



**WTD Robot 30**

(W-R30)

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01.

## Product Overview





## About Transparent OLED

Transparent OLED (Organic Light Emitting Diode) technology is a display technology that emits light without the need for a backlight or enclosure. This enables ultra-thin screens with high transparency, seamlessly integrating into various environments.

### Key advantages of Transparent OLED include:

- Self-emissive display: Each pixel emits its own light, offering deep contrast and vibrant colors.
- High transparency: With 43% light transmissivity, the design enables a clear, unobstructed view of objects, scenes, or other digital screens located behind the display.
- Wide viewing angles: Offers a 178° viewing angle, ensuring consistent image quality and brightness from nearly any perspective.



# WTD Robot 30

The W-R30 is a 30-inch transparent OLED display with a robotic base, combining high-definition transparent visu-als with autonomous mobility, delivering a futuristic digital interaction solution.

## Self-emissive OLED Screen

- Offers vivid colors, ultra-high contrast, and deep blacks, ensuring an outstanding visual experience.

## Intelligent Navigation System

- Supports automatic route cruise mode and can adapt to various scenarios.

## Comprehensive Obstacle Avoidance

- Equipped with intelligent sensing and automatic rerouting for smooth and safe operation.

## Seamless Human-Machine Interaction

- Features capacitive touch for intuitive and responsive user engagement.

## AI Digital Human Integration

- Supports third-party digital human systems, enabling precise positioning and interactive explanations for an enhanced tech-driven experience.

## Automatic Charging System

- Powered by a lithium iron phosphate (LiFePO4) battery, ensuring safety and reliability with auto-re-turn-to-charging dock functionality when battery levels are low.

The W-R30 is ideal for showrooms, shopping malls, museums, corporate exhibitions, and more, providing an intelligent and high-tech solution for digital display and interactive experiences.



# System Architecture

The R-R55 system comprises the following key components:

## Transparent OLED Panel

- Supports HD resolution with sharp, clear images.
- Covered with durable, anti-reflective tempered glass.
- Lightweight design with scratch-resistant properties.

## Embedded Android System

- Powered by a high-performance processor for smooth video playback and interactive applications.
- Pre-installed with Android 11 and essential apps.

## Touchscreen Functionality

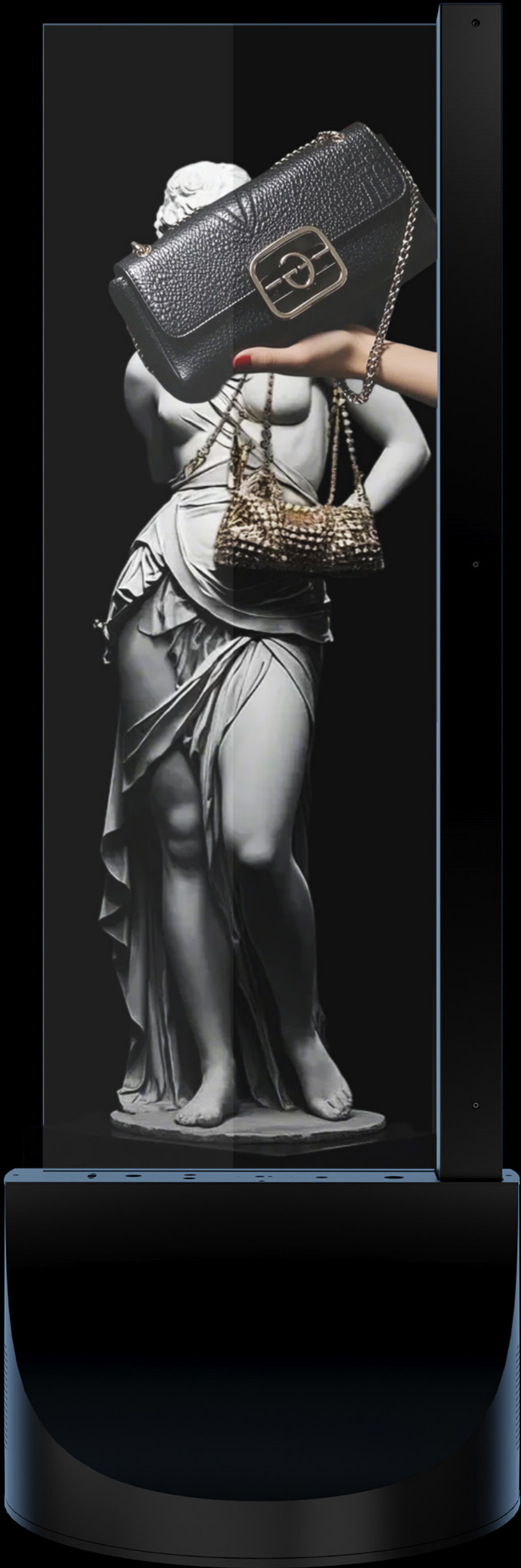
- Supports 10-point touch functionality on both Windows or Android systems.

## Connectivity Options

- Includes multiple interfaces, enabling seamless connectivity with external devices.
- Supports Wi-Fi and Bluetooth for wireless communication and enhanced connectivity.

## Thermal Management

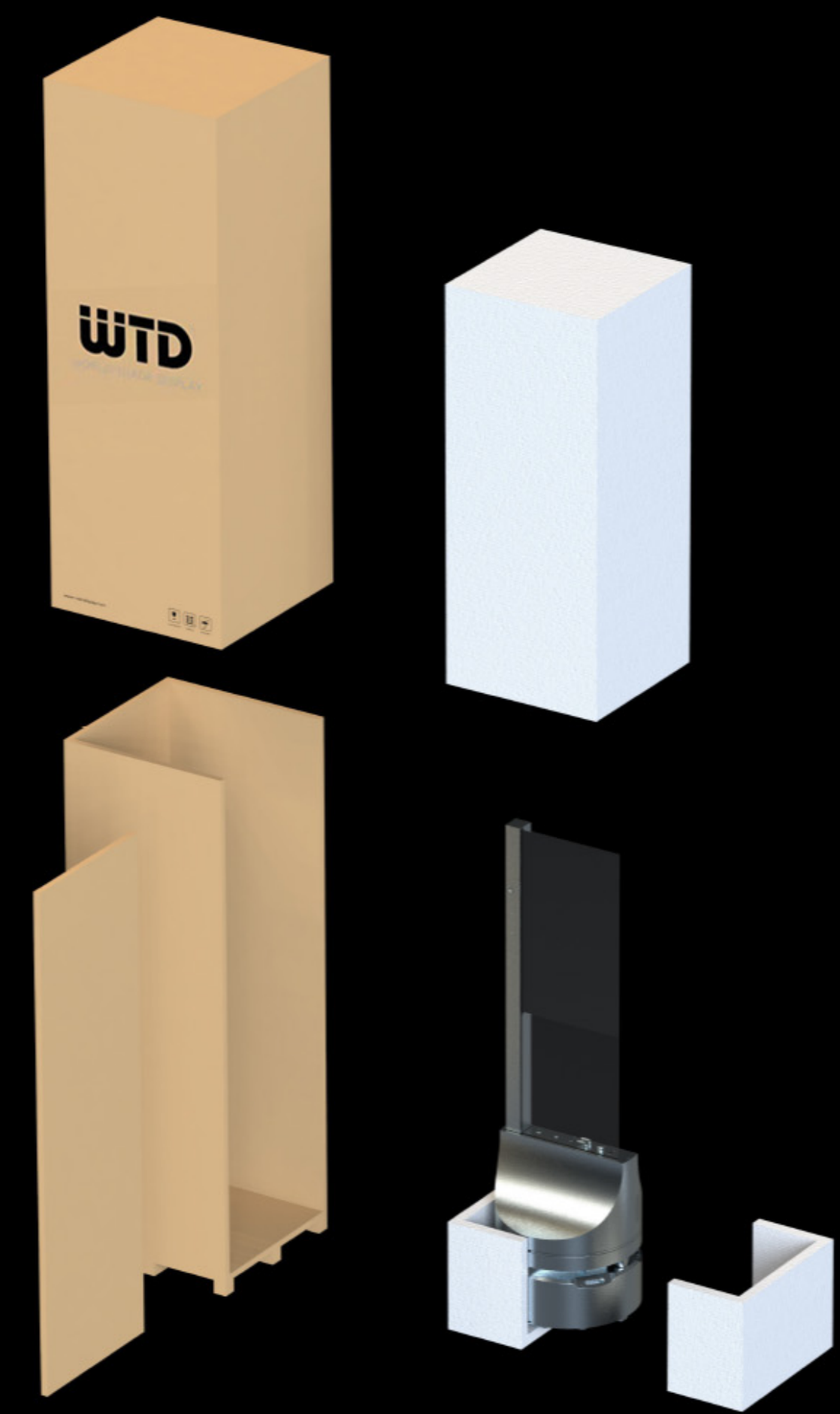
- Built-in ventilation system to ensure safe operating temperatures.



# Packaging Design

WTD Display's innovative packaging solution combines product protection with environmental sustainability:

- Innovative easy-unbox design for enhanced user experience
- Optimized cushioning structure for maximum screen protection
- Fully reusable packaging materials, demonstrating our commitment to environmental protection





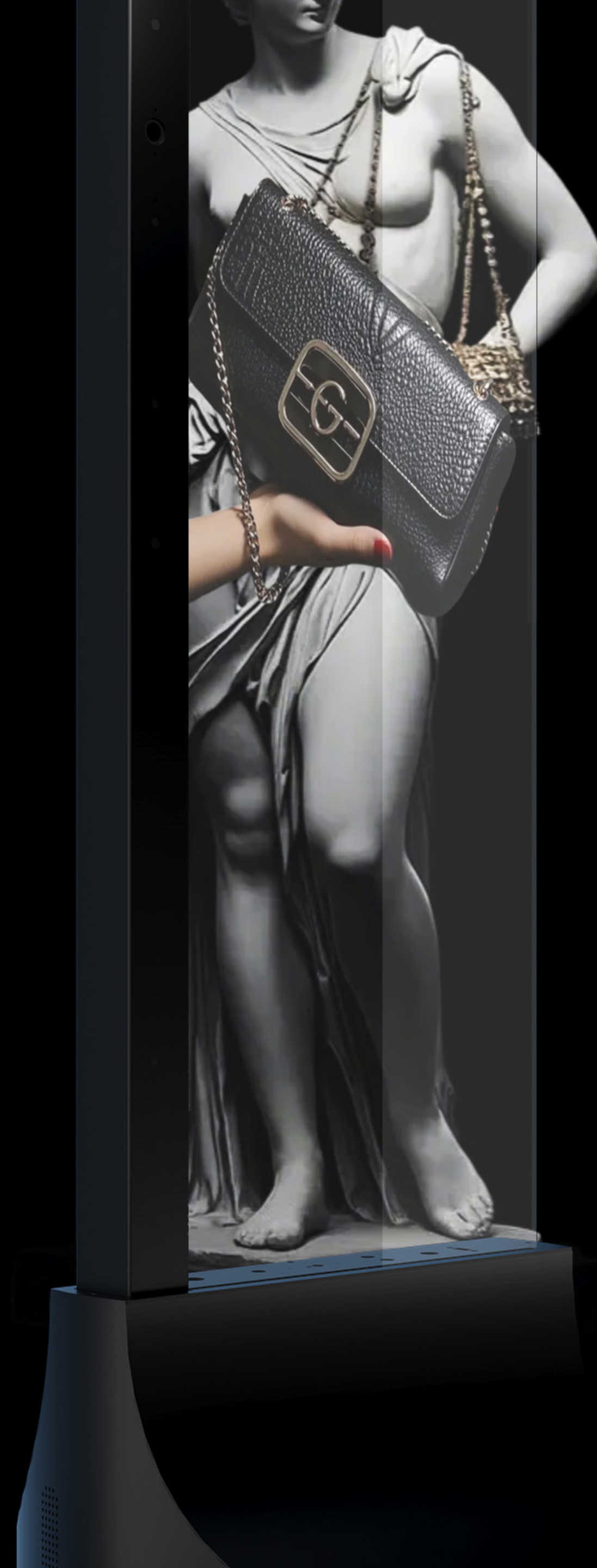
## Additional Accessories

### Included in the package:

- 1 × Power cable
- 1 × Wireless charging dock
- 1 × Remote control
- 1 × Certificate and Warranty card

### Optional Accessories (Available for Purchase):

- Lint-free Cloths: Designed to clean the screen without leaving fibers or dust.
- Flight Case: A durable case for safe transportation and storage of the display unit.





# 02.

## Installation

# Unpacking and Handling

## Shipping Box

- The W-R30 is packaged in a honeycomb box placed inside a wooden crate, with multiple foam sections inside the honeycomb box for added stability and protection. Arrow markings on the crate indicate the correct orientation for unpacking .

## Unpacking

- Open all fasteners on the wooden crate, remove the honeycomb box, and place it upright as indicated by the arrow markings.
- Remove the lid of the honeycomb box and take out the protective foam covering the display.

## Handling

- Lift the robot by its base or designated support points. Avoid applying pressure to the screen or other delicate components during this process.
- Always carry the robot with at least two people to minimize the risk of damage.





# Environmental Requirements

R-R55 is designed for indoor use only. To maintain optimal performance, follow these environmental guidelines:

## Temperature and Humidity

- Operating temperature: 0°C to 45°C (32°F to 113°F).
- Humidity: 10% to 90% (non-condensing).

## Light Exposure

- Avoid direct sunlight or exposure to ultraviolet (UV) light, as it can reduce the display's lifespan and performance.
- For the best transparency effect, ensure adequate lighting behind the screen to highlight background objects or scenes.

## Ventilation

- Maintain sufficient space around the robot to allow proper airflow. Do not block the ventilation openings or place objects too close to the robot, as this could increase internal temperatures.

## Heat Sources

- Keep the robot away from heat sources such as radiators, stoves, or other devices that generate excessive heat.



# Installation Guidelines

## Place Robot

- Place the robot on a flat ,stable surface that can support its weight, leave some space around it for ventila-  
tion.

## Connections and Setup

- Connect the robot to a power source using the provided power cable.
- Use HDMI or other compatible cables to connect external devices such as media players or computers.  
Ensure all connections are secure and properly aligned.

# Installation Disclaimer

Proper installation and operation are the customer's responsibility. Failure to follow the instructions in this manual or installation in a manner not described here may result in equipment damage or unsafe condi-  
tions for which the customer will be held liable.





**03.**

**Operation**

# Basic Operation

## Power On/Off

- Power On: Press the power switch to start the robot.
- Power Off: Press the power switch to turn off the robot.

## Adjusting Display Settings

- Adjust brightness, contrast, and other display parameters through the menu interface.
- Optimize settings based on ambient lighting and usage requirements to achieve the best visual experience.

## Basic Operation Precautions

- Regularly check the battery status and ensure it is sufficiently charged.
- Regularly check cable connections to ensure they are secure and undamaged.





# External Device Connection

## Common Connection Methods

- HDMI: For connecting computers, media players, or gaming consoles.
- USB: For connecting USB drives, peripherals (e.g., keyboard, mouse), or other external storage devices.

## Connection Steps

- Select the appropriate port and connect the external device to the robot.
- Ensure the system detects the connected device automatically.
- If necessary, adjust settings in the system menu to enable or configure the external device.

## Precautions

- Ensure all connections are secure to prevent signal loss or operational issues.
- Avoid frequently plugging and unplugging devices to reduce wear on ports.



# Touch Screen Operation

## Basic Operations

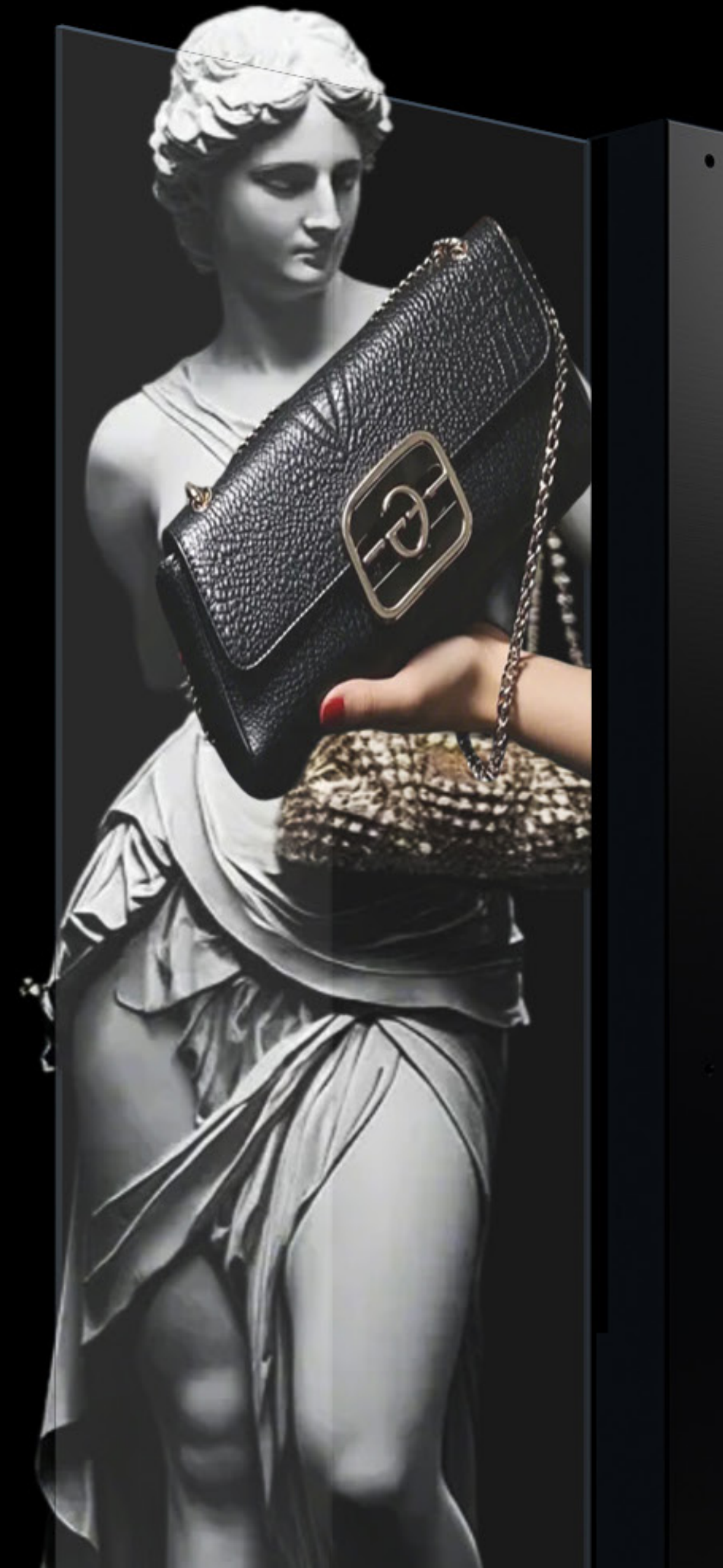
- Tap: Gently touch the screen once to select or activate a target element.
- Drag: Touch and slide on the screen to move content or interface elements.

## Screen Responsiveness

- The touch screen supports up to 10-point touch,ensuring precise and simultaneous recognition of multiple touch inputs.

## Precautions

- Ensure your fingers are clean to maintain touch accuracy.
- Avoid using sharp objects on the screen to prevent scratches on the display surface.





# Content Development Guidelines

## Resolution and Aspect Ratio

- Match the content resolution to the display resolution to prevent stretching or blurring.
- Use high-definition formats (1080p or above) to maximize the display's capabilities.

## Background and Contrast

- For transparent displays, ensure moderate background brightness so content is clearly visible.
- Adjust content contrast to avoid extremes, ensuring a comfortable viewing experience.

## Dynamic Content

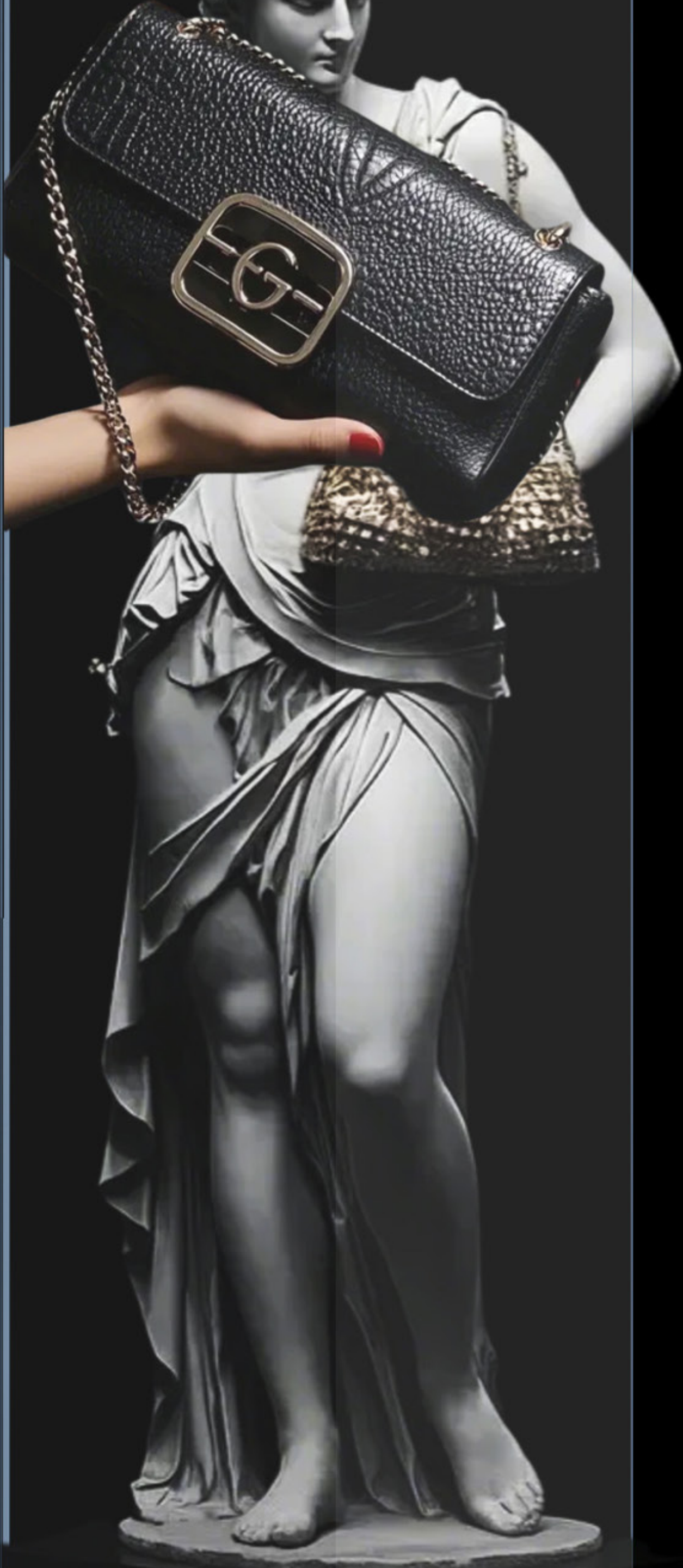
- Always use dynamic content to extend the display's lifespan and maintain optimal performance.
- Avoid displaying static images for prolonged periods to reduce the risk of image retention or burn-in.

## Color and Clarity

- Use appropriate color saturation in the content to maintain excellent visual effects on the transparent display.
- Ensure text and graphics are clear and legible, avoiding overly small fonts or intricate designs.

## Testing and Optimization

- Conduct thorough testing before presenting content to ensure optimal display performance under various lighting conditions.
- Adjust the brightness and contrast of the content based on the actual usage environment.



04.

## Technical Information

# Specifications

## WTD Robot 30 (W-R30)

### Transparent OLED Panel

- Resolution: 768 x 1366
- Aspect Ratio: 9:16
- Screen Size: 30 inches
- Luminance: 600/200 cd/m² (Center 1 point, Typ.)
- Pixel Pitch: 0.630 mm x 0.630 mm
- Viewing Angle: 178°H,V
- Color Gamut: 90%
- Color Depth: 10bit (R), 1.07 billion colors
- Lifetime: 30,000 hours

### Front Glass

- Glass Type: 6mm Tempered Glass

### Touchscreen

- Touch Technology: Capacitive Touch
- Touch Points Supported: 10

### Hardware Specifications

- Default OS: Android 11
- Processor: Quad-core Cortex-A55, up to 1.8GHz
- Memory (RAM): 8GB
- Storage (ROM): 64GB

### Battery Specifications

- Battery Voltage: 28.4V (7A)
- Battery Capacity: 25.6V, 25Ah
- Battery Life: ≥10 hours
- Charging Method: Auto-recharge when low or manual return.
- Charging Time: Approx. 8 hours (4A) / 4 hours (7A)
- Battery Lifespan: Over 2000 charge-discharge cycles

### Environmental Conditions

- Optimum storage temperature: 5°C to 35°C
- Operating Temperature: 0°C ~ 45°C
- Humidity: 10% ~ 90% RH (non-condensing)

### Dimensions & Weight

- Screen Dimensions: 387 mm x 676 mm
- Screen Dimensions: 699 mm x 1222 mm
- Weight: TBD





# Troubleshooting Guide

## Power Issues

- Ensure the battery is sufficiently charged. If the robot does not turn on, try recharging the battery.
- Verify that the wireless charging dock is receiving power and functioning properly.

## No Display or Black Screen

- Check all cable connections to ensure they are secure and free of damage.
- Confirm the correct input source is selected.
- Adjust brightness and contrast settings as needed.

## Display Flickering

- Ensure the input signal is stable.
- Inspect the cables for damage.
- Adjust the display's refresh rate settings if applicable.

## Unresponsive Touchscreen

- Clean the touchscreen surface to remove any dirt or obstacles.
- Restart the display to reset touchscreen functionality.
- Ensure that the touch driver is correctly installed.

## Image Retention

- Avoid displaying static images for extended periods. Use dynamic content instead.

If issues persist, please contact customer support for further assistance.

Email: [marketing@worldtradedisplay.com](mailto:marketing@worldtradedisplay.com)



# Maintenance Instructions

## Cleaning the Display Glass

- Use a soft, lint-free cloth or tissue.
- Use high-quality glass cleaners designed for OLED screens, or high-purity isopropyl alcohol (IPA).
- Do not mix IPA with glass cleaner. Use separate cloths for different cleaning agents to avoid cross-contamination.
- Caution: IPA is flammable. Do not use near open flames or other ignition sources.

## Cleaning Procedure

- Avoid letting cleaning agents seep into the gaps between the display glass and the casing, into the layer between the front and rear glass, or come into contact with the electronic base, as this may damage the OLED screen.
- Apply a small amount of cleaning solution or IPA onto the cloth (do not spray directly onto the glass surface).
- Begin cleaning from one side of the screen, using circular motions for even coverage.
- If stains persist, increase the amount of cleaning agent slightly and use a clean cloth for a second attempt.

## Additional Notes

- Regular cleaning ensures optimal visual performance and preserves touchscreen sensitivity.
- Ensure the robot is powered off and in a stable state before cleaning.



05.

## Support Information



## Technical Support

- Our professional technical support team is available to assist you with any issues related to this product.

For inquiries or technical support, please contact us via:

Email: [support@worldtradedisplay.com](mailto:support@worldtradedisplay.com)

Service Hours: We are available during business days and will respond within 12 hours.

- You can also learn more about our products on our website: [www.worldtradedisplay.com](http://www.worldtradedisplay.com)



# After-Sales Service

## WTD Boost Your Resources

One of our main priorities is the recruitment and technical training of talented people and at the same time to offer advanced technical support to our customers.

With its own specific organization internally, World Trade Display ensures accurate technical support service, maintenance & monitoring “Worldwide” and best meets customer’s needs in various sectors.

The request of the R.M.A. number is part of a process for the replacement and/or repair of any defe

For detailed terms and execution procedures, please refer to our comprehensive Support & Sales Policy: [www.worldtradedisplay.com/en/support](http://www.worldtradedisplay.com/en/support)



# Regulatory Compliance

## Environmental and Safety Standards

- The OLED screen we offer complies with internationally recognized environmental and safety regulations, including but not limited to:  
  
CE (Conformité Européenne): Indicates compliance with health, safety, and environmental protection standards for products sold within the European Economic Area.  
  
FCC (Federal Communications Commission): Ensures compliance with standards that prevent harmful interference in the United States.  
  
RoHS (Restriction of Hazardous Substances Directive): Guarantees the product does not contain hazardous substances exceeding permissible limits.

## User Responsibility and Local Regulations

- Users are responsible for complying with all applicable national and regional laws and regulations when using this product, including but not limited to e-waste recycling, environmental protection, and related industry standards.

## Product Certification Information

- Certifications for this product may vary by region. For more information or certification documents, please contact us at: [marketing@worldtradedisplay.com](mailto:marketing@worldtradedisplay.com)

## Disclaimer

- This manual is provided "as is" without any explicit or implied warranties or guarantees. While every effort has been made to ensure the accuracy of the content, World Trade Display shall not be liable





# Imprint

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**Official Website:**[www.worldtradedisplay.com](http://www.worldtradedisplay.com)

