

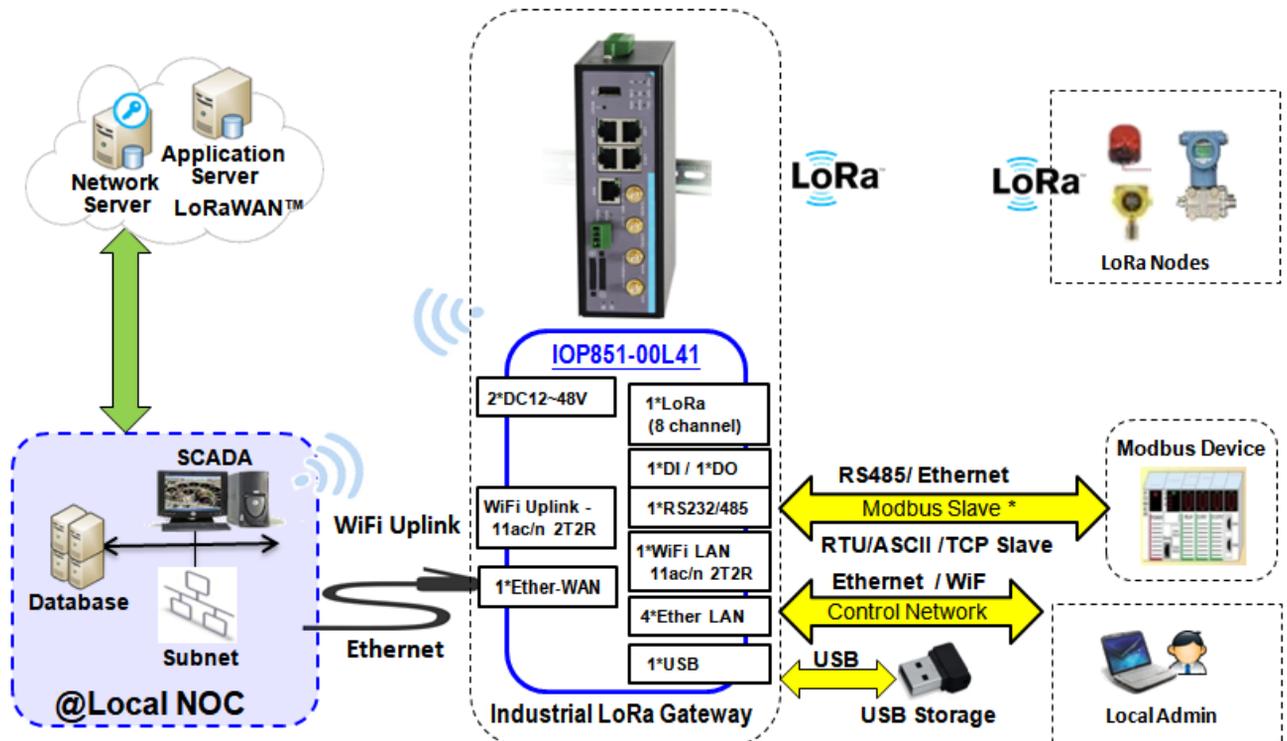
# WiFi IIoT LoRa Gateway

## Feature Sets:

- Smart Industry, Smart Utility, and Smart City applications.
- Equip with a WiFi uplink port for connecting the modbus devices to local network or control center wirelessly.
- Embedded an 8-channel LoRa gateway module for connecting with multiple LoRa nodes.
- LoRaWAN Compliance gateway, forward received LoRa packets to external public network server, or internal private network server.
- Integrate with 802.11n/ac 2T2R 2.4G/5GHz WiFi; Provide multiple (8+8) SSIDs for privilege group devices or users.
- 4\*GE LAN port with tag based and port based VLANs easily to group control and relocate traffic pattern.
- Equip with RS232/RS485 interface for Modbus RTU and various serial communication protocol, and DI/DO for device triggering or event reporting.
- Fully protocol with NAT/Routing compatible with most IP network.
- Firewall with SPI and IPS function prevent hacker attacking and enhance network efficiency.
- SNMP, Telnet CLI, and TR-069 for administrator to manage system.
- QoS and Bandwidth management for optimal bandwidth usage.
- Seamless power failover between redundant DC 12V~48V wide range power input.



## Connection Diagram:



# Specifications<sup>1</sup>:

## Device Interfaces

Uplink:	802.11ac/n (5G/2.4GHz) WiFi Uplink, 1*RJ45 GE (Configurable)
LAN-RJ45:	4*RJ45 GE
LAN-WiFi:	802.11ac/n 2T2R (5GHz / 2.4GHz) WiFi
LAN-LoRa:	1*LoRa (8*Channel)
LoRa Band <sup>2</sup> :	863MHz – 870 MHz (Europe), 902MHz – 928 MHz (US)
Comm. Bus:	1*RS232/RS485 (4-pin Terminal Block)
I/O:	1*DI ("Logic 0": 0~2V, "Logic 1": 5V~30V), 1*DO (Relay Mode, up to 30V / 1A)
Log Storage:	1*USB 2.0
Antenna:	1*SMA Jack (F) for ext. LoRa Ant. 2*SMA Jack (M) for ext. WiFi Ant. (2.4G/5GHz)
Power Source:	Dual DC 12V~48V

## WAN Functions

WAN:	Multiple WANs, Failover/Load Balance, Configurable Ethernet/WiFi
Ethernet:	Dynamic IP, Static IP, PPPoE, PPTP, L2TP
WiFi:	11ac/n 2T2R WiFi Uplink

## Basic Functions

Ethernet:	LAN IP, Subnet Mask
WiFi Operation:	AP Router, WDS, WDS Hybrid Modes
WiFi Security:	WEP, WPA, WPA2, WPA-PSK, WPA2-PSK, 802.1x
VLAN:	Port-based, Tag-based
LoRa Gateway:	Packet Forwarder, Public Network Server (external), Private Network Server (internal)
Port Forwarding:	Virtual Server / Computer, DMZ Host, PPTP/L2TP/IPSec Pass-through
Routing:	Static, Dynamic: RIP1/RIP2
QoS:	Policy-based Bandwidth Control and Packet Flow Prioritization

## Object Definition

Scheduling:	Time Schedule List
Grouping:	Host Grouping List
Ext. Server:	Email, Syslog, RADIUS, SCEP, FTP
Certificate:	My Certificate, Trusted Certificate, Issue Certificate

## Field Communication

Virtual COM:	RFC2217, TCP Client, TCP Server, UDP
Modbus:	Modbus Slave, Modbus Gateway for Modbus TCP Master/Slave, Modbus RTU/ASCII Master/Slave Access
Data Logging:	Sniffer, Off-line Proxy, Full-time Proxy, Sniffer & Proxy mixed modes

## Security

VPN Tunneling:	IPSec, OpenVPN
VPN Scenario:	Site to Site, Site to Host, Host to Site, Host to Host, Hub and Spoke, Dynamic VPN
Firewall:	SPI Firewall with Stealth Mode, IPS
Access Control:	MAC Filter

## Service

Event Handling:	Managing / Notifying Events; DI, DO, Modbus, Syslog, SNMP Trap, Email Alert, Reboot
LoRa:	LoRa Gateway, Public Network Server (external), Private Network Server (internal) ISM band support: EU 863 - 870 MHz, U.S. 902 - 928 MHz, AS 923 MHz Support for up to 8 uplink channels, 500 KHz bandwidth LoRa technology: Spreading Factors Support up to 200 Class A and C endpoints

## Administration

Config.& Mgmt.:	Web, Telnet CLI, Command Script, TR-069, SNMPv3 standard & AMIT MIB
System Op.:	MMI, System Info., System Time / Log, Backup & Restore, Reboot & Reset
FTP:	FTP Server, User Account
Diagnostic:	Packet Analyzer, Diagnostic Tools

## Dimension

Device (WxDxH):	62x125x160mm (w/o mounting kit) 62x135x160mm (with DIN Rail kit)
-----------------	--

## Environment

Operation Temp. <sup>3</sup> :	-30 °C ~ 70 °C
Storage Temp.:	-40 °C ~ 85 °C
Humidity:	10% ~ 95% (non-condensing)

## Accessory

- (1) Package Content
  - 1\*Device, 1\*Terminal Block (8-pin for DC Power & DI/DO), 1\* Terminal Block (4-pin for serial port), 1\*DIN Rail Bracket, 1\*Screw Bag, 1\*CD (User Manual).
- (2) Optional Accessory
  - Power Supply, Side Mounting Brackets, LoRa & WiFi Antenna, RF Cable.

## Certification

Approval / Certificate	CE
Standards & Regulation	EMI: EN 55032: 2015 +AC: 2016 Class B EN 61000-3-2:2014 EN 61000-3-3:2013 EMS: EN 55024:2010+A1:2015 EN 61000-6-2:2005+AC:2005 IEC 61000-4-2(ESD) Level 4 IEC 61000-4-3(RS) Level 3 IEC 61000-4-4(EFT) Level 4 IEC 61000-4-5(Surge) Level 3 IEC 61000-4-6(CS) Level 3 IEC 61000-4-8(PFMF) Level 4 Radio: EN 301 489-1/-7/-17/-24/-52, EN 300 328 V2.1.1 EN 301 893 V1.8.1, EN 50385 Safety: EN 60950-1

1. Specifications are subject to change without prior notice.  
2. Supported LoRa frequency depends on regional hardware version.  
3. WiFi performance will be degraded if device's ambient temperature is above 60°C.