LD1001

LoRaWAN® Gateway User Manual



Siliqs · https://siliqs.net

Document	Rev	Date	Notice
LD1001 User Manual	Rev 0.1 (Preliminary)	Nov 2026	Guineatech © Limited standard files

Document Version

Version	Time	Description	Remark
Rev. 0.1	2026-11-10	Preliminary version	Living

Copyright Notice

All contents in these files are protected by copyright law, and all copyrights are reserved by Guineatech. Siliqs is a product line of Guineatech. Without written permission, all commercial use of the files is forbidden, such as copy, distribute, reproduce the files, etc., but non-commercial purpose, downloaded or printed by individual are welcome.

Disclaimer

Guineatech reserves the right to change, modify or improve the document and product described herein. Its contents are subject to change without notice. These instructions are intended for your use only. This is a preliminary user manual; items marked "TBC" (to be confirmed) have no verified source yet and may change. The LD1001 Datasheet takes precedence for specifications.

Trademarks

LoRa® is a registered trademark of Semtech Corporation. LoRaWAN® is a registered trademark of the LoRa Alliance. ChirpStack is an open-source LoRaWAN Network Server project. Bluetooth® is a registered trademark of Bluetooth SIG, Inc. Linxdot and Milesight are trademarks of their respective owners. All other trademarks are the property of their respective owners.

CONTENTS

- 1. Package and Safety — 1.1 About this product / 1.2 Package contents / 1.3 Safety
- 2. Hardware — 2.1 Rear panel / 2.2 Indicators and button
- 3. Installation — 3.1 Indoor unit / 3.2 Outdoor version
- 4. Power-up and Access — 4.1 Factory settings / 4.2 Via Ethernet / 4.3 Via Wi-Fi / 4.4 Logging in
- 5. Simple Mode — 5.1 Home page / 5.2 Role, server and region / 5.3 Network / 5.4 Time sync / 5.5 Devices / 5.6 Device models / 5.7 Relays (mesh)
- 6. ChirpStack (Advanced)
- 7. Data Output: MQTT
- 8. Firmware Update and Backup
- 9. Troubleshooting and FAQ
- 10. Specification Summary
- 11. Regulatory and Contact

1. Package and Safety

1.1 About this product

> The LD1001 is an original Linxdot gateway product. Siliqs is the value-added system provider for the LoRaWAN system: it supplies the management software and features on the gateway, pre-shipment configuration, integration of Siliqs nodes, and technical support.

The LD1001 is an 8-channel LoRaWAN gateway. Siliqs ships it installed and configured:

- Built-in LoRaWAN network server (ChirpStack v4) and MQTT broker — a small site needs no separate server and no internet connection.
- Simple mode web page (Traditional Chinese / English) for everyday tasks: status, network, time, adding devices.
- Siliqs device catalogue — Siliqs nodes such as the SQC485I and SQS-TH-I are added from the web page with payload decoding already set up.

The LD1001 is hardware- and software-compatible with the LD1002; this manual applies to both.

1.2 Package contents

Item	Qty
LD1001 gateway	1
12 V power adapter	1
LoRa antenna	1

This manual is supplied electronically and is not included in the box. For the login and Wi-Fi passwords, see the label on the unit or the card in the package.

> Package contents of the outdoor version (PoE injector, N-type antenna, pole bracket, etc.): TBC.

1.3 Safety

- Attach the LoRa antenna before powering on. Powering on or transmitting without an antenna can damage the radio.
- Use only the supplied power adapter and cables.
- The indoor unit is for indoor use only; keep it away from moisture, water, direct sunlight and heat. Operating temperature and humidity range: TBC.
- Do not open or modify the gateway; doing so may affect the warranty (warranty terms: TBC).
- Transmit power must stay within the radio regulations of the country of use. The unit ships configured for Taiwan AS923-1; do not change to another regional band without confirming with Siliqs.
- Outdoor installation should be carried out by qualified personnel, with grounding and lightning protection per local regulations.
- Keep a suitable distance between people and the antenna during operation (RF exposure separation distance: TBC).

2. Hardware

2.1 Rear panel



LD1001 rear panel (illustration)

All connectors are on the rear panel. Seen from the rear, left to right:

Table 2.1: Rear panel

Item	Function
BT Pair	Bluetooth pairing button (see 2.2)
LoRa	RP-SMA antenna connector for the supplied LoRa antenna
USB	USB-A
LAN	Gigabit Ethernet (RJ45), DHCP by default
USB-C	USB Type-C
DC IN	12 V DC power input

> The indoor unit does not support PoE; power it from the supplied 12 V adapter.

2.2 Indicators and button

Item	Description
Indicators	Location, colours and meaning: TBC ([photo placeholder: indicator location])
BT Pair button	Bluetooth pairing. Function in the Siliqs firmware: TBC; not needed for normal operation

> Use the status card on the Simple mode home page (section 5.1), not the indicators alone, to judge whether the gateway is working.

3. Installation

3.1 Indoor unit

1. Attach the LoRa antenna to the rear LoRa connector. Hand-tighten clockwise; do not over-tighten with tools.

2. Connect the rear LAN port to a router or switch with an Ethernet cable. If you will configure over Wi-Fi only, you can skip this for now (section 4.3).

3. Connect the 12 V power. The gateway is ready in about 1 minute.

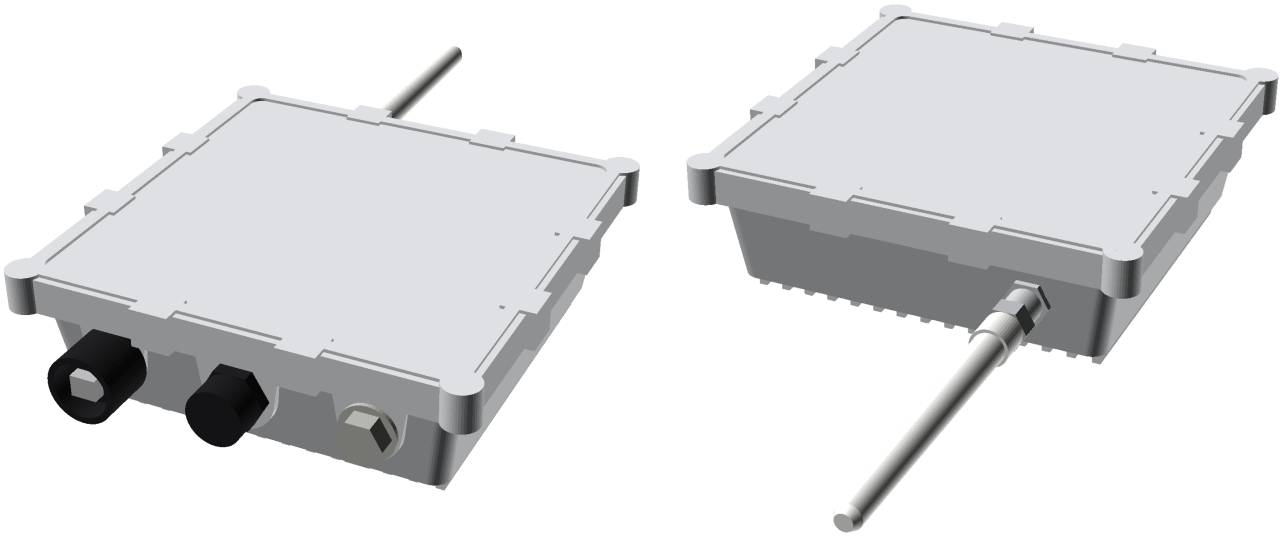
4. Placement: mount it high, away from metal objects and large obstructions, with the antenna vertical, for the best coverage.

> The built-in server is installed and running from the factory. Automatic time sync (NTP) needs access to an NTP server (section 5.4).

[Photo placeholder: indoor installation]

3.2 Outdoor version

The outdoor version houses the gateway board in a cast-aluminium enclosure for pole or wall mounting; software and operation are the same as the indoor unit. The outdoor version is planned. The openings and connectors below follow the current sample and may change in production; contact us for enclosure model and availability.



LD1001 outdoor version: cable side (left), antenna side (right) (illustration)

Table 3.2: Outdoor version

Item	Description
Enclosure	Die-cast aluminium, 217 × 217 mm outside, IP67 per enclosure maker (not separately tested)
Power	PoE over the Ethernet cable; a PoE splitter inside converts it to DC for the gateway. PoE type (802.3af or passive): TBC
LoRa antenna	N-type female bulkhead, opposite the cable side; fits a 16 cm N-type antenna (gain TBC)
Cable side	Waterproof RJ45 panel socket, M22 × 1.5 cable gland (spare), hex-bolt blanking plug
Mounting	4 × M6 threaded holes on the back (diamond pattern, 51 mm apart) for a pole bracket or wall mounting

Installation steps:

1. Configure the gateway indoors before going on site (network, time zone, devices) and check that the home page

status is good. Wi-Fi setup is not guaranteed once the metal lid is closed (TBC); use Ethernet on site.

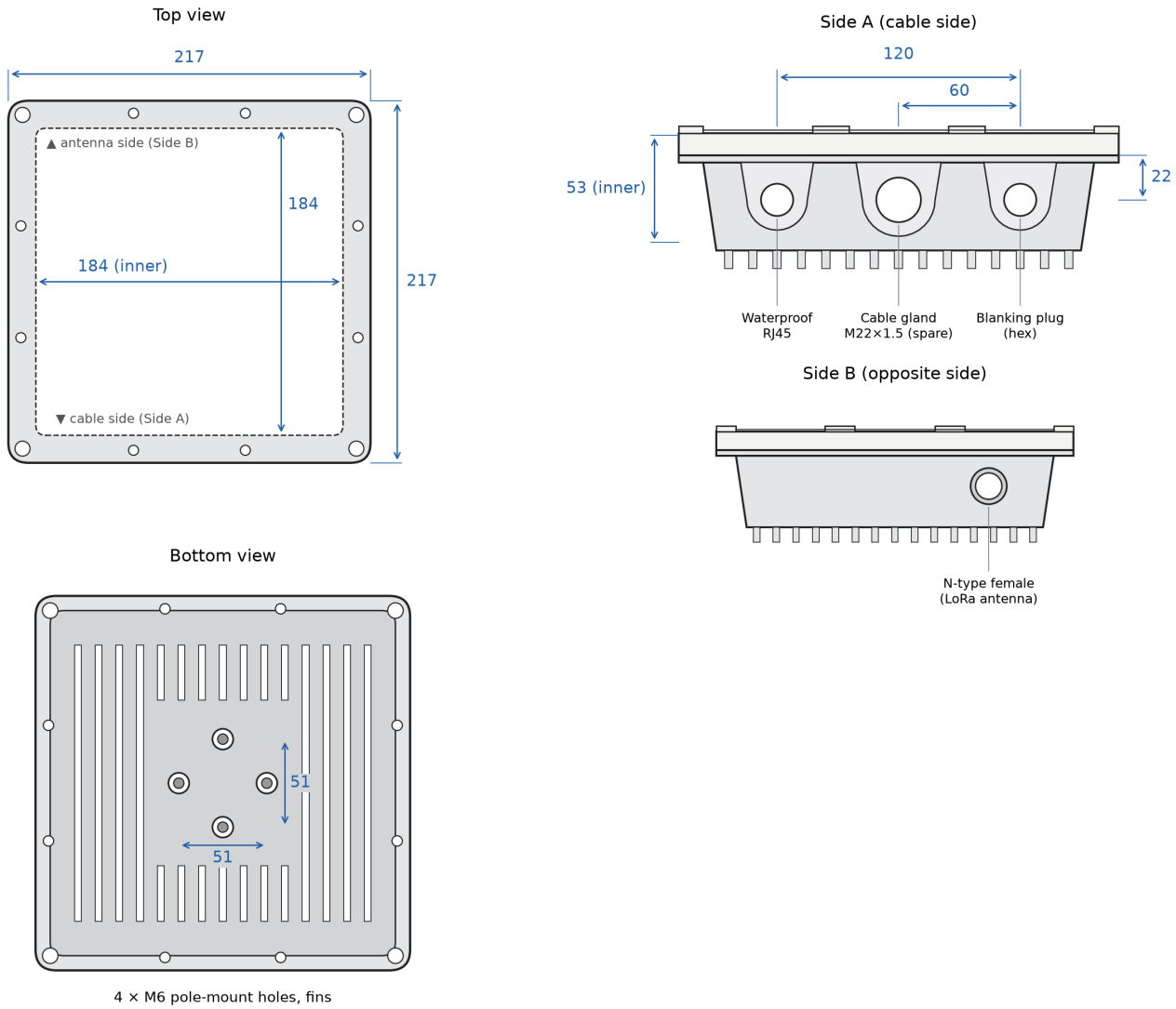
2. Fix the pole bracket to the 4 M6 holes on the back, then mount it on the pole or wall, antenna side up and vertical.

3. Attach the N-type antenna; wrapping the joint with waterproof tape is recommended.

4. Plug the Ethernet cable into the waterproof RJ45 socket and tighten its cap; connect the other end to the PoE injector (or a PoE switch) and on to the network.

5. About 1 minute after power-up, check the Simple mode home page from a computer on the network.

6. Ground the unit and provide lightning protection per local regulations; surge protector and grounding method for the Ethernet line: TBC (contact Siliqs).



Unit: mm. Outer, inner, opening and mounting-hole figures per enclosure maker's drawing; fittings as on the current unit. Wall, floor, fin, overall height and N-type position are indicative only (TBC).

LD1001 outdoor enclosure: top, cable side and bottom dimensions (mm)

4. Power-up and Access

4.1 Factory settings

Table 4.1: Factory settings

Item	Factory setting
Role	Main node (a regular LoRaWAN gateway)
Server	Built-in server (ChirpStack v4)
Band	Taiwan AS923-1, 8 uplink channels (923.2–924.6 MHz)
Ethernet	DHCP
Host name	`Siliqs-XXXX` (XXXX = last 4 digits of the Ethernet MAC address)
Wi-Fi hotspot name	`SiliqsXXXX` (XXXX = last 4 digits of the Wi-Fi MAC address; differs from the host name digits)
Management address on the hotspot	`http://10.100.100.1`
Login user / password	User `root`; password on the unit label or package card
Wi-Fi password	On the unit label or package card
Time zone	TBC (check on the Time sync page, section 5.4)

> If the unit label or package card shows a host name and Wi-Fi name, those take precedence. Change the factory default passwords after the first login.

4.2 Via Ethernet

1. With the gateway connected to your router and powered on, find the host name `Siliqs-XXXX` in the router's connected-devices list and note its IP address.

2. Or enter `https://siliqs-xxxx.local` in a browser (replace xxxx with this unit's 4 digits). Your computer must be on the same local network; if the name does not resolve, use the IP from the router list.

4.3 Via Wi-Fi

Without a network cable, a computer or phone can connect directly to the gateway's own Wi-Fi hotspot (2.4 GHz):

1. Join the Wi-Fi network `SiliqsXXXX`; the password is on the unit label or package card.

2. Browse to `http://10.100.100.1`; it redirects to `https://10.100.100.1/`.

> Change the Wi-Fi password after the first login (the factory default follows the same rule on every unit):
>
> 1. Simple mode home page → "Network" → at the bottom, "For Wi-Fi and other network settings, use Advanced mode →".
> 2. In the "Wireless Networks (SSID)" section, enter a new password (at least 8 characters) and click "Save".
> 3. Click "Apply (wifi reload)" for it to take effect.
> 4. If you are connected over Wi-Fi, you will be disconnected; reconnect with the new password.

4.4 Logging in

1. Browse to `https://<gateway IP>` (or the address from 4.2 / 4.3).

2. The browser warns that the connection is not secure / the certificate is invalid. This is because the gateway uses a

self-signed certificate; choose to proceed.

3. Enter user `root` and the password from the unit label or package card, then click "Log in".

4. You arrive at the Simple mode home page.

[Screenshot placeholder: login page]

> Change the login password right after the first login: Simple mode home page → "Change password". This is also the SSH root password. Keep the new password somewhere safe; it cannot be recovered without erasing the configuration (section 9).

Table 4.4: Management interfaces and ports

Service	Address / port
Simple / Advanced mode web pages	`https://<IP>` (port 443; port 80 redirects to HTTPS)
Built-in server (ChirpStack) console	`http://<IP>:8080`
MQTT broker	`<IP>`, port 1883
SSH	port 22, user `root`

5. Simple Mode

Simple mode puts the everyday settings on one page. Switch between 繁中 / EN at the top right.

5.1 Home page

[Screenshot placeholder: Simple mode home page]

The status card at the top shows the overall state:

Shown	Meaning	Action
Everything is running	Gateway is online and forwarding device data	—
Can't reach the server	The unit is fine but cannot deliver data to the server	See section 9
LoRa radio fault / not running	No device data can be received	Check the antenna and restart; contact us if it persists

Below are four tiles: Network (cable / Wi-Fi), LoRa radio, Sending data to (built-in server, your server, or via main node) and Last device data (seconds ago).

Common actions at the bottom of the home page:

Button	Purpose
Network	Ethernet IP: automatic or fixed (5.3)
Time sync	NTP servers, time zone, set the clock (5.4)
Devices	List, add and remove devices (5.5)
Device models	Add sensor models from the catalogue, or create your own (5.6)
Open built-in server	Opens the ChirpStack console (section 6)
Change password	Changes the root password for this web page (also the SSH password)
Restart	Reboots; back in about 1 minute
Restore last good state	Do not use on your own. With a snapshot USB stick inserted it erases the whole unit, including all settings and registered nodes. Use only when instructed by Siliqs

"← Advanced mode" at the top right and "Switch to Advanced" at the bottom show all settings. Wrong settings in Advanced mode can stop the gateway receiving data; ask us first about settings you are not familiar with.

5.2 Role, server and region

The settings in the middle of the home page are set at the factory; a single unit normally needs no changes.

Setting	Description
Role	Main node: works like a regular gateway and sends data to a server; choose this for a single unit. Relay: extends coverage, see 5.7
Server	Built-in server (factory): data goes to ChirpStack inside the gateway. My server: sends data to your own ChirpStack v4 server; enter its address, e.g. `tcp://lorawan.example.com:1883`
Mesh network key	Leave as is for a single unit; for relays see 5.7
Test mode	For testing relays — keep it off for normal use; when on, the main node discards data it hears directly from nearby devices
Region	Taiwan (AS923-1), 920–925 MHz. Contact us for other regional bands or custom channels

When switching to "My server", give the region file offered for download on the page (`region_as923.toml`) to your server administrator so the server's channel plan matches the gateway.

> With "My server", Simple mode device management and ABP Auto-Resync (5.5.3) do not apply; manage the nodes on your own server.
>
> "Apply settings" restarts the LoRa service; no data is received for about 10–20 seconds. Only click it when you change something.

5.3 Network

[Screenshot placeholder: Network page]

- Automatic (DHCP) is fine for most sites.
- If a server or other equipment must always reach the gateway at the same address, choose Fixed IP, enter the IP, subnet mask, default gateway (your router's IP) and optional DNS, then click "Apply". Pick an address your router will not hand out to other devices.
- Safety net: the network drops for a few seconds after applying. Log in again at the new address within 3 minutes and click "Keep these settings". Without confirmation the gateway reverts to the previous settings automatically.
- Wi-Fi settings (hotspot name and password, or joining the site network as a Wi-Fi client) are in Advanced mode.

5.4 Time sync

[Screenshot placeholder: Time sync page]

- Current time: shows the unit's clock and sync status. Click "Sync now" to resync.
- With no network and no NTP server on site, click "Use this computer's time"; the gateway switches back to accurate time once an NTP server is reachable.
- Time zone: choose your local zone. The web page drops for a few seconds after saving; LoRa reception is not affected.
- NTP servers: up to 5. On an internal-only network, enter your company NTP server's name or IP.

5.5 Devices

[Screenshot placeholder: Devices page]

5.5.1 The page

- Gateways & relays: this main node and any relays connected through the mesh, with online/offline state and last-seen time.
- Devices: one card per node with name, model, last report, signal (RSSI / SNR) and latest readings.
- Indicator: green = data within the last hour; amber = none for 1–24 h; red = none for over 24 h.
- Readings update while the page is open; after a gateway restart they reappear with each node's next report.

5.5.2 Adding a node

1. On "Devices", fill in the "Add a device" form at the bottom.

2. Device name：any name, e.g. "1F power meter".

3. Model：choose from the list. The model sets the join method and how data is decoded; a wrong model shows wrong values. If the model is missing, add it under "Device models" first (5.6).

4. Group (application)：choose an application.

5. Enter the keys for the model (DevEUI and keys are usually printed on the device or package, or provided by the supplier):

Join method	Fields
OTAA	DevEUI (16 hex), AppKey (32 hex), JoinEUI / AppEUI (optional, 16 hex)
ABP	DevEUI (16 hex), DevAddr (8 hex), NwkSKey and AppSKey (32 hex each)

6. Click "Add". Adding a device does not interrupt data from other devices.

7. Once the node powers up (OTAA nodes join first) and reports, its card shows the last report time and readings.

To remove a node, click "Delete" on its card. Its data stops being received until it is added again.

> Always add ABP nodes (e.g. SQC485I, SQS-TH-I) on this page. Do not add or edit them in the built-in server's (ChirpStack's) native console, and do not change their "Disable frame-counter validation" setting; otherwise they will not recover automatically after a power loss (5.5.3).

5.5.3 ABP Auto-Resync after node power loss

When an ABP node loses power and restarts, its LoRaWAN frame counter starts again from zero. A typical network server then rejects its data until someone resets the node on the server.

With the built-in server, the gateway detects the restart from the node's first few uplinks after reboot and rebuilds the session with the same keys, usually within about 1 minute (at one report every 15 s), with no manual action.

Conditions and limitations:

- Works only with the built-in server, and only for nodes added through Simple mode "Devices".
- To make recovery possible, the server does not check these nodes for repeated frame counters. A recorded old radio message replayed by someone may be accepted as new data, or trigger an extra resync; keys are not exposed. For stricter security, use OTAA nodes.
- Resyncs per node are limited (at most 1 per 10 minutes and 6 per 24 hours). If the first uplinks after a restart are all missed, or the limit is exceeded, data is still received but adaptive data rate (ADR) is paused until the node's next restart.
- Data sent by nodes while the gateway itself is powered off is not buffered or resent. The gateway is back about 1 minute after power returns, with all settings kept.

5.6 Device models

[Screenshot placeholder: Device models page]

The model defines how a device joins and how its data is decoded.

- Catalogue: models verified by Siliqs. Click "Add" to use one, or simply pick it when adding a device and it is added automatically.

Table 5.6: Catalogue (shipping build)

Model	Description	Join
Siliqs SQC485I	RS485 (Modbus) to LoRaWAN. Registers read back are shown as `reg0`, `reg1`…; shows "sensor not responding" when RS485 gets no reply	ABP
Siliqs SQS-TH-I	Temperature & humidity sensor	ABP
Milesight UC502 + RS485 temperature & humidity sensor	Decoded for a specific channel setup; a UC502 wired differently needs its own model	OTAA

- Create a model: if your sensor is not in the catalogue, create one under "Device models": join method (most commercial sensors use OTAA), LoRaWAN version (choose 1.0.3 if unsure), Class C or not, reporting interval, and paste the decoder from the supplier (ChirpStack v4, with a `decodeUplink` function). The region is fixed to AS923.
- A model still used by devices cannot be deleted.

5.7 Relays (mesh)

If the main node cannot hear some nodes (distance, obstructions), add another LD1001 set as a relay. The relay receives the nodes' LoRaWAN uplinks and forwards them over LoRa to the main node; the relay only needs power, no network cable.

1. On the main node's Simple mode home page, click "Generate new", then "Apply settings", and copy the Mesh network key (32 hex characters).

2. On the relay's home page, set the role to "Relay", paste exactly the same Mesh network key, and click "Apply settings".

3. Back on the main node's "Devices" page, the relay should appear under "Gateways & relays" as online.

4. To confirm a node's data really goes through the relay, temporarily enable "Test mode" on the main node — remember to turn it off afterwards.

> The factory default mesh key is identical on every unit, and the page reminds you of this. Change it before deploying relays.
>
> Maximum hops, relays per main node, and relay distance: TBC.

6. ChirpStack (Advanced)

The built-in server is a full ChirpStack v4. Click "Open built-in server" on the Simple mode home page, or browse to `http://<gateway IP>:8080`.

[Screenshot placeholder: ChirpStack login page]

- User / password: on the unit label or package card. Change the password right after the first login: click the user name at the top right → "Change password" → enter the new password in "Password" and "Confirm password" (at least 8 characters) → "Submit". This account can see node keys and data; keep it safe.
- Under Applications → (application) → select a node → "Events" tab, you can see the full content of every uplink.
- Device profiles, decoders, integrations, downlinks and other advanced functions are here; see the official ChirpStack documentation (https://www.chirpstack.io).

> Please note:
>
> - Do not edit or delete ABP nodes added through Simple mode here, and do not change their device profile or region settings; this would affect their connection and Auto-Resync.
> - Each gateway's built-in server keeps its own node list. If several gateways each act as a main node, register each node on only one of them.

7. Data Output: MQTT

Every uplink received by the built-in server is published to the MQTT broker on the gateway, so your back-end can subscribe directly.

Table 7: MQTT connection

Item	Description
Broker	`<gateway IP>`, port 1883 (MQTT, unencrypted)
Credentials	Anonymous access by factory default. Authentication can be enabled on the MQTT broker page in Advanced mode; see the notes below
Format	ChirpStack v4 JSON events
Uplink topic	`application/<application ID>/device/<DevEUI>/event/up`
Other events	`join`, `status`, `ack`, `txack`, `log`, etc. under the same path (ChirpStack v4 standard)

Example: subscribe to all uplinks with the mosquitto client:

`mosquitto_sub -h <gateway IP> -p 1883 -t "application/+/device/+/event/up" -v`

Common uplink JSON fields:

Field	Content
`deviceInfo.devEui`, `deviceInfo.deviceName`	Node identity and name
`object`	Decoded values (catalogue models include decoders)
`data`	Raw payload (Base64)
`fCnt`, `fPort`	Frame counter, port
`rxInfo[].rssi`, `rxInfo[].snr`	Signal quality
`time`	Reception time

> - Once broker authentication is enabled, every service connecting to the broker needs the new credentials, including services inside the gateway; an incomplete change interrupts data. We recommend enabling it with Siliqs' assistance.
> - Expose the broker to the local network only. For internet access, use a VPN or relay through your own server; do not open port 1883 to the internet.
> - With "My server" (5.2), data is published by your server; topics and credentials follow your server's setup.

8. Firmware Update and Backup

8.1 Firmware update

- The gateway software consists of several components (LoRa concentrator, mesh, MQTT forwarder, etc.). Each component page in Advanced mode has an "Update" function. The list is fetched live from the Siliqs update server (internet access required) and defaults to the newest stable release.
- beta / alpha releases have not been verified on real hardware; do not choose them for normal use.
- The LoRa service is briefly interrupted during an update. Update when notified or instructed by Siliqs, and download a backup of the built-in server first (8.2).
- Re-flashing the whole system image is not a user operation; contact us if needed. Do not hold the rear button during power-up or attempt to flash the unit yourself.
- How to view the installed firmware version and release notes: TBC.

8.2 Backing up the built-in server

The ChirpStack "Backup & Restore" page in Advanced mode downloads a backup of the built-in server's database (`.sql.gz`), including applications, devices and gateways.

- Download a backup after adding many nodes and before any update, and store it safely (it contains node keys).
- "Restore" erases the current database and replaces it with the backup's content. This cannot be undone; make sure the file is correct.

9. Troubleshooting and FAQ

Symptom	Possible cause	Action
Cannot find the gateway's IP	DHCP assigned a new IP	Look for a host name starting with `Siliqs-` in the router's device list; or connect via the Wi-Fi hotspot (4.3); use a fixed IP if needed (5.3)
Browser says "not secure"	Self-signed certificate	Normal; choose to proceed
Cannot connect after changing network settings	New settings are wrong	Wait 3 minutes; the previous settings are restored automatically
Home page shows "Can't reach the server"	May appear briefly after boot; or wrong "My server" address, server offline	Wait a few minutes; check the server address; if it persists click "Restart", then contact us
Home page shows LoRa radio fault	Radio problem	Check the antenna and click "Restart"; contact us if it persists
Device shows "none yet" or amber / red	Node has no power, too far, wrong DevEUI / keys, wrong model	Check node power; test near the gateway; power-cycle the node; otherwise delete and re-add it, checking DevEUI, keys and model
SQC485I shows "sensor not responding"	The node reaches the gateway but gets no Modbus reply over RS485	Check the equipment's power, RS485 A/B polarity, loose wiring, and that its serial settings match the node. See the SQC485I documentation
ABP node silent after power loss	Node was not added through Simple mode, or "My server" is in use	Delete and re-add it in Simple mode "Devices"; with your own server, handle frame counters on that server
Wrong clock	NTP unreachable	On "Time sync", click "Sync now" or "Use this computer's time"
Settings are messed up	—	Contact us (do not use "Restore last good state" on your own)
Forgot the login (root) password	—	There is no reset that keeps the configuration. Contact us; the unit must be returned (or serviced on site), re-flashed and reconfigured, and nodes registered on the built-in server are erased (restore them from a backup if you have one, 8.2)
Forgot the built-in server (ChirpStack) password	—	Contact us. As long as you know the root password, it can usually be reset without erasing the configuration

FAQ

- Does the gateway need internet access? No. The built-in server works on the local network; internet is only used for time sync, component updates, or sending data to an external server.
- Can I connect other brands' LoRaWAN nodes? Yes. LoRaWAN 1.0.x Class A / C nodes are supported; create a model under "Device models" and add them, or add them in the ChirpStack console.
- How many nodes can one gateway handle? TBC (depends on reporting rate and payload size).
- Can I use another country's band? The concentrator hardware supports it, but Siliqs currently offers Taiwan AS923-1 officially. Contact us for other regions (TBC).
- Can I use the built-in server and my own server at the same time? Simple mode uses one at a time. To deliver data to several places, forward it with the built-in server's MQTT or ChirpStack integrations (sections 6 and 7).

10. Specification Summary

For full specifications and sources, see the LD1001 Datasheet. If anything below differs from the datasheet, the datasheet prevails.

Table 10: Specification summary

Item	Description
CPU / memory / storage	Rockchip RK3566 quad-core, 2 GB RAM, 32 GB eMMC
LoRa concentrator	Semtech SX1302, 2 × SX1250 RF front ends
LoRaWAN	Class A / C devices, LoRaWAN 1.0.x (ABP, OTAA)
Shipping channel plan	AS923-1 (Taiwan), 8 × 125 kHz, 923.2–924.6 MHz; RX2 923.2 MHz, DR2
Max TX power	27 dBm (conducted)
RX sensitivity	TBC
Antenna	3 dBi LoRa antenna included, RP-SMA female
Network server	ChirpStack v4 (built-in), console on port 8080; MQTT on port 1883
Interfaces	1 × RJ45 (10/100/1000 Mbps), Wi-Fi 2.4 GHz, Bluetooth 5.0 / BLE, 1 × USB-A, 1 × USB Type-C
Power	12 V DC (adapter included); indoor unit has no PoE
Power consumption	5 W peak; about 1.3 W measured in operation (LD1002, relay role)
Size / weight	190 × 190 × 50 mm (without antenna) / 512 g
Operating temperature / humidity	TBC
Protection	Indoor unit for indoor use only (IP rating TBC); outdoor enclosure IP67 per enclosure maker

11. Regulatory and Contact

11.1 Regulatory

- This product uses the 920–925 MHz band (Taiwan AS923-1). Transmit power must stay within the radio regulations of the country of use.
- Type approval (NCC, etc.) and label location: TBC.
- Low-power radio device warning statements: TBC (to be added per the type approval obtained).
- Dispose of the product through electronic-waste recycling according to local regulations, not with household waste.

11.2 Related documents

- LD1001 Datasheet
- Siliqs node datasheets and documents (SQC485I, SQS-TH-I, etc.)
- ChirpStack documentation: https://www.chirpstack.io

11.3 Contact

Siliqs (Guineatech)

- Website: https://siliqs.net
- Email: support@siliqs.net
- Phone: +886-2-7751-5339