



(Latest online doc version)

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**Wirnet™ iFemtoCell-evolution**  
LoRaWAN® gateway for the Internet of Things  
Quick Start Guide



**Thank you for choosing Kerlink.  
We are proud to be part of your  
project.**



## 1. Normal Condition of use

The Wirnet™ iFemtoCell-evolution is an indoor LoRa Gateway for IoT chain. It is based on LoRa® technology provided by Semtech Company and is fully compatible and interoperable with existing LoRa LPWAN.



**helium**

Upon specific configuration, it can be used as a Helium-network compatible hotspot to mine HNT. To do so, it needs to be clearly mentioned once ordered as it use a specific cryptographic private key, a dedicated software, and Helium miner (not present by default on all product versions). If you have any doubt, please check directly with your reseller to ensure it is Helium-network compatible.

For Helium-network onboarding, please go through Helium application and use <https://helium-onboarding.kerlink.com>

|  | Wirnet™<br>iFemtoCell<br>evolution<br>868MHz     | Wirnet™<br>iFemtoCell<br>evolution<br>915MHz | Wirnet™ iFemtoCell<br>evolution 923MHz   |
|--|--|--|--|
| <i>Geographical area</i>   | Europe, Russia<br>Africa<br>Middle East<br>India | North America<br>Central America             | Asia: Indonesia,<br>Malaysia, Korea, Japan,<br>Taiwan, Hong Kong,<br>Thailand, Vietnam,<br>Singapore, Philippines<br>Oceania: Australia,<br>New Zealand<br>South America |
| <i>ISM band</i>  | 863 - 876 MHz                                    | 902 - 928 MHz                                | 915 - 928 MHz  |
| <i>Downstream<br/>bandwidth<br/>(Tx of the Wirnet™<br/>iFemtoCell-evolution)</i> | 863 - 873MHz                                     | 922 - 928 MHz                                | 915 - 928 MHz  |
| <i>Upstream bandwidth<br/>(Rx of the Wirnet™<br/>iFemtoCell-evolution)</i>       | 863 - 873 MHz                                    | 902 - 915 MHz                                | 915 - 928 MHz  |
| <i>Certifications</i>  | See paragraph 8.1                                | See paragraph<br>8.2                         | See paragraph 8.3  |

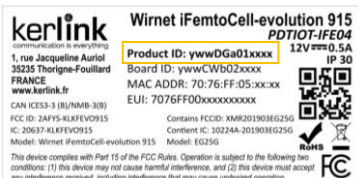
**Please check the appropriate version for the dedicated country.**

**Contact your reseller if required.**

**The present document addresses all the above Wirnet™ iFemtoCell-evolution versions.**

## 2. Need help?

- To provide the most updated technical documentation, as well as considering and saving the environmental resources, Kerlink is providing preferably “Online documentation”. You can then find the latest quick start documentation directly within our website : <https://www.kerlink.com/customer-support/>
- For its direct customers, Kerlink is also providing a Wiki access where it can be found a comprehensive set of documents and technical information. It can be accessed here: <http://wikikerlink.fr/>
  - If you don't have yet your Wiki login/password please request them to [support@kerlink.com](mailto:support@kerlink.com) (note that the “Product ID” of one of your products will be required).
  - How to find the “Product ID”? Please look at the Wirnet iFemtoCell-evolution sticker placed on the right side of the case.



- List of documents and information for self- help:
  - Setup of Wirnet™ iFemtoCell-evolution Gateway: Connection to the gateway, Firmware update, Packet Forwarder installation, Packet Forwarder configuration.
  - System Management: Connection, login and credentials, KerOS REST API, ...
  - Network Management: Backhaul configuration, Firewall, IPsec / OpenVPN.
  - LoRa Features, KerOS customization, Support and resources (FAQ, Troubleshoot the gateway ...)
- Application Notes: for questions related to generic engineering rules
  - AN-KLK03355 - Improving radio coexistence performance of LoRaWAN gateways
  - AN-KLK03356 - LoRaWAN gateways coverage optimization
  - AN-KLK03357 - LoRaWAN gateways installation recommendations
  - AN-KLK03358 - LoRaWAN gateways lightning protection

- For indirect Kerlink customers (meaning if purchased from a distributor), please contact them directly to access document information and support. If really needed, Kerlink can provide those documents through mail request.
- For any Warranty or Maintenance related request (Trouble shooting, help ...)
  - If purchased from a Distributor, please contact them directly for Level1 support
  - If purchased from Kerlink directly, please open an "Assistance Request" via our ticketing tool called OTRS (Open-source Ticket Request System). If you don't have yet your OTRS login/password, please request them to [support@kerlink.com](mailto:support@kerlink.com) (note that the Product ID or any serial number of one of your product will be required).  
Access to Kerlink "Technical Support team" for Maintenance Services is conditioned to a valid Maintenance contract.



For any other question related to our product, please contact your distributor or Kerlink ([sales@kerlink.com](mailto:sales@kerlink.com) or + 33 2 99 12 29 00).

### 3. Manufacturer


Kerlink, 1 Rue Jacqueline Auriol, 35235 Thorigné-Fouillard, France  
Tel: +33 (0)2 99 12 29 00 – Fax: +33 (0) 2 99 12 29 11  
[www.kerlink.com](http://www.kerlink.com)

### 4. Safety

- Please, read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, or maintain it.
- The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.







|   |   |
|---|---|
|   | <ul style="list-style-type: none"><li>• Refers to a critical situation.</li><li>• In case of non-compliance, it may result in property damage</li></ul> |
|  | <ul style="list-style-type: none"><li>• Refers to useful information during manipulations.</li></ul>  |

### 5. Packet contents

|  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Only use the Wirnet™ iFemtoCell-evolution for its intended use "Normal conditions of use".</li><li>• Maintenance and repair must be carried out by qualified personnel authorized by the manufacturer.</li><li>• The enclosure of the Wirnet™ iFemtoCell-evolution must not be opened by CUSTOMER.</li><li>• The Wirnet™ iFemtoCell-evolution should only be used with accessories or spare parts supplied by your reseller</li></ul> |
|--|---|



| N° | Components                                   | N° | Components  |
|----|--|----|---|
| 1  | Wirnet™ iFemtoCell-evolution                 | 9  | SMA connector for LoRa antenna  |
| 2  | Silkscreened KERLINK marking                 | 10 | Reset push button   |
| 3  | Jack connector (for power supply 12Vdc 0,5A) | 11 | Silkscreened Reset marking  |
| 4  | USB-A connector for configuration            | 12 | USIM connector  |
| 5  | RJ45 connector (Ethernet)                    | 13 | USB-C connector for debug probe and for configuration                   |
| 6  | 3 bicolor LEDs                               | 14 | LoRa antenna (862-873MHz, 902-928MHZ, 3dBi, 50Q; vertical polarization) |
| 7  | Wall mounting oblong holes                   | 15 | AC/DC power supply (not provided)                                       |
| 8  | Sticker with markings                        | 16 | Quick Start Guide (this document)                                       |

| Symbol  | Description                | Symbol  | Description  |
|---|----------------------------|---|--|
| Wirnet iFemtoCell-evolution   | Type of equipment          |                      | QR Code  |
| 12V  0,5mA | Power supply information   | <br>or other marking | CE marking indicating that the product complies with current European directives or other marking depending on the country   |
| Board ID  | Serial number of board     |                      | Marking indicating that the product complies with RoHS directives  |
| Final product ID  | Serial number of product   |                      | Do not dispose of with domestic waste  |
| MAC ADDR  | MAC address                |                      | Product must be installed on a non-flammable substrate (UL94V0). Refer to the installation instructions<br>Refer to the installation instructions before powering up |
| EUI   | Extended Unique Identifier |   |  |
| IP 30   | Indice of protection       |   |  |

## 7. Installation of Wirnet™ iFemtoCell-evolution

### 7.1 Mounting of the enclosure



- The Wirnet™ iFemtoCell-evolution enclosure must be mounted on any concrete pedestal, concrete wall or any non-flammable surface (UL94-V0).
- It must not be mounted on a flammable surface.

The Wirnet™ iFemtoCell-evolution may be mounted on a wall using the two oblong holes.

Only two screws (not included) are needed, all mounting information is mentioned on the following drawing.



### 7.2 Setting connections



Before setting all connections, ensure that the power supply is not connected to the mains supply.

An external LoRa antenna is connected to SMA or RP SMA connector. A 4G/3G antenna is integrated.

Once the Wirnet™ iFemtoCell-evolution is installed, you can select up to 2 technologies to access to Internet for the data backhaul:

- Ethernet connection, requiring an Ethernet access through a dedicated RJ45 cable (not included)
- 4G/3G cellular connection, requiring an USIM (not included) and a data subscription (not included)

Note that both configurations can be used in parallel. For example, RJ45 Ethernet with a 4G/3G link as a backup.



Ethernet cable, power supply and LoRa antenna connections



USIM card inserted

Once the LoRa RF antenna, the Ethernet cable (if used) or the 4G/3G (with USIM card inserted) and the power supply jack connector are plugged, the Wirnet™ iFemtoCell-evolution can be powered ON by connecting the power supply.



The Ethernet cable is not provided and must consist of two RJ45 T 568A (or 568B) plugs on each side.

KERLINK recommends using a cable with the following characteristics:

- Category: 6A
- Shielding: STP (U/FTP) or SSTP (S/FTP)
- Section conductors: AWG26
- External jacket: LSZH or PUR
- Maximum length: 100 meters

The power supply jack connector supply is not provided.

Please check accessories preconized by Kerlink

Operating temperature range: -20°C to +55°C

Humidity: 5% to 95%

Altitude max. < 2000m

| LED                     | Specification  |                        |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|-------------------------|--|------------------------|------------------------|-------------|--------|-------------|-----------|-------------|--------------------|----------|-----|---------------------|-----------|--------|--------------------|----------------|-------------------|---------------|-------------------|
| LED 1: Power/<br>Status | A solid Green for Power LED<br>A Status Red LED  |                        |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | <table border="1"> <thead> <tr> <th>Gateway Status</th> <th>“Status LED” Behaviour</th> </tr> </thead> <tbody> <tr> <td>Boot part 1</td> <td>Fix on</td> </tr> <tr> <td>Boot part 2</td> <td>Heartbeat</td> </tr> <tr> <td>Boot part 3</td> <td>Blink every second</td> </tr> <tr> <td>Run time</td> <td>Off</td> </tr> <tr> <td>Power down sequence</td> <td>Heartbeat</td> </tr> <tr> <td>Update</td> <td>Blink / 0.4 second</td> </tr> <tr> <td>Restore backup</td> <td>Blink / 2 seconds</td> </tr> <tr> <td>Restore stock</td> <td>Blink / 4 seconds</td> </tr> </tbody> </table> | Gateway Status         | “Status LED” Behaviour | Boot part 1 | Fix on | Boot part 2 | Heartbeat | Boot part 3 | Blink every second | Run time | Off | Power down sequence | Heartbeat | Update | Blink / 0.4 second | Restore backup | Blink / 2 seconds | Restore stock | Blink / 4 seconds |
|                         | Gateway Status   | “Status LED” Behaviour |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Boot part 1  | Fix on                 |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Boot part 2  | Heartbeat              |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Boot part 3  | Blink every second     |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Run time   | Off                    |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Power down sequence  | Heartbeat              |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Update   | Blink / 0.4 second     |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
|                         | Restore backup   | Blink / 2 seconds      |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
| Restore stock           | Blink / 4 seconds  |                        |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
| LED 2: Backhaul         | RED during boot<br>If the installed « applicative software » has been provided by Kerlink : <ul style="list-style-type: none"> <li>• RED if applicative software is disconnected</li> <li>• GREEN blinking during applicative software connection</li> <li>• GREEN fix if applicative software is connected</li> </ul>   |                        |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |
| LED 3: LoRa Data        | RED during boot<br>If the installed « applicative software » has been provided by Kerlink is installed: <ul style="list-style-type: none"> <li>• Applicative software management</li> <li>• Rx: GREEN blinking</li> <li>• Tx: RED blinking</li> </ul>  |                        |                        |             |        |             |           |             |                    |          |     |                     |           |        |                    |                |                   |               |                   |



Applicative software means embedded software running on the Wirnet™ iFemtoCell-evolution like KERLINK Small Private Network (SPN) or Kerlink « common » packet forwarder or any another Packet Forwarder (software that forwards LoRa packets received to a server).

Please contact your reseller to know the LEDs behavior if the applicative software installed on the Wirnet™ iFemtoCell-evolution is not the one officially provided by KERLINK.

To generate a software reset of the product : press the reset On/Off button during 1s.

To turn off the gateway : press the reset On/Off button during 5s.

To turn on the gateway : do a short press on the reset On/Off button.

To press the buttons, a tool with a 1mm diameter must be used.

For more information on the « Quick start of Wirnet™ iFemtoCell-evolution Gateway, please consult the Kerlink Wiki:

[http://wikikerlink.fr/wirnet-productline/doku.php?id=wiki:quickstart:quickstart\\_ifevo](http://wikikerlink.fr/wirnet-productline/doku.php?id=wiki:quickstart:quickstart_ifevo)



The Wirnet productline embeds a web interface to allow to easily manage the gateways:

- Trigger software upgrade/update,
- Configure the backhaul connectivity,
- Trigger actions on the gateway: Turn-off, reboot, factory reset ...

The generic syntax to access to this web interface is: `http://klk-<type_GW>-<serial>/`

This means:

- for the Wirnet iFemtoCell: `http://klk-wifc-03002e/`
- for the Wirnet iFemtoCell-evolution: `http://klk-fevo-03002e/`
- for the Wirnet iStation: `http://klk-wiis-03002e/`
- for the Wirnet iBTS: `http://klk-lpbs-03002e/`

Note that if your computer is on the same local network, you can also use directly the IP address of your gateway in a browser to connect to the Web interface.

The default credentials are:

Login: admin

Password: pwd4admin

**For security reasons, it is strongly recommended to change the default passwords.**

## 7.5 Connection in SSH to the Gateway

If you want to connect to the gateway as “root”, please enter login/password (root / pdmk-`Serialno`) of the Gateway.

Note about “Default password”: To prevent Web robots to attack the gateway with standard login/password such as root/root, default password is built using the last 6 digits of the serial number, of CPU module ID for Wirnet iBTS and « board ID » for Wirnet iFemtoCell, iFemtoCell-evolution and Wirnet iStation: pdmk-`Serialno`.

For example, if the serial number of a CPU module is 641ATe**0507DD**, then the root password will be pdmk-**0507DD** (case sensitive).

This 6 digits number can also be retrieved in the hostname. It is displayed in the shell prompt:

```
klk-lpbs_0507DD login: root
```

```
Password: pdmk-0507DD
```

**For security reasons, it is strongly recommended to change the default passwords.**

More information on the Kerlink Wiki: [www.wikikerlink.fr](http://www.wikikerlink.fr) in the section “Connect to the gateway” and in the section “Setup”.



Radio equipment shall be put into service and used only when granted a certificate, type approval, etc. according to the national regulation. They shall be properly installed, maintained and used for its intended purpose. Economic operators shall ensure effective and efficient use of the radio spectrum, avoidance of harmful interference, electromagnetic disturbances or to public health. Penalties may laid down applicable to infringements by economic operators of the provisions of national law adopted and they shall take all measures necessary to ensure that they are enforced. Such rules may include criminal penalties for serious infringements..

## 8.1 Wirnet™ iFemtoCell-evolution 868

### Simplified EU Declaration of Conformity

Hereby, Kerlink, declares that the radio equipment type Wirnet™ iFemtoCell-evolution 868 is compliant to Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at the following internet address:

<https://www.kerlink.com/customer-support/support-wirnet-ifemtoCELL-evolution/>

In Europe, the Wirnet™ iFemtoCell-evolution 868 station must comply with the ERC 70-03 requirements regarding duty cycle and maximum EIRP. They are summarized in the following table :

| ERC 70-03 | Frequency (MHz) | Power     | Duty Cycle |
|-----------|-----------------|-----------|------------|
| h1.4      | 865-868         | 14dBm ERP | 1%         |
| h1.5      | 868-868,6       | 14dBm ERP | 1%         |
| h1.7      | 869,4-869,65    | 27dBm ERP | 10%        |



The power supply of the Wirnet™ iFemtoCell-evolution 868 must be a limited source of power. Note that: If the LoRa antenna is changed, the output power must be adjusted to take into account the gain of the antenna in order to not overrule the ERC 70-03 recommendation.

Some countries in Europe may have specific frequency ranges, EIRP and duty cycles regulations. Check the local regulations before installing and commissioning the Wirnet™ iFemtoCell-evolution 868. For other countries, outside Europe, check the frequency range, the maximum EIRP and duty cycle allowed.

### UKCA Declaration of Conformity

Hereby Kerlink declares that your radio equipment Wirnet™ iStation 868 is in conformity with the following relevant legislation of United Kingdom:

UK SI 2017/1206 - Radio Equipment Regulations 2017



UK SI 2012/3032 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS2)



The power supply of the Wirnet™ iFemtoCell-evolution 868 must be a limited source of power. Note that: If the LoRa antenna is changed, the output power must be adjusted to take into account the gain of the antenna in order to not overrule the ERC 70-03 recommendation.


Some countries in Europe may have specific frequency ranges, EIRP and duty cycles regulations. Check the local regulations before installing and commissioning the Wirnet™ iFemtoCell-evolution 868. For other countries, outside Europe, check the frequency range, the maximum EIRP and duty cycle allowed.



Wirnet™ iFemtoCell-evolution 868 is also certified for the following countries:





| Country                    | Label, identification and comments   |
|----------------------------|--|
| UAE (United Arab Emirates) |  <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>TRA – United Arab Emirates<br/>           Dealer ID: Vision Valley DMCC<br/>           TA RTTE: ER91222/E1<br/>           Model: Wirnet iFemtoCell-evolution 868<br/>           Type: Indoor LoRaWAN Gateway</p> </div>  |

## 8.2 Wirnet™ iFemtoCell-evolution 923

The Wirnet™ iFemtoCell-evolution 923 is in compliance with the directive 2014/53/EU relating to radio equipment (RED) and is certified for the following countries:

|   |   |
|---|---|
| <br>Information | <p>The power supply of the Wirnet™ iFemtoCell-evolution 923 must be a limited source of power.</p> <p>Kerlink is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment</p> |
|---|---|

| Country                  | Label, identification and comments  |
|--------------------------|---|
| Australia<br>New Zealand |    |
| Japan                    | <div style="text-align: center;">  <div style="display: inline-block; vertical-align: middle;"> <p><b>R</b> 018-200237<br/> <b>R</b> 201-190133<br/> <b>T</b> AD190040201</p> </div> </div> <p>当該機器には電波法に基づく、技術基準適合証明等を受けた特定無線設備を装着している。</p> <p>This equipment contains specified radio equipment that has been certified to the Technical Regulation Conformity Certification under the Radio Law</p> |
| Singapore                | <div style="border: 1px solid black; padding: 10px; display: inline-block;"> <p>Complies with<br/>           IMDA Standards<br/>           DB106667</p> </div>  |

|                  |  |
|------------------|--|
| <p>Indonesia</p> | <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>78782/SDPPI/2021<br/>11019</p>  <p>Dilarang melakukan perubahan spesifikasi yang dapat<br/>Menimbulkan gangguan fisik dan/atau elektromagnetik<br/>Terhadap lingkungan sekitarnya</p>  </div>  |
| <p>Malaysia</p>  |   |
| <p>Thailand</p>  | <div style="border: 1px solid black; padding: 10px; text-align: center;">  <p>CLASS B<br/>NBTC ID. B69027-21-3723</p> </div> <p>“เครื่องโทรคมนาคมและอุปกรณ์นี้<br/>มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.”<br/>(This telecommunication equipment conforms to the standard<br/>or technical requirements of NBTC)</p> <p>“เครื่องวิทยุคมนาคมมีระดับการแผ่คลื่นแม่เหล็กไฟฟ้าสอดคล้องตาม<br/>มาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคม<br/>ที่คณะกรรมการกิจการโทรคมนาคมแห่งชาติประกาศกำหนด”<br/>(This radiocommunication equipment has the electromagnetic<br/>field strength in compliance with the Safety Standard for the<br/>Use of Radiocommunication Equipment on Human Health<br/>announced by the National Telecommunications Commission.)</p> |



เครื่องวิทยุคมนาคมนี้ ได้รับยกเว้น ไม่ต้องได้รับใบอนุญาตให้มี ใช้ซึ่งเครื่องวิทยุคมนาคมหรือตั้งสถานีวิทยุคมนาคมตามประกาศ กสทช. เรื่อง เครื่องวิทยุคมนาคม และสถานีวิทยุคมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาตวิทยุคมนาคม ตามพระราชบัญญัติวิทยุคมนาคม พ.ศ. 2498





**nano.** โทรคมนาคม  
กำกับดูแลเพื่อประชาชน  
Call Center 1200 ( Inswifi )

### 8.3 Wirnet™ iFemtoCell-evolution 915

The Wirnet™ iFemtoCell-evolution 915 is in compliance with both FCC and IC regulations. The associated FCC and IC identifiers of the Wirnet™ iFemtoCell-evolution 915 are:

Model: Wirnet™ iFemtoCell-evolution 915  
FCC ID: 2AFYS-KLKFEO915  
IC: 20637-KLKFEO915

Model: EG25G  
Contains FCC ID: XMR201903EG25G  
Contient IC: 10224A-201903EG25G

|   |   |
|---|---|
| <br>Information  | <p>The power supply of the Wirnet™ iFemtoCell-evolution 915 must be a limited source of power. Note that: Any change or modification of this equipment not expressly authorized by Kerlink may cause, interference and void the FCC authorization to operate this equipment.</p> <p>This device complies with Industry Canada's license-exempt RSSs.</p> <p>Operation is subject to the following two conditions:</p> <ol style="list-style-type: none"> <li>1. This device may not cause harmful interference, and</li> <li>2. This device must accept any interference received, including interference that may cause undesired operation of the device.</li> </ol>  |
| <br>Information | <p>Some conditions have to be respected to maintain the FCC and IC compliance of the devices in the USA and Canada. Please contact your reseller to have details.</p> <p>For other countries, check the specific regulations regarding maximum EIRP and duty cycle allowed.</p>   |
|   | <p>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:</p> |

- 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 radio transmitter 20637-KLKFEVO915 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio 20637-KLKFEVO915 a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

External antenna used: gain 3dBi dipole, 50 Ω, vertical, omnidirectional (Tekfun I50-SR-W / I50-S-W)

This equipment complies with RSSI02's and FCC radiation exposure limits set forth for an uncontrolled environment under the following conditions:

1. This equipment should be installed and operated such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and user's/nearby person's body at all times.
2. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'expositions de la CNR102 applicables pour un environnement non contrôlé aux conditions suivantes :

1. Cet équipement devra être installé et fonctionner de telle manière qu'une distance minimale de séparation de 20 cm soit maintenue entre la partie rayonnante (l'antenne) et l'utilisateur / les personnes à proximité à tout moment.
- 2 Cet émetteur ne doit pas être co-localisé ou opérer en conjonction avec toute autre antenne ou émetteur.

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSSI(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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 ;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The operation of this equipment is subject to the following two conditions:

- (1) This equipment or device may not cause harmful interference, and
- (2) this equipment or device must accept any interference, including that caused by its unwanted operation.

This equipment has been designed to operate with the antennas that are immediately listed and for a gain 3 dBi maximum antenna.

The use with this equipment of antennas not included in this list or that have a gain greater than 3 dBi are prohibited. The required impedance of the antenna is 50 ohms.

Wirnet™ iFemtoCell-evolution 915 is also certified for the following countries:

| Country | Label, identification and comments                          |
|---------|---|
| Mexico  | Marca : Kerlink<br>Modelo : Wirnet iFemtoCell-evolution 915 |

**NOM**

## 9. Disposal / Recycling



Do not dispose of the product with household waste. For proper disposal, contact a waste disposal company. The product packaging (cardboard and liners) can be removed with used paper.

## 10. Warranty

Contact your reseller for warranty conditions of the Wirnet™ iFemtoCell-evolution.



The Wirnet™ iFemtoCell-evolution is not warranted by Kerlink in case the enclosure is opened, modified, painted, branded out, outlined by CUSTOMER for any reason. Feel free to contact us for a guideline for the branding.

## 11. Accessories and Professional Services

For additional information, on available accessories and Professional Services please contact your reseller.

## 12. Give us your feedback

Your shopping and operational experiences are very important to us. We would like to invite you to leave review on our products and services. We will appreciate your time and efforts. We would be very proud to get any photo of your gateway installation. Can you share them to [dmk@kerlink.com](mailto:dmk@kerlink.com)



## 13. Find us in Social Media

We would like to hear from you: any tips, any news to share?

 [@kerlink\\_news](https://twitter.com/kerlink_news)

 [Kerlink](https://www.linkedin.com/company/kerlink)

 [Kerlink channel](https://www.youtube.com/channel/kerlink)

We stay at your disposal for any help on your project.  
Yours sincerely.

**Kerlink Team**



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