

Wirnet™ iFemtoCell- evolution LoRaWAN® Indoor Gateway for the Internet of Things



The Wirnet™ iFemtoCell-evolution is the ideal gateway to support your smart city, smart building or every smart project that requests dedicated indoor coverage and/or network densification, providing both a unique superior coverage and operational excellence with an internal 3G/4G backhaul.



Smart Energy



Smart Cities



Smart Agriculture
& Environmen



Smart Building
& Facilities

KERLINK IS CERTIFIED ISO9001:

2015 by AFNOR certification. The Quality Management System gives high priority to Customer satisfaction and progress implementation.



All product specifications are subject to change without notice (V2.9)

KEY FEATURES

- Indoor LoRa® Gateway,
- Ingress protection (IP30),
- 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:
 - AC/DC power supply (90-264VAC/12VDC) with 5.5x2.5mm plug
 - 5V DC supply via USB-C
 - Uninterrupted power supply with 5h or 24h autonomy (accessories)
- Highly secured device relying on a Trustzone firmware

KEY DIFFERENTIATORS

High performance, reliability & robustness

- Semtech Reference Design v1.5 components,
- Integrated LTE antenna,
- Built-in high rejection filters,

Secure HW and SW architecture

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

EASY DEPLOYMENT

- Easy installation: Wall mounting by 2 oblong holes or lay on a table (4 domes),
- Easy access to connectivity:
 - Ethernet 10/100 Mbps (RJ45),
 - USIM card (mini-SIM format)
 - 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 configuration,
- USB (Type C) connector for debug probe, for configuration and Power (5V DC)
- SMA or RP-SMA for LoRa® antenna,
- On/Off button,
- Simple and convenient configuration, management, control and update via 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),
- Rx Sensitivity: -140 dBm (SF12),
- TX conducted Power: configurable from 5dBm to 24dBm,
- Maximum TX EIRP: 27 dBm, LoRa® swivel antenna, 3 dBi peak gain
- Range -20°C +55°C, (for gateway only, without power supply),
- Humidity: 5% to 95%,
- Size: 160 x 90 x 35 mm,
- Weight: 163g (Gateway only); 372g (with packing),
- Spectrum analysis,
- Casing: IP30,
- CPU: ARM Cortex A9,
- DDRAM 256MB,
- 8GB eMMC (6GB available for user).

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 homemade applications, or extra packages additions,
- Including:
 - Operating System: KerOS with embedded GNU/Linux based on Yocto 3.1 (dunfell) LTS and Kernel 5.4 LTS
 - Native Language Support: Python 3.8, C/C++ and Shell,
 - Included packages: SQLite (Database), Connman/Ofono, NTPd, lighttpd.

ADDED-VALUE SERVICES FOR ALL GATEWAYS

- Lifetime Guarantee
- Access to Kerlink Wiki
- Zero Touch Provisioning (ZTP) and Zero Touch Maintenance (ZTM)
- Access to embedded Chirpstack LNS

More options :

- Maintain offer : Priority support, Access to Wanesy Magement 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



CERTIFICATIONS

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

(For any specific need, please contact us)

Wirnet™ iFemtoCell - Ordering references

Product Ordering References

REFERENCE	DESIGNATION	DESCRIPTION	ISM FREQUENCIES
PDTIOT-IFE03	Wirnet iFemtocell-evolution 868 MHz	2G/3G/4G backhaul + ETH backhaul	863-874.4MHz
PDTIOT-IFE04	Wirnet iFemtocell-evolution 915 MHz	2G/3G/4G backhaul + ETH backhaul	902-928MHz
PDTIOT-IFE05	Wirnet iFemtocell-evolution 923 MHz	2G/3G/4G backhaul + ETH backhaul	915-928MHz

868 Accessory Ordering References (Wirnet™ iFemtoCell-evolution)

DEBUG		
ACCIOT-SDE01	Debug Probe	Universal Debug Probe

SPARES		
KLK02843	Indoor 868 antenna – 2dBi – SMA	Spare
KLK03503	Interchangeable blades AC-DC power supply	12V / 6W interchangeable input blades, wall plug adapter

915 Accessory Ordering References (Wirnet™ iFemtoCell-evolution)

DEBUG		
ACCIOT-SDE01	Debug Probe	Universal Debug Probe

SPARES		
KLK02887	Indoor 915-923 antenna – 2dBi – SMA	Spare
KLK03503	Interchangeable blades AC-DC power supply	12V / 6W interchangeable input blades, wall plug adapter

923 Accessory Ordering References (Wirnet™ iFemtoCell-evolution)

DEBUG		
ACCIOT-SDE01	Debug Probe	Universal Debug Probe

SPARES		
KLK02887	Indoor 915-923 antenna – 2dBi – SMA	Spare
KLK03503	Interchangeable blades AC-DC power supply	12V / 6W interchangeable input blades, wall plug adapter