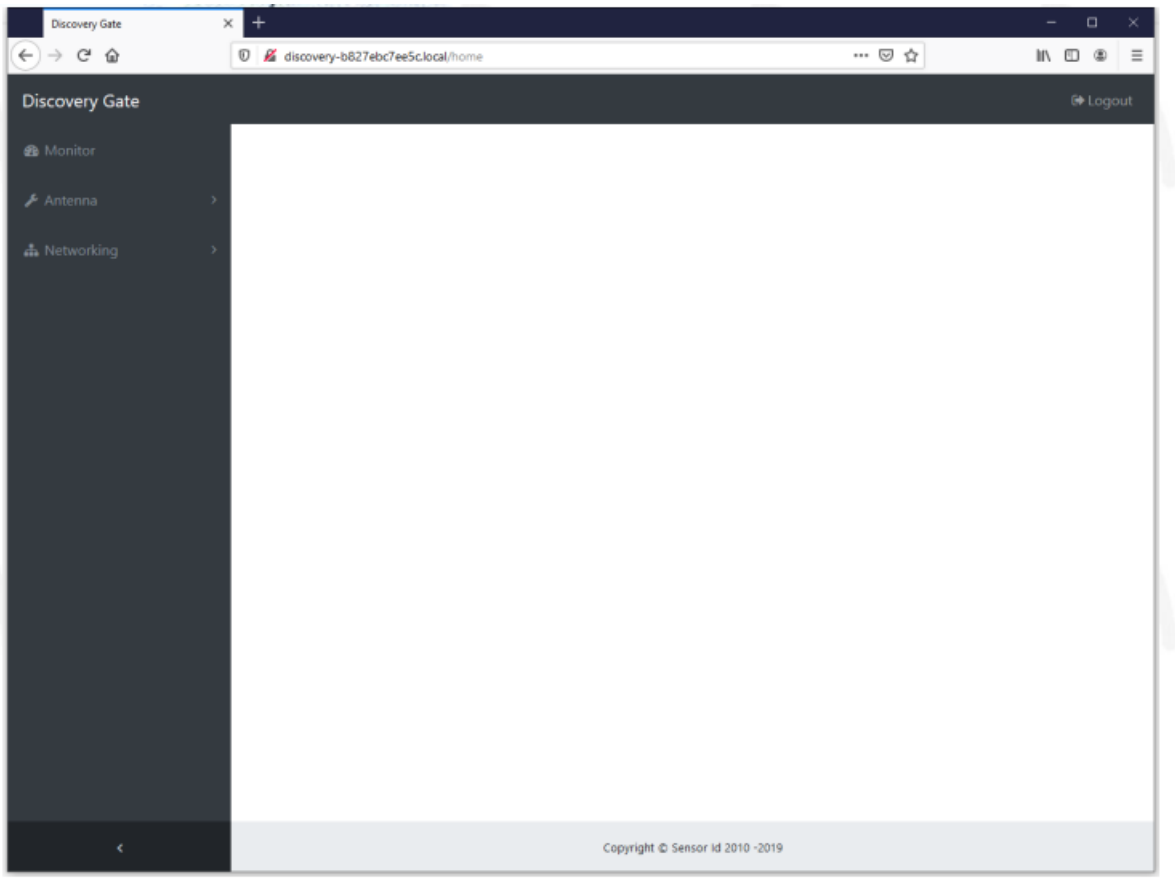
Login screen



To access to the discovery gate login page, you must start your browser (preferably FireFox) and enter the following url in the address bar: http://discovery-(antenna mac address).local/
The specific address of antenna is attached on external box

Home page

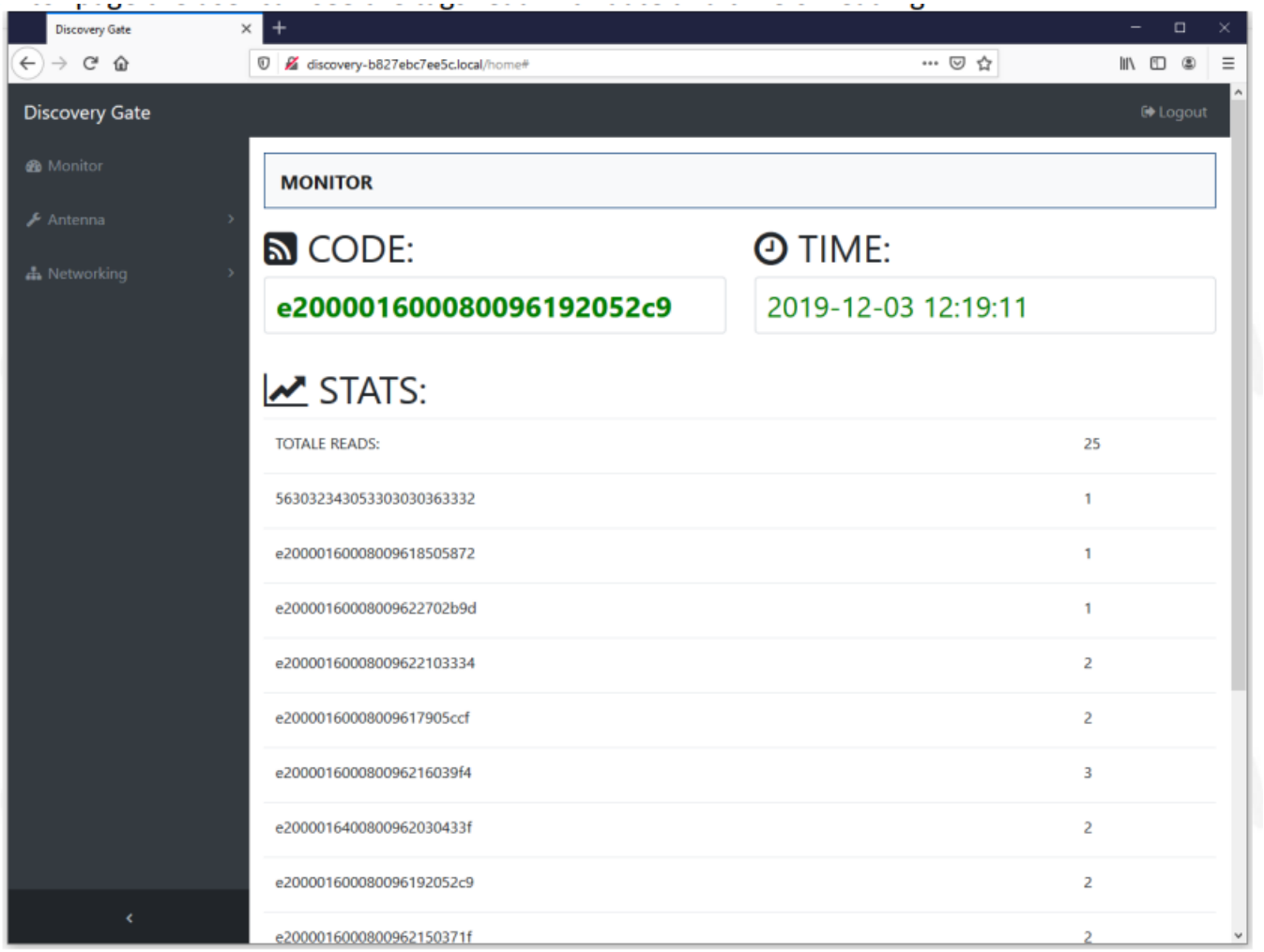
The first page after authentication is:



In this page it's possible select one of the reader configuration or monitoring options.

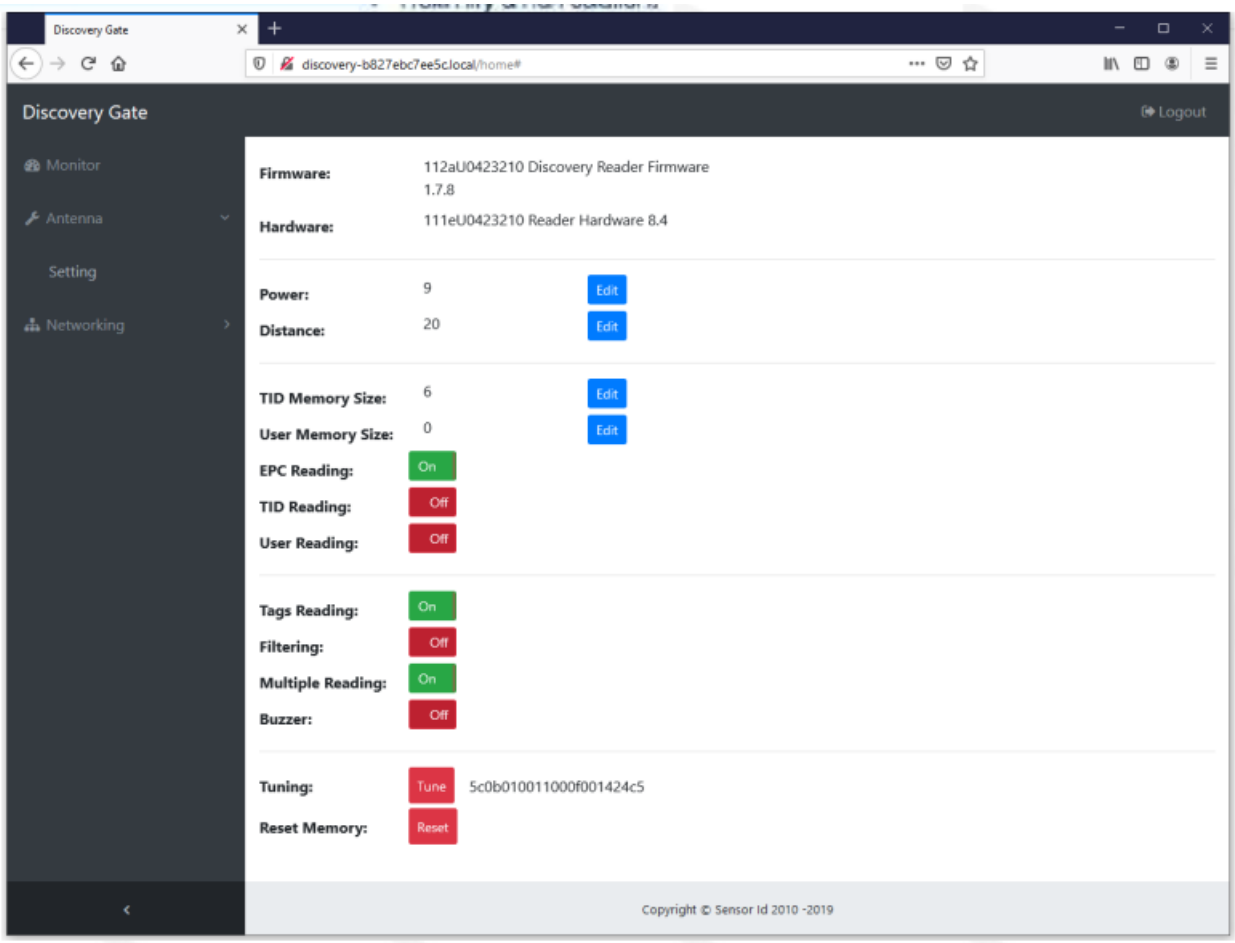
Monitor

In the monitor page the user can see the tags read with date and time of reading



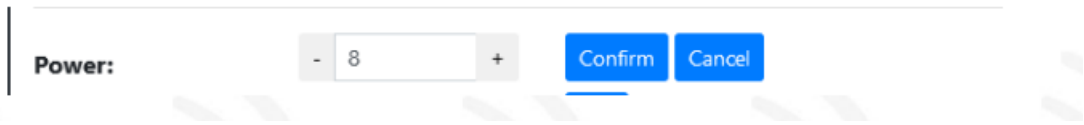
Antenna setting

In this page it’s possible read and set the reading configurations



Firmware/Hardware
These fields show the firmware and hardware revision of UHF Reader

Power
Using the power tab it's possible increase or decrease the RF power emitted by the reader.

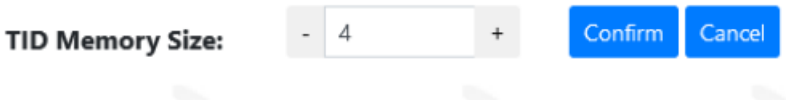


In particular the maximum power is 10 and minimum is 1. After select the desired value, press confirm button to set it.

Distance
The distance tab increase or decrease the reading distance.

In particular the maximum distance is 10 and minimum is 1. After select the desired value, press confirm button to set it. This parameter use both the RF power and the sensitivity in reception of the reader to set a desired reading distance.

TID Memory size
This tab defines the number of byte to read in TID memory.



The maximum value is 24 and minimum is 2 according to the EPC standard.

User memory size
This tab defines the number of byte to read in User memory.

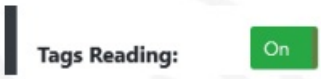
The maximum value is 64 and minimum is 2, and according to the EPC standard.

EPC Reading
This tab enable or disable the reading of EPC memory of tags

TID Reading
This tab enable or disable the reading of TID memory of tags

User Reading
This tab enable or disable the reading of User memory of tags

Tags Reading
This tab enable or disable the reading of tags



Filtering
This tab enable or disable a filtering of reading tags.

Enabling the filtering, the tag is read only once every minute.

Multiple reading
This tab enable or disable the reading of multiple tags in the same inventory cycle

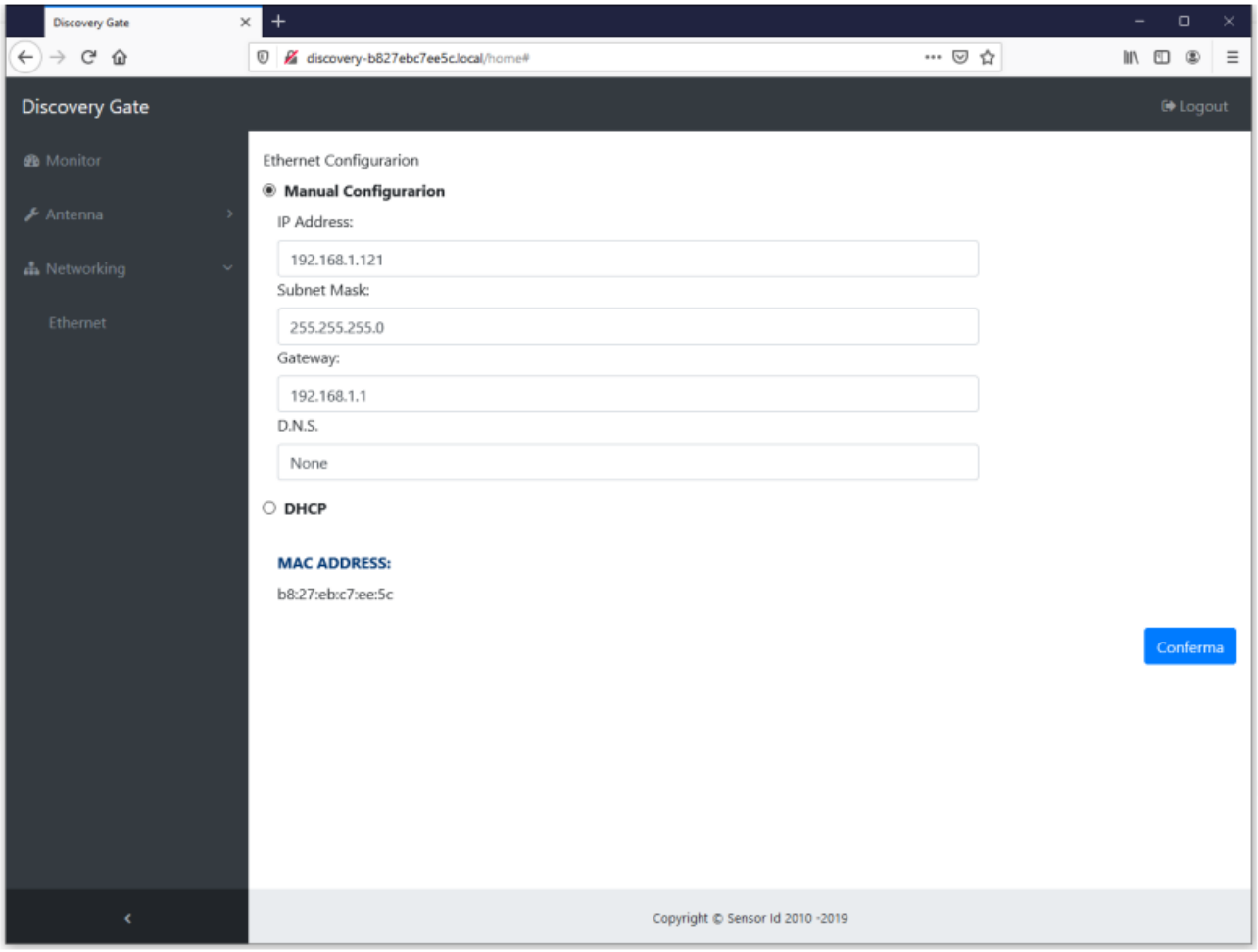
The maximum number of tags read in one inventory cycle is 10.

Buzzer
Using this tab it's possible activate or deactivate the sound emitted by the reader at every reading.

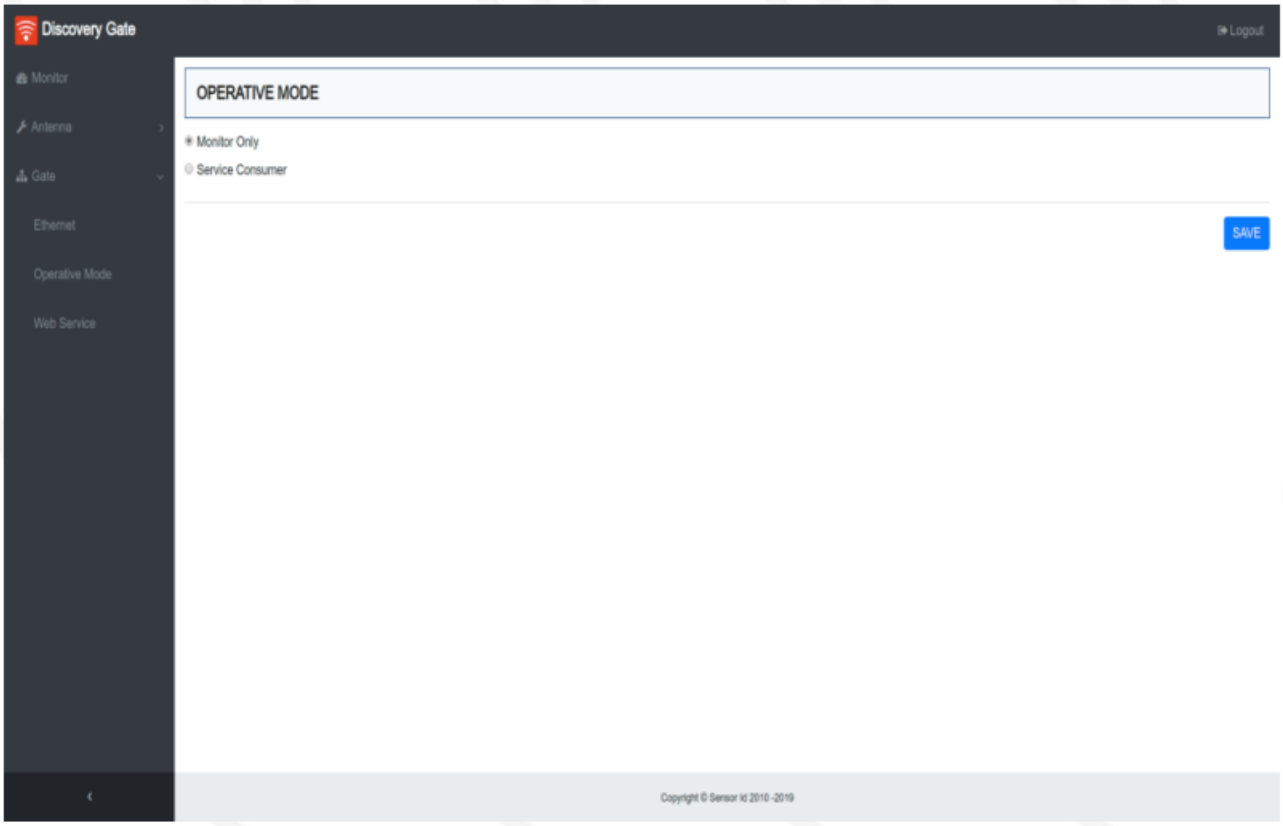
Antenna Tuning
This tab performs the tuning of antenna. This command must be send only when the antenna is installed and seated correctly. Run the antenna tuning to optimize the reading distances.

Networking

In this page it's possible configure the Ethernet settings.



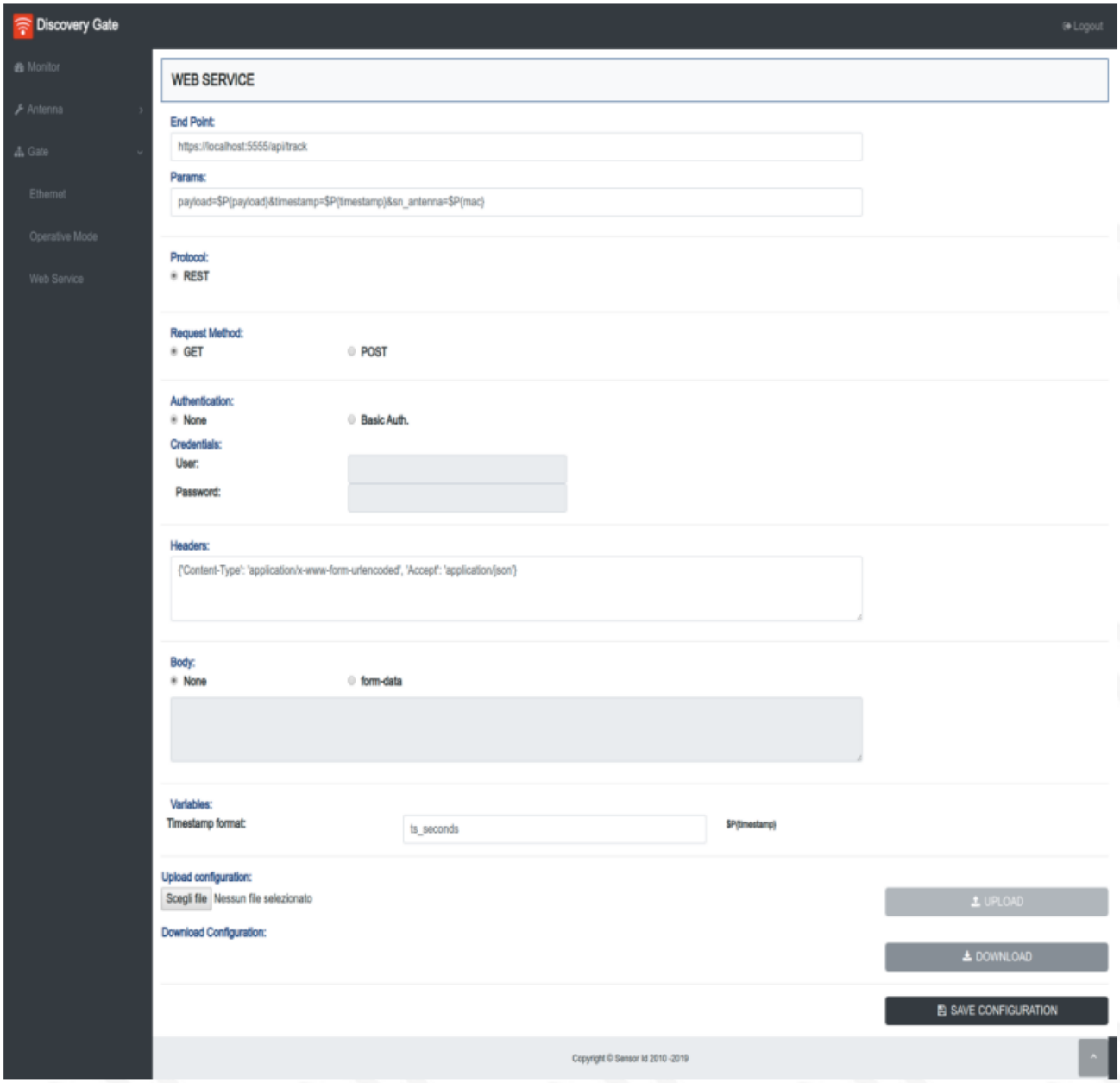
Operative mode



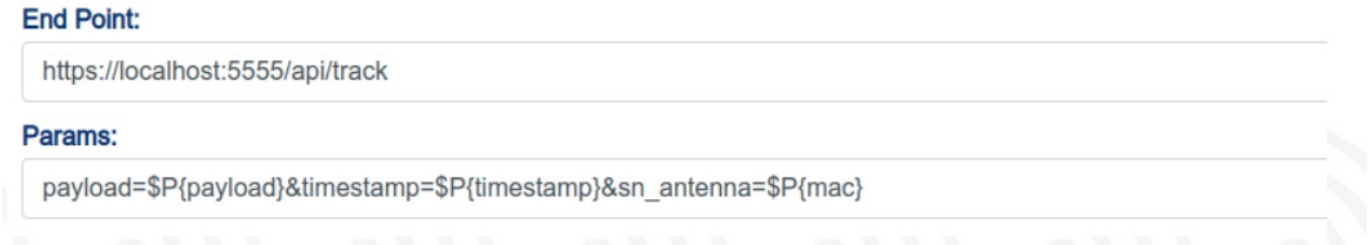
The Discovery Gate can operates in two mode:

1. Only monitor
2. Service Consumer When is selected “only monitor” no tag is sent to Server, this mode is for test only. Service Consumer mode is used for send data to a web service. Before doing this you need to configure some parameters in “web service” menu.

Web Service



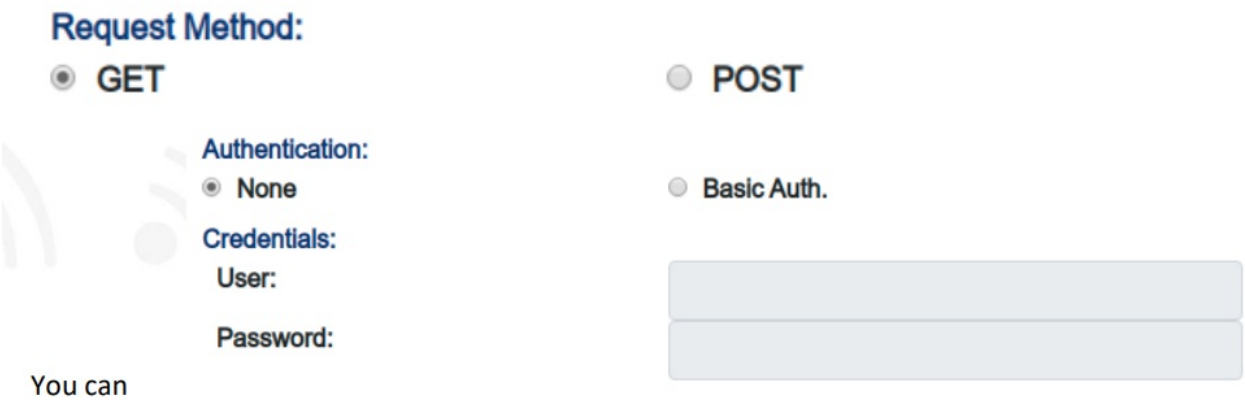
On this page you can set the parameters for sending data to the webservice. First of all we must enter the URL of the endpoint of the webservice.



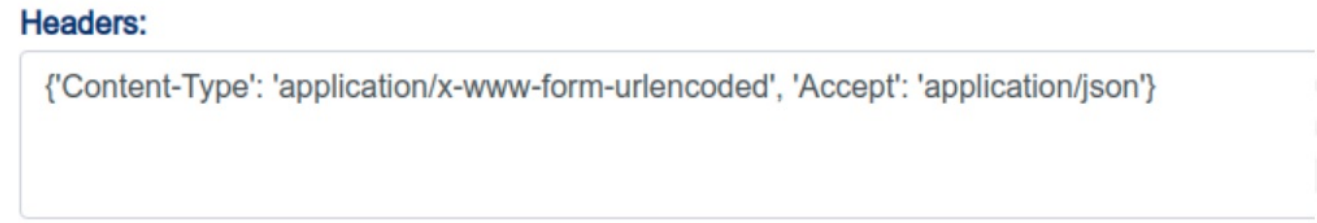
Params: in the url parameter you can use some parmeters placeolder for create dynamic ….

- $P{payload} : tag read form antenna
- $P{mac}: antenna mac address
- $P{timestamp} : timestamp
- $P{gate_id} : production id

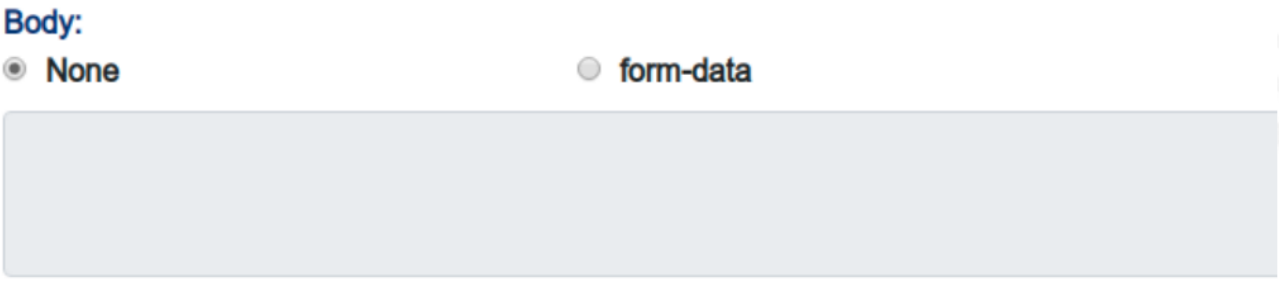
Request Method and authentication
In this section is possible set the request method, POST or GET, and authorizzation credential for the basic authentication.

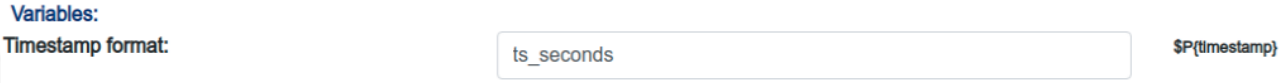


You can



customize the headers and body of request.





The table below shows all the codes that you can pass to the timestamp format.

Directive	Meaning	Example
ts_seconds	Unix Timestamp	
%a	Abbreviated weekday name.	Sun, Mon, ...

Directive	Meaning	Example
%A	Full weekday name.	Sunday, Monday, …
%w	Weekday as a decimal number.	0, 1, …, 6
%d	Day of the month as a zero-padded decimal.	01, 02, …, 31
%-d	Day of the month as a decimal number.	1, 2, …, 30
%b	Abbreviated month name.	Jan, Feb, …, Dec
%B	Full month name.	January, February, …
%m	Month as a zero-padded decimal number.	01, 02, …, 12
%-m	Month as a decimal number.	1, 2, …, 12
%y	Year without century as a zero-padded decimal number.	00, 01, …, 99
%-y	Year without century as a decimal number.	0, 1, …, 99
%Y	Year with century as a decimal number.	2013, 2019 etc.
%H	Hour (24-hour clock) as a zero-padded decimal number.	00, 01, …, 23
%-H	Hour (24-hour clock) as a decimal number.	0, 1, …, 23
%I	Hour (12-hour clock) as a zero-padded decimal number.	01, 02, …, 12
%-I	Hour (12-hour clock) as a decimal number.	1, 2, … 12
%p	Locale’s AM or PM.	AM, PM
%M	Minute as a zero-padded decimal number.	00, 01, …, 59
%-M	Minute as a decimal number.	0, 1, …, 59
%S	Second as a zero-padded decimal number.	00, 01, …, 59
%-S	Second as a decimal number.	0, 1, …, 59
%f	Microsecond as a decimal number, zero-padded on the left.	000000 – 999999
%z	UTC offset in the form +HHMM or -HHMM.	
%Z	Time zone name.	
%j	Day of the year as a zero-padded decimal number.	001, 002, …, 366
%-j	Day of the year as a decimal number.	1, 2, …, 366

Directive	Meaning	Example
%U	Week number of the year (Sunday as the first day of the week). All days in a new year preceding the first Sunday are considered to be in week 0 .	00, 01, …, 53
%W	Week number of the year (Monday as the first day of the week). All days in a new year preceding the first Monday are considered to be in week 0 .	00, 01, …, 53
%c	Locale’s appropriate date and time representation.	Mon Sep 30 07:06:05 2013
%x	Locale’s appropriate date representation.	09/30/13
%X	Locale’s appropriate time representation.	07:06:05
%%	A literal ‘%’ character.	%

Federal Communications Commission (FCC)

Part 15.19

This device complies with 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.

Part 15.21

Any changes or modifications to this equipment not expressly approved by Sensor ID may cause harmful interference and void the user’s authority to operate this equipment.

FCC

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.

RF Radiation Exposure statement
This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body.

Documents / Resources

	Sensor Id U04 ETH 11 Discovery Gate Ethernet Demo Software [pdf] User Manual GC665017, 2AVDNGC665017, U04 ETH 11 Discovery Gate Ethernet Demo Software, U04 ETH 11, Discovery Gate Ethernet Demo Software

References

- Welcome Sensor ID - Proximity Wireless Technologies Made in Italy
- Direct current - Wikipedia