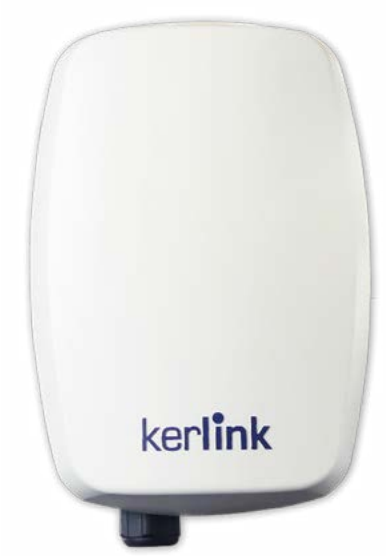
kerlink
communication is everything

Wirnet™ iStation

LoRaWAN® Outdoor Gateway for the Internet of Things



The "Wirnet™ iStation" is the ideal gateway to support you in your smart city, smart industry or every smart project, because it combines both the simplicity of installation, a unique superior coverage and operational excellence.

Smart Cities

Smart Industry

Smart Metering

Smart Agriculture & Environment

Key Features

- **Outdoor LoRa® Gateway,**
- Carrier grade casing (**IP67**) for industrial use,
- Supported unlicensed bands : 863-874.4MHz (EMEA, India), 902-928MHz (North America), 915-928MHz (APAC, Latin America),
- Supported LoRaWAN® regional parameters: EU863-870, IN865-867, RU864-870, US902-928, AU915-928, AS923, KR920-923,
- **8ch RX (125 kHz, multi Spreading Factor) + 1ch RX (250KHz or 500kHz, mono Spreading Factor) + 1ch RX (FSK) to get 10ch RX + 1ch TX,**
- Backhaul connectivity: 4G Worldwide module with 3G/2G fallback and Ethernet (RJ45),
- Powered by:
  - — PoE (Injector, switch, …), both Mode A and Mode B (802.3af specifications),
  - — +/- 48VDC through RJ45 (UPS, solar panels, …),
- **Highly secured device relying on a hardware secure core.**

Key Differentiators

High performance, reliability & robustness

- **Carrier grade design** with excellent heat dissipation
- Semtech Reference Design v1.5 components.

Security HM and SW 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
communication is everything

Wirnet™ iStation

LoRaWAN® Outdoor Gateway for the Internet of Things

Easy deployment

- No need to open the casing during the installation phase (waterproof connectors for RJ45, SIM card…),
- Easy installation mounting kit,
- **Fully integrated and internal antennas** (GPS, 4G, LoRa), no external antenna installation required (external LoRa antenna as an option),
- Easy access to connectivity:
  - — Ethernet 10/100 Mbps (RJ45),
  - — SIM card (mini-SIM format),
  - — Two LEDs controlled by SW (programmable):
    - 1 x green LED for power,
    - 1 x red LED for system status (update, boot behavior, LoRa status, backhaul…),
- USB (Type C) connector for debug probe,
- Multifunction button for On/Off/Reset/Factory reset,
- Simple and convenient configuration, management, control and update using the Kerlink Wanesy™ Management Center (Alarm notifications, firmware upgrade, platform statistics, RF statistics, RF spectrum analyzer…),
- Remotely configurable, manageable, via intuitive Web GUI,
- Remote access via SSH.

Technical Features

- Sniffer for LBT (Listen Before Talk),
- Built-in with high rejection SAW filters,
- Rx Sensitivity: -141 dBm (SF12),
- TX Power: configurable from 5dBm to 27dBm,
- Range -40°C +60°C,
- Humidity: 95%,
- Size : 265 x 165 x 100 mm,
- Weight : 1,4kg (mounting kit included),
- Spectrum analysis compliant,
- Backup batteries to allow the clean shut down of applications in case of power cut,
- Casing: IP67 Alu (Back), Polycarbonate (Front), Inox (mounting kit),
- Surge protection of the RF LoRa link (option),
- CPU: ARM Cortex A9,
- DDRAM 256MB,
- 8GB eMMC (6GB available for user),

Software Features

- **Same Software than Wirnet™ iBTS and iFemtoCell:** 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.

Value-added Services

- **Free access to Kerlink Wiki for customers**
- Plug & Play installation (option),
- Wirnet™ iStation is part of the end-to-end LoRa® connectivity solution with Kerlink Wanesy™ Management Center, remote monitoring and Operations Management suite (option),
- Wanesy™ SPN2 for Small Private Network, embedding a LoRa Network Server on the Gateway (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).

kerlink
communication is everything

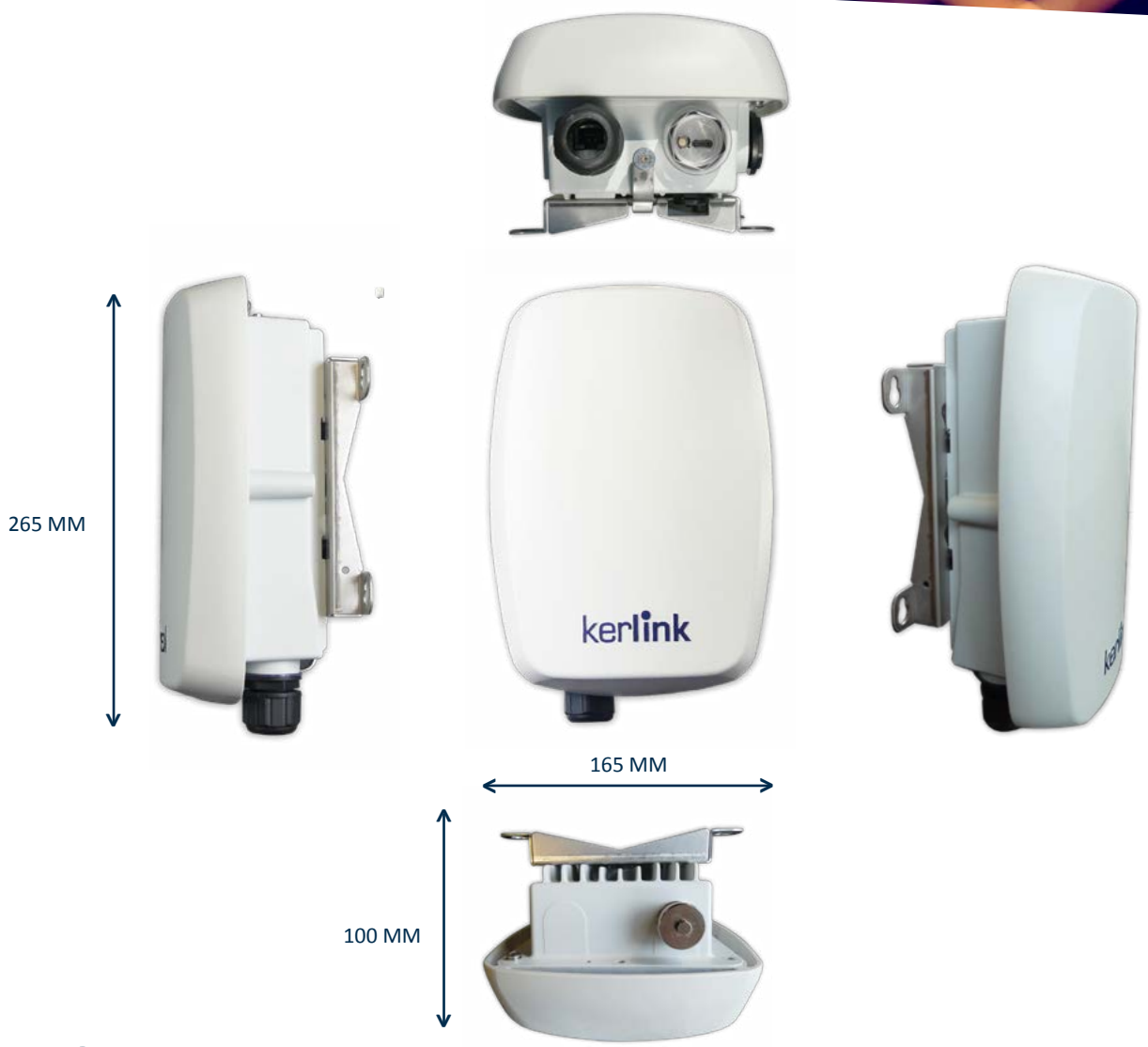
sales@kerlink.fr
+ 33 2 99 12 29 00
1 rue Jacqueline Auriol
35235 Thorigné-Fouillard
France

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:

kerlink
communication is everything

Wirnet™ iStation

LoRaWAN® Outdoor Gateway for the Internet of Things



Certifications

868	915	923
• Europe	• USA • Canada	• Australia • New-Zealand • Japan • Singapore

Many other countries already planned,
(additional information on demand)

Ordering References

Product Ordering References

Reference	Description	ISM Frequences
• PDTIOT-ISS04	Wirnet iStation 868 MHz	863-874.4MHz
• PDTIOT-ISS05	Wirnet iStation 915 MHz	902-928MHz
• PDTIOT-ISS06	Wirnet iStation 923 MHz	915-928MHz

kerlink
communication is everything

Wirnet™ iStation

LoRaWAN® Outdoor Gateway for the Internet of Things

868 Accessory Ordering References

POE INJECTOR	Reference	Description
• POE Injector	ACCIOT-INJ00	PoE Injector 30 W outdoor - AC Input
• POE Injector	ACCIOT-INJ02	PoE Injector 30 W indoor - 48VDC Input
• POE Injector	ACCIOT-INJ04	PoE Injector 30 W indoor - AC Input - EU
• POE Injector	ACCKLK-ELC00	PoE Injector 15 W indoor - AC Input - EU
EXTERNAL ANTENNA (optional)		
• Antenna	KLK03198	Antenna Omnidir 868Mhz 3 dBi - N male
• Antenna	ACCIOT-KAN01	Antenna kit Omni 868 MHz 6 dBi
(Outdoor) CAVITY FILTER		
• Cavity filter 865-867MHz	ACCIOT-CAV02	India
• Cavity filter 867.5MHz	KLK02915	865-870MHz - EU coexistence LTE800, RGSM
• Cavity filter 868MHz	KLK02916	863-873MHz - EU coexistence high power emitters
SURGE PROTECTION		
• Surge Protection for RF	ACCIOT-RSP01	RF Surge protection - LoRa
• Surge Protection for POE	ACCIOT-RSP02	PoE Surge protection - indoor
• Surge Protection for POE	ACCIOT-RSP03	PoE Surge protection - outdoor
DEBUG		
• Debug Probe	ACCIOT-SDE01	Universal Debug Probe

915 Accessory Ordering References

POE INJECTOR	Reference	Description
• POE Injector	ACCIOT-INJ00	PoE Injector 30 W outdoor - AC Input
• POE Injector	ACCIOT-INJ02	PoE Injector 30 W indoor - 48VDC Input
• POE Injector	ACCIOT-INJ06	PoE Injector 30 W indoor - AC Input - US
• POE Injector	ACCKLK-ELC00	PoE Injector 15 W indoor - AC Input - EU
EXTERNAL ANTENNA (optional)		
• Antenna	ACCIOT-KAN02	Antenna kit Omni 915/923 MHz 6 dBi
• Antenna	KLK03199	Antenna Omnidir 915Mhz 3 dBi - N male
SURGE PROTECTION		
• Surge Protection for RF	ACCIOT-RSP01	RF Surge protection - LoRa
• Surge Protection for POE	ACCIOT-RSP02	PoE Surge protection - indoor
• Surge Protection for POE	ACCIOT-RSP03	PoE Surge protection - outdoor
(Outdoor) CAVITY FILTER		
• Cavity filter 902-928MHz	KLK02973	USA, Canada, Mexico
DEBUG		
• Debug Probe	ACCIOT-SDE01	Universal Debug Probe

923 Accessory Ordering References

POE INJECTOR	Reference	Description
• POE Injector	ACCIOT-INJ00	PoE Injector 30 W outdoor - AC Input
• POE Injector	ACCIOT-INJ02	PoE Injector 30 W indoor - 48VDC Input
• POE Injector	ACCIOT-INJ04	PoE Injector 30 W indoor - AC Input - EU
• POE Injector	ACCIOT-INJ06	PoE Injector 30 W indoor - AC Input - US
• POE Injector	ACCKLK-ELC00	PoE Injector 15 W indoor - AC Input - EU
EXTERNAL ANTENNA (optional)		
• Antenna	ACCIOT-KAN01	Antenna kit Omni 868 MHz 6 dBi
• Antenna	ACCIOT-KAN02	Antenna kit Omni 915/923 MHz 6 dBi
• Antenna	KLK03198	Antenna Omnidir 868Mhz 3 dBi - N male
• Antenna	KLK03199	Antenna Omnidir 915Mhz 3 dBi - N male
SURGE PROTECTION		
• Surge Protection for RF	ACCIOT-RSP01	RF Surge protection - LoRa
• Surge Protection for POE	ACCIOT-RSP02	PoE Surge protection - indoor
• Surge Protection for POE	ACCIOT-RSP03	PoE Surge protection - outdoor
(Outdoor) CAVITY FILTER		
• Cavity filter 920-925MHz	ACCIOT-CAV01	South Korea, Singapore, HK, Taiwan, Thailand, Cambodia
• Cavity filter 920-928 MHz	ACCIOT-CAV03	New-Zealand, Japan, Costa Rica, Venezuela
• Cavity filter 918-923MHz	KLK02905	Indonesia Malaysia, Vietnam, Mynanmar
• Cavity filter 915-920MHz	KLK02906	Philippines, Israel, Cuba
DEBUG		
• Debug Probe	ACCIOT-SDE01	Universal Debug Probe