

# REQUEST QUESTIONNAIRE

ELECTROMAGNETIC COMPATIBILITY, RADIO, SAFETY

What you need to know about homologation:

To sell a product in Europe and all over the world, it is necessary that it meets the requirements of the regulatory texts.

We usually talk about approval procedure. In the context of CE marking, the person in charge of marketing (importer, commercial agent or manufacturer) undertakes to respect the product requirements specified by the directives (in terms of user safety and its assets, equipment compatibility to operate in the same electromagnetic environment, the right use of the radio frequency spectrum ...)

EMITECH Group offers a wide range of test services and guides you from the beginning to the end of your projects with trainings, engineering, or notified body services ...

In addition to the EMC, radio and electrical safety tests, the Emitech Group offers you a complete range of qualification tests in the mechanical fields (shock, vibration, endurance, earthquake ...) climatic (hot, cold, humidity, VRT ...), physico-chemical (IP, sunshine, fire ...) but also acoustic and hydraulic.

It is important to complete the questionnaire in its entirety, as it is necessary for the establishment of our technical and financial offer.

You will find throughout this document this symbol  which, if you place your mouse over it, will answer most of your questions.

Your contract manager remains at your disposal if, however, you don't know how to answer some items.

**Project Name :** **Applicant asking for the tests (the applicant will receive the test(s) report(s))**Company : Contact name : Address : Phone : Fax : E-Mail : Web Site : Other : VAT Number : ☐ **Check if the Applicant is also the Representative** **Authorized Representative (fill in only if different than the Applicant)**Company : Contact name : Address : Phone : Fax : E-Mail : ☐ **Check if the Applicant is the Manufacturer****Manufacturer**Company : Contact name : Address : Phone : Fax : E-Mail :

Please insert photos, pictures and diagrams of your product. That will help us to visualize for example the number and type of cable, the types of connectors, the materials used, or the bulk.

### EMC

- ☐ Qualification
- ☐ Engineering/Expertise <sup>?</sup>
- ☐ Prequalification <sup>?</sup>
- ☐ Training

- ☐ CE Marking
- ☐ FCC or/and ISDE
- ☐ CB Scheme <sup>?</sup>
- ☐ VCCI (Japan)

- ☐ Automotive
- ☐ 'e' or 'E' Marking
- ☐ Military / space / aeronautics

- ☐ EU type examination certificate by NB
- ☐ International Certification
- ☐ Project / Specification writing

- ☐ Details or Other requests:

### RADIO / EMF

- ☐ Qualification
- ☐ Engineering/Expertise
- ☐ Prequalification
- ☐ Training

- ☐ CE Marking
- ☐ FCC or/and ISDE
- ☐ Certificate by Notified Body (NB)
- ☐ SAR Measurements

- ☐ EMF : Human exposure to ElectroMagnetic Fields
- ☐ CB Scheme (only for EMF)

### ELECTRICAL SAFETY

- ☐ Qualification
- ☐ Engineering/Expertise
- ☐ Prequalification
- ☐ Training

- ☐ CE Marking
- ☐ CSA Mark
- ☐ cCSAus Mark
- ☐ CB Scheme
- ☐ Other mark of certification

Location of the service:

☐ In EMITECH laboratories

☐ In your Company

### Product destination

**It is important to note that if your application concerns several countries except Europe, USA and Canada, a request for Regulatory Study is recommended. (<http://www.certification-internationale.com>)**

Europe Market :

☐ Yes

USA Market :

☐ Yes

CANADA Market :

☐ Yes

CB SCHEME <sup>?</sup>

☐ Yes including the national deviations as appropriate for the relevant countries

Few country(ies) for CB Scheme (more than 50, for information)

☐ CEE ☐ Australia-New-Zealand ☐ China ☐ India ☐ Israel ☐ Japan

Others (To be defined) :

☐ R of Korean ☐ Russia ☐ Saudi Arabia ☐ South Africa

### Desired dates for the tests :

Presence of the customer during the tests:

☐ Yes .

☐ No, the product will be delivered to the laboratory, a document explaining the operation and modes specific to the tests will be made available to the technician.

### The language of reports:

**Others languages:**

(With additional cost)

☐ English (All reports are written in English)

**Number of desired reports :**

☐ 1 report by product

☐ 1 report for all products

Tests reports are transmit in electronic format by e-mail

**Standard(s) tests list or qualification test plan:** <sup>?</sup>

**Equipment Specification**

|                    |  |                     |  |
|--------------------|--|---------------------|--|
| Trade name :       |  |                     |  |
| Reference :        |  | Manufacturer Name : |  |
| Serial Number :    |  | Software Version :  |  |
| Firmware Version : |  | FCC ID / N° IC :    |  |
| Function :         |  |                     |  |

Web address related to the product:

Product already certified by EMITECH (indicate the references of the project):

☐ Serial Product
 ☐ Pre-series
 ☐ Prototype

Weight (kg):  Size (L x w x h) (m):

Area of use: Indoor ☐ Outdoor ☐ Specific:   
 Max/Min operating temperature :

Liquid or dangerous product \*:   
 Specifics connections (water, gas, \*) :   
 \* Provide the relevant safety orders

**Power supply**

AC adapter sold with the product: ☐ Yes ☐ No  
 Power supply range:  Volts AC With earth wire : ☐ Yes ☐ No  
 Single phase: ☐ 3 phases: ☐ With neutral: ☐  
 Frequency(ies) : ☐ 50 Hz ☐ 60 Hz ☐ Other:   
 USB power supply: ☐ Micro ☐ Mini ☐ Other:   
 POE power supply: ☐ Yes ☐ No  
 Induction power supply: ☐ Yes ☐ No  
 DC power supply (Without adaptor):  Volts DC  
☐ Cell ☐ Battery  Volts DC  
 Minimum and maximum voltage:  Volts DC  
 Equipment in operation during charging mode: ☐ Yes ☐ No Other Information:   
 For all power supplies please indicate:  
 Primary Power:  Watts  
 Nominal Current (per phase):  Amps

**Connection and/or Input/Output cables and power supply**

| N° | Designation (ex: RTC, RNIS, ADSL, Ethernet, RS232, USB, HDMI, VGA, ...) | Type* | Length (m) | Shielded (Yes/No) | Comments |
|----|-------------------------------------------------------------------------|-------|------------|-------------------|----------|
| 1  |                                                                         |       |            |                   |          |
| 2  |                                                                         |       |            |                   |          |
| 3  |                                                                         |       |            |                   |          |
| 4  |                                                                         |       |            |                   |          |
| 5  |                                                                         |       |            |                   |          |
| 6  |                                                                         |       |            |                   |          |
| 7  |                                                                         |       |            |                   |          |
| 8  |                                                                         |       |            |                   |          |
| 9  |                                                                         |       |            |                   |          |

\*Type : AC = AC power supply DC = DC power supply Batt=Battery N/E = No-Electrical I/O = Input/Output  
 PC = Patient Coupled TP = Telecommunication Port CI = Interconnection Cable RF = Radio frequency

### Power Supply

Number of power supply:

Transformer already approved:  
Power supply already approved:

☐ Yes (please provide a proof) ☐ No  
☐ Yes (please provide a proof) ☐ No

If no, please fill below

Casted Transformer:

☐ Yes ☐ No

Thermic Classification:

Switching power supply:

☐ Yes ☐ No

Number of secondary circuit:

Disconnectable power supply cable

☐ Product Side ☐ Wall Side ☐ Not disconnectable

The use of product : ☐ ?

☐ Transportable  
☐ Grounded

☐ Mobile  
☐ To carry/Portable

☐ To integrate  
☐ Wall mounted

Product or system to be used:

☐ Indoor  
☐ Technical Room

☐ Outdoor  
☐ On table

☐ Other:

Enclosure of product:

☐ Plastic

☐ Metallic

Category of installation:

☐ I

☐ II

☐ III

☐ IV

Altitude:

☐ <2000m

☐ Other:

Degree of pollution:

☐ 1

☐ 2

☐ 3

☐ 4

Temperature min/max:

Earth protection:

☐ Yes

IP Classification:

Telecom Part already certified:

☐ Yes (please provide a proof) ☐ No

Cable distribution:

☐ Yes

☐ No

Presence of laser, liquid or gas under pressure, ionize radiation, ultra sound :

☐ Yes

☐ No

If yes, specify:

Presence of battery:

☐ Yes

☐ Rechargeable

Type of Cell (Lithium, etc.):

☐ Button Cell

Alloy type of Cell:

Mobile Parts accessible: ☐ ?

☐ Yes

☐ No

Product includes motors other than step by step?

☐ Yes

☐ No

If yes, how many?

Operating process of the device under test:

Specific accessories for the operation of the product:

Other information:

**Please attach an installation / operation manual, technical construction documents, photos and Datasheet that you consider useful for the understanding of your equipment.**

Equipment environment:

- |                                      |                                                    |                                      |                                |
|--------------------------------------|----------------------------------------------------|--------------------------------------|--------------------------------|
| <input type="radio"/> Residential    | <input type="radio"/> Commercial                   | <input type="radio"/> Medical        | <input type="radio"/> Railways |
| <input type="radio"/> Light industry | <input type="radio"/> Industrial (Production site) | <input type="radio"/> Telecom Centre | <input type="radio"/> Military |
| <input type="radio"/> Navy           | <input type="radio"/> Aeronautic/Aviation          | <input type="radio"/> Automotive     |                                |
|                                      |                                                    | <input type="radio"/> 1st Mount      |                                |
|                                      |                                                    | <input type="radio"/> 2nd Mount      |                                |

Others:

If the product is on a vehicle, describe the type of vehicle:

- ☐ Product to be used by professional    ☐ Product for the General Public

Do you know the class that applies to your product: ☐ ?    ☐ A    ☐ B    ☐ To define

Critical frequencies: ☐ ?

Maximum internal frequency of the product: ☐ ?

Minimum internal frequency of the product:

Presence of equipotentiality cable: ☐ Yes    ☐ No

Presence of thermostat, temperature limiter, thermic cut off, (flickers measurement): ☐ Yes    ☐ No

Does the equipment contain sensitive components to magnetic field: ☐ Yes    ☐ No  
(Hall sensor, compass, coils, accelerometer, etc ...)

**For signal or telecommunication accesses outside a building, primary protection is required**

#### A Criteria:

Tolerances of operation or measures applicable to the product during continuous disturbances (immunity).

#### B Criteria :

Tolerances of operation or measures applicable to the product during transient disturbances (immunity).

Operating modes to be tested (examples: standby, cycle mode, emission, etc ...)

Control equipment or testing bench used:

**If yes, provide cables longer than 5 m**

☐ Yes    ☐ No

Set up duration before tests:

Time to check the correct operation:

**Warning: a duration > 3 s can greatly impact on the tests duration.**

## Presence of RADIO communication

Important: The radio standards require carrying out tests in each operating mode and in minimum and maximum temperature ranges. Please fill in the information in pages 5 and 7.

| <b>WiFi 2.4 GHz</b>                                |                          |                                                                                 |                                                                                                                                   |                               |                               |                                                             |
|----------------------------------------------------|--------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------------------------------|
| <input type="radio"/> Tx                           | <input type="radio"/> Rx | Duty Cycle:                                                                     | <input type="radio"/> <0.1%                                                                                                       | <input type="radio"/> <1%     | <input type="radio"/> <10%    | <input type="radio"/> Others:                               |
| Number of channels:                                |                          | <input type="radio"/> 13(EU) <input type="radio"/> 11(US)                       | Modulation:                                                                                                                       | <input type="radio"/> 802.11b | <input type="radio"/> 802.11g | <input type="radio"/> 802.11n <input type="radio"/> Others: |
| Used bands:                                        |                          | <input type="radio"/> 2400-2483.5                                               | OBW:                                                                                                                              | <input type="radio"/> 20Mhz   | <input type="radio"/> 40Mhz   | <input type="radio"/> Others:                               |
| Receiver category:                                 |                          | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3         | Reception bandwidth:                                                                                                              |                               |                               |                                                             |
| Module already certified?                          |                          | <input type="radio"/> CE Réf:                                                   | <input type="radio"/> FCCID:                                                                                                      | <input type="radio"/> IC:     |                               |                                                             |
| Adaptive equipment (Adaptative Frequency Agility): |                          | <input type="radio"/> Yes <input type="radio"/> No                              | <input type="radio"/> Listen Before Talk                                                                                          |                               |                               |                                                             |
| EIRP :                                             |                          | <input type="radio"/> >10dBm <input type="radio"/> <10dBm                       | Ability to keep the signal on transmission: <input type="radio"/> Yes ( <input type="radio"/> Modulated) <input type="radio"/> No |                               |                               |                                                             |
| Integrated antenna:                                |                          | <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA) | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                       |                               |                               |                                                             |
| If external, length(cm):                           |                          | Gain (dBi) :                                                                    | Operating during charge (battery) : <input type="radio"/> Yes <input type="radio"/> No                                            |                               |                               |                                                             |
| Number of antenna dedicated to WiFi:               |                          | <input type="radio"/> FHSS ; <input type="radio"/> Others                       |                                                                                                                                   |                               |                               |                                                             |

| <b>WiFi 5 GHz</b>                                  |                          |                                                                                 |                                                                                                                                   |                                    |                                    |                                                           |
|----------------------------------------------------|--------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|-----------------------------------------------------------|
| <input type="radio"/> Tx                           | <input type="radio"/> Rx | Duty Cycle:                                                                     | <input type="radio"/> <0.1%                                                                                                       | <input type="radio"/> <1%          | <input type="radio"/> <10%         | <input type="radio"/> Others:                             |
| Number of channels:                                |                          | Modulation:                                                                     | <input type="radio"/> 802.11a                                                                                                     | <input type="radio"/> 802.11n      | <input type="radio"/> 802.11ac     | <input type="radio"/> Others:                             |
| Used bands:                                        |                          | <input type="radio"/> 5150-5250MHz                                              | <input type="radio"/> 5250-5350MHz                                                                                                | <input type="radio"/> 5470-5700MHz | <input type="radio"/> 5600-5650MHz | <input type="radio"/> 5725-5875MHz                        |
| Receiver category:                                 |                          | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3         | Reception bandwidth:                                                                                                              |                                    |                                    |                                                           |
| Power (mW):                                        |                          | OBW :                                                                           | <input type="radio"/> 20Mhz                                                                                                       | <input type="radio"/> 40Mhz        | <input type="radio"/> 60Mhz        | <input type="radio"/> 80Mhz <input type="radio"/> Others: |
| Module already certified ?                         |                          | <input type="radio"/> CE Réf:                                                   | <input type="radio"/> FCCID:                                                                                                      | <input type="radio"/> IC:          |                                    |                                                           |
| Adaptive equipment (Adaptative Frequency Agility): |                          | <input type="radio"/> Yes <input type="radio"/> No                              | <input type="radio"/> Listen Before Talk                                                                                          |                                    |                                    |                                                           |
| EIRP :                                             |                          | <input type="radio"/> >10dBm <input type="radio"/> <10dBm                       | Ability to keep the signal on transmission: <input type="radio"/> Yes ( <input type="radio"/> Modulated) <input type="radio"/> No |                                    |                                    |                                                           |
| Integrated antenna:                                |                          | <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA) | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                       |                                    |                                    |                                                           |
| If external, length(cm):                           |                          | Gain(dBi) :                                                                     | Operating during charge (battery) : <input type="radio"/> Yes <input type="radio"/> No                                            |                                    |                                    |                                                           |
| Number of antenna dedicated to WiFi:               |                          | <input type="radio"/> FHSS ; <input type="radio"/> Others                       |                                                                                                                                   |                                    |                                    |                                                           |

| <b>RFID</b>                |  |                                  |                                |                                |                               |                              |
|----------------------------|--|----------------------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| Number of channels:        |  | Power (mW):                      |                                |                                |                               |                              |
| Used bands:                |  | <input type="radio"/> 125kHz     | <input type="radio"/> 134.2kHz | <input type="radio"/> 13.56MHz | <input type="radio"/> 433MHz  | <input type="radio"/> 868MHz |
|                            |  | <input type="radio"/> 902-928MHz | <input type="radio"/> 2.45GHz  | <input type="radio"/> 5.8GHz   | <input type="radio"/> Others: |                              |
| Module already certified ? |  | <input type="radio"/> CE Réf:    | <input type="radio"/> FCCID:   | <input type="radio"/> IC:      |                               |                              |

| <b>Bluetooth</b>                                   |                          |                                                                                 |                                                                                                                                   |                              |                                          |                                         |
|----------------------------------------------------|--------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------|-----------------------------------------|
| <input type="radio"/> Tx                           | <input type="radio"/> Rx | Duty Cycle:                                                                     | <input type="radio"/> <0.1%                                                                                                       | <input type="radio"/> <1%    | <input type="radio"/> <10%               | <input type="radio"/> Others:           |
| Number of channels:                                |                          | <input type="radio"/> 79 <input type="radio"/> Others:                          | Modulation:                                                                                                                       | <input type="radio"/> GFSK   | <input type="radio"/> π/4DQPSK           | <input type="radio"/> 8-DPSK Power(mw): |
| Used bands:                                        |                          | <input type="radio"/> 2400-2483.5MHz                                            | <input type="radio"/> Others:                                                                                                     | OBW (MHz):                   | <input type="radio"/> 1MHz               | <input type="radio"/> Others:           |
| Receiver category:                                 |                          | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3         | Reception bandwidth:                                                                                                              |                              |                                          |                                         |
| Module already certified ?                         |                          | <input type="radio"/> CE Réf:                                                   | <input type="radio"/> FCCID:                                                                                                      | <input type="radio"/> IC:    |                                          |                                         |
| Adaptive equipment (Adaptative Frequency Agility): |                          | <input type="radio"/> Yes <input type="radio"/> No                              | <input type="radio"/> FHSS                                                                                                        | <input type="radio"/> Others | <input type="radio"/> Listen Before Talk |                                         |
| EIRP :                                             |                          | <input type="radio"/> >10dBm <input type="radio"/> <10dBm                       | Ability to keep the signal on transmission: <input type="radio"/> Yes ( <input type="radio"/> Modulated) <input type="radio"/> No |                              |                                          |                                         |
| Integrated antenna:                                |                          | <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA) | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                       |                              |                                          |                                         |
| If external, length(cm) :                          |                          | Gain(dBi) :                                                                     | Operating during charge (battery) : <input type="radio"/> Yes <input type="radio"/> No                                            |                              |                                          |                                         |
| Number of dedicated antenna:                       |                          |                                                                                 |                                                                                                                                   |                              |                                          |                                         |

| Bluetooth Low Energy (BLE)                         |                          |                                                                         |                                                                                                                                   |
|----------------------------------------------------|--------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <input type="radio"/> Tx                           | <input type="radio"/> Rx | Duty Cycle:                                                             | <input type="radio"/> <0.1% <input type="radio"/> <1% <input type="radio"/> <10% <input type="radio"/> Others:                    |
| Number of channels:                                |                          | <input type="radio"/> 3 <input type="radio"/> 40(3+37)                  | Modulation: <input type="radio"/> GFSK <input type="radio"/> Others: Power(mw):                                                   |
| Used bands:                                        |                          | <input type="radio"/> 2400-2483.5MHz <input type="radio"/> Others:      | OBW (MHz): <input type="radio"/> 2MHz <input type="radio"/> Others:                                                               |
| Receiver category:                                 |                          | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 | Reception bandwidth:                                                                                                              |
| Module already certified?                          |                          | <input type="radio"/> CE Réf:                                           | <input type="radio"/> FCCID: <input type="radio"/> IC:                                                                            |
| Adaptive equipment (Adaptative Frequency Agility): |                          | <input type="radio"/> Yes <input type="radio"/> No                      | <input type="radio"/> FHSS <input type="radio"/> Others <input type="radio"/> Listen Before Talk                                  |
| EIRP :                                             |                          | <input type="radio"/> >10dBm <input type="radio"/> <10dBm               | Ability to keep the signal on transmission: <input type="radio"/> Yes ( <input type="radio"/> Modulated) <input type="radio"/> No |
| Integrated antenna:                                |                          | <input type="radio"/> Yes <input type="radio"/> No                      | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                       |
| If external, length(cm):                           |                          | Gain(dBi):                                                              | Operating during charge (battery): <input type="radio"/> Yes <input type="radio"/> No                                             |
| Number of dedicated antenna:                       |                          |                                                                         |                                                                                                                                   |

| Zigbee                                             |                          |                                                                                                   |                                                                                                                                  |
|----------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <input type="radio"/> Tx                           | <input type="radio"/> Rx | Duty Cycle:                                                                                       | <input type="radio"/> <0.1% <input type="radio"/> <1% <input type="radio"/> <10% <input type="radio"/> Others:                   |
| Number of channels:                                |                          | <input type="radio"/> 16 <input type="radio"/> Others:                                            | Modulation: <input type="radio"/> 802.15.4 <input type="radio"/> Others: Power(mw):                                              |
| Used bands:                                        |                          | <input type="radio"/> 2400-2483.5MHz <input type="radio"/> Others:                                | OBW (MHz): <input type="radio"/> 5MHz <input type="radio"/> Others:                                                              |
| Receiver category:                                 |                          | <input type="radio"/> 1 <input type="radio"/> 1.5 <input type="radio"/> 2 <input type="radio"/> 3 | Reception bandwidth:                                                                                                             |
| Module already certified?                          |                          | <input type="radio"/> CE Réf:                                                                     | <input type="radio"/> FCCID: <input type="radio"/> IC:                                                                           |
| Adaptive equipment (Adaptative Frequency Agility): |                          | <input type="radio"/> Yes <input type="radio"/> No                                                | <input type="radio"/> Listen Before Talk                                                                                         |
| EIRP :                                             |                          | <input type="radio"/> >10dBm <input type="radio"/> <10dBm                                         | Ability to keep the signal on transmission: <input type="radio"/> Yes( <input type="radio"/> Modulated) <input type="radio"/> No |
| Integrated antenna:                                |                          | <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA)                   | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                      |
| If external, length(cm) :                          |                          | Gain(dBi) :                                                                                       | Operating during charge (battery): <input type="radio"/> Yes <input type="radio"/> No                                            |

| Sigfox                                                                                              |                          |                                                                                                                                  |                                                                                                                            |
|-----------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <input type="radio"/> Tx                                                                            | <input type="radio"/> Rx | Power(mw):                                                                                                                       | Duty Cycle: <input type="radio"/> <0.1% <input type="radio"/> <1% <input type="radio"/> <10% <input type="radio"/> Others: |
| Central frequency                                                                                   |                          | Frequency bands:                                                                                                                 | Sigfox ID :                                                                                                                |
| <input type="radio"/> RC1 (868.13MHz – UE) →                                                        |                          |                                                                                                                                  | OCW:                                                                                                                       |
| <input type="radio"/> RC2 (902.2MHz – US/Brazil/Mexico) →                                           |                          |                                                                                                                                  | Number of channels:                                                                                                        |
| <input type="radio"/> RC3 (923.2MHz – Japan) →                                                      |                          |                                                                                                                                  | Reception bandwidth:                                                                                                       |
| <input type="radio"/> RC4 (920.8MHz –Asia, Latin America) →                                         |                          |                                                                                                                                  | <input type="radio"/> Listen Before Talk                                                                                   |
| <input type="radio"/> RC5 (920.8MHz –Korea) →                                                       |                          |                                                                                                                                  | Receiver category:                                                                                                         |
| <input type="radio"/> RC6 (865.2MHz- India) →                                                       |                          |                                                                                                                                  | <input type="radio"/> 1 <input type="radio"/> 1.5 <input type="radio"/> 2 <input type="radio"/> 3                          |
| Module already certified?                                                                           |                          | <input type="radio"/> CE Réf:                                                                                                    | <input type="radio"/> FCCID: <input type="radio"/> IC:                                                                     |
| Number of dedicated antenna:                                                                        |                          | Ability to keep the signal on transmission: <input type="radio"/> Yes( <input type="radio"/> Modulated) <input type="radio"/> No |                                                                                                                            |
| Integrated antenna: <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA) |                          | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                      |                                                                                                                            |
| If external, length(cm):                                                                            |                          | Gain (dBi):                                                                                                                      | Operating during charge (battery): <input type="radio"/> Yes <input type="radio"/> No                                      |

If you would like to know more about the Radiated Performance and RF Protocol tests requested by Sigfox, fill out the [questionnaire](#) and send it to: [sigfox@emitech.fr](mailto:sigfox@emitech.fr)

| LoRa                                                                                                |                          |                                                                                                                                                                |                                                                                                                            |
|-----------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <input type="radio"/> Tx                                                                            | <input type="radio"/> Rx | Power(mw):                                                                                                                                                     | Duty Cycle: <input type="radio"/> <0.1% <input type="radio"/> <1% <input type="radio"/> <10% <input type="radio"/> Others: |
| Used bands:                                                                                         |                          | <input type="radio"/> 865-868MHz <input type="radio"/> 868-868.6MHz <input type="radio"/> 868.7-869.2MHz                                                       |                                                                                                                            |
|                                                                                                     |                          | <input type="radio"/> 869.4-869.65MHz <input type="radio"/> 869.7-870MHz <input type="radio"/> Others (Frequency Min/Max) :                                    |                                                                                                                            |
| Spreading Factor:                                                                                   |                          | <input type="radio"/> SF7 <input type="radio"/> SF8 <input type="radio"/> SF9 <input type="radio"/> SF10 <input type="radio"/> SF11 <input type="radio"/> SF12 |                                                                                                                            |
| Bandwidth:                                                                                          |                          | <input type="radio"/> 125kHz <input type="radio"/> 250kHz <input type="radio"/> 500kHz                                                                         | Number of channels: OCW:                                                                                                   |
| Receiver category:                                                                                  |                          | <input type="radio"/> 1 <input type="radio"/> 1.5 <input type="radio"/> 2 <input type="radio"/> 3                                                              | Reception bandwidth:                                                                                                       |
| Module already certified ?                                                                          |                          | <input type="radio"/> CE Réf:                                                                                                                                  | <input type="radio"/> FCCID: <input type="radio"/> IC:                                                                     |
| Number of dedicated antenna:                                                                        |                          | <input type="radio"/> Listen Before Talk                                                                                                                       |                                                                                                                            |
| Integrated antenna: <input type="radio"/> Yes <input type="radio"/> No ( <input type="radio"/> SMA) |                          | Ability to keep the signal on transmission: <input type="radio"/> Yes ( <input type="radio"/> Modulated) <input type="radio"/> No                              |                                                                                                                            |
| If external, length(cm) :                                                                           |                          | Gain (dBi) :                                                                                                                                                   | Ability to keep the signal in reception: <input type="radio"/> Yes <input type="radio"/> No                                |
|                                                                                                     |                          | Operating during charge (battery) : <input type="radio"/> Yes <input type="radio"/> No                                                                         |                                                                                                                            |

| ○ GNSS (GPS)                                                                         |     |                     |                     |
|--------------------------------------------------------------------------------------|-----|---------------------|---------------------|
| ○Tx                                                                                  | ○Rx | Number of channels: | Power (mW):         |
| Used bands :      ○GNSS B1 (BDS)   ○L1 (GPS et SBAS)   ○G1 (Glonass)   ○E1 (Galiléo) |     |                     |                     |
| Module already certified?                                                            |     | ○CE Réf:            | ○ FCCID:      ○ IC: |

| ○ GSM(2G)   ○ GPRS (2G)   |     |                                                         |                     |
|---------------------------|-----|---------------------------------------------------------|---------------------|
| ○Tx                       | ○Rx | Used bands:      ○900 et 1800(EU)      ○850 et 1900(US) | Power (mW):         |
| Module already certified? |     | ○CE Réf:                                                | ○ FCCID:      ○ IC: |

| ○ UMTS (3G)               |     |                                                                  |                     |
|---------------------------|-----|------------------------------------------------------------------|---------------------|
| ○Tx                       | ○Rx | Used bands:      ○ I et VIII(EU)   ○ II et V(US)   ○Other bands: | Power (mW):         |
| Module already certified? |     | ○CE Réf:                                                         | ○ FCCID:      ○ IC: |

| ○ LTE (4G)                |     |                                                                 |                     |
|---------------------------|-----|-----------------------------------------------------------------|---------------------|
| ○Tx                       | ○Rx | Used bands:      ○ 3 ; 7 et 20(EU)      ○ 28(EU)      ○ Others: | Power (mW):         |
| Module already certified? |     | ○CE Réf:                                                        | ○ FCCID:      ○ IC: |

**Other type of radio: (indicate at least the Power, the frequency, the Duty Cycle and the type of modulation)**

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