

USER MANUAL

SparkVision Glasses 2 Ultra

1. General Information

 Read this manual before using the product.

 Pay attention to all warnings and precautions.

This manual applies to the following product:

Field	Details
Product name	SparkVision Glasses 2 Ultra
Model/type	SparkVision Glasses 2 Ultra
Product category	Non-medical assistive consumer product
Bundle accessory	SparkVision Smart Ring, supplied as a compatible control accessory with this SparkVision bundle.
Companion application	SparkVision Assistant for Android
Product identifier	The serial number, product ID, batch number, Glasses ID, or other product identifier appears on the product packaging, application, or accompanying documents.
Manufacturer	"SPARK VISION IS" Ltd.
Manufacturer address	Sofia, 1164, Lozenets district, "Krum Popov" 1 str., Bulgaria
VAT	BG206677712
Website	https://sparkvision.tech
EU Declaration of Conformity	SparkVision Glasses 2 Ultra EU Declaration of Conformity

The following symbols are used in this manual, on the product, or on the packaging:

Symbol	Description
	Warning or caution. Read the related safety instruction before use.
	Read the user manual before use.
	Manufacturer.
	Catalogue or model reference.
	Serial number or product identifier.
	Fragile. Handle with care.
	Keep away from heat and direct sunlight.
	Keep dry.
	CE mark. Product conformity with applicable European requirements.
	Do not dispose of with household waste. Use authorised electrical and electronic waste collection.

2. Intended Use

SparkVision Glasses 2 Ultra are a non-medical assistive consumer product. The product captures visual and audio information, processes selected information locally or through the SparkVision Assistant app and SparkVision services, and provides spoken output to support everyday information access.

This product is not a medical device. It is not intended to diagnose, prevent, monitor, treat, alleviate, or compensate for disease, injury, or disability. It is not a safety device, navigation device, emergency device, payment verification device, food-safety device, or legal/financial decision tool.

The product is intended for use by people who want spoken access to visual information, including users with visual impairments. Use by children or vulnerable users should be supervised by a responsible adult or caregiver.

3. Package Contents and Compatible Accessories

The SparkVision Glasses 2 Ultra bundle includes the SparkVision assistive software configuration, the SparkVision Smart Ring control accessory, and the SparkVision Capsule Battery. The standard glasses package includes:

- SparkVision Glasses 2 Ultra.
- One pair of long nose pads.
- One pair of short nose pads.
- Glasses storage case.
- Magnetic charging cable.
- SparkVision Capsule Battery, 1700 mAh external battery.
- User manual or product information.

The SparkVision bundle also includes the SparkVision Smart Ring and any ring charging or fitting accessories supplied with that bundle.

The SparkVision Smart Ring package includes:

- Hard-back zip travel case.
- Five stretch-fit rings for different finger sizes.
- Portable protection for the ring.
- Fast charging clip, with full ring charge in about 60 minutes.
- 1 m USB-A to USB-C charging cable for the charging clip.
- SparkVision Smart Ring module with supplier-stated IP67 water and dust protection.

Use only certified chargers, cables, and accessories in good condition. Do not use damaged, modified, wet, or visibly worn accessories.

4. Device Overview

- **Camera:** captures images for recognition and description features.
- **Microphones:** capture voice commands, call audio, and voice-assistant input when those features are used.
- **Speakers:** provide spoken output and system sounds.
- **Temple button:** selects options, pauses or resumes speech, exits modes when held, and powers the glasses off when held for about five seconds.
- **Touch slider:** moves through menus and spoken results. Touch and hold to start or stop the voice assistant.
- **SparkVision Smart Ring:** provides compatible remote control for menu navigation, selection, pause/resume, and exiting functions.

5. Charging and Power

- Charge the glasses and Smart Ring fully before first use.
- The glasses contain a rechargeable lithium-ion battery with a nominal capacity of 210 mAh.
- Use the supplied magnetic charging cable for the glasses and a certified 5 V USB power source in good condition. Glasses 2 Ultra supports fast charging when used with compatible supplied or SparkVision-approved charging accessories.
- The bundled SparkVision Capsule Battery (1700 mAh) provides up to 6 additional charges, extending typical use to up to about 12 hours, depending on mode, volume, wireless connection, battery age, and environment. Charge the Capsule Battery with a certified 5 V USB power source in good condition.
- Do not charge in wet, humid, dusty, or condensing environments.
- Do not puncture, bend, crush, heat, burn, or open the battery or product housing.
- If the glasses or ring become unusually hot, smell unusual, change shape, leak, or show visible battery swelling, stop using them and contact SparkVision.
- Batteries are not user-replaceable.
- Charge the SparkVision Smart Ring with its charging clip and USB-A to USB-C cable connected to a certified 5 V USB power source. The ring supports fast charging, with full charge in about 60 minutes. Typical Smart Ring battery life is up to 5 days of use or up to 20 days standby, depending on use and battery age.
- Wipe sweat, dust, and moisture from the Smart Ring and charging clip before charging.
- Do not expose the Smart Ring charging clip to water, rain, liquids, or snow.
- Do not use a damaged or modified Smart Ring, charging clip, cable, or power source.
- The glasses revert to the previous working software version if a manual software or firmware update fails.

6. Companion App Setup

The SparkVision Assistant app for Android is used for account setup, Bluetooth pairing, online features, assistants, face registration, voice settings, translation, work mode, ring setup, and software-related settings.

An account is required. Internet access is required for setup and for online features. Some features require account status, service availability, or paid access outside in-app purchases. Features are subject to change after software updates.

Connect SparkVision Glasses 2 Ultra

1. Install and open the SparkVision Assistant app on an Android phone.
2. Sign in or create an account.
3. Open Devices or choose the option to use SparkVision Glasses 2 Ultra.
4. Grant Bluetooth and nearby-device permissions when requested.
5. Turn on Bluetooth. If Android asks for Location services for nearby Bluetooth scanning, enable them.
6. Tap Start scanning.
7. Keep the glasses near the phone. If the app requests the pairing action, fold the right arm and press the hardware button three times quickly.
8. Select the discovered glasses that match your device.
9. Enter the Glasses ID printed on the glasses, packaging, or accompanying documents if requested.
10. Tap Connect glasses and follow the app instructions until setup is complete.

Connect the SparkVision Smart Ring

1. Open the companion app and choose the ring connection option.
2. Grant Bluetooth and nearby-device permissions if requested.
3. Turn on Bluetooth and keep the ring near the phone.
4. Scan for rings, choose the correct ring, and tap Pair.
5. If Android asks you to confirm pairing, confirm it on the phone.
6. If prompted, enable the SparkVision Ring Control accessibility service so ring controls continue to work when the app is minimised or the phone screen is locked.

7. Controls

Action	Control
Move forward	Slide forward on the touch slider, or push the Smart Ring forward.
Move backward	Slide backward on the touch slider, or push the Smart Ring backward.
Activate or select	Press the temple button once, or press the Smart Ring once.
Pause or resume speech	Press the temple button once, double-tap the slider, press the Smart Ring once, or push the Smart Ring left or right.
Exit current option	Press and hold the temple button or Smart Ring until the option exits.
Voice assistant	Touch and hold the slider with one finger until the listening chime.

8. Moving Through the Menu

When the glasses start, they announce the first option in the main menu. Move forward or backward to hear the next or previous option. The menu wraps around, so moving past the last option takes you back to the first option.

- Press to enter the current option.
- Hold to leave the current option and return to the menu.
- If speech is playing, pause or resume before moving if you need time to listen.

9. Online and Offline Modes

Offline mode processes supported tasks on the device and does not require internet. Online mode uses the phone connection and internet for more accurate processing and for features that require network access.

- Offline features include reading text, describing scenes, reading receipts, identifying food products, recognising money, finding light, naming colours, and basic transit detection.
- Online features include call-a-friend, voice assistant, enhanced recognition, navigation assistant guidance, exact transit route numbers when available, and other network-based functions.
- Work mode, language, voice, translation, and text-extraction behaviour are adjusted in the companion app settings.

Online services are subject to unavailability, delay, change, suspension, and account status. AI-supported features are included without usage limits on SparkVision Glasses 2 Ultra.

10. Main Functions

- **Read Text:** reads printed or displayed text aloud.
- **Multi-page Read:** captures several pages and reads them in order.
- **Describe Environment:** describes the scene, objects, people, layout, signs, and visible hazards.
- **Continuous Scene Description:** keeps describing what the camera sees while the mode is active.
- **Food Products:** identifies visible product information, price, expiry date, ingredients, warnings, and allergens.
- **Receipts:** reads visible store name, date, purchased items, prices, and total.

- **Money:** identifies visible banknotes or coins and estimates the total visible amount.
- **Light:** announces brightness and visible light-source direction.
- **Colours:** identifies the main colour or colours of the object in front of the camera.
- **Transit:** detects buses, trams, and trolleybuses; online mode also reads route numbers when available.
- **Navigation Assistant:** provides spoken walking guidance to a destination, together with the SparkVision app on the mobile device.
- **Date and Time:** announces the current date and time.
- **Call a Friend:** starts a live assistance call with a linked assistant.
- **Voice Assistant:** accepts spoken requests and answers using AI-supported services.
- **Settings:** battery, volume, playback speed, translator, image capture, restart, help guide, and language.

All functions are informational only. Outputs may be incorrect, incomplete, delayed, unavailable, or affected by lighting, motion, framing, image quality, network status, service availability, or software limitations.

11. Using Each Function

Read Text

Hold the text about 30 to 40 cm in front of the camera. Use good lighting and keep the item steady. Press to capture. When Help centering is selected in Settings, you hear "Follow the instructions to center the text correctly". Hold the document flat and facing the camera and follow the short spoken commands — move the document left, right, up, or down, move closer, or move farther away. A repeating tone means no text is visible yet, and you may also hear warnings about glare or low light. When you hear "hold steady", keep the document still: the photo is taken automatically and read aloud. If you are sure the document is well positioned, press the temple button once to capture immediately. While listening, move forward to skip to the next sentence and move backward to return to the previous sentence. Pause or resume at any time. Hold to exit.

Multi-page Read

Press once for each page you want to capture. Double-tap when you are done capturing pages and want listening to begin. Move between pages or sentences with forward and backward controls. Hold once to exit page view, and hold again to exit the option.

Describe Environment

Face the scene you want described and press. The glasses may describe nearby objects, objects farther away, signs, stairs, holes, obstacles, and other visible hazards. Descriptions are informational only and must not be used as the only basis for movement, crossing roads, avoiding hazards, or making safety decisions.

Continuous Scene Description

Use this mode only when it is safe to do so. The camera continues describing what it sees. Press for a new instant photo and description. Stop moving before listening to or acting on information that requires attention. Hold to exit.

Food Products

Point the camera at the product label so the name, ingredients, expiry date, price, and warnings are visible. Always check the original label before eating, buying, or serving food. Do not rely on the product for allergen, expiry, ingredient, or food-safety decisions.

Receipts

Place the receipt flat or hold it straight so the full receipt is visible. The glasses may read the store, date, items, prices, and total when visible. Always check the original receipt before payment, reimbursement, accounting, or financial decisions.

Money

For the most reliable result, scan one banknote at a time. If scanning more than one, place notes side by side, not stacked. Place coins with the heads facing up. Money recognition is informational only. Always verify money independently before making or accepting payment.

Light

Start this mode to hear whether the area is very dark, poorly lit, moderate, well lit, or very bright. If a light source is visible, the glasses may say where it is located.

Colours

Hold only the item you want identified in front of the camera. Avoid other objects in the frame. Colour results may be affected by shadows, screens, reflections, camera exposure, and surrounding objects.

Transit

Use Transit to detect approaching buses, trams, or trolleybuses. You may ask for a specific route through the voice assistant, or activate the option to detect approaching vehicles. Online mode may read route numbers. Offline mode identifies vehicle type when possible.

Transit output is informational only. It may be wrong, late, incomplete, or unavailable. Do not rely on the glasses as the only basis for boarding, crossing, approaching vehicles, standing near traffic, or making travel-safety decisions.

Navigation Assistant

The glasses work together with the SparkVision app on your mobile device for walking navigation. The mobile device plans the route and measures your direction, and every sound and announcement plays through the glasses. To start, open Navigation in the app, enter where you want to go, and

choose a destination from the results. The app confirms with "starting navigation" and tells you the distance to the destination.

Hold the mobile device flat in your palm, like a small tray, with its top edge pointing straight ahead in the direction you are facing. The app measures direction from the mobile device itself, so keep it level and steady while you walk. If you drift off the line, the glasses play correction sounds: a lower tone means turn a little to the left, a higher tone means turn a little to the right, and the farther off you are, the faster the sound repeats. When you come back to the correct direction, you hear a short double beep once; after that, silence means you are walking correctly. Sound plays only when something needs your attention.

The app announces the remaining distance to the destination and to the next turn at the intervals you choose in the app settings, under Walking guidance. Turns are announced in advance, for example "in fifty meters, easy left turn", and again at the turn itself. If you walk in the opposite direction for a longer time, the app says "wrong direction, turn around" and the mobile device vibrates. After the route changes, give the app a few seconds before trusting the next instruction. This feature requires the phone companion app, location permission, and internet.

Navigation output is informational only. Satellite positioning in cities can be off by several meters, and the app cannot see obstacles, curbs, or traffic. Always use your white cane or guide dog, and your own judgment, for everything immediately around you. Do not rely on navigation as the only basis for movement, crossing roads, avoiding obstacles, or making travel-safety decisions.

Call a Friend

Move forward or backward through assistants you have linked, then press to start a call. Assistant connections are added by the user, and calls are initiated by the user from the glasses or app. Assistants cannot start a call to the glasses. During an active call, the assistant can hear you, speak with you, view the glasses camera, and receive your location if the app has permission. Hold during a call to hang up. This feature requires the phone companion app and internet.

Voice Assistant

Touch and hold the slider until you hear the listening chime. Speak naturally. You can ask a question, ask for a description, request a mode, or ask to change a setting. Touch and hold the slider again to stop the assistant. This feature requires the phone companion app and internet.

When using the voice assistant, you are interacting with AI-supported services. AI outputs may be incorrect, incomplete, delayed, or unavailable.

12. Settings

- **Battery:** announces the current battery percentage.
- **Volume:** move forward to increase volume, move backward to decrease volume, press to save, or hold to exit without saving.
- **Playback speed:** choose the speech category, adjust speed, listen to the sample, and press to save.
- **Translator:** turns translation on or off. Move forward for Yes, backward for No, and press to confirm.
- **Image capture:** chooses how Read Text takes the photo. Choose Help centering to hear spoken commands that guide you to centre the text before the photo is taken automatically, or Direct capture to take the photo immediately without guidance.
- **Restart:** restarts the glasses.
- **Help Guide:** plays spoken help for the glasses, controls, functions, settings, and tips.
- **Change language:** changes the spoken language. Available languages vary by software version.

13. Companion App Features

- Connect glasses, view connection status, battery, and last response.
- Manage glasses, Smart Ring, and connection status.
- Add or remove people for face recognition. Face photos are used for enrolment processing and are not stored by SparkVision after processing for this feature; face embeddings are stored and can be deleted by the user.
- Invite, accept, review, or remove assistant connections.
- Adjust speech engine, voice, speed, pitch, and test speech.
- Enable or disable translation and choose source and target languages.
- Choose automatic, Latin-language, or Cyrillic-language text extraction if recognition quality needs adjustment.
- Choose online or offline behaviour.

14. Getting Better Results

- Use good lighting. If unsure, use the Light option first.
- Keep text, labels, money, and receipts steady while capturing.
- For ordinary text, start at about 30 to 40 cm from the camera.
- For small receipt text, move closer while keeping the full receipt visible.
- Clean the camera area regularly.
- If a result sounds wrong, change distance, angle, or lighting and try again.

15. Warnings and Precautions

Important warnings:

- Do not use the glasses as your only navigation aid in traffic, near stairs, on platforms, near water, near vehicles, or in any hazardous place.

- Do not use recognition, description, transit, navigation, or AI outputs as the sole basis for safety, traffic, emergency, medical, medication, food, allergen, financial, legal, payment, or accessibility decisions.
- Do not use the product while driving, cycling, operating machinery, crossing roads, or performing tasks requiring full attention.
- Stop moving before using modes that require attention.
- Do not use or charge the product in wet, humid, dusty, or condensing environments.
- Do not use the product if the frame, camera, speakers, microphones, charging port, cable, battery, ring, or accessories appear damaged.
- Do not open the housing or attempt unauthorised repairs.
- Do not disassemble, modify, adjust, or repair the Smart Ring or charging clip. Service and repair must be performed only by qualified service personnel.
- Keep the Smart Ring and ring-size accessories away from small children. The Smart Ring contains small parts and a lithium-ion battery and is not suitable for children under 3 years of age.
- Do not allow children to use the Smart Ring.
- The Smart Ring contains magnetic material. Consult a qualified health professional if you use an implantable electronic device and are unsure whether magnetic material can affect it.
- Do not submerge the Smart Ring or expose it to water beyond the supplier-stated IP67 guidelines. The charging clip is not water resistant.
- Keep the product away from excessive heat, direct sunlight during storage, open flames, and strong mechanical impact.
- Respect privacy and local laws when capturing images, audio, video, text, faces, documents, addresses, payment data, restricted areas, or other sensitive information.

16. Technical Specifications

Specification	Details
Hardware platform	Snapdragon AR1 Gen 1 / RT600 MIMXRT685SFAWBR.
Wireless interfaces	Wi-Fi 6 and Bluetooth 5.3.
Weight	Approximately 38.5 g for the glasses hardware.
Hinge-to-hinge width	149 mm.
Lens height	50.6 mm.
Lens width	53 mm.
Bridge width	21 mm.
Temple length	157 mm.
Field of view	30 degrees.
Eye relief	18 mm.
Battery	Rechargeable lithium-ion battery, 210 mAh, not user-replaceable.
External battery	SparkVision Capsule Battery, 1700 mAh, up to 6 additional charges for up to about 12 hours of use.
Camera	12 MP Sony IMX681 camera, 3024 x 4032 resolution.
Camera focal length	1.9 m.
Camera aperture	F 2.25.
Camera field of view	H: 77 degrees, V: 94 degrees, D: 109 degrees.
Camera autofocus	Not supported.
Camera depth of field	Approximately 34 cm to infinity.
Camera tilt	3 degrees inward.
Memory	2 GB RAM, 32 GB storage.
Audio input	Directional microphone system, four microphones.
Audio output	2 x AAC 0920 speakers.
Controls	Temple button, touch slider, and SparkVision Smart Ring.
Water/dust protection	No SparkVision-declared IP protection rating for the glasses bundle unless stated on the product label or sales documents.
Smart Ring water/dust protection	Supplier-stated IP67 protection for the ring module. The charging clip is not water resistant.

17. Radio Parameters and Compliance

The product uses wireless interfaces for Bluetooth pairing, Smart Ring control, data transfer, and connection to the companion app. Use the product only in countries and regions where these radio interfaces are permitted.

Radio interface	Frequency information
Bluetooth	2402-2480 MHz, maximum RF power 20 dBm.
Wi-Fi 2.4 GHz	2400-2483.5 MHz, maximum RF power 20 dBm.
Wi-Fi 5 GHz U-NII-1	5150-5250 MHz, maximum RF power 23 dBm.
Wi-Fi 5 GHz U-NII-2A	5250-5350 MHz, maximum RF power 23 dBm.
Wi-Fi 5 GHz U-NII-2C	5470-5725 MHz, maximum RF power 23 dBm.
Wi-Fi 5 GHz U-NII-3	5750-5850 MHz, maximum RF power 14 dBm.
SparkVision Smart Ring	Bluetooth 2402-2480 MHz, maximum transmit power < -8.55 dBm EIRP.

The 5150-5350 MHz frequency range is restricted to indoor use in the EU and other countries where that restriction applies.

Hereby, "SPARK VISION IS" Ltd. declares that the radio equipment type SparkVision Glasses 2 Ultra is in conformity with Directive 2014/53/EU and other applicable EU requirements when used as intended and in accordance with this manual. The EU Declaration of Conformity for this model is available here: [SparkVision Glasses 2 Ultra EU Declaration of Conformity](#).

18. Maintenance and Cleaning

- Turn the product off before cleaning.
- Clean with a dry or slightly damp microfiber cloth.
- Keep the camera clean. A dirty camera can cause poor recognition results.
- Do not use solvents, alcohol, abrasive cleaners, ultrasonic cleaning, or excessive water.
- Do not allow liquid to enter openings.
- Keep software updated when updates are available.

19. Operating Conditions

- Use in dry environments.
- Avoid strong vibration, impact, dust, condensation, and direct exposure to rain.
- Do not block the camera, speakers, microphones, touch controls, or charging contacts during use.
- Do not use if the product has been dropped, crushed, exposed to liquid, or visibly damaged.

20. Storage and Transport

- Turn the product off before storage.
- Disconnect charging cables.
- Store in the protective case.
- Store in a cool, dry place without condensation.
- Avoid dropping, bending, crushing, or placing heavy objects on the product.

21. Troubleshooting

- **Glasses do not turn on:** charge the glasses, then try again.
- **Smart Ring does not respond:** charge the ring, keep it close to the phone/glasses, and check pairing.
- **No sound:** increase volume and check whether speech is paused.
- **Poor recognition:** clean the camera area, improve lighting, hold the item steady, and try again.
- **App cannot find glasses:** check Bluetooth, nearby-device permission, Location services if Android requests them, and repeat the pairing action.
- **Online feature unavailable:** check internet connection, account status, service availability, and required permissions.
- **Software update fails:** keep the product powered and try again later. If an update cannot complete, the product reverts to the previous working version. Contact SparkVision if the problem continues.

22. Privacy and Data Protection

Depending on the feature used, the glasses, Smart Ring, companion app, and SparkVision services capture or process images, audio, video, recognised text, face data, location, device identifiers, account information, assistant-call data, and technical logs. Some processing happens locally. Online features transmit data securely to SparkVision services or trusted processing providers.

- An account is required for setup and online services.

- The app is Android-only.
- Some features require paid access. Feature availability, account terms, and service limits are described in the purchase or service terms.
- Do not use the product where photography, audio recording, video transmission, or cloud processing is prohibited.
- Inform people nearby that the product captures images, audio, video, or location when those features are used.
- Use face recognition only with appropriate consent and for lawful purposes. Face photos are not stored by SparkVision after processing for this feature; face embeddings are stored and can be deleted by the user at any time through the available account or app controls.
- Assistant connections are initiated by the user. The user chooses which assistant to add, and the user starts an assistance call. Assistants cannot start a call to the glasses. During an active call, the assistant receives camera video or images, audio, and location data if the relevant permissions and services are enabled.
- Avoid capturing private documents, payment cards, passwords, identity documents, confidential business information, or restricted areas unless you have the right to do so.
- AI and recognition outputs may be incorrect or incomplete.
- Data is retained while the user account is active for the purposes of providing the service, improving services, and troubleshooting. If a user account is inactive for 6 months, SparkVision deletes the account and related personal data, unless a longer retention period is required or permitted by applicable law. Users can request deletion of their data at any time by contacting customer.support@sparkvision.tech.
- For privacy questions or data-rights requests, contact SparkVision using the details in this manual.

23. Service Life and Decommissioning

Expected service life is 2 years under normal use and compliance with this manual, unless otherwise stated in the purchase documents.

Stop using and decommission the product if there is irreversible mechanical damage, visible battery swelling, excessive heating, corrosion, damaged connectors, or any condition that may make the product unsafe.

Dispose of the product, batteries, and accessories through authorised collection points for electrical and electronic waste and battery waste. Do not dispose of them with household waste. Do not attempt to remove the glasses or Smart Ring rechargeable lithium-ion batteries unless instructed by SparkVision or an authorised service centre.

24. Warranty and Support

- Commercial warranty: 24 months from product delivery, unless different terms are stated in the purchase documents.
- The warranty covers manufacturing defects during normal use.
- The warranty does not cover misuse, unauthorised repair, water damage, impact damage, normal wear, unsafe chargers, or incompatible accessories.
- Users must not open the housing.
- Batteries are not user-replaceable and no spare battery is supplied for user replacement.
- SparkVision handles warranty and support for the SparkVision bundle. Hardware safety assessment or repair is performed by SparkVision, a qualified Rokid hardware service route, or another authorised service centre coordinated by SparkVision. For Romania, customer service and warranty handling are provided locally, with repair coordinated through SparkVision unless otherwise stated.
- This commercial warranty does not affect statutory consumer rights under applicable law.

25. Service and Contacts

Manufacturer and support contact: "SPARK VISION IS" Ltd. Sofia, 1164, Lozenets district, "Krum Popov" 1 str., Bulgaria VAT: BG206677712 Phone: +359 878 63 06 76 Website: <https://sparkvision.tech> Email: customer.support@sparkvision.tech

26. Issue and Revision Date

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