

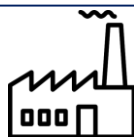
Wirnet™ iStation

LoRaWAN™ Gateway for the Internet of Things

The iStation is the ideal gateway to support your smart city, smart industry or any other smart project combining simplicity of installation and superior technical characteristics.



Smart Cities



Smart Industry



Smart Metering



Smart Agriculture
& Environment

Key Features

- **Outdoor LoRa® Gateway**
- Carrier grade casing (**IP67**) for industrial use
- LoRaWAN® 1.0.3 revision A (evolutive)
- Supported unlicensed bands : 863-874.4MHz (EMEA), 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, ...)
- **Fully integrated and internal antennas** (GPS, 4G, LoRa), no external antenna installation required (external LoRa antenna as an option). Internal LoRa Antenna peak gain : +2.6dBi.

Differentiators

High performance, reliability & robustness

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

Security

Secure HW and SW architectures:

- Authentication of the software by SecureBoot (Signed firmware)
- Securing the critical softwares by SecureStorage (keys and certificates in secured area) using ProvenCore™ solution
- Secured links management and secured backhaul (OpenVPN/IPsec)
- Secure reboot (watchdog) and recovery on previous config (or factory config if the boot issue is not fixed)

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Easy deployment

- No need to open the casing during the installation (waterproof RJ45 connector for Ethernet, SIM card...)
- Easy installation mounting kit
- 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 via the Kerlink Wanesy™ Management Center
- Remotely configurable, manageable, via intuitive Web GUI
- Remote access via SSH

Technical Features

- Sniffer for LBT (Listen Before Talk)
- Built-in high rejection filters
- Rx Sensitivity: -141 dBm (SF12)
- TX Power: configurable from 5dBm to 27dBm
- Temperature 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 for clean shut down of applications in case of power failure
- Casing: IP67 Alu (Back), Polycarbonate (Front), Stainless steel (mounting kit)
- CPU: ARM Cortex A9
- DDRAM 256MB
- 8GB eMMC (6GB available for user applications)

Software Features

- **Same FW 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
- **Including:**
 - Operating System: KerOS with embedded LTS (Linux Long Term Support) 4.14 Distribution, Yocto 2.4
 - Language Support: Python2, C/C++ and Shell
 - Packages: SQLite (Database), Connman/Ofono, NTPd, lighttpd
- **Access to Kerlink Wiki**

Value-added Services

- Pre-staging for Plug& Play installation
- Wirnet™ iStation is part of the end-to-end LoRa® connectivity solution with Kerlink Wanesy™ Management Center
- Wanesy™ SPN2 for Small Private Network, embedding a LoRa Network Server on the Gateway.
- Maintenance Services
- Kerlink Project Management: a comprehensive service offering and a global network of specialist integrators to support your entire project.

Thanks to its expertise and experience, Kerlink teams are fully mobilized to reduce your operational and commercial risks.

Don't hesitate to contact us:

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communication is everything

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Certifications

- Europe
- USA/Canada
- New Zealand, Australia, Japan
- Singapore
- Many other countries already planned, (additional information on demand)

Ordering references

Reference

- PDTIOT-ISS04
- PDTIOT-ISS05
- PDTIOT-ISS06

Description

Wirnet iStation 868 MHz
Wirnet iStation 915 MHz
Wirnet iStation 923 MHz

ISM Frequencies

863-874.4MHz
902-928MHz
915-928MHz

Wirnet™ iStation

LoRaWAN™ Gateway for the Internet of Things

868 accessories

Family	Reference	Description
•POE Injector	ACCIOT-INJ00	PoE INJECTOR 30W 55V OUTDOOR
•POE Injector	ACCIOT-INJ02	PoE Injector 30W Indoor (48VDC Input Voltage)
•POE Injector	ACCIOT-INJ04	PoE Injector 30W Indoor EU (AC Input Voltage)
•POE Injector	ACCKLK-ELC00	PoE INJECTOR PD-3501G/AC (15W)
•Surge Protection for POE	ACCIOT-RSP02	SURGE PROTECTION FOR INDOOR POE LINK
•Surge Protection for POE	ACCIOT-RSP03	SURGE PROTECTION FOR OUTDOOR POE LINK

External antenna (Optional)

•Antenna	KLK03198 / ACC0071	Antenna Omnidir 868Mhz 3 dBi - N male
•Antenna	ACCIOT-KAN01	Wirnet iBTS - Kit Antenne 868Mhz 6 dBi

(Highly recommended if external antenna)

•Surge Protection for RF	ACCIOT-RSP01	RF SURGE PROTECTION FOR LORA LINK
•Debug Probe	To create	Universal Debug Probe

915 accessories

Family	Reference	Description
•POE Injector	ACCIOT-INJ00	PoE INJECTOR 30W 55V OUTDOOR
•POE Injector	ACCIOT-INJ02	PoE Injector 30W Indoor (48VDC Input Voltage)
•POE Injector	ACCIOT-INJ06	PoE Injector 30W Indoor EU (AC Input Voltage)
•POE Injector	ACCKLK-ELC00	PoE INJECTOR PD-3501G/AC (15W)
•Surge Protection for POE	ACCIOT-RSP02	SURGE PROTECTION FOR INDOOR POE LINK
•Surge Protection for POE	ACCIOT-RSP03	SURGE PROTECTION FOR OUTDOOR POE LINK

External antenna (Optional)

•Antenna	ACCIOT-KAN02	Wirnet iBTS - Kit Antenne 915Mhz 6 dBi
•Antenna	KLK03199 / ACC0072	Antenna Omnidir 915Mhz 3 dBi - N male
•Antenna	ACC0074	Kit Antenna 915Mhz 6 dBi

(Highly recommended if external antenna)

•Surge Protection for RF	ACCIOT-RSP01	RF SURGE PROTECTION FOR LORA LINK
•Debug Probe	To create	Universal Debug Probe

923 accessories

Family	Reference	Description
•POE Injector	ACCIOT-INJ00	PoE INJECTOR 30W 55V OUTDOOR
•POE Injector	ACCIOT-INJ02	PoE Injector 30W Indoor (48VDC Input Voltage)
•POE Injector	ACCIOT-INJ04	PoE Injector 30W Indoor EU plug (AC Input Voltage)
•POE Injector	ACCIOT-INJ06	PoE Injector 30W Indoor US plug (AC Input Voltage)
•POE Injector	ACCKLK-ELC00	PoE INJECTOR PD-3501G/AC (15W)

External antenna (Optional)

•Antenna	ACCIOT-KAN01	Wirnet iBTS - Kit Antenne 868Mhz 6 dBi
•Antenna	ACCIOT-KAN02	Wirnet iBTS - Kit Antenne 915Mhz 6 dBi
•Antenna	KLK03198 /ACC0071	Antenna Omnidir 868Mhz 3 dBi - N male
•Antenna	KLK03199 / ACC0072	Antenna Omnidir 915Mhz 3 dBi - N male
•Antenna	ACC0074	Kit Antenna 915Mhz 6 dBi

(Highly recommended if external antenna)

•Surge Protection for RF	ACCIOT-RSP01	RF SURGE PROTECTION FOR LORA LINK
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