Wirnet™ iZeptoCell Ethernet

LoRaWAN® Indoor Gateway for the Internet of Things

The "Wirnet™ iZeptoCell Ethernet" is the ideal gateway to support you in your smart city, smart building or every smart project that requests dedicated indoor coverage and/or network densification, providing both a unique superior LoRa® coverage and operational excellence with Ethernet backhaul.

Smart Cities   Smart Building   Smart Metering   Smart Retail

Key Features

- **Indoor LoRa® Gateway,**

- **Supported unlicensed bands:** 863-870MHz (EMEA, India), 902-928MHz (North America),

- **Supported LoRaWAN® regional parameters:** EU863-870, IN865-867, RU864-870, US902-928,

- **8 x 8 packets detectors, 8ch RX (125 kHz, multi Spreading Factor) + 1ch RX (250KHz or 500kHz, mono Spreading Factor) + 1ch RX (FSK) + 1ch TX,**

- **Backhaul : Ethernet 10BASE-T, 100BASE-TX,**

- **Powered trough USB-A connector using:**

    - AC/DC power supply (90-264VAC/5VDC), direct mounting (included accessory),

    - USB-A extension cable (included accessory),

    - USB-A to USB-C cable (included accessory),

    - PoE/USB power splitter (optional accessory, not included),

- **Highly secured device relying on a hardware secure core.**

Key Differentiators

High performance, reliability & robustness
- Semtech CoreCell Reference Design,
- Integrated LoRa antenna,
- Built-in high rejection filters,
- Low power consumption

Secure hardware and software architectures
- SecureBoot (Signed firmware),
- SecureStorage (keys and certificates in secured area) using ProvenCore™ solution,
- Secured links and backhaul protection (OpenVPN/IPsec),
- Reboot (watchdog) and recovery on previous Management config (or factory config if the boot issue is not fixed).

Kerlink is certified ISO9001: 2015 by AFNOR certification. The Quality Management System gives high priority to Customer satisfaction and progress implementation.

afaq
ISO 9001
Qualité
AFNOR CERTIFICATION

- Easy installation: wall mounting by 1 oblong holes or by VELCRO strips or by double sided adhesive tape, or direct mounting on AC/DC supply or lay on a table,
- Easy access to connectivity:
  - o Ethernet 10BASE-T, 100BASE-TX (RJ45 connector), allowing 150m reach with Cat5e cable
  - o 3 programmable LEDs:
    - 1 LED (green/red) for Power status,
    - 1 LED (green/red) for Backhaul status,
    - 1 LED (green/red) for LoRa® RF activity Rx/Tx,
- USB Type A connector for power supply,
- Integrated LoRa® antenna
- On/Off/Reset button
- Simple and convenient configuration, management, control and update via the Kerlink Wanesy™ Management Center (Alarm notifications, Firmware upgrade, platform statistics, RF statistics, ...)
- Remotely configurable, manageable, via intuitive Web GUI
- Remote access via SSH

Software Features

- **Same Software than Wirnet™ iBTS, Wirnet™ iStation, Wirnet™ iFemtoCell and Wirnet™ iFemtoCell-evolution:** same User experience, quicker integration,
- **Dynamic web interface (On-the fly modifications),**
- **Programmable Gateway :** Toolchain, libraries and header files for compilation of homemade applications, or extra packages additions,
- **Including:**
- Operating System: KerOS with embedded GNU/Linux based on Yocto 2.4 and LTS kernel 4.14,
- Native Language Support: Python2, C/C++ and Shell,
- Included packages: SQlite (Database), Connman/Ofono, NTPd, lighttpd.

Technical Features

- LoRa® performance:
- Rx Sensitivity: -140 dBm (SF12BW125),
- Tx conducted power: configurable from 5dBm to 27dBm
- Maximum EIRP: 28dBm
- Ethernet: IEEE 802.3 10BASE-T, 100BASE-TX,
- CPU: ARM Cortex A7 792MHz,
- DDRAM 2Gbits,
- 4GB eMMC (2GB available for user)
- Power consumption: 1W nominal, 3.5W max
- Operating Temperature Range: 0°C +55°C (for gateway only, without power supply),
- Humidity: 5% to 95%,
- Size: 76 x 68.5 x 32 mm,
- Weight: 65g (gateway only); 250g (with packaging),
- Casing: IP30

Value-added Services

- **Free access to Kerlink Wiki for customers**
- Plug & Play installation,
- Wirnet™ iZeptoCell Ethernet is part of the end-to-end LoRa® connectivity solution with Kerlink Wanesy™ Management Center, remote monitoring and Operations Management suite (option),
- Maintenance Services (option),
- Kerlink Project Management: Kerlink supports you throughout your project by responding to your specific needs through its service offering and network of specialist integrators available worldwide (option).

Thanks to their expertise and experience, Kerlink teams are fully mobilized to help you develop your business and reduce your operational and commercial risks.
Don't hesitate to contact us:
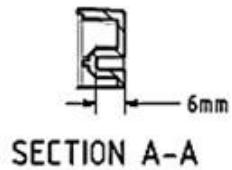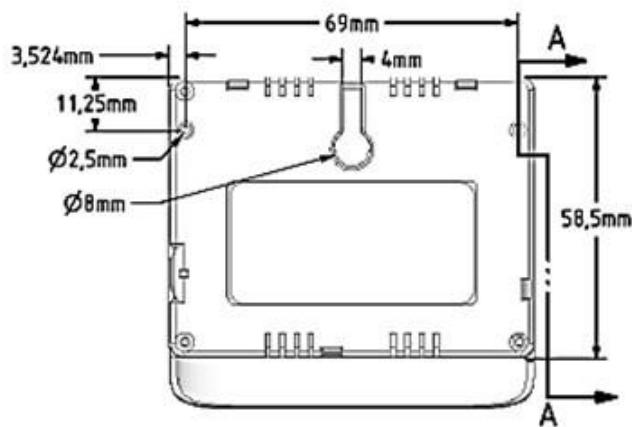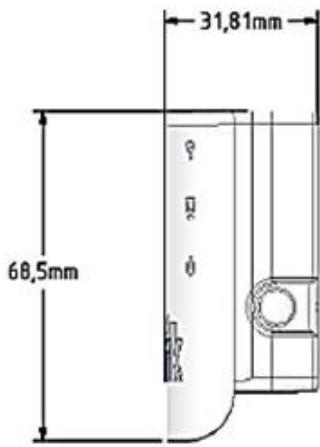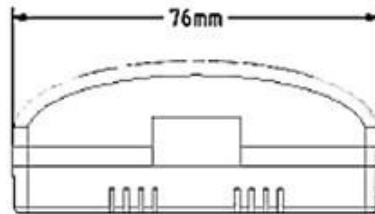
Certifications

868	915
• Europe (CE)	• USA (FCC) • Canada (ISED)

(For any specific need, please contact us)

Product Ordering references

Reference	Description	Frequency range
• PDTIOT-IZEE800	Wirnet™ iZeptoCell Ethernet	863-870MHz
• PDTIOT-IZEE900	Wirnet™ iZeptoCell Ethernet	902-928MHz

Wirnet™ iZeptoCell Cellular

LoRaWAN® Indoor Gateway for the Internet of Things

The "Wirnet™ iZeptoCell Cellular" is the ideal gateway to support you in your smart city, smart building or every smart project that requests dedicated indoor coverage and/or network densification, providing both a unique superior LoRa® coverage and operational excellence with embedded LTE-M backhaul.

Smart Cities   Smart Building   Smart Metering   Smart Retail

Key Features

- **Indoor LoRa® Gateway,**

- **Supported unlicensed bands**: 863-870MHz (EMEA, India), 902-928MHz (North America),

- **Supported LoRaWAN® regional parameters:** EU863-870, IN865-867, RU864-870, US902-928,

- **8 x 8 packets detectors, 8ch RX (125 kHz, multi Spreading Factor) + 1ch RX (250KHz or 500kHz, mono Spreading Factor) + 1ch RX (FSK) + 1ch TX,**

- **Backhaul : LTE CatM1 / LTE CatNB2 (NB-IoT) / EGPRS / GPRS worldwide connectivity with remotely configurable eUICC,**

- **Powered through USB-A connector using:**

    - AC/DC power supply (90-264VAC/5VDC), direct mounting (included accessory),

    - USB-A extension cable (included accessory),

    - USB-A to USB-C cable (optional accessory, not included),

    - PoE/USB power splitter (optional accessory, not included),

- **Highly secured device relying on a hardware secure core.**

Key Differentiators

High performance and reliability
- Semtech CoreCell Reference Design,
- Integrated LoRa and LTE antennas,
- Built-in high rejection filters,

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Secure hardware and software architectures
- SecureBoot (Signed firmware),
- SecureStorage (keys and certificates in secured area) using ProvenCore™ solution,
- Secured links and backhaul protection (OpenVPN/IPsec),
- Reboot (watchdog) and recovery on previous Management config (or factory config if the boot issue is not fixed).

Easy deployment

- Easy installation: wall mounting by 1 oblong holes or by VELCRO® strips or by double sided adhesive tape, or direct mounting on AC/DC supply or lay on a table,
- Easy access to connectivity:
  - o   eSIM with LTE-M/NB-IoT/GPRS worldwide connectivity,
  - o   3 programmable LEDs:
    - -   1 LED (green/red) for Power status,
    - -   1 LED (green/red) for Backhaul status,
    - -   1 LED (green/red) for LoRa® RF activity Rx/Tx,
- USB Type A connector for power supply,
- Integrated LoRa® and LTE antennas,
- On/Off/Reset button,
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Technical Features

- LoRa® performance:
- -   Rx Sensitivity: -140 dBm (SF12BW125),
- -   Tx conducted power: configurable from 5dBm to 25dBm
- -   Maximum EIRP: 27dBm
- LTE CatM, Cat NB, GPRS, EGPRS module supporting:
- -   +23dBm output power (class 3),
- -   Bands 1, 2, 3, 5, 8, 12, 13, 18, 19 20, 25, 26, 27, 28, 66, 71, 85,
- -   EU RED, US FCC, CA ISED, BRAZIL ANATEL, JAPAN JRF & JTBL, CHINA CCC, Singapore INDA, Australia RCM, Taiwan NCC, Korea approvals,
- MFF2 eUICC remotely configurable,
- CPU: ARM Cortex A7 792MHz,
- DDRAM 2Gbits,
- 4GB eMMC (2GB available for user)
- Power consumption: 1W nominal, 5.5W max
- Operating Temperature Range: 0°C +55°C (for gateway only, without power supply),
- Humidity: 5% to 95%,
- Size: 76 x 68.5 x 32 mm,
- Weight: 65g (gateway only); 250g (with packaging),
- Casing: IP30

sales@kerlink.fr
+ 33 2 99 12 29 00
1 rue Jacqueline Auriol
35235 Thorigné-Fouillard
France

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