Ulefone Ulefone Armor 28 Ultra Thermal

Ulefone Armor 28 Ultra Thermal User Manual

MODEL: ULEFONE ARMOR 28 ULTRA THERMAL

1. INTRODUCTION AND OVERVIEW

The Ulefone Armor 28 Ultra Thermal is a cutting-edge 5G AI rugged smartphone designed for durability and high performance. It features advanced thermal imaging capabilities, a powerful MediaTek Dimensity 9300+ processor, a unique dual-screen design, and a robust camera system. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your device.

This device is built to withstand harsh environments, meeting IP68/IP69K and MIL-STD 810G standards for water, dust, and shock resistance. Its 10600mAh battery with 120W fast charging ensures extended usage and quick power-ups.

Figure 1.1: Ulefone Armor 28 Ultra Thermal - Front and Rear View

2. WHAT'S IN THE BOX

Verify that all the following items are included in your product package:

- Ulefone Armor 28 Ultra Thermal Phone
- AC power charger (100~240V)
- Type-C to Type-C Data cable (100cm)

- Screen Protector (pre-applied or included)
- SIM Tray Ejector
- Lanyard
- User Manual & Warranty Card

Figure 2.1: Package Contents

3. SETUP

3.1 Initial Power On

1. Press and hold the Power Key (located on the right side of the phone) until the Ulefone logo appears.
2. Follow the on-screen prompts to complete the initial setup, including language selection and network connection.

3.2 SIM Card & Storage Expansion

- Locate the SIM/TF card slot on the side of the device.
- Use the provided SIM tray ejector tool to open the tray.
- Insert your Nano-SIM cards and/or a microSD card (up to 2TB) into the designated slots.
- Gently push the tray back into the device until it clicks into place.

3.3 Network Connection

- For Wi-Fi: Go to **Settings** > **Network & Internet** > **Wi-Fi**. Select your desired network and enter the password if required.
- For Mobile Data (5G): Ensure your SIM card is active and mobile data is enabled in **Settings** > **Network & Internet** > **Mobile network**.

3.4 Security Setup

- Set up Fingerprint Unlock: Go to **Settings** > **Security & privacy** > **Fingerprint Unlock**. Follow the instructions to register your fingerprint on the side-mounted sensor.
- Set up Face Unlock: Go to **Settings** > **Security & privacy** > **Face Unlock**. Follow the instructions to register your face.

Video 3.1: Overview of the Armor 28 Ultra Thermal Version, including setup and features.

4. OPERATING INSTRUCTIONS

4.1 Display Features

The Ulefone Armor 28 Ultra Thermal features a 6.67-inch flexible AMOLED Main Display with 120Hz responsiveness, reaching up to 2200 nits peak brightness. It also includes a 1.04-inch flexible AMOLED Sub-Display on the rear.

- **Main Display:** Enjoy vibrant colors and smooth scrolling.
- **Sub-Display:** Offers touch controls, an always-on view for notifications, music control, and quick selfies. Customize your watch face to suit your style.
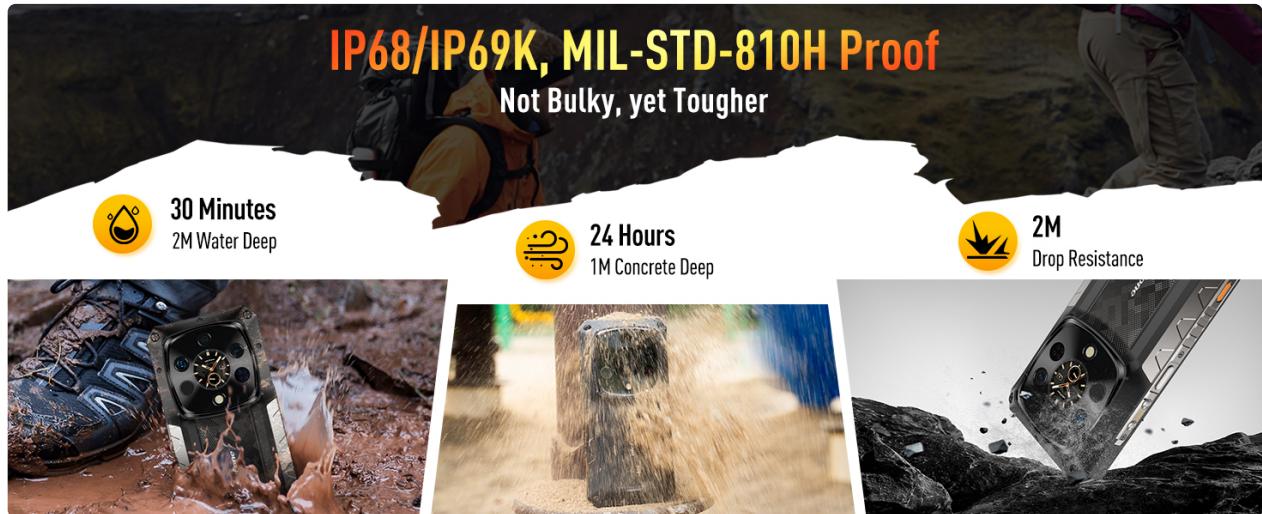
Figure 4.1: Main Display Capabilities

Figure 4.2: Rear Sub-Display Customization

Video 4.1: Demonstration of the Ulefone Armor 28 Ultra Sub-Display.

4.2 Camera System

The device boasts a versatile camera setup:

- **Main Camera:** 50MP with 1-inch type IMX989 sensor, capable of 8K video recording.
- **Ultra-wide Macro Lens:** 50MP with JN1 sensor, 117° field of view.
- **Night Vision Camera:** 64MP with OV64B sensor and NightEif Ultra 3.0 algorithm, enhanced with 4 infrared LEDs.
- **Front Camera:** 50MP for high-quality selfies.

Utilize the Custom Key for quick access to camera functions, including underwater camera mode.

Figure 4.3: Ultra-High Resolution Imaging System

Figure 4.4: 50MP Main Camera with IMX989 1" Largest Sensor


Figure 4.5: 50MP Ultra-wide Macro Camera
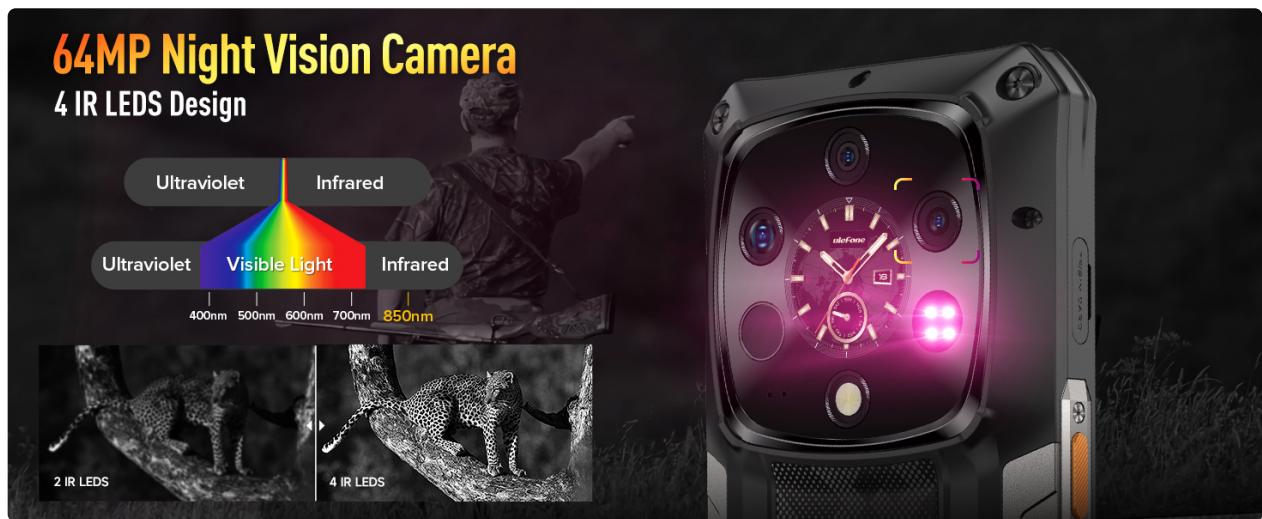
Figure 4.6: 64MP Night Vision Camera

Figure 4.7: 50MP Ultra Front Camera

Figure 4.8: 8K Video Recording

4.3 Thermal Imaging

The device integrates AI-powered thermal imaging with the ThermoVue T2 chip, offering a 640 x 512 resolution and 25Hz high refresh rate for accurate and clear thermal images. It supports various modes and color palettes for diverse applications.

- Access the ThermoVue Pro app to utilize thermal imaging.
- Explore modes like PIP (Picture-in-Picture) and SPO (Spot) for enhanced information management and heat source detection.
- Generate professional PDF reports from thermal data.
- Applications include pipe blockages inspection, mechanical and electrical maintenance, building science, hidden camera searching, and wildlife monitoring.
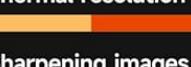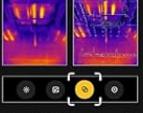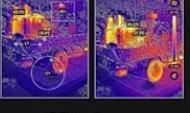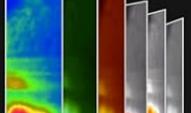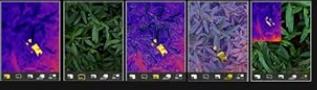
Figure 4.9: AI-Powered Thermal Imaging
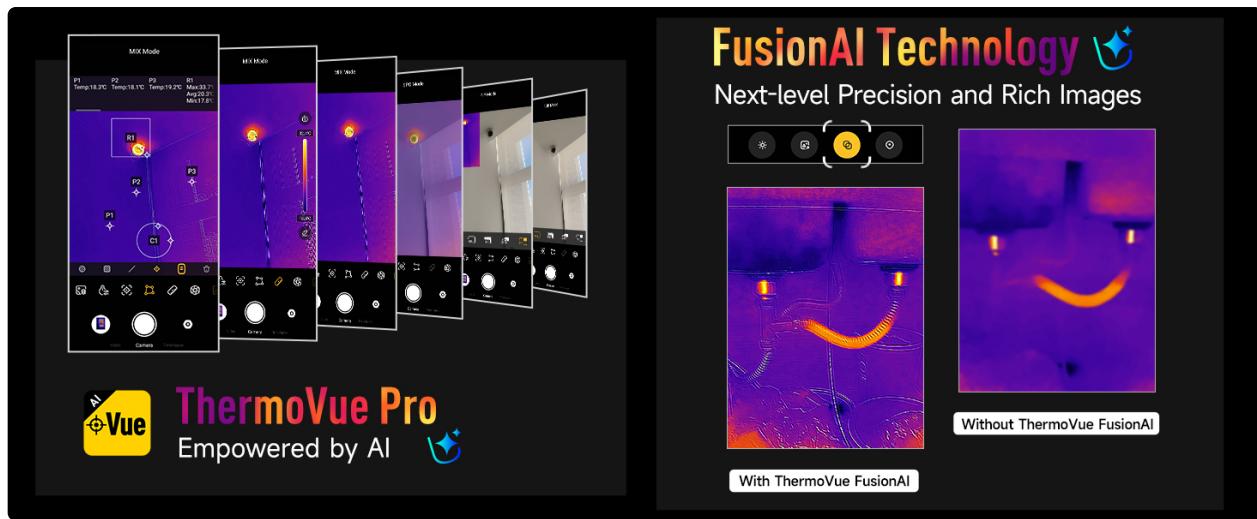
Figure 4.10: Thermal by ThermoVue T2
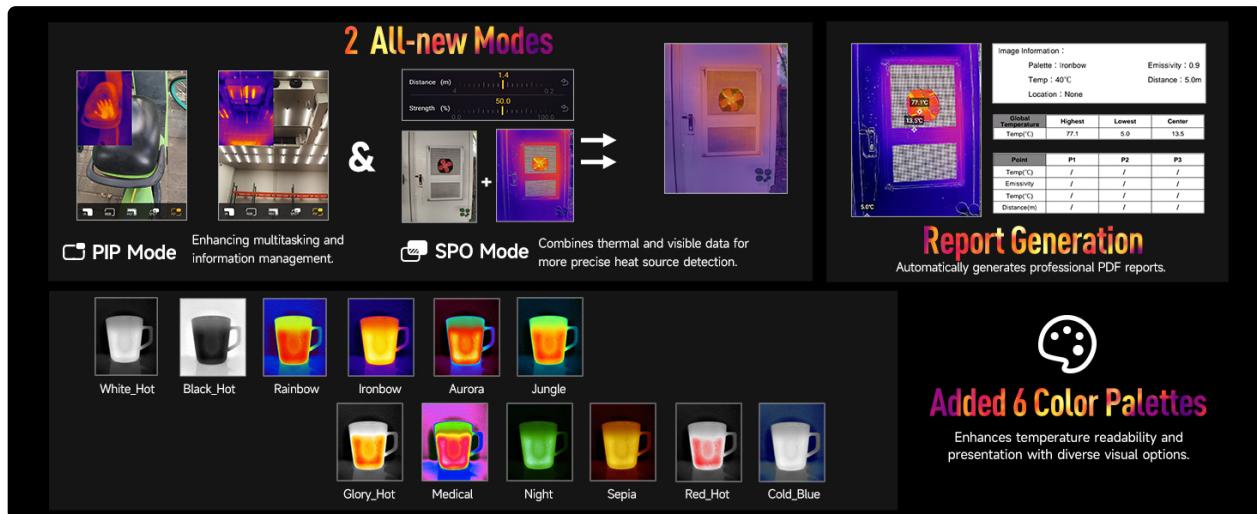
Figure 4.11: Thermal Imaging Modes and Palettes

Figure 4.12: Thermal Imaging Applications

Video 4.2: Showcase of Ulefone Armor 28 Ultra Thermal imaging capabilities.

4.4 Performance & Storage

Powered by the 4nm MediaTek Dimensity 9300+ processor (up to 3.4GHz), the Armor 28 Ultra ensures robust and efficient performance. It features up to 32GB RAM (16GB physical + 16GB virtual) and 1TB ROM, expandable up to 2TB via SD card.

Figure 4.13: MediaTek Dimensity 9300+ & AI Engine

Figure 4.14: MediaTek Dimensity 9300+ 5G AI SoC

4.5 Battery & Charging

The 10600mAh large battery provides up to 576 hours of standby time, 58 hours of talk time, and 14 hours of video playback. It supports 120W fast charging (40% in 10 minutes), 50W wireless charging, and wireless reverse charging.

Figure 4.15: 10600mAh Mega Battery

Figure 4.16: 10600mAh Mega Battery Performance

4.6 Connectivity & Other Features

- **Global 5G Network:** Supports dual SIM dual standby.
- **Wi-Fi 7:** For ultra-fast wireless connections.
- **Bluetooth 5.4:** For seamless accessory pairing.
- **NFC:** Supports Google Pay for convenient transactions.
- **USB 3.2 Gen 2:** Up to 10Gbps transfer speeds, supports screen casting.

- **IR Blaster:** Control compatible home appliances.
- **GPS:** GPS + GLONASS + Beidou + Galileo for precise navigation.
- **uSmart Expansion Connector:** Compatible with professional accessories like endoscopes and microscopes (sold separately).
- **AI Toolbox:** Features AI removal, AI background, AI digital human, and AI photography.
- **Custom Key:** Programmable button for quick access to functions.
- **Widevine L1:** For high-definition streaming content.

Figure 4.17: More Additional Functionalities

Figure 4.18: Comprehensive Additional Features

Figure 4.19: uSmart Expansion Connector

5. MAINTENANCE

5.1 General Care

- Clean the device regularly with a soft, damp cloth. Avoid harsh chemicals or abrasive materials.
- Ensure all port covers are securely closed to maintain IP68/IP69K water and dust resistance.
- Avoid exposing the device to extreme temperatures (hot or cold) for prolonged periods.

5.2 Battery Longevity

- For optimal battery life, avoid fully discharging the battery frequently.
- Use only Ulefone-approved chargers and cables.

6. TROUBLESHOOTING

If you encounter issues with your Ulefone Armor 28 Ultra Thermal, try the following steps:

- **Device not responding:** Press and hold the Power Key for about 10-15 seconds to force a restart.
- **Network connectivity issues:** Toggle Wi-Fi or Mobile Data off and on. Restart the device. Check your SIM card.
- **Charging problems:** Ensure the charging cable and adapter are securely connected. Try a different

charger and cable. Clean the charging port if necessary.

- **App crashes/freezes:** Close the app and reopen it. Clear the app's cache and data in**Settings** > **Apps**.
- **Thermal imaging not working:** Ensure the ThermoVue Pro app has all necessary permissions. Check for app updates.

For persistent issues, refer to the detailed user manual available on the device or contact Ulefone customer support.

7. SPECIFICATIONS

| Feature	Specification
Model Name	Armor 28 Ultra Thermal
Operating System	Android 14 (Upgradable to Android 15)
CPU	MediaTek Dimensity 9300+ (4nm, 3.4 GHz)
RAM	32 GB (16GB physical + 16GB virtual)
Storage	1024 GB (1TB), expandable up to 2TB
Main Display	6.67 Inches AMOLED, 120 Hz Refresh Rate, 2200 nits Peak Brightness
Sub-Display	1.04 Inches AMOLED
Rear Camera	50MP (Main) + 50MP (Ultra-wide Macro) + 64MP (Night Vision)
Front Camera	50MP
Video Resolution	Up to 8K
Thermal Imaging	ThermoVue T2 chip, 640 x 512 resolution, 25Hz
Battery Capacity	10600 mAh
Fast Charging	120W
Wireless Charging	50W (supports reverse wireless charging)
Durability	IP68/IP69K, MIL-STD 810G, Corning Gorilla Glass 5
Connectivity	5G, Wi-Fi 7, Bluetooth 5.4, NFC, USB 3.2 Gen 2, IR Blaster, GPS
Dimensions	6.86 x 3.29 x 0.76 inches
Weight	15.9 ounces (450 Grams)

8. WARRANTY AND SUPPORT

Ulefone provides a 12-month manufacturer warranty service in the US for the Armor 28 Ultra Thermal. For any questions or support regarding your product, please contact Ulefone customer service.

For further assistance, you may visit the official Ulefone website or contact their support channels. Keep your purchase receipt and warranty card for service claims.

Related Documents - Ulefone Armor 28 Ultra Thermal

	[Ulefone Armor 3 User Manual: Features, Setup, and Safety Guide](#) Comprehensive user manual for the Ulefone Armor 3 rugged smartphone. Learn about installation, device features, basic operations, and essential safety precautions.
	[Ulefone Armor 25T Series User Manual: Comprehensive Guide to Setup, Features, and Safety](#) Detailed user manual for the Ulefone Armor 25T Series smartphone. Covers device setup, card installation, network bands, basic operations, crucial safety information, and disclaimers.
	[Ulefone Armor 24 Multi Function Instructions](#) User guide for the Ulefone Armor 24 smartphone, detailing features like Underwater Camera, Wired Reverse Charging, Custom Key configuration, uSmart Expansion Connector, and RAM Expansion capabilities.
	[Ulefone Armor Mini 20 Pro Series User Manual](#) Comprehensive user manual for the Ulefone Armor Mini 20 Pro Series, covering setup, features, safety information, and troubleshooting.
	[Ulefone Armor 21 User Manual](#) User manual for the Ulefone Armor 21 rugged smartphone, detailing features, setup, safety information, and usage instructions. Includes information on card installation, hardware components, charging, basic operations, and safety guidelines.
	[Ulefone Armor X8i Rugged Smartphone - Specifications and Features](#) Detailed specifications and features of the Ulefone Armor X8i rugged smartphone, including its MediaTek processor, 3GB RAM, 32GB storage, 5.7-inch HD+ screen, 5080mAh battery, and IP68/IP69K rating.