Open Source LoRa WiFi Gateway
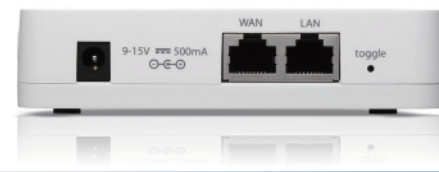
LG01

LG01-P

LG01-S (Sensor Version)

OVERVIEW:

The LG01 is an open source single channel LoRa Gateway. It lets you bridge LoRa wireless network to an IP network via WiFi, Ethernet, 3G or 4G cellular.

LG01 has WiFi interface, Ethernet port and USB host port. These Interfaces provide flexible methods for users to connect their sensor networks to Internet.

LG01 runs Open Source OpenWrt system, user are free to modify the source file or compile the system to support their customized applications.

Features:

- Open Source OpenWrt system
- Low power consumption
- Firmware upgrade via Web
- Software upgradable via network
- Auto-Provisioning
- Built-in web server
- Managed by Web GUI, SSH via LAN or WiFi
- Support WiFi AP, Client or Ad-Hoc(Mesh) mode
- Internet connection via LAN, WiFi, 3G or 4G
- Failsafe design provides robustly system
- LoRa band available at 433/868/915/920 Mhz
- Max range in LoRa: 5 ~ 10 km
- Arduino IDE compatible. Easy to program.

Specifications:

Linux Side:
- Processor: 400MHz, 24K MIPS
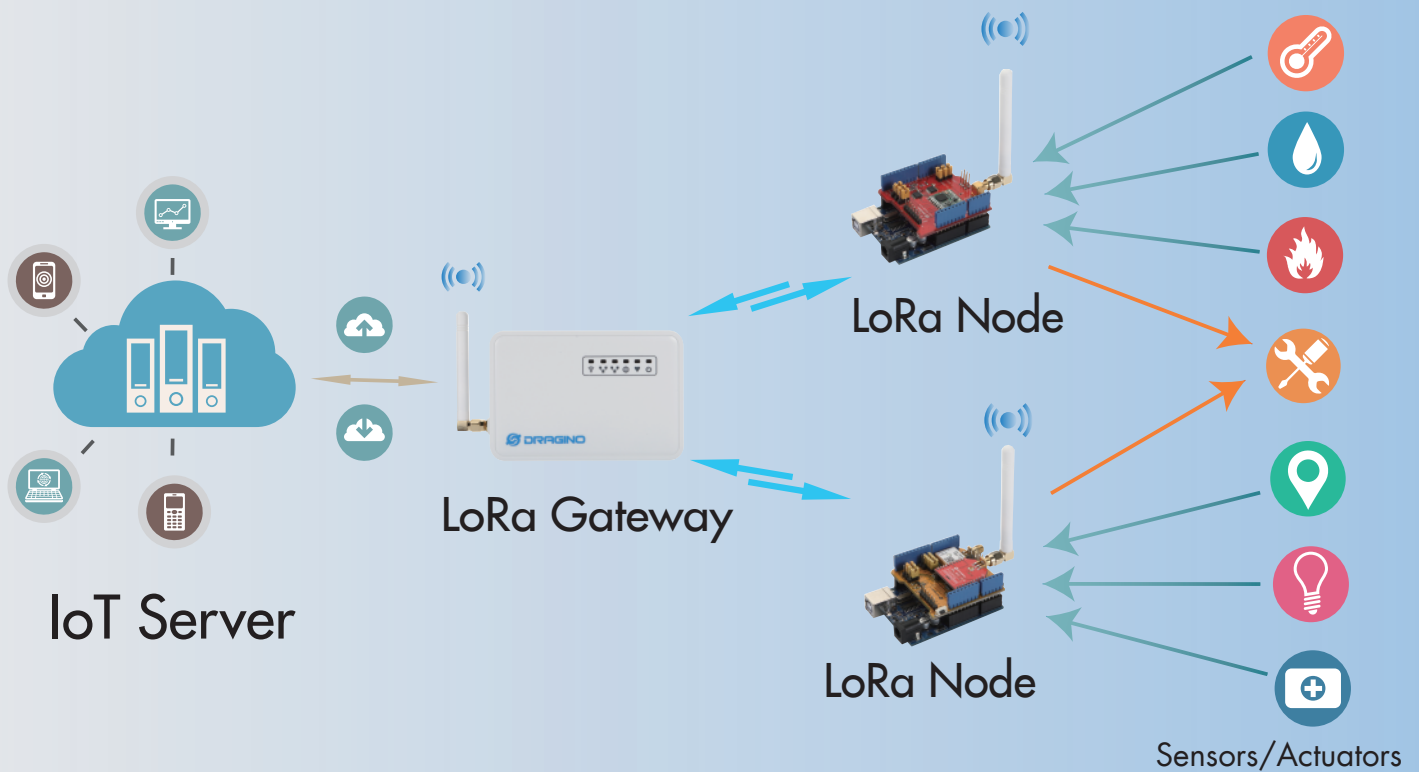- Flash: 16MB ;   RAM: 64MB

MCU/LoRa Side:
- MCU: ATMega328P
- Flash:32KB, RAM:2KB
- LoRa Chip: SX2176/78

Interfaces:
- 10M/100M RJ45 Ports x 2
- WiFi : 802.11 b/g/n
- LoRa Wireless
- Power Input: 12V DC
- USB 2.0 host connector x 1
- USB 2.0 host internal interface x 1
- 14 pos screw terminal (LG01-S)
- 3G/4G module (optional)

LoRa Gateway Network Structure

IoT Server

LoRa Gateway

LoRa Node

LoRa Node

Sensors/Actuators

Smart farm

Intelligent Community

Smart home

Outdoor monitoring

Smart medical

Intelligent plant

Cloud computation

Intelligent transport

Applications:

- Wireless Alarm and Security Systems
- Home and Building Automation
- Automated Meter Reading
- Industrial Monitoring and Control
- Long range Irrigation Systems
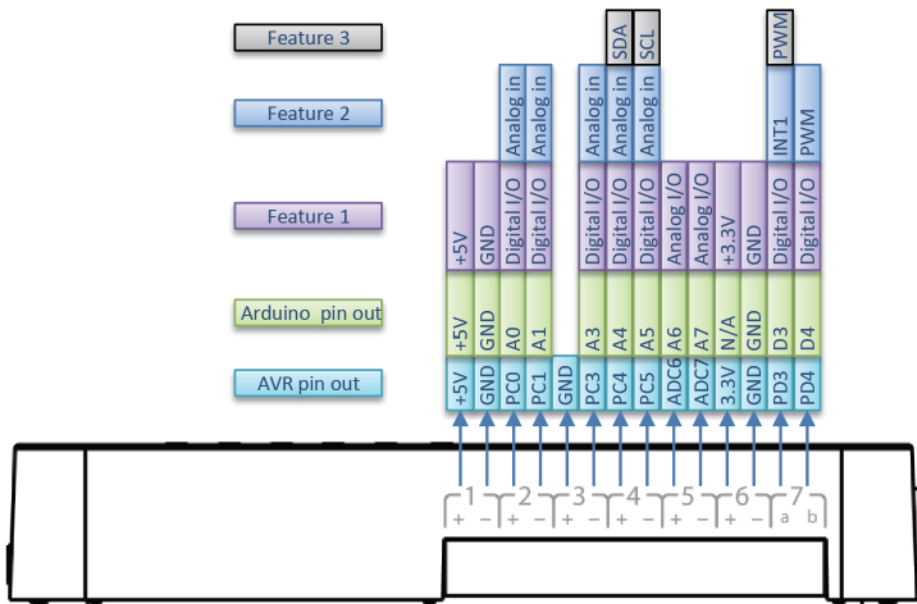- GPS tracker,etc

LG01 Variants

LG01-P

LG01-S
Screw Terminal to connect sensors

LG01-S Pin Out

Sensor port Spec:
- Arduino pin compatible
- 7 x Digital I/Os
- 7 x Analog I/Os
- 2 x PWMs, 1 x I2C
- All I/O pins can be use for UART
- Voltage Range for I/O: -0.5 ~ 3.8V
- IEC61000-4-2 ESD protection

Order Info:

Standard Version:
- LG01-P-433: Best Tuned at 433Mhz
- LG01-P-868: Best Tuned at 868Mhz
- LG01-P-915: Best Tuned at 915Mhz

Sensor Version:
- LG01-S-433: Best Tuned at 433Mhz
- LG01-S-868: Best Tuned at 868Mhz
- LG01-S-915: Best Tuned at 915Mhz