

ClodPi Labs (India) Pvt Ltd is based out in Bengaluru (India) having expertise in technologies around IoT space with wide industry expertise in providing LoRaWAN solutions capable of advanced IoT applications.

Brief - LoRaWAN® Gateway:

The **LoRaWAN® Gateway** is an ideal gateway for Internet of Things (IoT) SMART project requirements with simple to install, operate and wider coverage.

Implementations:

- Smart City
- Smart Industry
- Smart Meters (Energy, Water, Gas)
- Smart Street Lights
- Smart Fleet management
- Smart Agriculture and many more

ClodPi Labs does have capabilities w.r.t LoRaWAN® gateways with product line which includes below listed industrial and non-industrial gateways providing options for Outdoor and Indoor usage:

<u>Gateway</u> ↓	<u>Outdoor</u>	<u>Indoor</u>	<u>4G*</u>
LoRaWAN® Compatible	✓	✓	✓

**4G option is available for Outdoor version only.*

Key Features:

- Outdoor / Indoor LoRa® Gateway
- Industrial Carrier Grade enclosure / casing (IP68) with excellent heat dissipation for Outdoor version
- Supported bands*: 863-874.4MHz (EMEA, India), 902-928MHz (North America), 915-928MHz (APAC, Latin America)

- Supported LoRaWAN® regional frequencies: IN 865-867
- Backhaul connectivity: 4G Worldwide module and Ethernet (RJ45)
- Powered by:
 - ✓ PoE (Injector), 802.3at specifications
 - ✓ +/- 48VDC through RJ45 (isolated power)
- Highly secured device relying on a hardware secure core
- High performance, reliability & robustness
- Semtech SX1302
- Hardware and Software architecture
 - ✓ SecureBoot (Signed firmware)
 - ✓ Reboot (watchdog) and recovery to previous version config (or factory config in case the boot issue is not fixed)

Ease Of Installation, Deployment & Maintenance:

- No need to open the Top casing during installation (waterproof connectors for RJ45, SIM card...)
- Easy installation mounting kit
- Fully integrated and internal antennas GPS, 4G, LoRa external antenna installation required (*external LoRa antenna 3.5 dBi or 8 dBi possible as an option. One can choose to have other options as well.*)
- Easy access to connectivity:
 - ✓ Ethernet 10 /100 Mbps (RJ45)
 - ✓ SIM card (micro-SIM format)
- Recovery Button
- Simple and convenient configuration,
- Web Interface for configuration and management
- Five LEDs controlled by software (programmable):

LED Indicator	DESCRIPTION
Power	The LED is lit when the power is ON.

Ethernet	The LED is lit when the ethernet connection is successful.
Internet	The LED is lit when the internet supply is ON.
4G	The LED is lit when the 4G internet is ON.
Status	The LED starts blinking once the Onboarding request is submitted. The LED will continuously lit when Gateway is successfully onboarded.

Hardware Technical Features:

- Sniffer for LBT (Listen Before Talk)
- Built-in high rejection SAW filters
- Rx Sensitivity: -141 dBm (SF12)
- Conducted TX Power: configurable from 14 dBm to 27 dBm
- Operating Temperature Range: - 40°C to + 60°C
- Humidity: 95%
- Dimensions: 265 x 165 x 100 mm
- Weight: 1.4 kg (mounting kit included)
- Spectrum analysis compliant
- Casing: IP68 [ASA](#) (Top), [ASA](#) (Bottom)
- Surge protection of the RF LoRa link (option)
- CPU: MIPS24KEc (575/580 MHz) with 64 KB I-Cache and 32 KB D-Cache
- RAM: 128MB
- Flash: 32MB SPI Flash

Software Features:

- Greater user experience, easy and quicker integration
- User friendly web interface

Images:

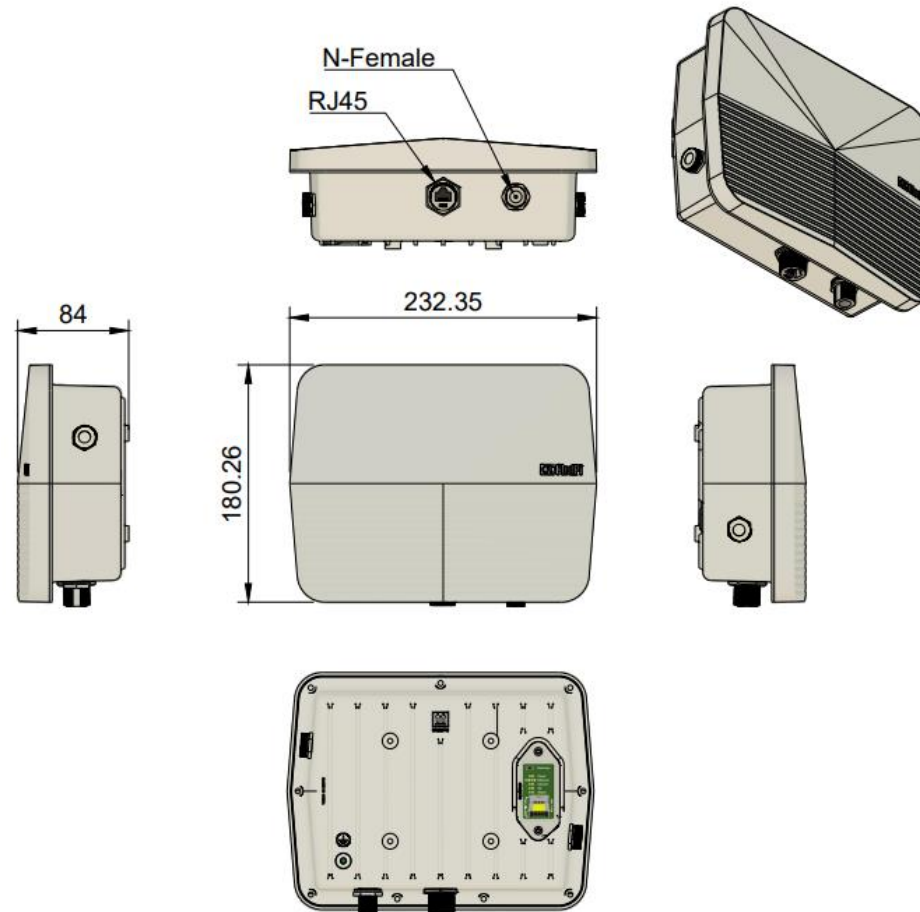


Image: Gateway Outdoor

Package Content:

ClodPi's Gateway (Outdoor) device package comes with the following items:

SN	ITEM	QUANTITY
1	ClodPi's Gateway device (Outdoor) (<i>IP68, ASA material</i>)	One
2	Breathers	Two
3	PoE Injector 802.3at (48V, industry grade) with power cord	One
4	LoRa Antenna - 3.5 dBi, N-Female / Fiberglass	One
5	Surge Arrester	One
6	RJ45 Connector	One
7	N-Male to N-Male Cable	One
8	Cable Lug (<i>for earthing</i>)	One
9	Gateway mounting Plate	One
10	Gateway Mounting Metal Hose Clamps	Two
11	Antenna Mounting Metal Bracket Kit (2inch Flagpole)	One
12	Waterproof Tape	One
13	Insulation Tape	One
14	Screws (M4)	Four

Other Services:

- Free access to ClodPi Discourse for customers
- Plug & Play installation (option)
- ClodPi's Gateway is part of the end-to-end LoRa® connectivity solution.
- Management and Maintenance Services
- Comprehensive service offering to support your entire project.

Certifications:

FCC	IC	WPC	RCM
✓	✓	✓	✓

* many more certifications / geographical areas are being covered.



Having expertise and experience, ClodPi Labs team is fully equipped to help you to develop, to optimize the infrastructure cost, operational and commercial risks thereby scaling up your Internet of Things (IoT) use case implementation.

Don't hesitate to contact us:

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