

INS-Gate

Open Clover-Net capabilities to the cloud

Expand your Clover-Net wireless network operation thanks to one or several INS-Gate devices. Real added value access point towards end-nodes deployed on the field, the INS-Gate provides all keys to bring about efficiently your devices remotely.

As the hyphen of your remote Clover-Net wireless sensor network, INS-Gate manages information efficiently between cloud and Clover-Net-enabled devices on the field.

Based on Clover-Sense®, it focuses on private network with real-time two-way communications, low power, ultra-long range, robustness, coexistence, security, cost optimization, and is world-wide scalable thanks to its 3 main RF bands (433, 868 and 915MHz compliant design).



Plug & Play

Ineo-Sense provides to the industrial market a scalable wireless module embedding network management services for plug-and-play deployments. DHCP capable, the Clover-Gate also includes a user friendly Web server to ease configuration in few seconds. It can connect to any MQTT and is ready-to-use.

MQTT protocol

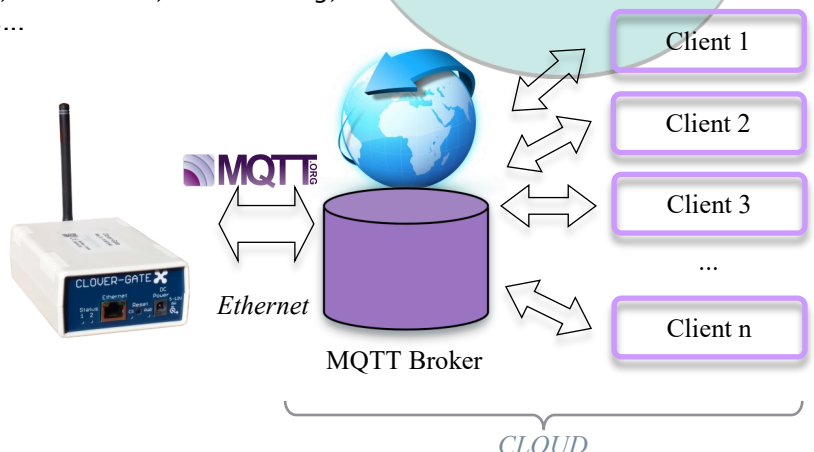
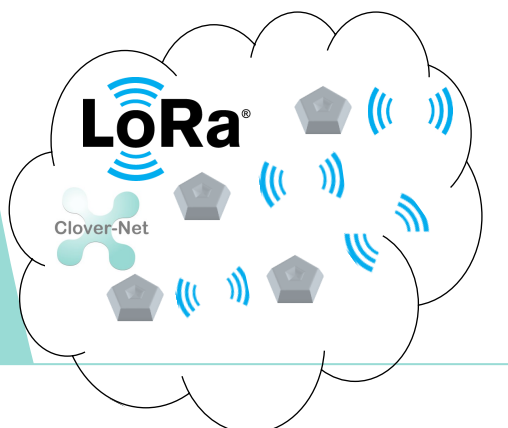
MQTT is a Machine-to-Machine (M2M) "Internet of Things" connectivity protocol designed as an extremely lightweight publish/subscribe messaging transport, based on brokers and clients. Many brokers are available (Open Source, free access...) and offer a no-limit scalability.

Advanced services

This clever Gateway offers many services, either in RF side, like self-discovery, data buffering (prevent from losing data), events and data logging, Auto-answer, OTA firmware upgrade... or in other communication capabilities, like GPRS, NTP synchro, I/O Extensions...

Secure

As a cornerstone in the communication chain, this Gateway insures security by using SSL and AES 128 mechanism. Moreover, Clover-Gate generates failure reports to complete the global system monitoring, in addition to LED status.



INS-Gate main features

- Long Range & bi-directional communication (1Km / 3Km / 5 Km /...)
- Clover-Net protocol including Full networks services (Broadcast, Repeater, Mesh, ...)
- Low power consumption to fit alternative powering like solar panels
- Low cost for mass deployment
- Full 2 way communications
- Native Three bands implementation (433, 868 and 915Mhz)
- High coexistence transmission (Multi-channel & TSSP)
- Secured by SSL and AES 128
- Failure and status messages (NTP synchro status, Buffering status...)
- Time stamped buffering
- DHCP and fix IP capabilities
- NTP time synchronization
- Open IoT MQTT over layer
- Advanced firmware update mechanism
- Embedded configuration web server

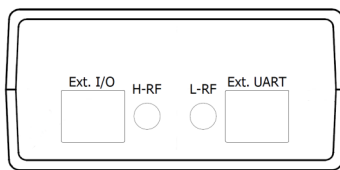


Interfaces and Connections

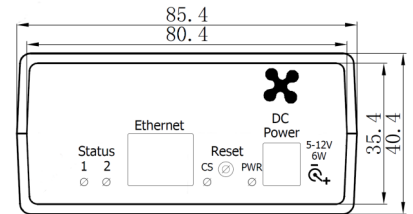
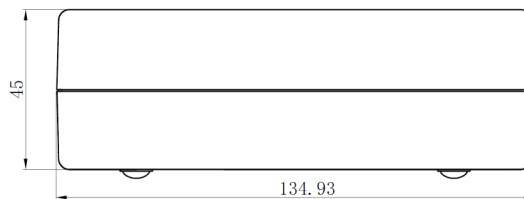
- Power supply: 5-12Vdc max 200mA (plug transformer included), PoE as option
- RF antenna: 2 SMA connectors 433MHz and 868/915MHz (local antenna supplied)
- Connectivity: Ethernet socket (10/100Mbps)
- 4 LED status (Power, RF Tx/Rx, MQTT Broker, NTP and Buffering status)
- Factory Reset button



Dimensions



Back view



Front view

Order references

Order #	Description
INS-GAT-MQ-489-001	INS-Gate standard version
INS-GAT-MQ-489-002	INS-Gate PoE version
INS-GAT-MQ-489-003	INS-Gate with external antenna (3m cable)



Clover-Net generic features

- Transmission range up to 5,000m line of sight, up 500m indoor.
- Real-time 2-way communications: Scheduled transmission, automatic alarms and on-demand reading.
- Robust against physical and electronic interferences.
- Fast event reactivity, huge coexistence ability.
- Low cost for mass deployment
- Auto RTC propagation
- Native Three bands compatibilities (433, 868 and 915Mhz)
- CE & EN 300-220 & FCC 15-247 compliant
- LORA WAN compatible
- Use Multi-channel frequencies and FHSS to avoid collision.
- Dedicated alarm frequency channel.
- Data Encryption by AES 128 with dynamic key mixt
- Include Full networks services (Broadcast, Repeater, Mesh, ...)