Wirnet™ iZeptoCell Ethernet
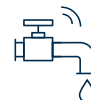## LoRaWAN® Indoor Gateway for the Internet of Things

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**

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

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 (optional accessory, not included),

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

• **Highly secured device relying on a Trustzone firmware**

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 Trusted Execution Environment 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).
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:

- Ethernet 10BASE-T, 100BASE-TX (RJ45 connector), allowing 150m reach with Cat5e cable

- 3 LEDs:

   - 1 LED (green/red) for Gateway status,

   - 1 LED (green/red) for Backhaul status,

   - 1 LED (green/red) for LoRa® RF activity (Uplink, Downlink),

• USB Type A connector for power supply,

• Integrated LoRa® antenna

• Reset button

• Remotely configurable, manageable, via intuitive Web GUI

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 256 MB,

• 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

Software Features

• Same Kerlink software on all i-Series (for infrastructure homogeneity and easy maintenance

• **Dynamic web interface (On-the fly modifications),**

• **Programmable Gateway:** Toolchain, libraries and header files for compilation of in-house SW, or extra packages additions,

• **Including:**

- Operating System: KerOS with embedded GNU/Linux based on Yocto LTS and Kernel LTS,

- Native Language Support: Python3, C/C++ and Shell,

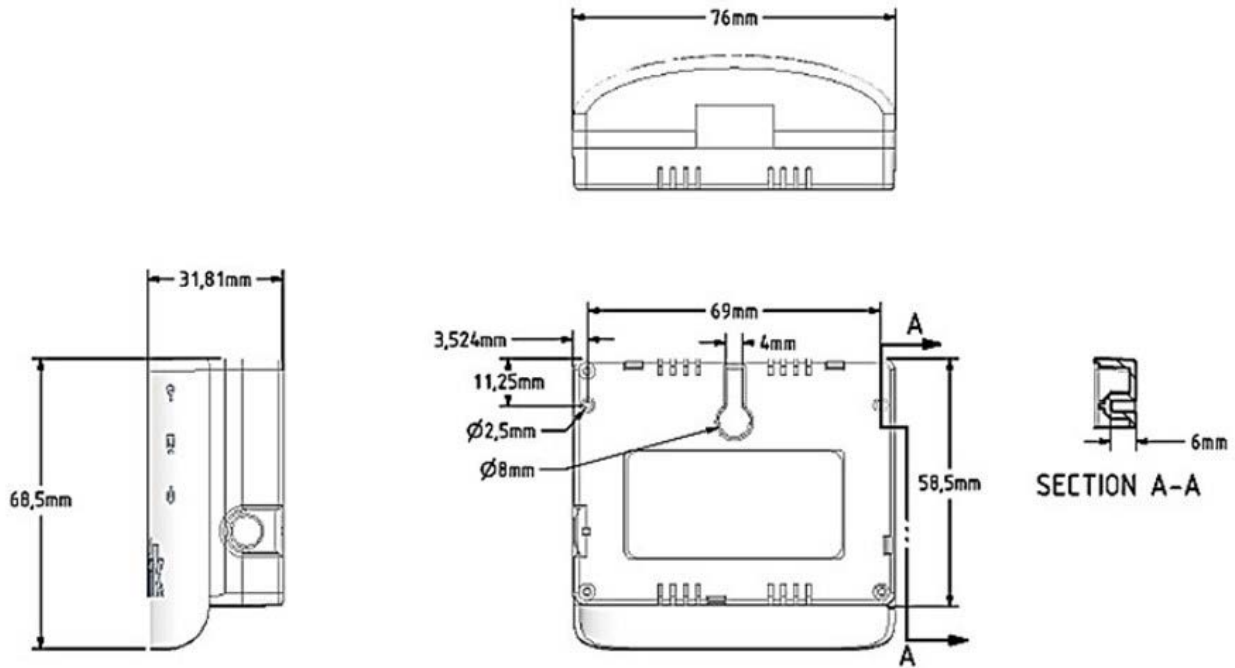- Kerlink Common Packet Forwarder (Semtech Packet Forwarder, GWMP), Basic Station

Added-Value Services for all gateways

• Lifetime Guarantee

• Access to Kerlink Wiki

• Zero Touch Provisioning (ZTP) and Zero Touch Maintenance (ZTM)

More options :

• Maintain offer: Priority support, Access to Wanesy Maganement Cockpit including inventory, Software packages management, remote reboot, alerting features

• Operate offer: SLAs, Network Operating Center, Pro-Active and preventive maintenance, Reports and recommendations for network optimization

Thanks to their expertise and experience, Kerlink teams are fully mobilized to help you develop your business and reduce your operational and commercial risks.

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Certifications

868	915	(For any specific need, please contact us)
• **Europe (CE)**	• **USA (FCC)** • **Canada (ISED)**	

Wirnet™ iZeptoCell Ethernet - Ordering references

Product Ordering References

Reference	Designation	Description	ISM Frequencies
PDTIOT-IZEE800	Wirnet iZeptoCell Ethernet	8CH LoRa, Indoor, ETH backhaul	863-870 MHz
PDTIOT-IZEE900	Wirnet iZeptoCell Ethernet	8CH LoRa, Indoor, ETH backhaul	902-928 MHz

868 and 915 Accessory Ordering References (Wirnet™ iZeptoCell)

Power connectivity	Designation	Description	Recommendation
KLK03566	PoE Splitter with USB A output		
KLK03537	2,8m USB C to USB A extension cable		

All product specifications are subject to change without notice (V2.0)