

INKORA

User Manual

Firmware 1.1.7

INKORA

DIY e-ink calendar

Easy assembly without glue or screws

Just insert the parts into the case and it's done.
As easy as **LEGO** or **IKEA**.

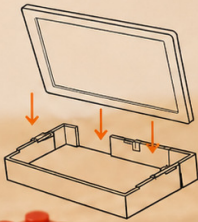
**No glue**
Nothing needs to be glued

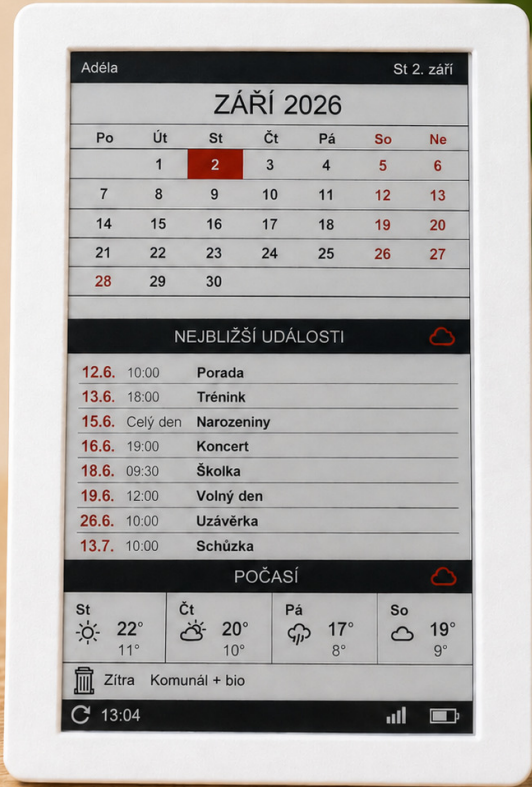
**No screws**
Nothing needs to be screwed

**Just insert the parts**
Insert and use

**As easy as LEGO or IKEA**

**No programming**
Setup via the web





Simple assembly without soldering or programming.

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Quick first-installation guide

- 1 Connect Inkora to a computer using a USB data cable.
- 2 Open the [Inkora web installer](#) in Chrome or Edge.
- 3 Flash the setup firmware and wait for confirmation that the installation completed successfully.
- 4 Press the lower button on Inkora so that the installer can identify the hardware.
- 5 Connect to the INKORA-XXXXXX Wi-Fi network using the credentials shown on the display or in **Logs & Console**.
- 6 Open the displayed Inkora address and complete the installation wizard.
- 7 After the restart, configure the language, region, time, calendars, weather, waste collections, and quiet hours.
- 8 Select **Save and finish**, then wait for the first complete display refresh.

For detailed instructions, including recovery when the display cannot be detected, see Chapter 4.

1. What is Inkora

Inkora is a family e-ink calendar based on the ESP32-S3 microcontroller. At regular intervals it wakes up, connects to the saved Wi-Fi network, downloads calendar and optional weather data, redraws the display, and returns to deep sleep.

Inkora can:

- display events from Google Calendar;
- display events from Apple/iCloud calendars through CalDAV using an app-specific password;
- combine events from multiple selected calendars;
- display a monthly calendar and up to eight upcoming events;
- display a four-day weather forecast;
- notify you about up to six recurring waste collections;
- display regional public holidays and, where available, name days;
- work with different languages, regions, time zones, and date formats;
- update itself automatically;
- use the most recently saved data when the internet is unavailable.

2. Supported hardware

Supported controller boards:

- LaskaKit ESPink 3.6;
- Seeed Studio EE05.

Supported 7.5-inch e-ink displays:

- Waveshare 7.5-inch BWR, 800 x 480 pixels;
- GoodDisplay GDEM075F52 7.5-inch.

The installer must know the correct board and display combination. If automatic display detection fails, select the display manually only when you are certain of its exact model. An incorrect profile may result in failed or incorrect rendering.

PSRAM is helpful but is not required for normal use. The installation check shows it for diagnostic purposes only.

3. What you will need

- an assembled Inkora with a supported board and display;
- a USB data cable, not a charge-only cable;
- a stable USB power source;
- a computer with Chrome or Edge and Web Serial support;
- a 2.4 GHz home Wi-Fi network with internet access;
- a Google and/or Apple account, if required;
- an app-specific password for an Apple account.

Do not disconnect the USB cable or switch off the power during installation.

3.1 Physical assembly

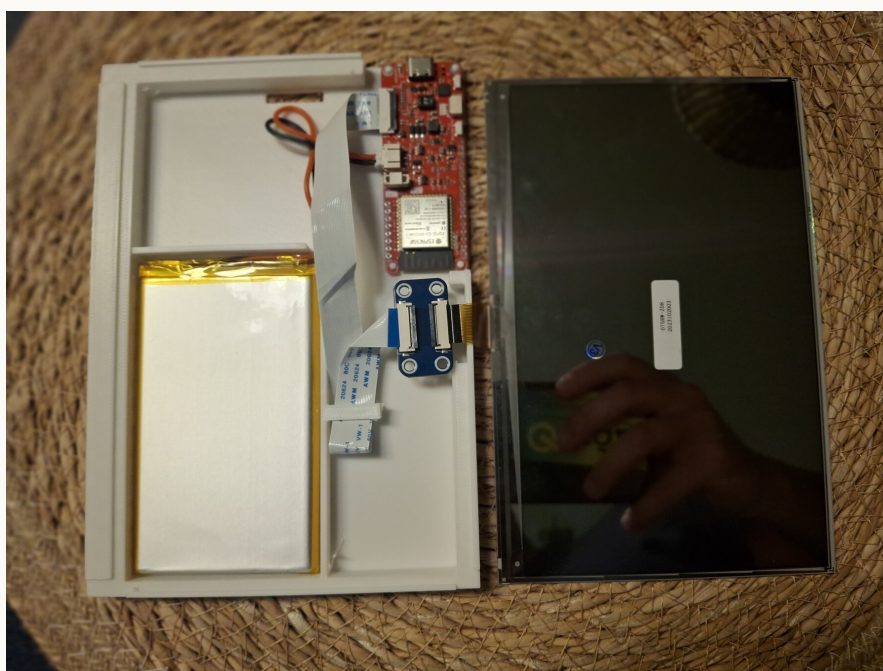
Use the enclosure variant intended for your controller board and display. The parts fit together without glue, and the electronics do not need to be soldered or screwed in place.



Front and rear enclosure parts before the components are installed.



Example of the connected components before installation in the enclosure. Do not sharply bend the display flex cable.



Example component placement. Use the enclosure variant intended for your controller board and display, and route the cables so that the enclosure cannot pinch them.

After checking the cable routing, place the display into the front part and carefully close the snap-fit enclosure. Then continue with the first installation over USB.

4. First installation over USB

4.1 Flashing the setup firmware in a web browser

- 1 Connect Inkora to the computer using a USB data cable.
- 2 Open the [official Inkora web installer](#) in Chrome or Edge.
- 3 Click **Install setup firmware**.
- 4 Select **Connect** in the installation window.
- 5 Select the USB device corresponding to Inkora, confirm the connection, and start installing the **Inkora Setup** firmware.
- 6 If the installer asks to erase the previous device contents, confirm the operation.
- 7 Keep the USB cable connected and do not switch off the power while the firmware is being flashed.
- 8 Wait for the web installer to report that the installation completed successfully.

USB installation requires HTTPS and Web Serial support. If the browser does not offer the connected device, use a computer with an up-to-date version of Chrome or Edge. A phone can be used for the following Wi-Fi setup, but USB installation support depends on its operating system, browser, and ability to connect USB devices.

4.2 Physical controller identification

After the firmware has been flashed successfully, press the **lower button** on Inkora.

This step is required. The setup firmware uses the pressed button to identify the controller safely. Until the lower button is pressed, it waits without a time limit and does not start the setup Wi-Fi or WebUI.

After identification, Inkora attempts to determine the connected display model automatically.

If the display is detected correctly

The e-ink display shows:

- the setup Wi-Fi name in the form INKORA-XXXXXX;
- the password for this network;
- the address `http://192.168.4.1`.

Connect the computer or phone to the displayed Inkora network and open the following address in a browser:

`http://192.168.4.1`

The computer or phone may warn that the network has no internet access. This is expected because it is a local connection to Inkora. Stay connected to this network.

If the display model is not detected

If the installer cannot identify the display model safely, it will not guess. It may therefore be unable to draw the connection details on the display. In this case:

- 1 Return to the web installer window used to flash the firmware.
- 2 Open **Logs & Console**.
- 3 Find the block beginning with Inkora Setup.
- 4 Note the values shown next to SSID, Password, and URL.
- 5 Connect the computer or phone to the Wi-Fi network shown as SSID, using the value from Password.
- 6 Open the address shown as URL, normally `http://192.168.4.1`.
- 7 Continue in the installation wizard until **Choose firmware**.
- 8 Open **Advanced installation** and confirm the warning.

9 In the manual display selection, choose the exact connected model:

- **Waveshare 7.5-inch BWR 800 x 480**; or
- **GoodDisplay GDEM075F52 7.5-inch**.

10 Click **Apply and test**.

11 Continue only after the installer confirms that the display was tested successfully.

If the credentials are not visible in the console, restart the installer, leave **Logs & Console** open, and press the lower button again. Do not select a display by trial and error; check the exact panel model first.

An incorrect selection may result in failed or incorrect rendering. If you cannot confirm the exact display model, do not continue with the installation.

4.3 Five steps of the installation wizard

Step 1 - Device check

After the required physical identification, the installer checks:

- the ESP32-S3 chip;
- flash memory size;
- PSRAM presence as diagnostic information;
- the result of Inkora hardware identification;
- the connected e-ink display and its response.

If Inkora does not respond to the lower button, the installation wizard will not start. Restart the installer and repeat Section 4.2. If the display is not detected, follow the **Logs & Console** and manual selection procedure in that section.

Step 2 - Home Wi-Fi

- 1 Wait for the network scan to finish.
- 2 Select your home Wi-Fi network.
- 3 Enter its password.
- 4 Select **Connect**.

The Wi-Fi credentials are stored locally on the device only.

This step also offers optional anonymous technical installation statistics. No installation telemetry is sent unless you explicitly select this option. See the Privacy chapter for details.

Step 3 - Language and region

Select the interface language and regional data. Language and region are independent choices. For example, the German interface can be combined with the Austrian region.

The region primarily controls public holidays and name days. The time zone is selected later in the main wizard and does not have to match the region's default zone.

Step 4 - Firmware version

The default choice is **Public**, the stable channel intended for normal use. **Beta** is available in Advanced installation and may contain newer but less thoroughly tested changes.

Step 5 - Review and installation

- 1 Review the language, region, Wi-Fi, and update channel.
- 2 Keep the device connected to USB.
- 3 Select **Install Inkora**.
- 4 Wait while the firmware is downloaded, verified, and written.

5 The device restarts automatically when finished.

4.4 Continuing to the main wizard

After restarting, the installer attempts to continue over the home network. Check that the phone or computer has reconnected to your home Wi-Fi. If the handoff over the home network fails, Inkora uses its own INKORA-XXXXXX network and shows the required connection details on the display.

5. Initial Inkora setup

The main wizard temporarily stores unfinished selections in the current browser. The device configuration is saved permanently only after final confirmation.

5.1 Wi-Fi

If Inkora does not yet have a working home network connection, the wizard offers:

- manual network name entry;
- scanning for available networks;
- password entry;
- saving and testing the connection.

Inkora uses 2.4 GHz Wi-Fi. If the connection fails, confirm that the network provides 2.4 GHz access and compatible security. See Troubleshooting for additional advice.

5.2 Language, region, and display preferences

Configure:

- interface language;
- regional data;
- time zone;
- first day of the week;
- 12-hour or 24-hour time;
- short date format;
- header date format;
- Celsius or Fahrenheit.

Supported languages

- Czech (cs-CZ)
- Slovak (sk-SK)
- English (en-GB)
- English - United States (en-US)
- German (de-DE)
- Spanish (es-ES)
- French (fr-FR)
- Dutch (nl-NL)
- Polish (pl-PL)

Supported regional packs

- Czechia
- Slovakia
- Germany - nationwide data
- Austria - nationwide data
- United Kingdom - England and Wales

- United States - federal holiday dates
- Spain - nationwide public holidays
- Metropolitan France
- Netherlands
- Poland
- No regional data

A regional pack may not include every local, state, or provincial holiday. For example, the United States pack contains federal holiday dates, while the German and Austrian packs contain nationwide data.

Time zone

Inkora offers all 598 supported IANA time zones. The browser first attempts to detect the current zone automatically. Inkora then stores a specific zone, for example:

- Europe/Prague
- America/Los_Angeles
- America/New_York
- Pacific/Honolulu

Check the automatic choice carefully if you are setting up Inkora away from its future location, using a VPN, or using a browser device with an incorrect time zone. The selected zone includes the relevant daylight-saving rules.

First day of the week

You can choose:

- Monday;
- Sunday.

This selection changes the order of columns in the monthly calendar.

Time and date format

Time:

- 24-hour, for example 23:30;
- 12-hour, for example 11:30PM.

Short event date:

- day-month, for example 24.10.;
- month-day, for example 10/24.

Combining the US short date and 12-hour time produces an event date and time such as:

10/24 11:30PM

Header date:

- day before month, for example Sun 24. October;
- month before day, for example Sun October 24.

Temperature unit

You can choose:

- Celsius (°C);
- Fahrenheit (°F).

5.3 Calendars

At least one Google or Apple calendar must be connected before initial setup can be completed.

Google Calendar

- 1 Select **Connect Google**.
- 2 Start authorization.
- 3 Inkora displays a Google web address and a one-time user code.
- 4 Open the address, sign in directly with Google, and enter the code.
- 5 Grant Inkora read-only calendar permission.
- 6 Return to the Inkora WebUI and refresh the page.
- 7 After the Google account connection is confirmed, select **Continue**.
- 8 Select the calendars to synchronize and save the selection.

Your Google password is never entered into Inkora. Inkora uses the calendar . readonly permission and cannot create, change, or delete events. Up to eight Google calendars can be selected.

Apple/iCloud calendars

Do not use your normal Apple ID password. First create a separate app-specific password in your Apple account settings.

To connect Apple/iCloud calendars:

- 1 Select **Connect Apple**.
- 2 Enable Apple synchronization.
- 3 Enter the Apple ID email address.
- 4 Enter the app-specific password.
- 5 Save the account.
- 6 Start calendar discovery.
- 7 Select the required calendars and save the selection.

Up to eight Apple calendars can be selected. A calendar name and CalDAV URL can be entered manually for nonstandard cases. Most users do not need this fallback option.

5.4 Weather

Weather is optional.

- 1 Enable **Show weather**.
- 2 Enter a city or municipality.
- 3 Save the settings.

Inkora finds the location through Open-Meteo and stores its coordinates. The display shows a four-day forecast with a weather icon and maximum and minimum temperatures. The unit follows the Celsius/Fahrenheit setting.

If you do not want weather information, leave it disabled. The four weather fields on the display remain empty. Changing the location name in settings automatically enables weather display, so review the option before saving.

5.5 Waste collections

Waste collections are optional and are calculated locally. They are not sent to a calendar provider or to the Inkora server.

There is always at least one configuration row, but it is disabled by default. You can create between one and six items. For each item, configure:

- whether it is enabled;
- a custom name such as Garbage, Recycling, Compost, or Bio;
- the date of one known collection;
- an interval from 1 to 366 days.

Use **+ Add another collection** to add an item. Use the cross button to remove one. The final remaining row cannot be removed, but it can be disabled.

Example for a municipality where garbage is collected weekly and compost alternates with recycling:

Name	Known starting date	Interval
Garbage	any known collection date	7 days
Compost	a known compost collection date	14 days
Recycling	a known recycling date in the alternate week	14 days

Compost and Bio may describe a similar waste category in different regions. The name is entirely user-defined, so use the wording common in your area.

Inkora calculates future dates by repeating the selected interval from the starting date. It does not know about irregular changes caused by public holidays, local exceptions, or one-off schedule changes. Adjust the starting date when such a change occurs.

5.6 Quiet hours

Quiet hours are optional. The suggested default interval is 21:00-06:30.

During quiet hours, an automatic wake:

- does not enable Wi-Fi;
- does not download calendar or weather data;
- does not check for updates;
- does not refresh the e-ink display;
- returns the device to sleep until the end of the configured interval.

If the next regular wake would occur during quiet hours, sleep is extended until the end of that period. Manual refresh, setup mode, and factory reset remain available. If Inkora does not have valid time, it follows the normal update cycle because it cannot determine safely whether quiet hours are active.

5.7 Completing the wizard

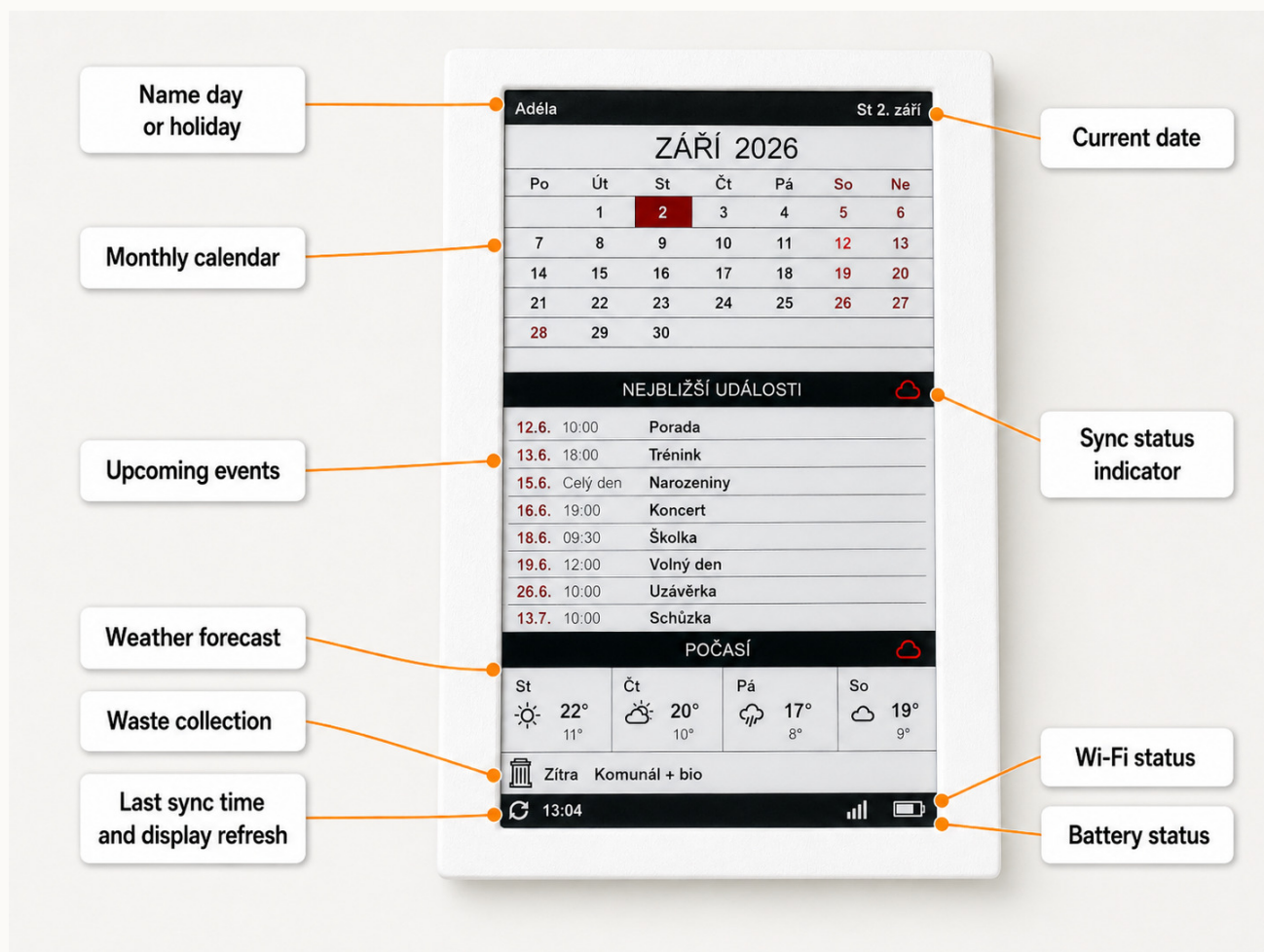
Review the summary on the final page and select **Save and finish**. Inkora then:

- 1 saves the configuration;
- 2 downloads and verifies the required language, region, and font packs;
- 3 synchronizes calendars and weather;
- 4 redraws the full display without setup information;
- 5 keeps the result page available for approximately five seconds;
- 6 closes the WebUI and enters deep sleep.

Do not interrupt final processing by submitting the form repeatedly. The firmware ignores duplicate requests while finalization is in progress.

This final step may take several minutes.

6. What is shown on the display



Overview of the main parts of the completed screen. The actual content depends on the selected region, calendars, weather, and waste collection settings.

The completed screen contains:

- a top header with the current day and date;
- name days when provided by the selected region;
- the current month name;
- a monthly calendar using the selected first day of the week;
- a highlight for the current day;
- markings for days containing events and regional public holidays;
- an **Upcoming events** section containing up to eight items;
- a four-day forecast when weather is enabled;
- the nearest waste collection reminder when configured;
- the time of the last screen refresh;
- icons for Wi-Fi signal strength and battery status.

The cloud icon next to calendars or weather helps distinguish live and fallback data. If the internet is unavailable, the screen may contain previously saved information. The time in the footer uses the selected time zone and 12/24-hour format.

7. Button controls

To refresh the display, enter setup mode, or perform a factory reset, first press the upper button briefly. Within the next approximately three seconds, begin the required command with the lower button, using the appropriate hold duration.

7.1 Button commands

Action	Result
Short press	Synchronize and redraw manually
Hold for 10 to less than 20 seconds, then release	Open setup mode and the WebUI
Hold for at least 20 seconds	Factory reset

Setup mode does not open exactly at the tenth second. Inkora waits for the lower button to be released so that it can distinguish a display refresh, setup mode, and a factory reset.

8. Opening the WebUI again

- 1 Enter setup mode using the buttons described above.
- 2 Inkora first attempts to remain connected to the saved home Wi-Fi network.
- 3 The display shows either a WebUI address on the home network or the credentials for the temporary INKORA-XXXXXX network.
- 4 Connect the phone or computer to the same home network, or directly to the Inkora network.
- 5 Open the IP address shown on the display in a web browser.

The WebUI remains available for up to approximately five minutes after setup mode starts. Activity on the page does not extend this limit. When the time expires, Inkora closes the interface and continues to sleep. Start setup mode again if more time is needed.

The local WebUI uses HTTP, not HTTPS. Access is protected by the temporary Wi-Fi password displayed on the physical screen and by your physical control of the device.

9. WebUI overview

The main page shows Wi-Fi status, the number of selected calendars, and the selected location when weather is enabled.

Calendars

- connect or manage a Google account;
- select Google calendars;
- connect or manage an Apple account;
- discover and select Apple calendars;
- test event loading.

Wi-Fi

- view the saved network name and connection status;
- scan for available networks;
- enter a new SSID and password;
- save the new network.

Enter the password again when changing networks. For security, the existing password is not displayed in the form.

Language and region

- language;
- region;
- time zone;
- first day of the week;
- time format;
- short date format;
- header date format;
- Celsius or Fahrenheit.

Changing the language or region requires internet access because the corresponding pack must be downloaded.

Weather

- enable or disable weather;
- change the city or municipality.

Waste collections

- one to six custom items;
- enable individual items;
- name, starting date, and interval;
- add and remove items.

Quiet hours

- enable or disable quiet hours;
- set the start and end time.

Device maintenance

- view the current firmware version;
- refresh the display immediately;
- check for an update manually;
- view diagnostics and export the log;
- select an update channel;
- start the setup wizard;
- remove Wi-Fi credentials;
- disconnect the Google account;
- perform a factory reset.

10. Normal operation

The default synchronization interval is 60 minutes and cannot be changed by the user.

During a regular wake, Inkora:

- 1 applies the stored local time zone;
- 2 connects to the home Wi-Fi network;
- 3 synchronizes accurate time when required;
- 4 checks for a scheduled update;
- 5 downloads events and weather;
- 6 calculates public holidays, name days, and waste collections;
- 7 redraws the display;
- 8 returns to deep sleep.

The next interval is measured from entry into deep sleep. The actual time between two displayed updates is therefore the configured interval plus the time needed to connect, download, and render.

Operation without internet access

Inkora does not enter setup mode automatically when Wi-Fi is unavailable. It attempts to use the saved event and weather cache, renders available data, and retries the connection during the next wake.

To repair Wi-Fi, press the upper button and then hold the lower button for 10 to less than 20 seconds. Release it to open setup mode.

Low battery

When the battery is critically low, Inkora limits its activity and enforces a sleep interval of at least 180 minutes. This protects the battery and reduces energy-intensive display refreshes.

11. Firmware updates

11.1 Update channels

- **Public** - stable production releases recommended for normal use;
- **Beta** - optional testing of newer changes.

11.2 Automatic update checks

By default, Inkora checks for updates once per day during the first regular wake after 18:00 local time. The check requires:

- an internet connection;
- valid local time;
- a wake outside active quiet hours.

If these conditions are not met, the update check does not run during that cycle. Inkora tries again during a later suitable wake.

11.3 Manual check

- 1 Open setup mode.
- 2 In **Device maintenance**, select **Check for updates now**.
- 3 Inkora verifies the version, update channel, and firmware compatibility with the device.
- 4 If a newer compatible version is available, Inkora downloads and verifies it.
- 5 The device restarts after a successful update.

A message saying that no update is available may mean that the server does not provide a higher compatible version for the active channel and the specific Inkora variant. Updating is not based on the version number alone. The release must also match the update channel and device hardware.

11.4 Update security

Inkora uses A/B updates. A new version is written to the inactive application partition. Before activation, Inkora verifies:

- the permitted HTTPS server;
- package size;
- SHA-256 of the complete package;
- signature footer structure;
- the RSA-2048/SHA-256 signature.

If verification fails, the update is not activated and the current firmware remains available. Language, region, font, and display packs are signed and verified in the same way.

12. Diagnostics

The **Diagnostics** page can show:

- the last critical error;
- a stable error code;
- a localized explanation;
- a numeric detail such as an HTTP status;
- the source and technical message;
- the error time when time was synchronized;
- the current diagnostic log from RAM.

Selecting **Export log** downloads `eka_lendar - logs .txt`. It also contains basic memory and Wi-Fi information, Google connection status, and the number of selected calendars.

Diagnostics are not sent anywhere automatically. Review the export before sharing it. It is not intended to contain passwords or tokens, but it may contain technical addresses, calendar names or identifiers, the selected language or region, timestamps, and error information.

13. Disconnecting accounts and deleting settings

Deleting Wi-Fi credentials

Select **Delete Wi-Fi** under dangerous actions and confirm the prompt. Inkora removes the saved SSID and password. The network must be configured again before normal use.

Disconnecting Google

Disconnect Google removes local OAuth credentials and the Google calendar selection. To revoke access completely, also remove the Inkora application in the security settings of your Google account.

Disconnecting Apple

Disable or remove the Apple connection on the Apple management page. To revoke access completely, also revoke the relevant app-specific password in your Apple account settings.

Factory reset

A factory reset can be started from the WebUI, or by pressing the upper button and then holding the lower button for at least 20 seconds. It removes:

- user configuration;
- Wi-Fi credentials;
- Google tokens and calendar selection;
- Apple credentials and calendar selection;
- event and weather cache;
- the diagnostic record.

Inkora's technical hardware settings may remain saved so that the device does not use an incorrect display profile after the reset. Clean initial setup starts after the reset.

14. Privacy

Google

Inkora communicates directly with Google OAuth and the Google Calendar API. The Inkora server does not receive calendar contents. Access tokens are stored locally on the device.

Apple

Inkora communicates directly with `caldav.icloud.com`. The Apple ID, app-specific password, calendar addresses, and events do not pass through the Inkora server and are stored locally.

Weather

The location name is sent to Open-Meteo during search. Its coordinates are sent when forecast data is requested.

Inkora server

The Inkora server provides:

- setup firmware;
- update checks and downloads;
- language, region, font, and display packs.

Your calendar contents do not pass through it.

Optional installation telemetry

Only after explicit consent, installation telemetry may include:

- the installation event type and result;
- installer and firmware versions;
- interface language;
- flash size and PSRAM presence;
- display test result;
- a technical error code after a failure.

It does not contain the MAC address, Wi-Fi SSID or password, Google or Apple credentials, calendars, events, location, or a stable device identifier.

15. Security limitations

Internet communication uses HTTPS and certificate validation. Certificate validity depends on correct time, so Inkora may synchronize time through NTP after a cold start.

The local WebUI uses HTTP inside the temporary network or home LAN. Start setup only in a trusted environment and do not share credentials shown on the display with unauthorized people.

Inkora does not use ESP-IDF Secure Boot, hardware eFuse locking, or Flash Encryption. A person with physical access and suitable equipment may be able to read flash contents or reprogram the device over USB. Protect the device from unauthorized physical access.

16. Troubleshooting

The WebUI does not open

- Check that no more than five minutes have passed since setup mode started.
- Check the address shown on the display.
- When using the home LAN, the phone or computer must be connected to the same network.
- When using INKORA-XXXXXX, ignore warnings about missing internet access and remain connected.
- Open `http://192.168.4.1` or the address shown on the Inkora display; do not use `https://`.
- If the setup window expired, start setup mode again.

Inkora cannot connect to Wi-Fi

- Check the SSID and password, including letter case.
- Use a network available in the 2.4 GHz band.
- Move Inkora closer to the access point.
- Temporarily disable client isolation, captive portals, or other IoT network restrictions.
- If a combined 2.4/5 GHz network fails, try a separate 2.4 GHz SSID.
- If modern WPA3 mode fails, try compatible WPA2 or a mixed access-point mode.
- Change the network in the Wi-Fi section of setup mode.

Use an open unsecured network only as a brief diagnostic test, never as a permanent solution.

Manual update says that no update is available

- Check the active Public/Beta channel.
- Check that the server release is intended for your Inkora variant.
- Inkora must have internet access and valid time.
- The new version number must be higher than the installed version.
- If the check still fails, export diagnostics and record the installed version, channel, and display type.

Weather is not displayed

- Check that weather is enabled.
- Check the location name.
- Internet access is required to save a new location.
- During an outage Inkora may display cached data; without live or saved data the section remains empty.

A calendar does not synchronize

- Check the internet connection and correct time.
- Confirm that the account is still connected.
- Confirm that at least one calendar is selected.
- Google authorization may need to be renewed.
- For Apple, check the app-specific password; the normal Apple ID password cannot be used.
- Look for E4xxx or E5xxx codes in Diagnostics.

Time or date is shifted

- Check the specific time zone, not only the region.
- In the United States, choose the zone for the actual location, for example America/Los_Angeles for Seattle.
- Check the 12/24-hour time and short date format.
- Refresh the display manually after changing the setting.

The display did not refresh

- E-ink retains the previous image even without power.
- Press the upper button briefly and, within the next approximately three seconds, press the lower button briefly for a manual refresh.
- Check the power supply, display connection, and correct hardware profile.
- If the installer did not detect the display, verify the selected model.
- Look for errors E1101 to E1103.

Inkora appears to be stuck

- Normal deep sleep is expected and is not visually apparent on the display.
- If an e-ink refresh or firmware update is in progress, do not disconnect power.
- If Inkora does not respond after a reasonable time, restart its power supply.
- Then open setup mode and export diagnostics.
- If the firmware cannot start, perform USB recovery.
- Check whether the display cable is damaged or loose.

17. Error codes

Error codes are identical in every language. When requesting support, you can report only the code, for example E4004, and any numeric detail.

Code	Meaning	Recommended check
E1001	LittleFS internal storage could not be mounted	Restart or recover over USB
E1002	Configuration could not be loaded	Setup mode or factory reset
E1101	Display module initialization failed	Wiring and hardware profile
E1102	E-ink display initialization failed	Display model and cable connection
E1103	Display buffer could not be allocated	Restart and check the installed firmware
E2001	Wi-Fi connection failed	SSID, password, 2.4 GHz, and security mode
E2002	Wi-Fi connection was lost	Signal strength and network stability
E2003	Setup network could not be started	Restart and repeat setup
E2101	Time synchronization failed	Internet access, NTP, and firewall
E3001	Language pack is missing	Internet access and saving the language again
E3002	Language pack is invalid	Download it again or update the firmware
E3003	Language pack download failed	Internet access and server availability
E3201	Region pack is missing	Internet access and saving the region again
E3202	Region pack is invalid	Download it again or update the firmware
E3203	Region pack download failed	Internet access and server availability
E4001	Google configuration is missing	Connect Google again
E4002	Google authorization is required	Connect the account again
E4003	Google token refresh failed	Disconnect and reconnect Google
E4004	Google Calendar API request failed	Internet access, service status, and diagnostics
E4005	Google denied access	Account permissions and a new connection
E5001	Apple credentials are missing	Apple ID and app-specific password
E5002	Apple/iCloud authorization failed	App-specific password validity
E5003	iCloud calendar discovery failed	Account, internet access, and CalDAV
E5004	Apple calendar download failed	Internet access and iCloud status
E5005	Invalid iCloud/CalDAV response	Diagnostics and retrying later
E6001	Weather location is missing	Set a location or disable weather
E6002	Weather request failed	Internet access and Open-Meteo
E6003	Invalid weather response	Save the location again or retry later
E7001	OTA manifest could not be loaded	Internet access, update channel, and server
E7002	Firmware download failed	Connection stability
E7003	Update verification failed	Do not continue; download it again later
E7004	OTA write or finalization failed	Restart, diagnostics, or USB recovery
E7005	Insufficient memory or space for OTA	Restart or USB recovery
E9999	Unclassified error	Export complete diagnostics

18. Recovery over USB

Use USB installation when:

- the device cannot start normally;
- OTA repeatedly fails;
- the configuration or storage has become corrupted;
- the correct display model must be selected again;
- the device is being prepared for a new user.

The procedure is the same as for the first installation. A complete reinstall may require Wi-Fi and accounts to be configured again. Before recovery, note the selected calendars, weather location, waste schedules, and display formats.

19. Quick checklist

After completing setup, check that:

- ☐ Inkora is connected to the correct 2.4 GHz Wi-Fi network.
- ☐ The correct language and region are selected.
- ☐ The time zone matches the device's physical location.
- ☐ The first day of the week, date, and time use the required formats.
- ☐ Temperature uses the correct unit.
- ☐ At least one Google or Apple calendar is connected.
- ☐ The correct calendars are selected.
- ☐ Weather is configured or intentionally disabled.
- ☐ Waste collections have the correct starting date and interval.
- ☐ Quiet hours are configured as required.
- ☐ Current information is visible on the display after setup.
- ☐ The required update channel is selected.