JungleSIM C1H Control Hub - Datasheet

Terrarium controller without a screen: Wi-Fi, smart plugs and wireless sensors



The C1H is the controller of a JungleSIM terrarium, one per tank, for places where nobody needs a screen. It is the S1M screen module's electronics and firmware without the display and buttons. It reads the JungleSIM wireless sensors, switches up to eight Shelly smart plugs on day, night and season schedules and keeps working without the internet. Everything is set in the JungleSIM app.

Features

- Up to 8 Shelly smart plugs (light, heater, mister, rain, fogger, fans), switched over the local Wi-Fi
- JungleSIM wireless sensors over ESP-NOW (no router needed between sensor and C1H)
- Day, night and season targets; alerts in the app for too hot, too cold, too humid, too dry, sensor lost, plug lost
- Feeding plan and care reminders in the app
- Wi-Fi setup without buttons: WPS for two minutes at power-up when no known network is found
- Real-time clock with backup cell: schedules keep running after a power cut, also offline
- microSD card for settings and logs
- Firmware updates over the air; the C1H also updates its sensors
- Small and plain: 63.2 x 65.2 x 13.8 mm, no text, wall mounting with two keyholes

Electrical

Parameter	Value
Supply	5 V DC (4.75-5.25 V) via USB-C, sink only (CC 5.1 k to GND)
Current	typ. 0.1 A, max. 0.5 A (Wi-Fi transmit peaks)
Recommended power supply	CE-marked USB power supply 5 V, 1-3 A, to EN IEC 62368-1
Internal rail	3.3 V, synchronous buck AP63203 (2 A)
USB data	USB 2.0 full speed (service only), ESD protection USBLC6-2SC6
Protection class	III (SELV), circuits ES1 / PS1 to EN IEC 62368-1
Backup cell	CR2032 lithium coin cell, 3 V, in a holder inside the screwed case

Radio

Parameter	Value
Module	Espressif ESP32-S3-WROOM-1 (CE type-examination certificate, Eurofins NB 0980)
Standard	IEEE 802.11 b/g/n (2.4 GHz, 20 MHz), ESP-NOW

Parameter	Value
Frequency band	2400-2483.5 MHz (channels 1-13)
Max. transmit power	20 dBm e.i.r.p. (firmware limit)
Antenna	PCB antenna on the module, max. gain 2.33 dBi
Bluetooth	present in the module, switched off by the firmware
Security	WPA2-PSK Wi-Fi via WPS push button on the router; TLS with certificate check to the cloud and the update server

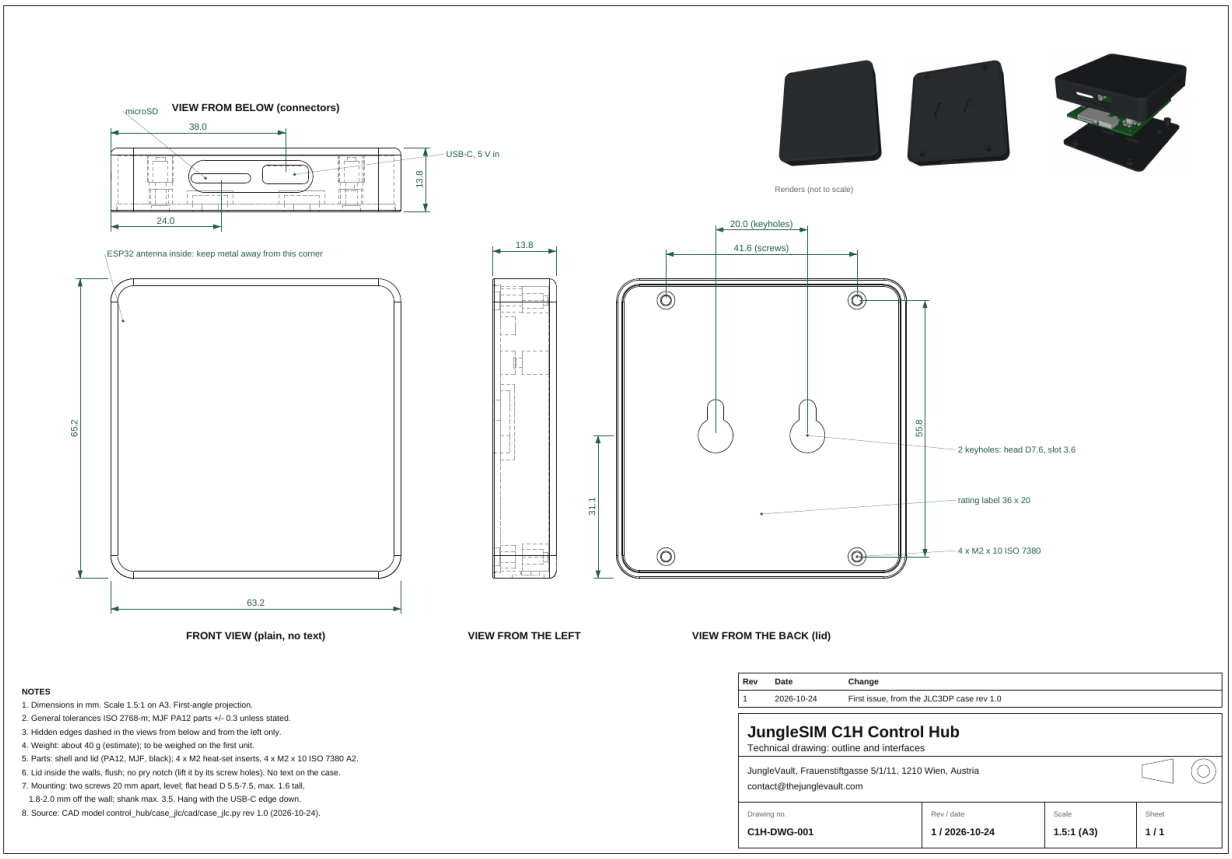
Clock and storage

Parameter	Value
Clock	DS3231M, +/- 5 ppm (about 2.6 minutes a year), set from the internet when online
Storage	microSD, push-push socket, FAT32, up to 32 GB
Factory reset	power up 5 times in a row, each time for less than 10 s, or from the app

Mechanical and environment

Parameter	Value
Dimensions	63.2 x 65.2 x 13.8 mm
Weight	to be weighed on the first unit
Case	PA12 nylon, MJF printed, black; lid inside the walls, 4 x M2 screws into heat-set inserts
Mounting	2 keyholes 20 mm apart (flat screw head 5.5-7.5 mm, max. 1.6 mm tall) or lying flat
Connectors	USB-C and microSD in the bottom edge
Ingress protection	IP20, indoor use in dry rooms
Operating	0 to 40 °C, max. 85 % RH, non-condensing
Storage	-10 to 50 °C

Drawing



Outline drawing C1H-DWG-001 rev 1 (the A3 drawing is a separate download)

Ordering information

Item	Contents
JungleSIM C1H Control Hub	C1H in its case, USB-C cable, quick guide, safety sheet, claim-code sticker

Compliance

CE (RED 2014/53/EU, RoHS 2011/65/EU). Marked with the crossed-out wheelie bin (WEEE 2012/19/EU). Manufacturer: JungleVault, Frauenstiftgasse 5/1/11, 1210 Wien, Austria, contact@thejunglevault.com.

Specifications may change; the newest datasheet is on thejunglevault.com.

Revisions

Rev	Date	Changes
1	2026-10-24	First issue, hardware rev 1.4, JLC3DP case rev 1.0.