

Ulefone Ulefone Armor Mini 20T Pro

Ulefone Armor Mini 20T Pro 5G Rugged Phone User Manual

Model: Ulefone Armor Mini 20T Pro

1. INTRODUCTION

The Ulefone Armor Mini 20T Pro is a compact, rugged 5G smartphone designed for durability and advanced functionality. It features a thermal imaging camera, versatile LED lighting, and robust protection against water, dust, and drops, making it suitable for demanding environments.

2. SAFETY INFORMATION

Please read all safety instructions before using the device to ensure proper and safe operation. Avoid exposing the device to extreme temperatures, direct sunlight for prolonged periods, or corrosive chemicals. Do not attempt to disassemble or repair the device yourself.

3. PACKAGE CONTENTS

Verify that all items are present in your product package:

- Ulefone Armor Mini 20T Pro 5G Rugged Phone
- AC power charger (100~240V)
- Type-C to Type-C Data cable (100cm)
- Screen Protector
- SIM Tray Ejector
- Lanyard

4. PRODUCT OVERVIEW

The Ulefone Armor Mini 20T Pro is engineered for resilience and functionality. Below is an overview of its physical characteristics and key components.



Figure 4.1: Front and rear view of the Ulefone Armor Mini 20T Pro, highlighting its compact size and rugged design.

All in 4.7" HD+ Display

Corning Gorilla Glass Victus

 **720 x 1600**
Resolution

 **373**
PPI

 **700nits**
Max Brightness

 **90Hz**
Refresh Rate

**85.6 mm/
3.37-inch**



53.98 mm/2.12-inch



**133.3 mm/
5.25-inch**

63.3 mm/2.49-inch



Figure 4.3: Physical dimensions of the Armor Mini 20T Pro, illustrating its compact form factor comparable to a credit card.

5. SETUP

5.1 SIM Card and MicroSD Card Installation

Locate the SIM tray 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 supported) into the designated slots. Ensure the cards are correctly oriented

before reinserting the tray firmly into the phone.

5.2 Initial Power On

Press and hold the Power button (located on the side) until the Ulefone logo appears. Follow the on-screen prompts to complete the initial setup, including language selection, Wi-Fi connection, and Google account setup.

5.3 Charging the Device

The Armor Mini 20T Pro supports both wired and wireless charging.

- **Wired Charging:** Connect the provided Type-C to Type-C data cable to the phone's USB-C port and the AC power charger. Plug the charger into a power outlet. The device supports 33W fast charging.
- **Wireless Charging:** Place the phone on a compatible 15W wireless charging pad. Ensure the phone is centered on the pad for optimal charging.
- **Reverse Charging:** The device also supports reverse charging, allowing you to charge other devices using the phone's battery.



Figure 5.1: The 6200mAh battery provides extended usage, including 336 hours standby, 34 hours call time, and 22 hours video playback.



Figure 5.2: The phone supports 33W fast charging, 15W wireless charging, and wireless reverse charging for convenience.

6. OPERATING INSTRUCTIONS

6.1 Basic Navigation (Android 14)

The Ulefone Armor Mini 20T Pro runs on Android 14, offering an intuitive user experience. Navigate through the interface using gestures or on-screen buttons. Swipe down from the top for quick settings and notifications. Access the app drawer by swiping up from the home screen.



Figure 6.1: The latest Android 14 OS provides enhanced privacy, improved photo quality, and a refined multi-tasking interface.

6.2 Thermal Imaging Camera (FLIR Lepton 3.5)

The integrated FLIR Lepton 3.5 thermal micro-camera allows for advanced thermal imaging capabilities. Use the pre-installed MyFLIR Pro app to access and utilize the thermal camera.

- **Temperature Measurement:** Quickly pinpoint hot spots and identify problems by measuring temperatures from -10°C to 550°C.
- **Image Enhancement:** Utilize VividIR™ image enhancement technology for clearer thermal images.
- **Customizable Area:** Monitor temperature ranges within a specific area by moving and resizing the measurement box.
- **Thermal Locking:** Lock the thermal view on a specific point.
- **Temperature Alert:** Set alarms for specific temperature thresholds.

THERMAL BY **FLIR** Lepton 3.5

Beyond Professional Handheld Thermal Camera



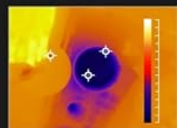
160 x 120
Higher Resolution



60 x 90

160 x 120

<50mk Sensitivity

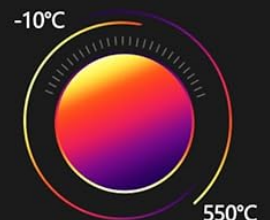


P1: 0.7°C P2: 1.7°C P3: 37.2°C

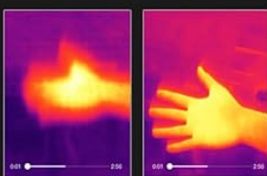
GPU-Powered
Thermal Imaging



-10°C to 550°C
Temperature Measurement



25Hz Refresh Rate



9Hz

25Hz

±3°C
Accuracy High Precision



12µm Pixel Pitch

Up to 1000m
Measuring Range

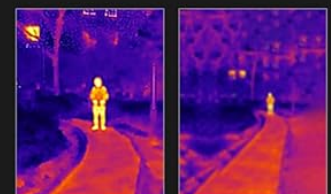


Figure 6.2: Detailed specifications of the FLIR Lepton 3.5 thermal camera, including 160x120 resolution and -10°C to 550°C temperature range.

Your browser does not support the video tag.

Video 6.1: Demonstration of the Ulefone Armor Mini 20T Pro's thermal imaging capabilities, showcasing its use in various scenarios.

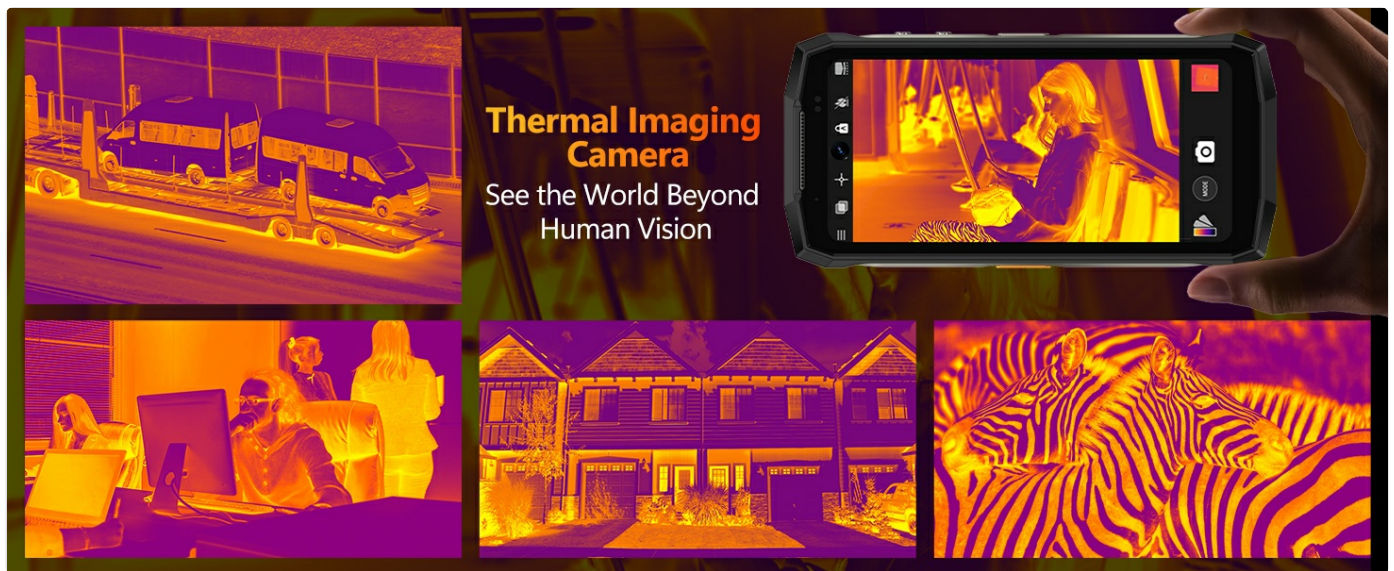


Figure 6.3: The MyFLIR Pro app allows users to explore new capabilities such as VividIR, Thermal Locking, and customizable measurement areas.

6.3 Camera Functionality

- **50MP Main Camera:** The primary camera features a 1/1.31" ultra-large 50MP Samsung ISOCELL GN1 image sensor with a 1.2um pixel size and F/1.95 aperture for clear and detailed photos.
- **32MP Selfie Camera:** Capture high-quality selfies with the 32MP Samsung GD1 Sensor, featuring a 5P lens and 80.4° field of view.
- **Underwater Camera:** Utilize the dedicated underwater camera mode for capturing photos and videos in aquatic environments.

50MP

50MP Main Camera

Enlargement Is Still Clear

50MP
1/1.31"
Ultra-large Sensor
1.2µm
Pixel Size
f/1.95
Aperture



32MP Ultra-clear Selfie

Easy Selfies



Figure 6.4: Details of the 50MP main camera and 32MP ultra-clear selfie camera for high-quality photography.

6.4 Versatile LED Light

The phone is equipped with a powerful LED light featuring 130 LEDs and a 500 lumens max brightness. It offers various modes for different uses:

- **Camping Light:** Provides broad illumination for outdoor activities.
- **Hiking Light:** Focused beam for navigating trails.

- **Cycling Light:** Enhances visibility during cycling.
- **Emergency Lighting:** Provides light in critical situations.



Figure 6.5: The versatile LED light offers powerful illumination for camping, hiking, cycling, and emergency situations.

6.5 Emergency Warning Light

For safety, the phone includes a dedicated emergency warning light with simulated red light, blue light, and red-blue warning light modes. This can be activated via a physical button for quick access in emergencies.



Figure 6.6: The emergency warning light serves as a portable safety tool with various light modes.

6.6 Connectivity

- **Global 5G Network:** Supports dual SIM dual standby for convenient and efficient communication. (Note: Not compatible with AT&T or Cricket networks).
- **Wi-Fi:** Connect to wireless networks for internet access.
- **Bluetooth:** Pair with Bluetooth devices such as headphones or speakers.
- **NFC:** Use for contactless payments (Google Pay) and quick data transfer.
- **IR Remote:** Control compatible infrared devices.
- **GPS:** Supports GPS, Glonass, QZSS, Galileo, and BeiDou for accurate navigation.

6.7 Performance and Storage

Powered by a MediaTek Dimensity 6300 5G 8-core CPU (2.4GHz) and a 6nm chipset, the phone offers robust performance. It comes with 16GB RAM (8GB physical + up to 8GB virtual RAM) and 256GB internal storage, expandable up to 2TB via TF card.

MediaTek Dimensity 6300 5G Soc

Up to 16GB RAM + 256GB ROM





6nm
Advanced Process



Up to 2.4GHz
Clock Speed

Cortex-A76
Hyper-fast Performance

4,33,932
AnTuTu Score

Figure 6.7: The MediaTek Dimensity 6300 5G SoC provides powerful performance with 16GB RAM and 256GB ROM.

6.8 Other Features

- **Fingerprint Unlock:** Securely unlock your device using the integrated fingerprint sensor.

- **Custom Key:** Program a physical button for quick access to frequently used functions or apps.
- **Gloves Mode:** Enhance touch sensitivity for operation while wearing gloves.
- **Outdoor Toolbox:** A suite of useful tools for outdoor activities.
- **Headset-Free FM Radio:** Listen to FM radio without needing a connected headset.
- **Body Camera Holder:** The phone is compatible with a body camera holder for hands-free recording.

Your browser does not support the video tag.

Video 6.2: A hands-on overview of the Armor Mini 20 Pro, demonstrating its features and compact design.

Your browser does not support the video tag.

Video 6.3: An in-depth overview of the Ulefone Armor Mini 20T Pro Rugged Phone, highlighting its various functionalities.

7. MAINTENANCE

7.1 Ruggedness and Durability

The Ulefone Armor Mini 20T Pro is built to withstand harsh conditions, meeting MIL-STD 810G standards and reaching IP68 and IP69K levels for supreme protection.

- **Waterproof (IP68):** Submersible in up to 2 meters of water for 30 minutes.
- **Dustproof (IP69K):** Fully protected against dust ingress and high-pressure, high-temperature water jets.
- **Drop Resistance (MIL-STD 810G):** Designed to withstand drops from up to 2 meters.
- **Corning Gorilla Glass Victus:** The 4.7-inch HD+ display is protected by Corning Gorilla Glass Victus, offering 4x higher scratch threshold.

Versatile LED Light

Camping

Hiking

Cycling

Emergency Lighting

Emergency Warning Light Portable Safety Tool

Blue light

Red light

Constant

Blink

IP68
Waterproof

IP69K
Dustproof

MIL-STD-810H
Certification

30 Minutes
2M Water Deep

Dust Proof

2M
Drop Resistance

Figure 7.1: The phone's robust certifications ensure protection against water, dust, and drops.

Your browser does not support the video tag.

Video 7.1: A durability test of the Armor Mini 20 Series, demonstrating its resistance to water, dust, and impacts.

7.2 Battery Care

The 6200mAh sub-zero solid-state battery is designed for reliable performance even in extreme temperatures, as low as -20 degrees Celsius. To maximize battery life:

- Avoid fully discharging the battery frequently.
- Use the provided charger and cable for optimal charging.
- Enable ultra power saving mode when battery is low to extend standby time.

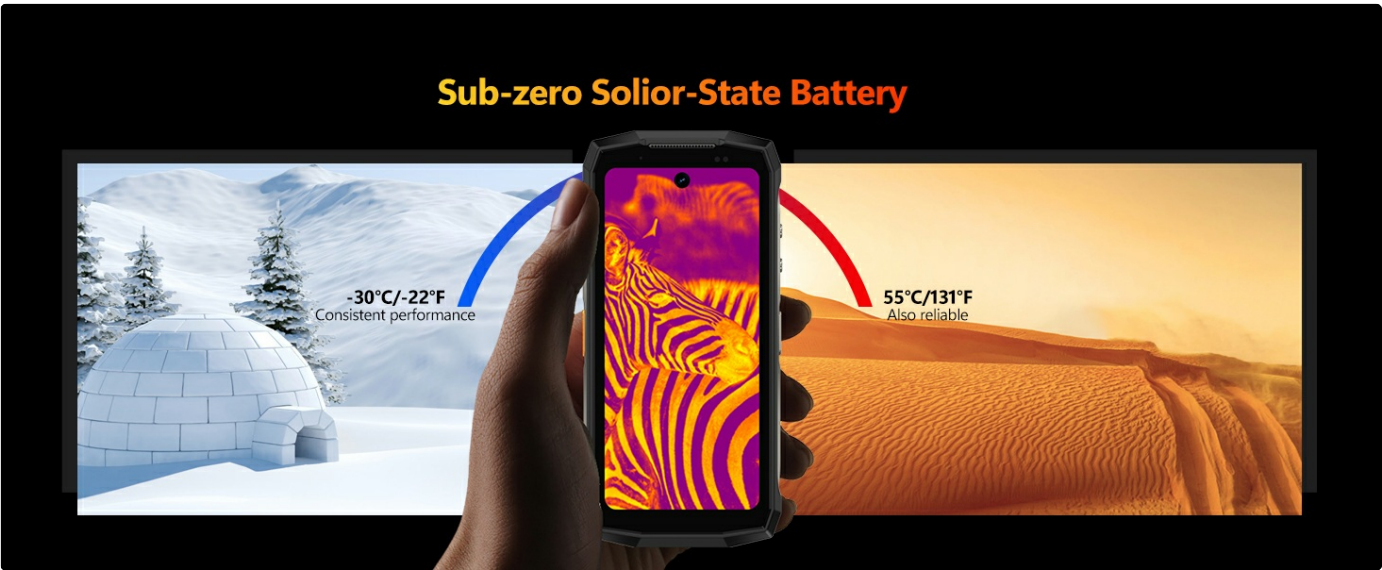


Figure 7.2: The sub-zero solid-state battery maintains consistent performance from -30°C to 55°C.

8. TROUBLESHOOTING

If you encounter issues with your Ulefone Armor Mini 20T Pro, refer to the following common solutions:

- **Device not powering on:** Ensure the battery is charged. Connect to the charger and wait a few minutes before attempting to power on again.
- **Screen unresponsive:** Perform a forced restart by holding the Power button for about 10-15 seconds.
- **Network connectivity issues:** Check if airplane mode is off. Restart the device. Verify SIM card installation. Contact your network provider if issues persist.
- **Thermal camera not working:** Ensure the MyFLIR Pro app is updated. Restart the app or the phone.
- **Slow performance:** Close unnecessary background apps. Clear cache. Ensure sufficient storage space.

9. SPECIFICATIONS

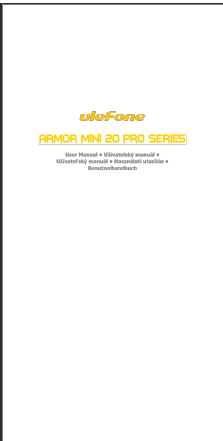


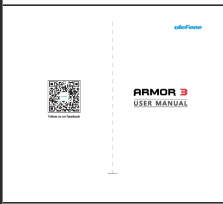
Feature	Detail
Model Name	Ulefone Armor Mini 20T Pro
Product Dimensions	5.25 x 2.49 x 0.98 inches
Item Weight	10.6 ounces (301 Grams)
Operating System	Android 14
Screen Size	4.7 Inches
Resolution	720 x 1600 (HD+)
Refresh Rate	90 Hz

Feature	Detail
CPU Model	MediaTek Dimensity 6300 5G (8-core)
CPU Speed	2.4 GHz
RAM Memory Installed Size	16 GB (8GB physical + 8GB virtual)
Memory Storage Capacity	256 GB (expandable up to 2TB)
Battery Capacity	6200 Milliamp Hours
Main Camera	50MP
Selfie Camera	32MP
Thermal Imaging	FLIR Lepton 3.5 (-10°C to 550°C)
Ruggedness	IP68, IP69K, MIL-STD 810G
Connectivity Technologies	Bluetooth, Infrared, Wi-Fi, USB, NFC, 5G
Special Features	Rugged Body, Reverse Wireless Charging, Thermal Imaging, Versatile LED Light, Water Resistant, IR Remote, Fingerprint Unlock, Custom Key, Gloves Mode, Underwater Camera, Outdoor Toolbox, GPS

10. WARRANTY AND SUPPORT

Ulefone products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official Ulefone website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Related Documents

	<p>Ulefone Armor Mini 20 Pro Series User Manual</p> <p>Comprehensive user manual for the Ulefone Armor Mini 20 Pro Series, covering setup, features, safety information, and troubleshooting.</p>
	<p>Ulefone Armor 25T Series User Manual: Comprehensive Guide to Setup, Features, and Safety</p> <p>Detailed user manual for the Ulefone Armor 25T Series smartphone. Covers device setup, card installation, network bands, basic operations, crucial safety information, and disclaimers.</p>
	<p>UleFone Armor Mini 20 Pro Series User Manual</p> <p>Comprehensive user manual for the UleFone Armor Mini 20 Pro Series, covering setup, features, safety information, and warranty conditions. Includes details on card management, messaging, photography, and device specifications.</p>
	<p>Ulefone Armor 3 User Manual: Features, Setup, and Safety Guide</p> <p>Comprehensive user manual for the Ulefone Armor 3 rugged smartphone. Learn about installation, device features, basic operations, and essential safety precautions.</p>

Documents - Ulefone – Ulefone Armor Mini 20T Pro



[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.

lang:en score:39 filesize: 1.59 M page_count: 97 document date: 2024-11-20

[\[pdf\]](#) Test Report

Randy He Test Report 11 Shenzhen Gotron Electronic CO LTD 5010 2AOWK 2AOWK5010

Report No.: S24070203407006 FCC CFR47 PART 22H, 24E, 27 CERTIFICATION

TEST REPORT FCC ID: 2AOWK-5010 Product: Mobile Phone Trade Mark: ulefone

Model No.: GQ5010 Family Model: Armor Mini 20T Pro, Armor Mini 20 Pro, Armor

Mini 20 Ultra, Armor Mini 20T Ultra Report No.: S24070203407006 Issue Date:

Aug....

lang:en score:11 filesize: 1.49 M page_count: 68 document date: 2024-09-11