



Bittium Tough Mobile2 Highest Level of Security for Mobile Communications User Guide

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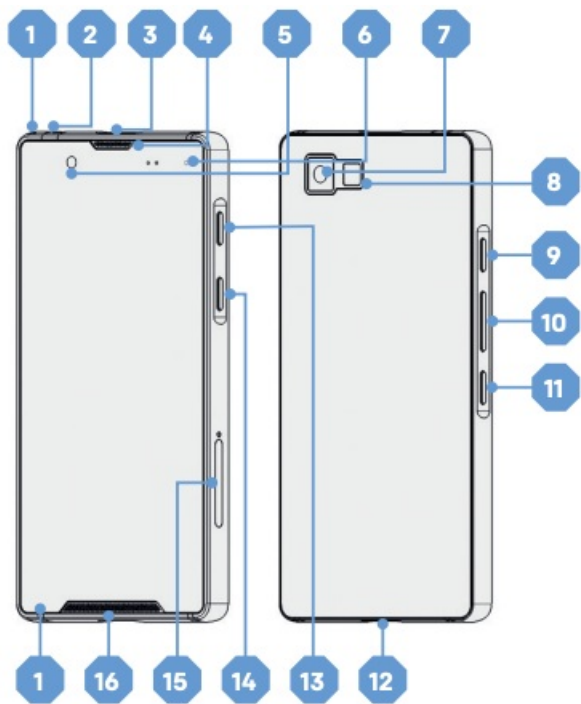
Bittium Tough Mobile 2 User Guide



Device at a Glance

1. Microphones
2. Headset connector
3. Emergency key
4. Earpiece
5. Front camera
6. Status indicator LED
7. Back camera
8. Flash LED
9. Volume up key
10. Push to Talk key (PTT)
11. Volume down key
12. USB 3.1 port (USB-C)
13. Privacy Mode key
14. Power key (device On/Off)
15. SIM tray
16. Loudspeakers

The ambient light sensor and proximity sensor are located next to the status LED.



Please read this quick guide carefully before using the device.

Bittium Tough Mobile 2 is factory tested to be IP67 resistant to dust and water.

Intentional underwater immersion of the device should be avoided. The device is not designed for underwater use or use in a shower. Purposeful use of the device in these environments will invalidate the warranty.

For more info on Bittium Tough Mobile 2 Ingress Protection see www.bittium.com.

Box Contents

Device sales package contains the following items:

- Charger
- USB-C cable
- SIM tray tool
- Quick Start Guide

Box contents and the appearance of the accessories may vary.

Bittium approved USB-C compatible accessories can be used with the device.

Operating system and applications

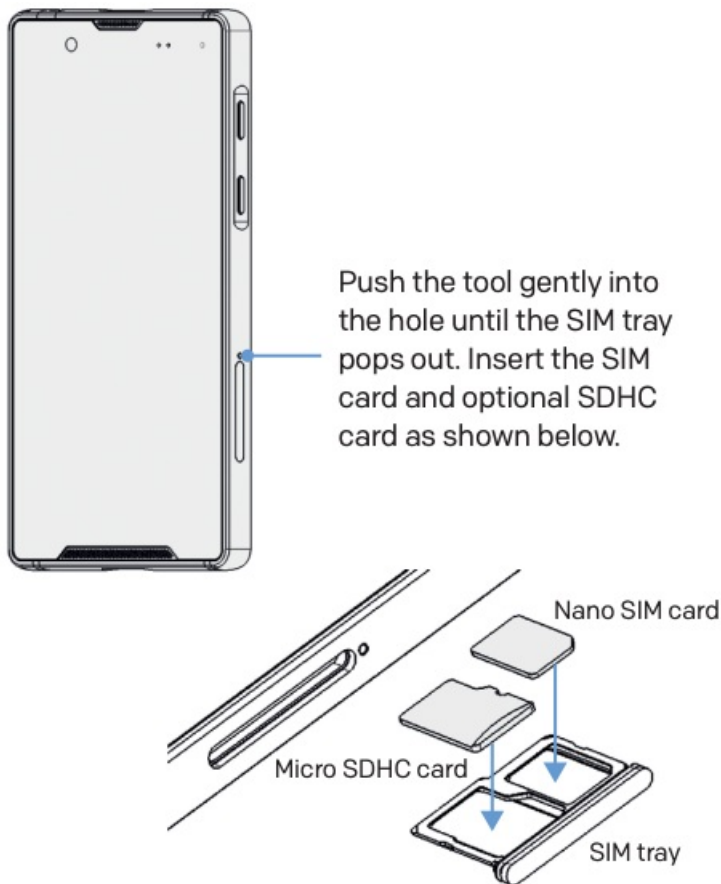
Bittium Tough Mobile 2 uses the Android™ operating system. Android is a trademark of Google LLC.

This Quick Start Guide contains only highlights and device-specific features and functionalities. For more information on Android features visit www.android.com

The device may have pre-installed 3rd party applications. For more information, see www.bittium.com.

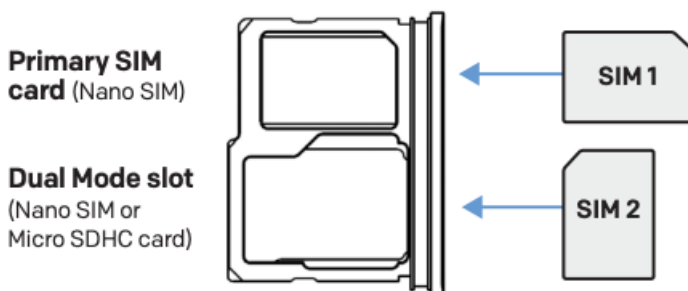
Getting Started

To start using the device first open the SIM card tray and insert the SIM card(s). To open the SIM tray insert the SIM tray tool into the hole shown below.



Insert your primary Nano SIM card onto the SIM card slot as shown above. If you have a secondary Nano SIM card, insert it onto the Dual Mode slot. In case you are not using two SIM cards you can insert your Micro SDHC card onto the Dual Mode slot. After the SIM and SD cards are inserted, push the SIM tray back.

See the figure below if you are inserting two SIM cards.



Support the cards gently with your thumb when inserting the SIM tray.

NOTE

In order to maintain water and dust resistance, keep the rubber seal around the SIM tray clean of any dirt.

Note also that if the SIM tray is opened during use, a notification is shown on the device screen.

Prior to using the device the battery should be fully charged using the charger and the USB cable provided in the sales package. Press the power key to power up the device.

NOTE

Device has internal battery which is not user replaceable. Only Bittium authorized service can replace the battery, if required.

Once the device has powered up, follow the onscreen instructions to set up the device using the Security Wizard.

If there is a need to forcibly restart your phone, press and hold the power button until the phone restarts.

Device battery capacity is 3000mAh.



Device Cannot Start Due to Low Battery

If the device battery charge is so low that it cannot start, the following symbols will appear on the device screen depending on the case:



Device cannot start: Device is connected to charger and battery is charging. Please wait, the device will start automatically when 5% battery charge level is reached.



Device cannot start: Device is not connected to charger and battery is not charging. Connect the device to charger to charge it.

LED Indications

LED color	LED status	Device power	Device status	Battery status
Red	Blinking	ON	Not charging	Battery <15%
Red	Constant	ON or OFF	Charging	Battery <15%
Yellow	Constant	ON or OFF	Charging	Battery 15–89%
Green	Constant	ON or OFF	Charging	Battery 90–100%
Green	Blinking	ON	Privacy Mode ON	Battery >15%
White	Blinking	ON	Screen notification	Missed call or SMS, for example

Security Notification

In case you see one of these texts during use:

“The always on security system has detected a hardware protection event. As a security procedure, all data in the phone has been erased.”

or

“The always on security system has detected power loss on backup battery. As a security procedure, all data in the phone has been erased.”

This can happen if

1. phone has received a heavy impact or an attempt has been made to open the chassis; and/or
2. the phone has not been recharged for a long time.

If these notifications keep appearing try setting the tamper detection level setting to Basic. If this does not help contact your service or customer support.

Security Wizard

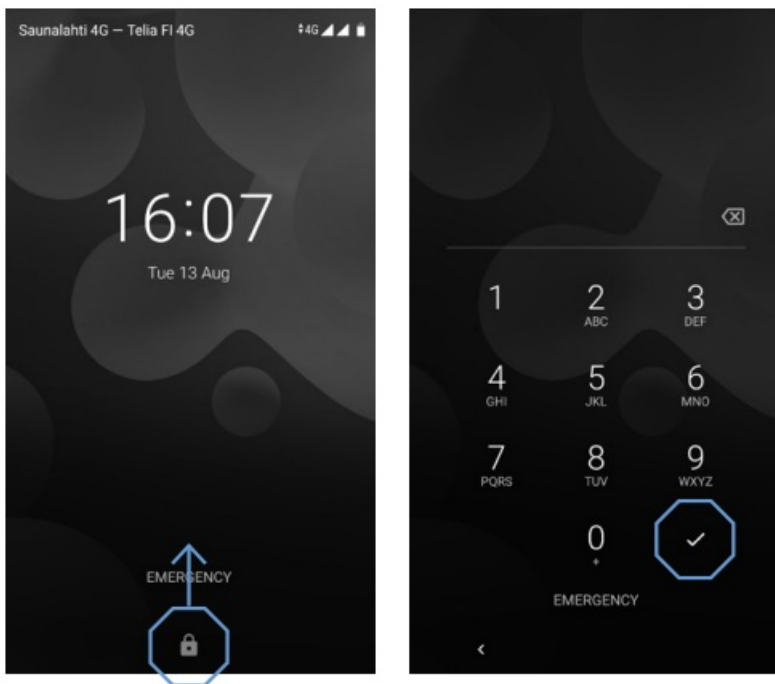
The device is equipped with a Security Wizard that is launched during the initial power up of the device. Security Wizard is used to set up a number of different device settings. Follow the on-screen instructions by first setting a screen lock code. The number of set up steps may vary depending on the security features of the device.

Lock Screen

Switching off the display locks the device. The device also locks after a period of inactivity. Switch the display off by pressing the power key once.

The display can be switched on by pressing the power key or programmable key. To open the screen lock and to access the home screen, follow the steps below:

1. Swipe the lock upwards.
2. Enter the screen lock code.
3. Tap the check mark ✓.



Special Key Functions

The device has dedicated special keys in addition to the Push to Talk (PTT) key function. The Emergency key is a configurable button and Privacy mode key protects the user from device-based spying attempts. See Privacy Mode section on next page for more information.

Button descriptions can also be found on the phone's back cover sticker, which can be removed.

Privacy Mode

Bittium Tough Mobile 2 can be set to a special privacy mode in which some of the device functionalities are intentionally disabled:

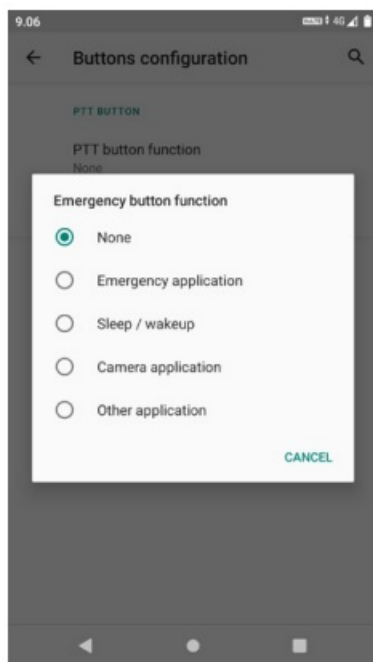
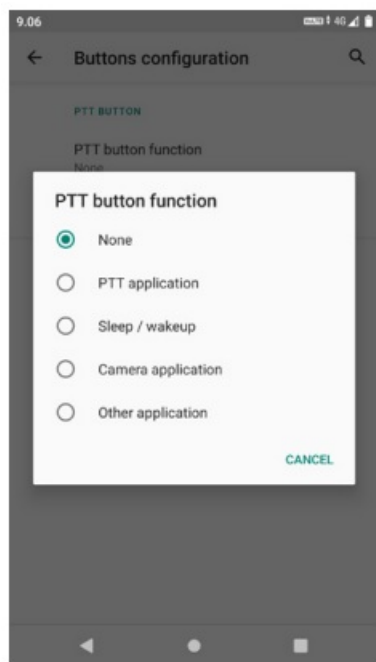
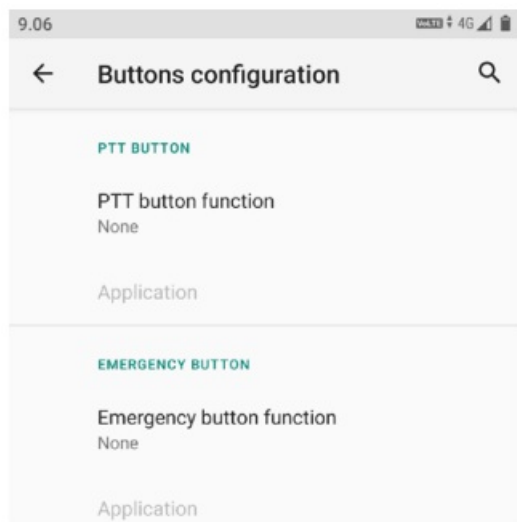
- Microphones are disconnected
- Bluetooth is disabled
- Device cameras are disabled
- Sensor accuracy is reduced
- Silent Mode is activated

Activate/deactivate the privacy mode by pressing the Privacy Mode key for approx. 2 seconds. See page 3 for the location of the key.

When Privacy Mode is active and you receive a call, you need to deactivate the Privacy Mode which enables microphone so that the caller can hear you.

Programmable Keys

Device PTT key and the Emergency key can be configured for a desired function. The key configuration can be done via Settings → Buttons.



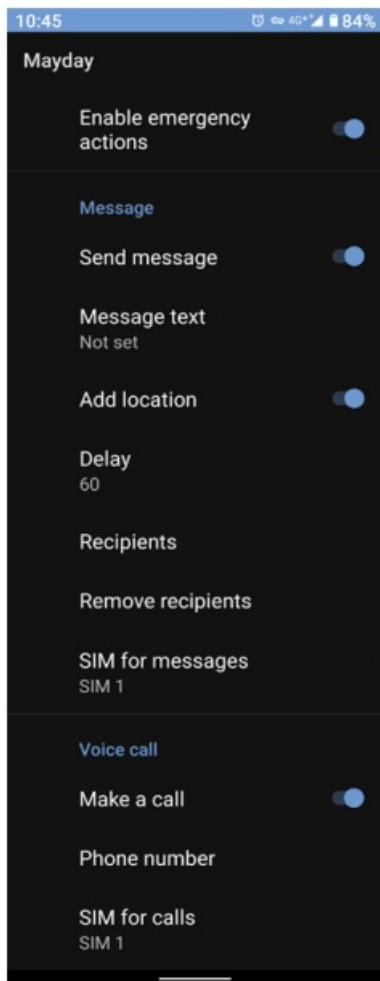
Note that PTT application is not included in the device, but the Emergency application is (Mayday).

Mayday Application

The device applications include also an emergency application called Mayday. It can be assigned to the Emergency key via Settings → Buttons and there by selecting Emergency button → Emergency button function. You can find the Mayday software from the installed applications.

See picture on the next page for the available settings. Remember to enable the emergency actions by activating

the Enable emergency actions setting at the top of the Mayday application settings. Other settings include message options and voice call options.



Software Update

Use software update to manually check for available software updates and install them on your device.

1. Go to Settings → System → Advanced → Additional system updates.
2. Tap 'Check Now' to check if an update is available.

You can also set the schedule for OTA (over-the-air) updates by tapping Check OTA updates. Options are: Disabled, Daily, Weekly and Monthly. Note that In order to receive over-the-air SW updates minimum 50% battery level must be available.

Important Health and Safety Precautions

Please take the following safety precautions when using the device:

WARNINGS

Only use the chargers approved by Bittium Wireless Ltd. The use of non-Bittium approved chargers may be dangerous.

Permanent hearing loss may occur if earphones or headphones are used at high volume for prolonged periods of

time.

Do not use the charger if it has a visible defect, or if you suspect it is damaged.

Do not allow children to play with the device since it contains small parts that can become detached and create a choking hazard.

In Japan, USA and Canada, use 5GHz WLAN only indoors.

CAUTIONS

The material used in the display and back cover is glass. The display and back cover can break if your handset is dropped or if it receives a significant impact. Do not use the device if the screen or back cover is broken or cracked as this may cause an injury.

Do not open the device. This will trigger a tampering event which will erase all data from the phone and it cannot be used anymore without Bittium service.

Any modification to this product is prohibited and will invalidate the warranty. Opening the device and using the components for purposes not otherwise authorized by this document, including any use in airplanes or any other Aviation application, is prohibited and will invalidate the warranty. Allow only authorized personnel to service the device and its accessories. Unauthorized service will invalidate the warranty.

The device may become warm when using it for prolonged periods of time, such as talking on the device, charging the battery or browsing the web. In most cases, this condition is normal and therefore should not be interpreted as a problem with the device.

Do not expose the device to excessive heat, for example direct sunlight.

Do not expose device surfaces to sun lotion, mosquito repellent or equivalent.

Do not glue any brackets or equivalent onto the device back cover.

NOTES

When driving, check and obey the laws and regulations on the use of mobile phones in the area where you drive. If you are going to use your phone while driving, always pay full attention to driving and use a handsfree solution, if available. The law in many countries requires the use of a vehicle handsfree solution while driving.

Always create a backup of data you want to keep (such as contacts and calendar notes) before sending your device for service.

Emergency Call

Some security features in Bittium Tough Mobile 2 such as privacy mode, CS call disabling and airplane mode prevent you from making an emergency call if these are enabled. Be aware of this restriction when these features are enabled.

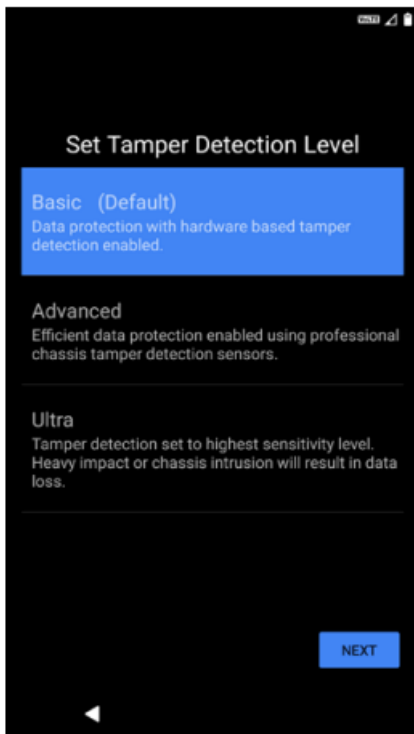
Tamper Detection

Bittium Tough Mobile 2 is equipped with hardware and software tamper detection. Upon detection of a tampering

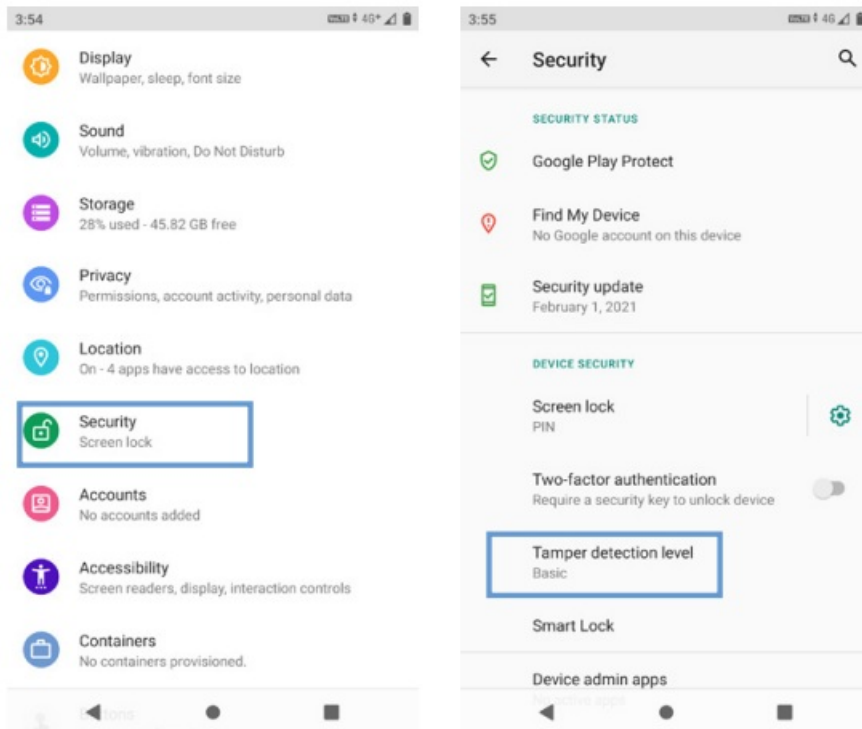
event, the user data, including encryption keys, will be erased.

Important! Emergency calls are not possible if the device is tampered.

Tamper detection level is set during the initial setup and Bittium recommends that Basic level is selected.



Tamper detection level can also be changed later via Settings → Security → Tamper detection level.



Important Customer Information

Bittium Tough Mobile 2 is a wireless device, containing a radio transmitter and receiver which emit radio

frequency energy during its use.

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the radio signals from a wireless phone.

Do not use the device near medical equipment without permission. A minimum of six (6) inches or 153 mm should be maintained between the device and an implantable medical device, such as a pacemaker or implantable cardiac defibrillator in order to avoid potential interference with the medical device.

Persons having implanted medical devices should follow instructions from the manufacturer of the medical device for safe use within proximity of wireless devices. Wireless phones may also interfere with some hearing aids. In the event of such interference, consult the service provider or call customer service to discuss alternatives.

Radio signals may interfere with improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the vehicle manufacturer or its representative regarding your vehicle. Aftermarket electronics which have been added to the vehicle should also be checked.

Any modification of Bittium Tough Mobile 2 is prohibited. Only authorized personnel should service the device and its accessories.

Only use software updates provided by Bittium. Accessories for Bittium Tough Mobile 2 should be either purchased from or approved by Bittium. Turn Bittium Tough Mobile 2 OFF in any facility where posted notices so require.

To avoid interfering with blasting operations turn Bittium Tough Mobile 2 OFF when in a blasting area or in areas posted: "Turn off two-way radio". Obey all signs and instructions.

Turn Bittium Tough Mobile 2 OFF when in areas with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Areas with a potentially explosive atmosphere are often, but not always, marked clearly. Potential areas may include fueling areas (such as gas stations); below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles (such as grain, dust, or metal powders); and any other area where you would normally be advised to switch off your vehicle engine.

An emergency call can be made only within a service area. For an emergency call, make sure that you are within a service area and that the device is switched on.

The device does not necessarily meet all specifications in extreme temperatures. Battery capacity (use time) is limited in low temperatures, and the device performance may be limited in high temperatures.

The device is equipped with intelligent battery charging control that limits battery charging in extremely hot and cold temperatures to ensure battery safety and extended operating life.

Camera Flash LED

The radiation hazards comply with the limit level for Exempt Group of IEC 62471 / Risk Group 1 of EN 62471.

Declaration of Conformity



Hereby, Bittium Wireless Ltd. declares the Tough Mobile 2 product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of Conformity can be found at www.bittium.com.

FCC Notice to Users

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna on the radio or television equipment, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the radio or television equipment dealer.

Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

To satisfy the FCC RF Exposure requirements for mobile transmitting devices, a separation distance of 10 mm should be maintained between the antennas of this device and persons during operation. To ensure compliance, operations at closer distances than this are not recommended.

Specific Absorption Rate (SAR) Certification Information

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE Std. C95.1-1992 and has been tested in accordance with the measurement procedures specified in FCC RF Exposure guidelines and IEEE Std. 1528-2013.

The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/ kg. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations. The highest SAR value reported under these guidelines when used at the ear is 1.30 W/kg and when correctly worn on the body is 1.44 W/kg.

Frequency Bands and Power

Following table lists the frequency bands in which the radio equipment operates as well as the maximum radio-frequency power transmitted (conducted) in these frequency bands:

Frequency bands and maximum transmitted radio frequency power

GSM850/900	33.3dBm
GSM1800/1900	30.8dBm
WCDMA850/900/1700/ 1900/2100	25dBm
LTE Band FDD	1,2,3,4,5,7,8,12,13,14,17, 20,25,26,28,29,30,66: 25.5dBm
LTE Band TDD	38,39,40: 25dBm
Wi-Fi 2.4G	16.5dBm
Wi-Fi 5G	17dBm
Bluetooth	12.5dBm

Operating Temperature

Device operating temperature range is -20°C – +55°C.

IMEI Information

Device IMEI information can be found via Settings → About phone → IMEI (sim slot 1) and IMEI (sim slot 2).

Alternatively you can type *#06# in the phone's dialer.

Limited Warranty

For a period of 1 year from the date of purchase, Bittium Wireless Ltd. ("Bittium") warrants this Product, including all accessories provided in the sales box, against defects in materials or workmanship. If this Product is determined to be defective within the 1 year warranty period, Bittium will repair the Product or replace it with a new or refurbished Product, at its option, at no charge to the customer, except as set forth below.

This warranty does not cover cosmetic damage, or device failure caused by liquid damages, or damage due to misuse, abuse, negligence, accident, modification or disassembly of any part of the Product. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair by anyone other than a facility authorized by Bittium to service this Product. For more info on Bittium Tough Mobile 2 Ingress Protection see www.bittium.com.

To obtain warranty service, you must receive a Return Authorization from Bittium and ship the Product, at your expense, to Bittium's authorized service facility. You must ship the Product in either its original packaging or packaging affording an equal degree of protection.

This warranty does not cover customer instruction, set up, or set up adjustments or network coverage problems.

PLEASE CONTACT

support@bittium.com

for warranty support.

Published By

Bittium Wireless Ltd.

Ritaharjuntie 1, 90590 Oulu, Finland

+358 40 344 2000

www.bittium.com

For the latest Quick Start Guide see:

www.bittium.com

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	<p>Bittium Tough Mobile2 Highest Level of Security for Mobile Communications [pdf] User Guide</p> <p>Tough Mobile2 Highest Level of Security for Mobile Communications, Tough Mobile2, Highest Level of Security for Mobile Communications, Level of Security for Mobile Communications, Security for Mobile Communications, Mobile Communications, Communications</p>
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References

-  [Android - Secure & Reliable Mobile Operating System](#)
-  [Connectivity to be trusted. | Bittium](#)