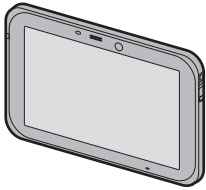




Operating Instructions - Reference Manual

Tablet Computer

Model No. **FZ-S1 series**



Panasonic Connect Co., Ltd.

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DHQP1081WA/J1 C0521-3032

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Introduction

About this manual

Thank you for purchasing this Panasonic product. For optimum performance and safety, please read these instructions carefully.

This manual describes the preparation of the unit for use, and the operations and settings of the main features.

- Descriptions in this document are based on models without wireless WAN. The availability of some functions depends on your unit's specifications and the locale of purchase. See "Specifications" (page 73) for information about your unit.
- Descriptions in this document are based on models with GMS (Google Mobile Services).
- Panasonic Connect Co., Ltd. and/or its affiliates are referred to collectively as "we" or "Panasonic".
- This product supports microSD, microSDHC, and microSDXC memory cards. In this document, the term "microSD card" is used as a generic term for any supported memory card.
- This product supports Nano SIM cards (certain models only). In this document, the term "SIM card" is used as a generic term for any supported SIM card.
- Information in this document is subject to change without notice.
- For the latest information about optional products, refer to the product catalogs, etc.
- The language of this manual may be different depending on the region selected when setting the language.

Disclaimers

- Some illustrations in this document may look different from the actual product. Also, the screen descriptions or the procedures may vary due to differences between the OS versions or automatic app updates. To confirm the OS version, from the home screen, tap  **[Settings]** → **[About tablet]** → confirm under **[Android version]**.
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Handling cautions

General use

- Operating environment
 - Temperature
 - Operation: -20 °C to 50 °C {-4 °F to 122 °F} (IEC60068-2-1, 2)^{*1}
 - Storage: -30 °C to 70 °C {-22 °F to 158 °F}
 - Humidity
 - Operation: 30 % to 80 % RH (No condensation)
 - Storage: 30 % to 90 % RH (No condensation)

Even within the above temperature/humidity ranges, operation for a long time in extreme environments, smoking nearby, or operation in places where oil is used or where there is a lot of dust will result in product deterioration and will shorten the product life.

Also, when using the product in cold environments, the product may take longer to start up and battery operation time may be reduced.

If the product is wet in temperatures of 0 °C {32 °F} or below, freeze damage may occur. Make sure to dry off the product in such temperatures.

^{*1} Do not directly touch this product with your bare hands when using it in a hot or cold environment.

- Do not place the product in the following areas, as doing so may damage the product.
 - Near electric appliances. The image may be distorted or noise may occur.
- This product is designed to reduce physical shock applied to the LCD and internal electrical components (camera, etc.). However, protection against malfunction due to such shock is not guaranteed. As with any portable device, precautions should be taken to avoid any damage.
- When operating the screen using the dedicated stylus (included/optional), do not firmly press it down. Doing so may damage the dedicated stylus or result in scratches or dents on the display.
- Do not place objects on the surface of the product or press down hard on the product with sharp objects. The display surface may get scratched.
- Do not damage the rear camera and photo light.
- Do not use the dedicated stylus when dust or dirt (e.g., oil) is on the display or on the tip of the dedicated stylus. Otherwise foreign particles on the screen/stylus tip may scratch the display surface or obstruct operation of the dedicated stylus. Clean the display and stylus tip before use.
- Use the dedicated stylus only for touching the display. Using it for any other purpose may damage the dedicated stylus and result in scratches on the display.
- Confirm the safety and security of software before downloading or installing it on the product. Installing malware or viruses can cause malfunction and the disclosure of any private information stored in the product, or may cause excessive sound volume.
- Turn off the product before removing the SIM card or microSD card. Failure to do so can result in data loss or damage to the SIM card, microSD card, or product.
- Do not place the product near a television or radio receiver. This may cause television or radio interference.
- Keep the product away from magnets. Failure to do so may cause malfunction.
- When using the product in a vehicle, it may affect electronic devices in the vehicle depending on the vehicle type. Confirm the effects from radio waves with the vehicle manufacturer or sales dealer before use.
- It is illegal in many areas to record a call without permission. Always ask the other party for permission before recording a call.
- Follow these instructions and this manual to avoid any damage to the devices. Carefully read the instruction manuals of the peripheral devices.
 - Use peripheral devices that conform to the product's specifications.
 - Connect to the connectors in the correct direction.
 - If a connector is hard to insert, do not try forcibly. Check its shape, direction, alignment of pins, etc.

Protecting your data

- To prevent accidental loss of data, we recommend that you regularly back up any important data that you store in the product, SIM card, and microSD card.
- To prevent the unintended disclosure of private information, always confirm the destination before sending messages, file attachments, or any other communications, such as email.
- The internal storage of the product is encrypted automatically. microSD cards (external storage) are not encrypted.
- Before disposing of the product or handing the product over to a third party, remove the SIM card, microSD card, and any other accessories.
- Before disposing of the product or handing the product over to a third party, perform a factory data reset (page 67) to erase any data stored in the product.
- Before using Wi-Fi or Bluetooth® features, take appropriate action to secure your data.

Waterproof/dustproof

- The product is waterproof/dustproof when the USB port cover and headset jack cover are closed, and the battery is attached. Therefore, keep water and dust away from product's internal components, accessories, and optional products.
- To prevent liquids, sand, dust, or any foreign objects from entering the product, always keep the covers and battery clean and make sure to firmly close the covers after opening. Take care not to get anything caught between the covers or between the battery and the product.
- Do not use the product if the gasket of the USB port cover or the battery is damaged, deformed, or peeled off.
- If the product is exposed to water droplets, wipe them off with a dry, soft cloth and dry thoroughly.
- Do not leave any water droplets on the product. Water droplets may cause the USB port or headset jack to short circuit, or create smears on the screen.
- If the product is wet, wipe off the moisture before connecting with peripheral devices.
- Do not dry the product with an appliance or heat source such as a microwave oven or dryer.
- Use the charger (included/optional) while dry and do not use it in places with water such as bathrooms because it is not waterproof/dustproof.

Maintenance

- When cleaning the product, make sure to turn it off.
- When cleaning the product, wipe it with a soft, dry cloth.
 - If the product is particularly dirty, thoroughly wring a cloth soaked in water, wipe off the dirt, and then wipe with a dry cloth.
 - Do not clean the product with solvents such as benzene, thinner, or strong alkaline detergent because they may affect the surface of the product.

Battery

- The battery is a consumable item. Depending on the usage conditions, it may swell as it reaches the end of its life. When the typical battery life of approximately one year or about 500 charge cycles is exceeded, the battery deteriorates. If the battery begins to swell, or the amount of time it can be used after a full charge becomes dramatically shorter, the battery should be replaced with a new one. Contact your technical support representative.
- Do not touch the terminals of the battery. Failure to observe this may cause poor contact.
- When the battery is left installed in the product, it discharges electricity gradually in small amounts even if the product's power is off. If left for a long period (several months or more), the battery will over discharge and its performance may deteriorate.
- Store the battery in environments with an ambient temperature of -20 °C to 35 °C (-4 °F to 95 °F). If the battery is stored in other environments, battery performance and battery life may be reduced.
- When storing or transporting the battery, make sure that the battery's terminals do not become dirty and that no foreign objects or debris become attached to the battery's terminals.

- If battery charging is not completed after the specified charging time has passed, remove the battery from the product. The battery protection device may be damaged.
- You cannot charge an installed battery if it is not recognized by the product. Make sure that you use the specified battery.
- Dispose properly in compliance with local waste regulations.

Trademarks

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- All other trademarks identified herein are the property of their respective owners.

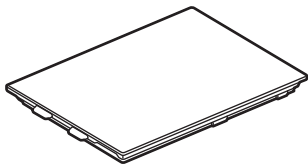
Getting started

Confirming the included items

Included items vary depending on the model.

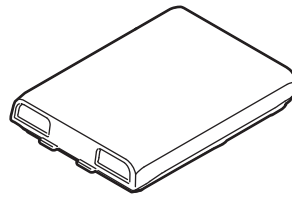
If any items are missing, please contact your technical support representative.

- **Main unit** × 1
- **Battery Pack** × 1



Model No. FZ-VZSUT10

or



Model No. FZ-VZSUT11

- In general, FZ-VZSUT10 is used in the illustrations, but FZ-VZSUT11 is used in some illustrations.

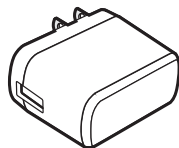
- **Operating Instructions - Read Me First** × 1

<For Europe models>

- **USB cable** × 1

<For Asia-pacific models>

- **AC adaptor (Model No. FZ-AAE184E)** × 1



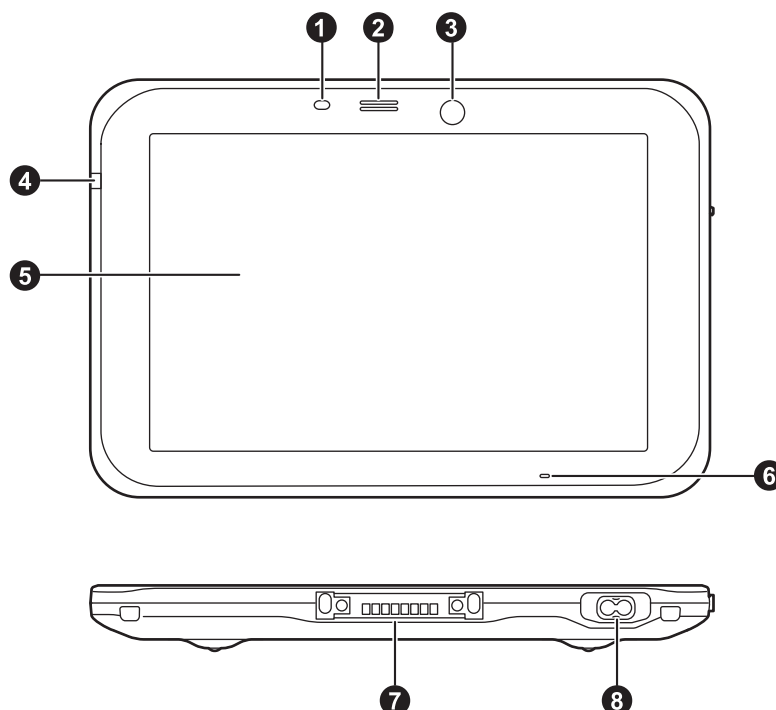
- Connect only the supplied USB cable.
- The shape of the power plug varies depending on your country.

- **USB cable** × 1
- **Stylus** × 1
- **Tether** × 1

Description of parts

- For the description of parts of the option equipped models, refer to their respective pages.

Front view / bottom view



1 Ambient light sensor

Automatically adjusts the screen brightness.

2 Speaker

3 Front camera

4 Indicator

Orange, lit: Battery is charging

Green, lit: Battery charging is complete

Red, lit: Battery level is 15 % or less of a full charge

5 Display (touch panel) (page 33)

Glove mode: Can be operated while using gloves.

Pen mode: Changes the screen to a sensitivity optimized for stylus operations.

Rain mode: Prevents misoperation in wet conditions.

6 Microphone

7 Expansion bus connector

Used when connecting an optional cradle, etc.

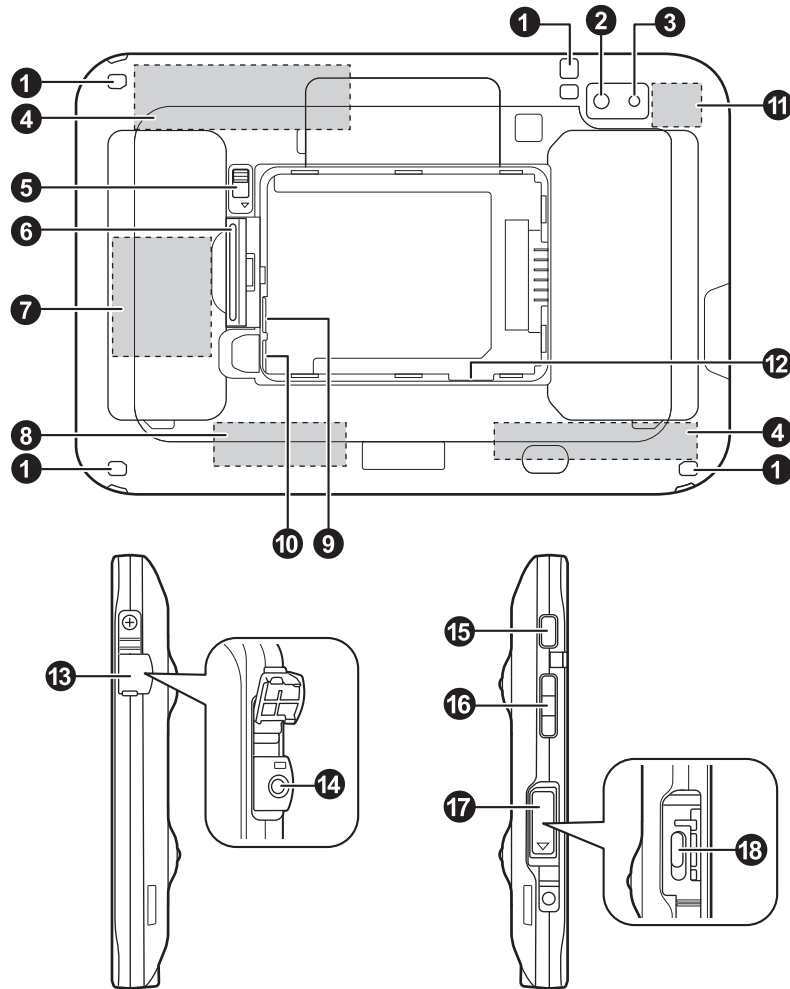
<Only for models with an external antenna connector>

8 External antenna connector

Used when connecting the external antenna.

- Do not use the external antenna at a distance of 20 cm or less from a human body.

Rear view / Side view



- ❶ Strap attachment hole**
- ❷ Rear camera**
- ❸ Photo light**
Can be used when taking pictures with the rear camera.
- ❹ Wireless WAN antenna^{*1} (internal)**
- ❺ Cover latch lock**
- ❻ Cover latch**
- ❼ NFC antenna (internal)**
When using an NFC card or other NFC device, touch the card/device to this area of the unit.
- ❽ Wi-Fi antenna, Bluetooth antenna (internal)**
- ❾ Nano SIM card slot 1^{*1} (page 14)**
- ❿ Nano SIM card slot 2^{*1*2} (page 14)**
- ⓫ GNSS antenna (internal)**
- ⓬ microSD card slot (page 13)**

- ⑬ Headset jack cover
- ⑭ Headset jack
- ⑮  Power button (page 19)
- ⑯ Volume buttons
- ⑰ USB port cover (page 12)
- ⑱ USB Type-C® (USB 3.0) port

*1 Only for models with wireless WAN

*2 Only for models with dual SIM card slots

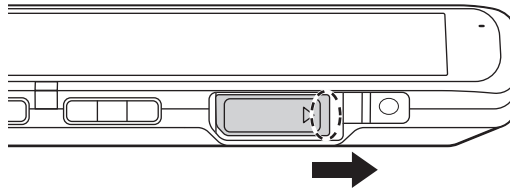
IMPORTANT

- Observe the following to ensure the waterproof and dustproof performance of the unit.
 - Make sure the headset jack cover is securely closed when the headset jack is not being used.
 - When closing the headset jack cover, make sure there is no debris around the cover.

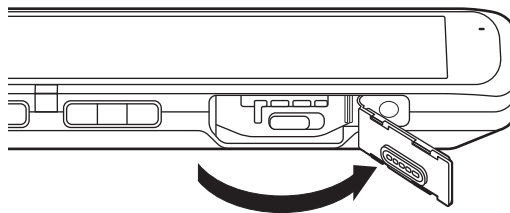
Opening and closing the USB port cover

Opening the cover

1. Put your fingertip on the tab (circled in the illustration), and slide the cover in the direction of the arrow until you hear a click.

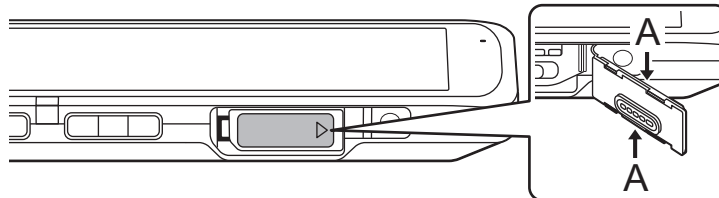


2. Open the cover as shown below.

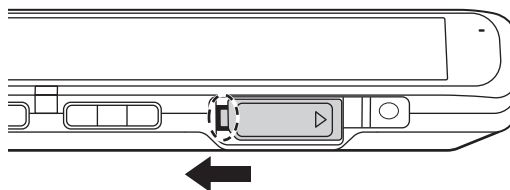


Closing the cover

1. Close the cover firmly to seal it closed.
 - Close the cover firmly until the red lines on the sides of the cover (A) are no longer visible.



2. Lock the cover by sliding it in the direction of the arrow until you hear a click.
 - Close the cover firmly until the red area (circled in the illustration) of the cover is no longer visible.

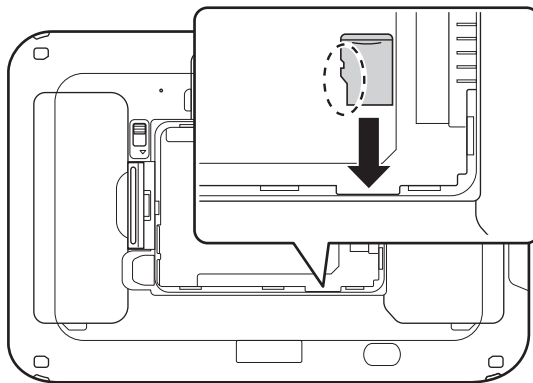


IMPORTANT

- Observe the following to ensure the waterproof and dustproof performance of the unit.
 - Make sure the USB port cover is securely closed and locked when the USB port is not being used.
 - When closing the USB port cover, make sure there is no debris around the cover.
 - Make sure the gasket of the USB port cover is not damaged, deformed, or peeled off.

Installing a microSD card

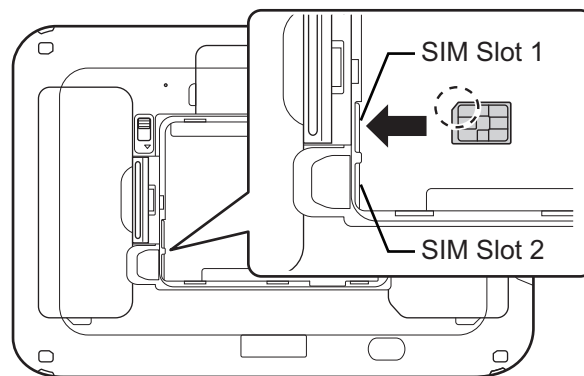
- When installing or removing a microSD card, place the unit on a flat surface.
 - If a battery is installed, remove it (page 16).
1. Insert the microSD card into the microSD card slot.
 - Install only microSD cards.
 - Hold the microSD card so that the metal terminals are facing down, and insert with the notch facing in the same direction of the circled area in the illustration below.



2. Slide the microSD card until you hear a click.
 - To remove a microSD card, push it slightly into the slot to eject it.

Installing a SIM card (models with wireless WAN only)

- When installing or removing a SIM card, place the unit on a flat surface.
 - If a battery is installed, remove it (page 16).
1. Insert the SIM card into the Nano SIM card slot (SIM Slot 1).
 - Install only Nano SIM cards.
 - Hold the SIM card so that the metal terminals are facing down, and insert with the notch facing in the same direction of the circled area in the illustration below.
 - <Only for models with a single SIM card slot>
The SIM card will not be recognized unless it is inserted into SIM Slot 1.
 - <Only for models with dual SIM card slots>
To install another SIM card, use slot 2. The procedure is the same as slot 1.



2. Slide the SIM card until you hear a click.
 - To remove a SIM card, push it slightly into the slot to eject it.

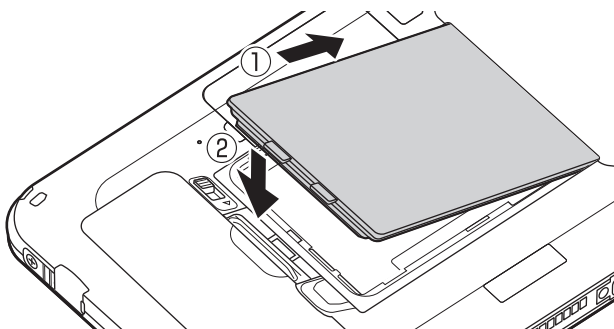
Installing and removing the battery

- If the cover latch is closed, open it (page 16).

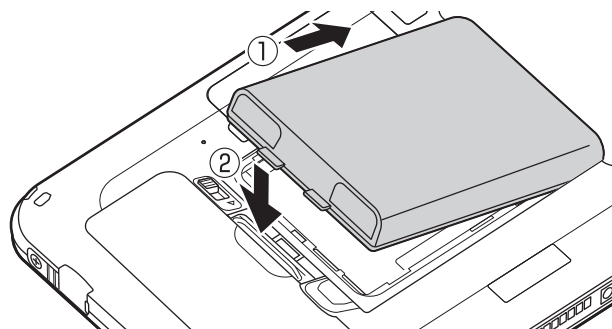
Installing the battery

1. Insert the tabs at the battery's terminal side into the notches of the unit (①), and then lower the battery into place (②).

FZ-VZSUT10

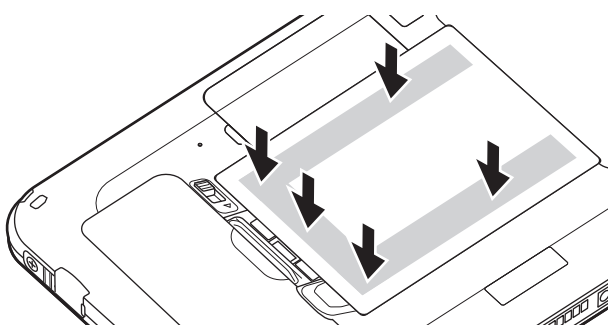


FZ-VZSUT11

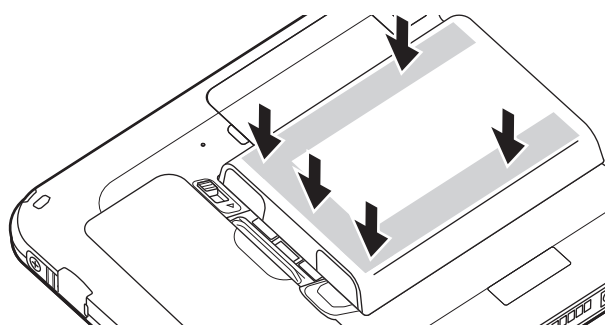


2. Press down firmly on the outside edges of the battery to seal it closed.

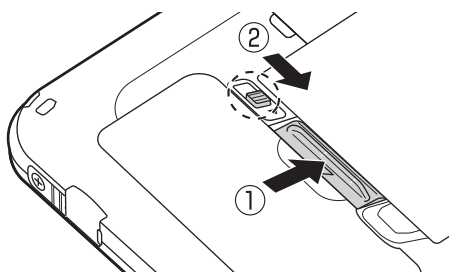
FZ-VZSUT10



FZ-VZSUT11



3. Close the cover latch (①) and lock it (②) by sliding the cover latch lock (circled in the illustration) toward .



- Close the cover latch and the cover latch lock firmly until the red areas are no longer visible.

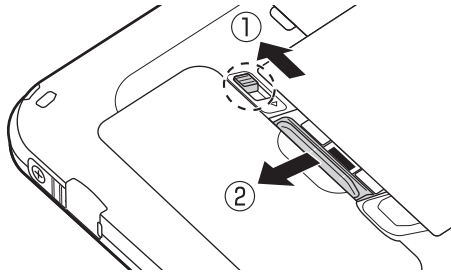
IMPORTANT

- Observe the following to ensure the waterproof and dustproof performance of the unit.

- When installing the battery, make sure there is no debris lodged in the gasket of the battery and the unit.
- Make sure the gasket of the unit is not damaged, deformed, or peeled off.
- Always make sure the battery is securely installed and locked.

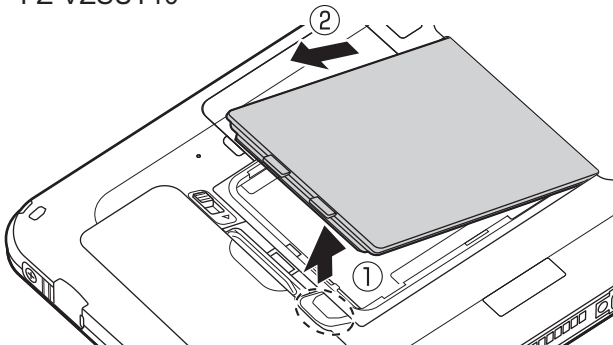
Removing the battery

- Make sure to turn off the unit before replacing the battery.
1. Unlock the cover latch by sliding the cover latch lock (circled in the illustration) away from  ▼ (①), and then open the cover latch by sliding it (②).

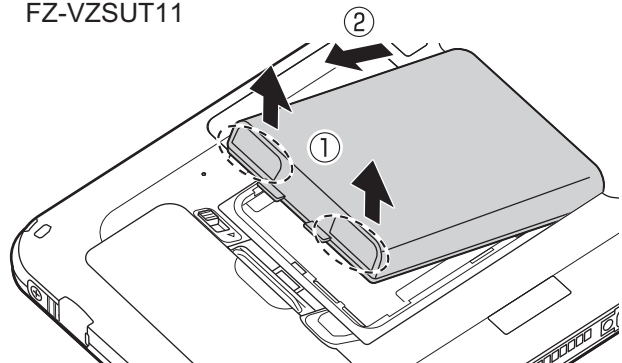


2. Insert your fingertip into the groove (circled in the illustration), lift the battery (①) and then remove it (②).

FZ-VZSUT10



FZ-VZSUT11



IMPORTANT

- Do not remove the battery while the unit is wet. When the unit is wet, remove the water by wiping off the water droplets and thoroughly drying the unit before removing the battery. (See “Waterproof/dustproof” (page 6).)

Replacing the battery (Battery warm swap)

You can replace the battery without turning the unit off.

- Replace the battery within 30 seconds. If more than 30 seconds has passed, apps that are running are forced to close and you may lose unsaved data.
- During warm swapping, all wireless functions are turned off temporarily.

1. From the home screen, tap  **[Warm Swap]**.
 - You can also press and hold  (power button) until the power options dialog is displayed, and tap **[Battery Warm Swap]**.
2. Follow the on-screen instructions.
 - It may take some time until the indicator lights in green.
3. Replace the battery.

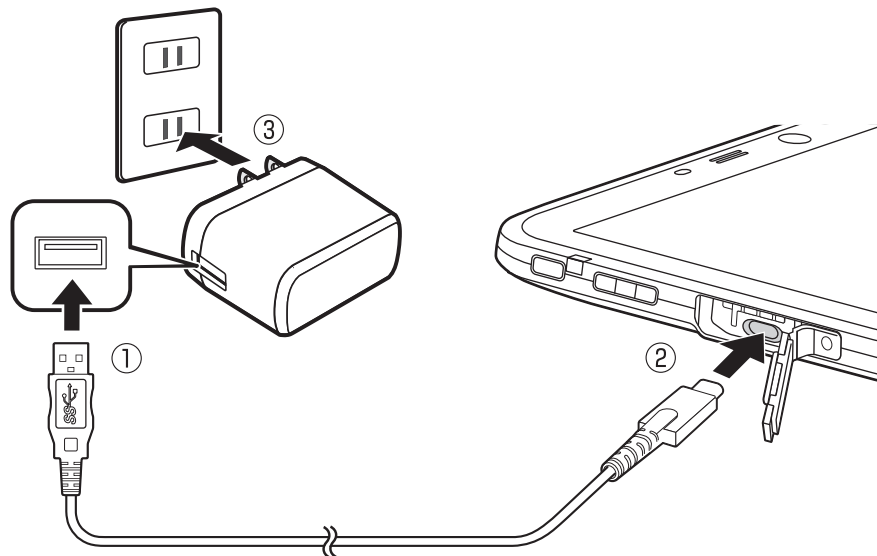
IMPORTANT

- Make sure the unit is not accessing the microSD card or SIM card before warm swapping the battery.
- Do not remove the microSD card or SIM card while warm swapping the battery.
- Make sure you save any important data before warm swapping the battery.

Charging the battery

The battery is not charged at the time of purchase. Charge the battery before turning on the unit for the first time or after an extended period of storage.

- This section explains how to connect the optional AC adaptor and charge.
AC Adaptor: FZ-AAE184E1 series (USB cable included)
- 1. Face the USB mark of the USB cable upward, and connect the AC adaptor (①) and the unit (②).
- 2. Plug the power plug (③) of the AC adaptor into a power outlet.
 - The shape of the power plug varies depending on your country.



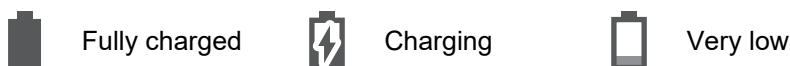
- Charge the battery in environments with an ambient temperature of 10 °C to 35 °C (50 °F to 95 °F).
- The indicator lights in orange while the battery is charging, and lights in green when charging is complete.
- The unit prevents overcharging of the battery by charging only when the remaining battery level is approximately 96 % or less of its full capacity.

Note

- When removing the USB cable, make sure to remove it while holding the plug. Do not pull by the cable.
- When connecting a USB cable, note the shape of the micro USB plug and the micro USB port. Do not attempt to connect the USB cable upside down.
- Remove any dust or water droplets from plugs before connecting them. Do not use excessive force when inserting plugs or insert them at an angle.

Confirming the battery level

The battery level is displayed in the upper-right corner of the screen, in the status bar.



You can also confirm the specific amount of battery level remaining. From the home screen, tap  **[Settings]** → **[Battery]**.

Turning the unit on and off

Turning the unit on

Press and hold  (power button) for more than 2 seconds.

Turning the unit off

1. Press and hold  (power button) until the power options dialog is displayed.
2. Tap **[Power off]**.
 - To restart the unit, tap **[Restart]**.

Turning the screen on and off

When the unit has not been used for a certain period of time, or if you press  (power button) while the screen is displayed, the screen will turn off.

Press  (power button) to turn on the display again.

Releasing the screen lock

If you press  (power button) while the display is off, the lock screen will be displayed.

Swipe up the screen to release the screen lock.

Configuring the unit for the first time

The first time you turn the unit on, you will be prompted to configure the initial settings. Follow the on-screen instructions and configure each item as needed. An internet connection is required to configure certain items.

Screen description

Home screen

The home screen is the main screen from which you can launch apps, check widgets, etc. You can customize the home screen to suit your needs by adding, moving, and removing items as desired. (“Customizing the home screen” (page 22))

You can also view a list of all installed apps in the app list by swiping up the home screen.

Gesture navigation

To go to the home screen: Swipe up from the bottom of the screen

To switch apps: Swipe up from the bottom, hold, and then release

To go back: Swipe from either the left or right edge

You can show the navigation buttons on the screen. From the home screen, tap  **[Settings]** → **[System]** → **[Gestures]** → **[System navigation]**.

Status bar

The status bar is displayed at the top of the screen when using most apps. It displays icons that let you know the status of the battery, network signal, and other features.



Notifications panel

The notifications panel provides detailed information about incoming email messages, app updates, calendar events, etc. You can open the notifications panel by swiping down from the top of the screen toward the center of the screen. To close the notifications panel, swipe up the screen. While the notifications panel is open, you can swipe down/up to show or hide the hidden items.

While the notifications panel is open, you can tap a notification and open the corresponding app, adjust the screen brightness, or switch the displayed apps on and off. You can also swipe a notification left or right to delete it from the panel.

- Tap  to move to **[Settings]** app.
- Tap  to edit apps displayed on the notification panel, or to reset the notification panel.

Icons

Status icons

Status icons are displayed in the status bar. Some commonly displayed icons are explained below.



Battery is fully charged¹



Battery is charging^{*1}



Battery level is very low^{*1}

^{*1} You can also use the **[Settings]** app to view details about battery usage. From the home screen, tap  **[Settings]** → **[Battery]**.



Do not disturb mode is active



Pen mode is active



Glove mode is active



Rain mode is active



Airplane mode is active



Unit is connected to a Wi-Fi network



Portable Wi-Fi hotspot is active



NFC is active



Unit is connected to a mobile network (models with wireless WAN only)

Notification icons

Notification icons are displayed in the left side of the status bar and in the notifications panel. Some commonly displayed icons are explained below.



Customized silent mode is active



USB tethering is enabled (models with wireless WAN only)



Multiple tethering methods are enabled (models with wireless WAN only)

Customizing the home screen

Adding app shortcuts/folders to the home screen

1. Swipe up the home screen, and then in the app list, find the desired app.
2. Tap and hold the desired app, and then move it slightly.
 - The screen switches to the home screen.
3. Drag the app and drop it in the home screen.
 - A folder will be created if you overlap it with another app. To change the folder name, tap **[Unnamed Folder]** while the folder is open.

Adding widgets to the home screen

1. Tap and hold a blank area in the home screen.
2. Tap **[Widgets]**.
3. Scroll to find the desired widget.
4. Tap and hold the desired widget.
 - The screen switches to the home screen.
5. Drag the widget and drop it in the home screen.

Moving or deleting items in the home screen

1. Tap and hold the item, and then move it slightly.
2. Drag the item to the desired location (to move) or to **[×]** (Remove) (to delete).

Changing the wallpaper in the home screen

1. Tap and hold a blank area in the home screen.
2. Tap **[Wallpapers]**.
3. Select the app.
4. Select an image to set as the wallpaper, and then tap **[SET WALLPAPER]**.

Configuring the home screen

1. Tap and hold a blank area in the home screen.
2. Tap **[Home settings]**.
3. Follow the on-screen instructions and configure the desired settings as necessary.

Input

Typing and voice input

The unit's keyboard is displayed automatically when you tap a text entry field or when you are prompted to enter information. You can type using the on-screen keyboard; in some cases, you can also enter text by speaking.

Using the keyboard

Changing the default keyboard

1. From the home screen, tap  **[Settings]** → **[System]** → **[Languages & input]**.
2. Tap **[Virtual keyboard]**, and then select the desired keyboard.

Changing the keyboard language

1. From the home screen, tap  **[Settings]** → **[System]** → **[Languages & input]**.
2. Tap **[Virtual keyboard]**, select the desired keyboard, and then configure the desired settings according to your needs.
 - If the desired keyboard is not shown, tap **[Virtual keyboard]** → **[Manage keyboards]**, and then select the desired keyboard.

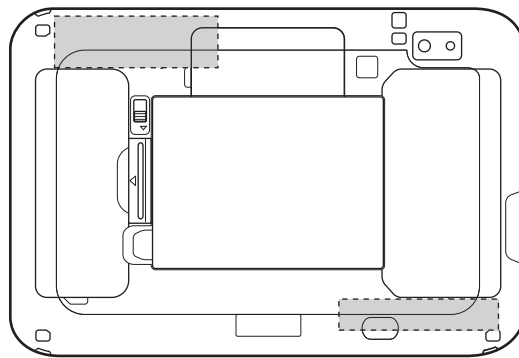
Connectivity

Mobile network (models with wireless WAN only)

You can use the unit to connect to a mobile network and access emails and the Internet. Mobile network-related settings are available from the home screen by tapping  **[Settings]** → **[Network & internet]** → **[Mobile network]**.

Note

- Attach a SIM card before using a mobile network.
- The wireless WAN antenna is contained in the gray area indicated in the illustration below. Covering the area around the antenna with your hand may affect the signal quality.



Changing the active SIM card slot (models with dual SIM card slots)

You may be able to insert two SIM cards into the unit and select which card is active. See “Installing a SIM card (models with wireless WAN only)” (page 14) for the card installation procedure.

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Mobile network]** → **[Advanced]** → **[SIM card slot]**.
2. Select the desired slot and then tap **[OK]** → **[OK]**.
 - Depending on the mobile network service provider associated with the corresponding SIM card, you may need to change the preferred mobile network type (“Changing the preferred mobile network type” (page 24)).

IMPORTANT

- Depending on the software version, changing the active SIM card slot may not be possible. Contact your technical support representative for more information.

Changing the preferred mobile network type

You can select the preferred mobile network type used for mobile network connections.

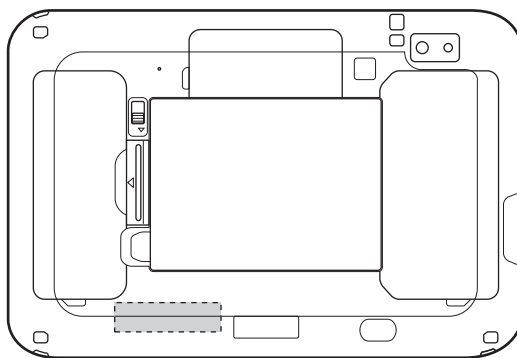
1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Mobile network]** → **[Advanced]** → **[Preferred network type]**.
2. Select the preferred network type.

Wi-Fi

You can use the unit to connect to a wireless LAN access point and access emails and the Internet.

Note

- The Wi-Fi antenna is contained in the gray area indicated in the illustration below. Covering the area around the antenna with your hand may affect the signal quality.



Turning Wi-Fi on and off

1. From the home screen, tap  **[Settings]** → **[Network & internet]**.
2. Tap the **[Wi-Fi]** switch to turn Wi-Fi on or off.
 - If the switch in **[Wi-Fi]** → **[Wi-Fi preferences]** → **[Turn on Wi-Fi automatically]** is turned on, Wi-Fi will turn on automatically when a saved network is detected.

Connecting to a Wi-Fi access point

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Wi-Fi]**.
 - Make sure that Wi-Fi is turned on.
2. Select the desired network name.
 - If the desired network name is not displayed, you may need to enter the network name (SSID) manually. See “Entering the network name (SSID) manually” (page 25) for more information.
3. If you are connecting to a network with security protection, enter the password.
4. Tap **[CONNECT]**.

Entering the network name (SSID) manually

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Wi-Fi]**.
 - Make sure that Wi-Fi is turned on.
2. Tap **[Add network]**.
3. Enter the network name (SSID), then select the network's security type and enter the password, if required.
4. Tap **[SAVE]**.

Selecting the frequency band used for Wi-Fi

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Wi-Fi]** → **[Wi-Fi preferences]** → **[Advanced]** → **[Wi-Fi frequency band]**.
2. Select the desired setting.

Setting a portable Wi-Fi access point (models with wireless WAN only)

You can use the unit as a Wi-Fi access point to connect other devices that are compatible with wireless LAN to the Internet.

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Hotspot & tethering]** → **[Wi-Fi hotspot]**.
2. Tap the switch to turn Wi-Fi hotspot on or off.
3. Configure the hotspot name, security type, password, etc. as desired.

Using peer-to-peer Wi-Fi connections (Wi-Fi Direct)

The unit can establish peer-to-peer connections with other devices that are compatible with Wi-Fi Direct. This allows you to directly send and receive data between the unit and other devices without using a wireless access point.

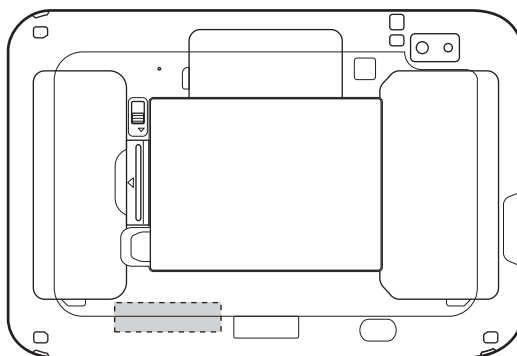
1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Wi-Fi]**.
 - Make sure that Wi-Fi is turned on.
2. Tap **[Wi-Fi preferences]** → **[Advanced]** → **[Wi-Fi Direct]**.
3. Select the desired settings and functions as necessary.
 - Available devices are displayed under **[PEER DEVICES]**.

Bluetooth

You can use the unit to connect to other Bluetooth-compatible devices.

Note

- The Bluetooth antenna is contained in the gray area indicated in the illustration below. Covering the area around the antenna with your hand may affect the signal quality.



Turning Bluetooth on and off

1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[Connection preferences]** → **[Bluetooth]**.
2. Tap the switch to turn Bluetooth on or off.

Pairing a Bluetooth device

Use this procedure to use the unit to initiate the pairing process, such as when pairing a Bluetooth headset.

- Make sure that Bluetooth is turned on, and set the other Bluetooth device to pairing mode or discoverable mode. (Refer to the instruction manuals included with the other device for details.)
1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[Connection preferences]** → **[Bluetooth]** → **[Pair new device]**.
 - The unit searches for nearby Bluetooth devices, and the names of Bluetooth devices available for pairing are displayed.
 2. Tap the name of the device that you want to pair with the unit.
 3. Follow the on-screen instructions.

Note

- When the unit receives a connection request from the other Bluetooth device, a pairing request screen is displayed. Follow the on-screen instructions.

Removing a paired Bluetooth device

1. From the home screen, tap  **[Settings]** → **[Connected devices]**.
 - Previously connected devices are shown under **[PREVIOUSLY CONNECTED DEVICES]**.
2. Tap  → **[FORGET]** of the paired device that you want to remove.
 - If you cannot find the device you want to remove, tap **[See all]**.

Sharing the unit's Internet connection via Bluetooth (Bluetooth tethering)

Use this procedure to use the Bluetooth connection and share the Internet connection with a Bluetooth device that supports PAN profiles. You may not be able to share the unit's mobile network connection (models with wireless WAN only) depending on your mobile network service provider.

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Hotspot & tethering]**.
2. Tap the **[Bluetooth tethering]** switch to turn it on.

Airplane mode

When using the unit where wireless connections are prohibited, such as on airplanes and in hospitals, you can turn off wireless connections by enabling airplane mode. Once you have turned on airplane mode, you can manually turn certain wireless communication features on again, such as Wi-Fi and Bluetooth.

Turning airplane mode on and off

1. From the home screen, tap  **[Settings]** → **[Network & internet]**.
2. Tap the **[Airplane mode]** switch to turn it on or off.

USB connection

You can connect the unit to a computer or USB device.

Note

- The unit's Type-C port does not support USB PD (USB Power Delivery) or Thunderbolt.
- For use and compatibility of USB devices, refer to the instruction manual of the USB device.
- Do not remove a USB device while you are accessing it. If you remove it before operation is completed, the data may get corrupted or the device may become inaccessible.
- Please understand that we are not responsible for any loss of recorded data or any other direct or indirect damage.

Transferring files in the unit to a computer

You can connect the unit to a computer and transfer files. Connect the unit's Type-C port to a computer using the USB cable and follow the procedure below.

1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[USB]**.
2. Select **[File Transfer]**.

Note

- You can also change the setting by tapping the notification in the notifications panel.
- Do not remove the USB cable while the unit is being accessed. Doing so may corrupt the data.

Sharing the unit's Internet connection (USB tethering) (models with wireless WAN only)

You can share the unit's Internet connection with another computer. You may not be able to share the unit's mobile network connection (models with wireless WAN only) depending on your mobile network service provider.

Follow the procedure below while the unit's Type-C port and a computer are connected using a USB cable.

1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Hotspot & tethering]**.
2. Tap the **[USB tethering]** switch to turn it on.

Displaying on an external display

The unit's screen can be displayed on an external display. Use a display cable to connect the unit's Type-C port to an external display.

Note

- Depending on the display cable used, wireless WAN communication quality may be poor.

microSD memory card

See "Installing a microSD card" (page 13) for the card installation procedure.

Confirming the available space on the microSD card

From the home screen, tap  **[Settings]** → **[Storage]**.

Security

Locking the screen

You can lock the screen to prevent accidental operation. You can also enhance security by requiring a PIN, pattern, or password to prevent the screen from being unlocked.

Configuring the screen lock

1. From the home screen, tap  **[Settings]** → **[Security]** → **[Screen lock]**.
 - If the screen lock is already configured, you must unlock the unit before configuring a different unlock method.
2. Select the desired unlock method and then follow the on-screen instructions.

Note

- The risk of unauthorized access to the unit is increased when using the **[None]** and **[Swipe]** unlock methods as these methods provide little to no security. For increased security, select an unlock method that is unknown to others and difficult to guess.
- Do not use a password, etc. that you already use for other features.

Locking the screen

You can lock the screen by the following methods.

- Press  (power button) while the screen is displayed.
- Press and hold  (power button) to display the power options menu, and then tap **[Lockdown]**.
- Wait for the screen to automatically turn off.

[DeviceManagement] app

You can disable the unit's individual hardware features to prevent access to certain functions.

IMPORTANT

- A password must be set in order to use this feature.
- If you enter the wrong password more than 5 times, even the correct password will not be recognized if entered after that. In this case, restart the unit and enter the correct password again.
- The password will be erased when the unit is reset using the factory data reset.

Enabling and disabling certain hardware features

1. Swipe up the home screen, and then in the app list, tap  **[DeviceManagement]** → **[Device setting items]**.
2. Select the desired feature and then select the desired setting.
 - Repeat this step to change the settings for other features, if desired.
3. Tap **[APPLY]**, enter the password and then tap **[OK]**.
 - If a password is not set, you will be prompted to create a new one.

Note

- Some settings will take place the next time the corresponding hardware component is connected, mounted, etc.

Adding the USB storage

1. Swipe up the home screen, and then in the app list, tap  **[DeviceManagement]** → **[Device setting items]**.
2. Add USB storage with the following procedures.
 - **[Add device]**: Enter the vendor ID or product ID of the USB storage you want to add.
 - **[Do scan]**: Scan the connected USB storage, and then tap the USB storage you want to add.

Restricting the network connection

You can restrict connecting servers or connection methods such as mobile networks or Wi-Fi.

1. Swipe up the home screen, and then in the app list, tap  **[DeviceManagement]** → **[IP Filter Settings]**.
2. Tap **[Enable IP Filter]** to turn on the checkbox.
3. Tap **[Use Filtering Rule X]** in Filtering Rule 1 to 5 to turn on the checkbox.
4. Tap **[Filtering Network]** or **[Add IP Address to Accept]** of the selected Filtering Rule, and then select the usable connection method or add the allowed server.
5. Tap **[APPLY]**, enter the password and then tap **[OK]**.
 - If a password is not set, you will be prompted to create a new one.

Changing or deleting the password used for [DeviceManagement]

1. Swipe up the home screen, and then in the app list, tap  **[DeviceManagement]** → **[Password settings]**.
2. Select the desired item and then follow the on-screen instructions.

Exporting and importing [DeviceManagement] settings

1. Swipe up the home screen, and then in the app list, tap  **[DeviceManagement]**.
2. Tap  → **[Export]** or **[Import]**.

Settings

Power options menu

You can press and hold  (power button) to display the power options menu. From here, you can perform or set the following commonly-used features.

- Power off
- Restart
- Battery Warm Swap (see “Replacing the battery (Battery warm swap)” (page 17))
- Touch operation mode (page 33)
- Lockdown (page 30)

[UserButtonManager] app

You can customize the unit's function buttons. Some of the available functions that you can assign to the buttons are listed below.

- Back
- Home
- Menu
- Barcode reader trigger
- Flashlight
- Launch an app of your choosing
- Capture a screenshot
- Security mode (turns off the screen and sound)
- Display the screen when it is turned off

Changing the functions assigned to the buttons

1. Swipe up the home screen, and then in the app list, tap  **[UserButtonManager]**.
2. Tap  next to the item you want to change, and then select the desired function.

Default button assignments

The default button assignments are explained below.

Short press assignments

- **Left Side button (for models with a barcode reader)**
No function by default.
- **Right Side button (for models with a barcode reader)**
No function by default.
- **Left+Right Side button (for models with a barcode reader)**
No function by default.
- **Volume up button**
Increases the volume.
- **Volume down button**
Decreases the volume.

Long press (press and hold) assignments

- **Left Side button (for models with a barcode reader)**

- No function by default.
- **Right Side button (for models with a barcode reader)**
No function by default.

Wakeup Setting

Assigns a button to display the screen when it is turned off.

Customized silent mode

Customized silent mode allows you to quickly change a variety of settings that affect sound volume, screen brightness, etc.

Configuring customized silent mode

You can adjust the settings that will be enabled when customized silent mode is turned on.

1. From the home screen, tap  **[Settings]** → **[Sound]** → **[Customized silent mode]**.
2. Under **[CUSTOMIZE]**, tap the switch of the desired settings to turn them on or off.
3. Tap the **[Customized silent mode]** switch to turn it on.

Note

- Turn off customized silent mode before changing the settings.

Turning customized silent mode on and off

There are multiple methods you can use to turn customized silent mode on and off.

- Press the button assigned to customized silent mode in the **[UserButtonManager]** app (see page 32)
- Turn on **[Customized silent mode]** in the **[Settings]** app (see “Configuring customized silent mode” (page 33))

[Panasonic Enterprise Launcher] app

You can change the home app to Panasonic Enterprise Launcher. If Panasonic Enterprise Launcher is set, you can control the use of the functions or apps. In Panasonic Enterprise Launcher, there are two modes, kiosk mode and user mode.

- Administrator login is necessary to customize the Panasonic Enterprise Launcher.
- Launcher3 is the Android™ standard home app.

Using [Panasonic Enterprise Launcher]

1. From the home screen, tap  **[Settings]** → **[Apps & notifications]** → **[Default apps]**.
2. Tap **[Home app]** → **[Panasonic Enterprise Launcher]**.
3. Tap  → **[Admin login]** → enter the password (default: blank) → **[OK]**.
4. Tap  → **[Settings]**, and then configure the desired settings according to your needs.

Touch operation settings

You can select the following touch operation modes to suit your working conditions.

- **Glove mode:** Makes the screen more sensitive to touch operations. Useful when operating the unit while wearing gloves.
- **Pen mode:** Changes the screen to a sensitivity optimized for stylus (included/optional) operations.
- **Rain mode:** Prevents accidental operation when the screen is wet.

1. From the home screen, tap  **[Settings]** → **[Display]** → **[Advanced]** → **[Touch operation mode]**.
2. Select the desired mode.
3. When necessary, tap  → **[Advanced]**, select the desired feature and configure it as desired.
 - **[Finger sensitivity]**: Set the sensitivity required for the screen to respond to touch operations. If the sensitivity is high or the screen is wet, select **[Low]**. If you feel that the sensitivity is low, select **[High]**.
 - **[Glove thickness]**: Set the screen sensitivity according to the glove thickness.
 - **[Rain condition]**: Set according to the amount of rain falling on the screen, i.e., how wet the screen is.
 - When **[Rain condition]** is set to **[Heavy]**, “tap and hold” operations are limited to 2 seconds.

Note

- You can also change the touch operation mode by tapping **[Touch operation mode]** in the power options menu (see “Power options menu” (page 32)).
 - Turn glove mode off when you are not wearing gloves.
 - Even if glove mode is enabled, the unit may not be able to be operated while wearing certain types of gloves.
 - When rain mode is enabled, the screen responds by being firmly pressed with a finger.
 - Even if rain mode is enabled, the unit may not be able to be operated or may not respond properly to touches when the entire screen is wet or depending on the amount of water on the screen.
- Temporarily press  (power button) to turn off the screen and wipe the water off of the screen.

Accessibility settings

The unit provides a variety of settings that allow you to change how the user and unit interact.

1. From the home screen, tap  **[Settings]** → **[Accessibility]**.
2. Select the desired feature or option and configure it as desired.
 - **[Volume key shortcut]**: Allows you to press and hold both volume buttons to start the selected accessibility feature.
 - **[Select to Speak]**: Allows you to tap specific items on your screen to hear them read aloud.
 - **[TalkBack]** (models with GMS only): Reads items on the screen aloud.
 - **[Text-to-speech output]**: Allows you to configure the unit’s text-to-speech features.
 - **[Font size]**: Allows you to make the text on the screen smaller or larger.
 - **[Display size]**: Allows you to make the items on your screen smaller or larger.
 - **[Dark theme]**: Allows you to invert the colors on screens that support the dark theme. It puts less strain on the eyes and extends battery usage.
 - **[Magnification]**: Allows you to turn on the unit’s screen magnification feature.
 - **[Color correction]**: Allows you to correct the colors in the screen.
 - **[Color inversion]**: Allows you to invert all colors in the screen.
 - **[Large mouse pointer]**: Allows you to make the pointer size larger when a mouse is connected.
 - **[Remove animations]**: Allows you to speed up the unit by disabling animations.
 - **[Accessibility Menu]**: If on, allows you to display large menus anytime you tap the icon at the bottom right of the screen.
 - **[Switch Access]** (models with GMS only): Allows you to use one or more switches to select items, scroll, enter text, and more.
 - **[Dwell timing]**: Allows you to set the connected mouse pointer to click when it stops moving.

- **[Auto-rotate screen]**: Allows you to configure the unit to rotate the screen automatically when the unit is tilted.
- **[Touch & hold delay]**: Allows you to adjust the amount of time that passes before the unit recognizes a “long tap” as a tap-and-hold operation.
- **[Time to take action (Accessibility timeout)]**: Allows you to specify the time until a notification disappears.
- **[Mono audio]**: Combines channels when playing audio.
- **[Audio balance]**: Allows you to adjust the left and right volume balance while using earphones.
- **[Caption preferences]**: Allows the display of captions.
- **[High contrast text]**: Allows you to clearly display text by increasing its contrast.

Apps

Starting apps

There are several ways you can start an app.

- Swipe up the home screen, and then in the app list, tap the app's icon
- Create a shortcut to the app in the home screen (see “Adding app shortcuts/folders to the home screen” (page 22))
- Use the **[UserButtonManager]** app to assign the app to one of the unit's buttons (see “Changing the functions assigned to the buttons” (page 32))

Preinstalled apps

The unit comes preinstalled with the following apps.



Barcode Reader

Allows you to configure the barcode reader (equipped models only) (“Barcode reader settings” (page 43)).



Chrome (models with GMS only)

Internet browser app.



DeviceManagement

Allows you to disable the unit's individual hardware features (“[DeviceManagement] app” (page 30)).



Photos (models with GMS only)

Allows you to display, edit, and manage photos and movies.



Contacts

Allows you to store and manage your contacts.



UserButtonManager

Allows you to configure the unit's buttons (“[UserButtonManager] app” (page 32)).



Hardware Diagnostic

Allows you to check if the unit's functions are operating correctly (“About hardware diagnostics” (page 48)).



SignDemo

A demo app for electronic signatures.



StylusNote

Allows you to save and share handwritten notes (“[StylusNote] app” (page 37)).



Log sending app

Allows you to acquire logs from the unit, and save them to storage or send them to the server. It is used for analysis during malfunction.



Button Handler

Allows you to select the button handler app. Button handler apps developed independently can be set here.

[UserButtonService] is set at the time of purchase. If it is set to [Disable], the [UserButtonManager] app cannot be used.



Panasonic Rapid Configuration

Allows you to apply the various settings at once by scanning a QR code.



WL/BL App

Displays the apps whitelisted and blacklisted in management tools.

Other apps are preinstalled in addition to those mentioned above.

[StylusNote] app

This is an app that allows you to save handwritten notes as images. You can also share saved notes with this app.

Using the [StylusNote] app

1. Swipe up the home screen, and then in the app list, tap  [StylusNote].

Icon description



Navigation menu: Save, share, and delete handwritten notes, change the screen orientation, or turn pen only mode on or off.



Pen tool



Eraser tool



Tool options: Set the pen and eraser thickness, or the pen color.



Background tool: Set an image to use as the background.



Return to the previous state.



Close the app.

Note

- Handwritten notes are saved to:
From the home screen, tap  **[Settings]** → **[Storage]** → **([Internal shared storage] →) [Files]**
→ **[Android]** → **[data]** → **[com.panasonic.psn.stylusdemo]**.

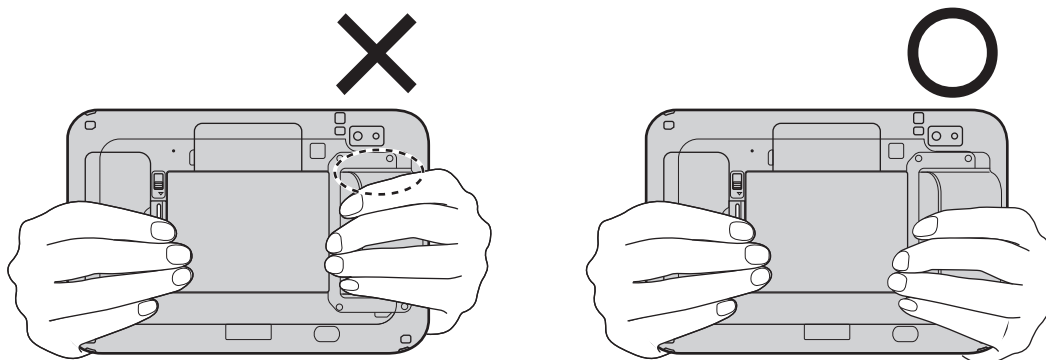
Camera

Taking pictures

1. From the home screen, tap  [Camera].
2. Confirm that  (camera mode) is displayed.
 - If  is displayed, swipe the screen to the right and then tap  to select camera mode.
3. Tap  to take a picture.
 - You can use the digital zoom by pinching in and out or by pressing the volume buttons to adjust the zoom ratio.

Note

- For models with the optional equipment, do not hold the upper side of the option part when shooting. When shooting with the flash, the light may reflect off your finger and appear in the image.



Recording videos

1. From the home screen, tap  [Camera].
2. Confirm that  (video mode) is displayed.
 - If  is displayed, swipe the screen to the right and then tap  to select video mode.
3. Tap  to start recording, and tap  to stop recording.
 - You can use the digital zoom by pinching in and out or by pressing the volume buttons to adjust the zoom ratio.

Using the option menu

1. While using the [Camera] app, tap .
2. Tap the desired icon and then select the desired option.
 - **Front/rear camera selector**
Used to switch between the front and rear camera. Some features are not available depending on which camera is selected.



- **Flash mode**^{*1}

 : On

 : Off

 : Auto^{*2}

- **Scene modes**

 : Snow

 : Sunset

 : Night view

 : Landscape

AUTO : Auto

HDR : HDR (mode that reduces blocked out blacks and blown-out highlights in scenes with large differences in brightness)^{*2}

- **Grid lines**

Set whether to display guiding grid lines in the shooting screen.



- **Self timer**^{*2}

 3s 10s

- **Exposure**^{*1*2*3}



^{*1} Only when the scene mode is set to **[AUTO]**

^{*2} Only in camera mode

^{*3} Only when **[Manual exposure]** is enabled in the camera settings

Camera settings

1. In the **[Camera]** app, swipe the screen to the right and then tap .
2. Select the desired feature and configure it as desired.
 - **[Resolution]**: Allows you to set the camera resolution and video quality.
 - **[Quality]**: Allows you to set the picture quality.
 - **[Focus mode]**^{*1}: Allows you to set the shooting mode according to the subject.
 - **[White balance]**: Allows you to adjust the color development of images according to the weather and conditions of the shooting location.
 - **[Date stamp]**: Allows you to display the date and time when the picture was taken.
 - **[ISO]**^{*1}: Allows you to set the ISO sensitivity.
 - **[Save location]**: Allows you to save location information in pictures.
 - **[Advanced]**: Allows you to set the exposure, storage location, and shutter sound.

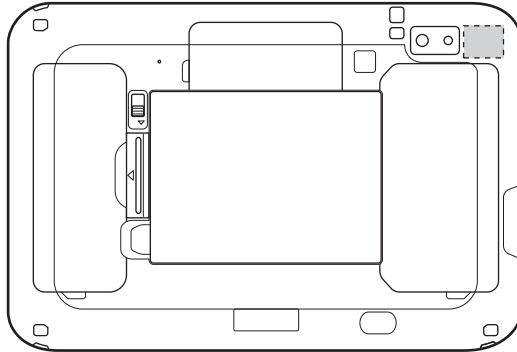
^{*1} Only in camera mode

GNSS

Allows you to use GNSS information such as GPS and GLONASS.

Note

- The GNSS antenna is contained in the gray area indicated in the illustration below. Covering the area around the antenna with your hand may affect the signal quality.



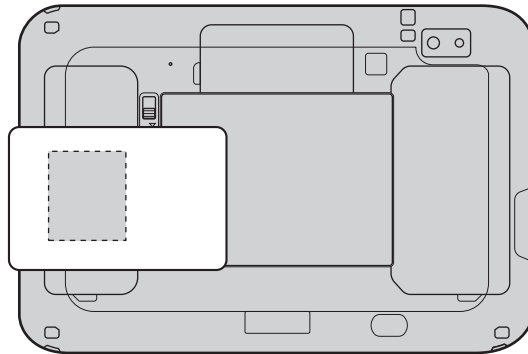
- When using a device compatible with USB 3.0, GNSS information may not be received correctly. In this case, turn off **[SuperSpeed USB]**.
 1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[External device]**.
 2. Tap the **[SuperSpeed USB]** switch to turn it off.

NFC card reader/writer

The unit can read NFC card data. It can also transmit data with other devices that have NFC built in.

Note

- Hold the NFC card in the orientation as shown in the figure.
- When using NFC, unlock the screen.
- If the unit is having difficulty reading, slightly shift the position of the card.
- If your unit is equipped with the barcode reader over the NFC antenna, NFC cannot be used.



Turning NFC on and off

1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[Connection preferences]**.
2. Tap the **[NFC]** switch to turn it on or off.

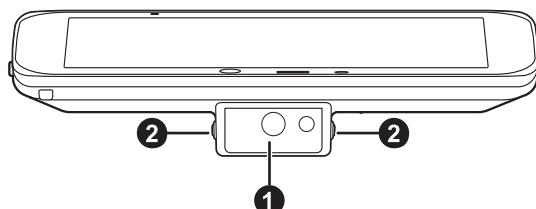
Advanced NFC settings

1. From the home screen, tap  **[Settings]** → **[Connected devices]** → **[Connection preferences]**.
 - Make sure that NFC is turned on.
2. Tap **[Advanced NFC settings]**.
3. Select the desired settings and then configure them according to your needs.

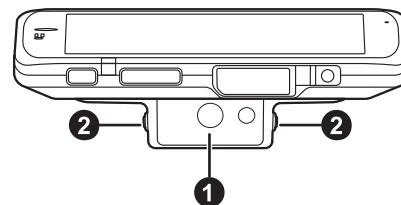
Barcode reader (equipped models only)

Description of parts

<Landscape type>



<Portrait type>



❶ Barcode reader

❷ Side button

Barcode reader settings

1. Swipe up the home screen, and then in the app list, tap  **[Barcode Reader]**.
2. Select the desired settings and then configure them according to your needs.

Triggering the barcode reader

You can use the **[UserButtonManager]** app to configure which button is used to start scanning the barcode. See “Changing the functions assigned to the buttons” (page 32) for more information.

Using the barcode reader

Typically, scanned barcodes are entered into the currently selected text field of the app that is in the foreground.

About the demo app

You can try using the barcode reader by launching the demo app.

1. Swipe up the home screen, and then in the app list, tap  **[Barcode Reader]** →  → **[Demo]**.

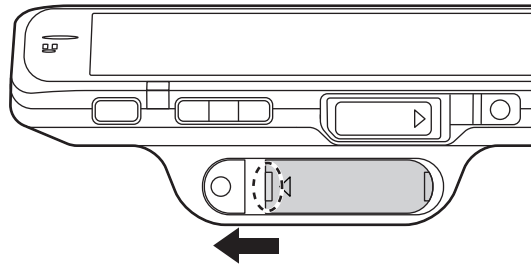
Note

- The barcode scan function is assigned to the side buttons in the demo app. Pressing the buttons emits a laser. Take care not to look directly at the laser or point it at other people's eyes. Doing so will cause damage to the eyes.

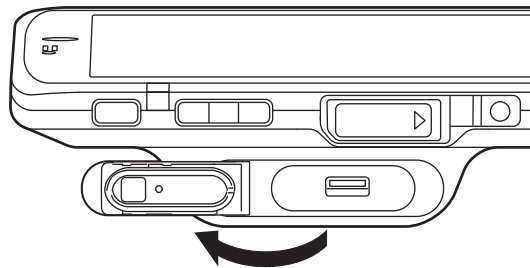
USB Type-A port (USB 2.0 Host only) (equipped models only)

Opening the cover

1. Put your fingertip on the tab (circled in the illustration), and slide the cover in the direction of the arrow until you hear a click.

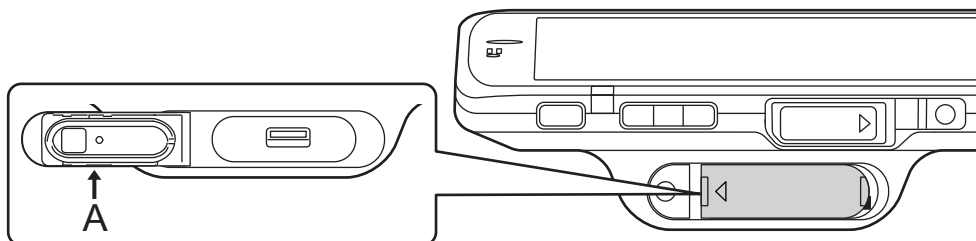


2. Open the cover as shown below.

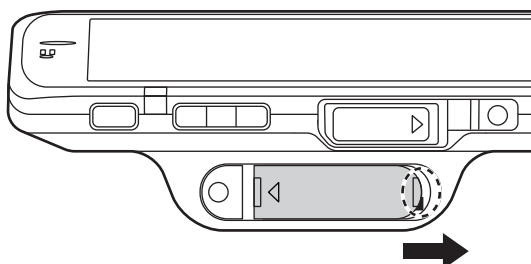


Closing the cover

1. Close the cover firmly to seal it closed.
 - Close the cover firmly until the red line on the side of the cover (A) is no longer visible.



2. Lock the cover by sliding it in the direction of the arrow until you hear a click.
 - Close the cover firmly until the red area (circled in the illustration) of the cover is no longer visible.



IMPORTANT

- Observe the following to ensure the waterproof and dustproof performance of the unit.
 - Make sure the USB port cover is securely closed and locked when the USB port is not being used.
 - When closing the USB port cover, make sure there is no debris around the cover.
 - Make sure the gasket of the USB port cover is not damaged, deformed, or peeled off.

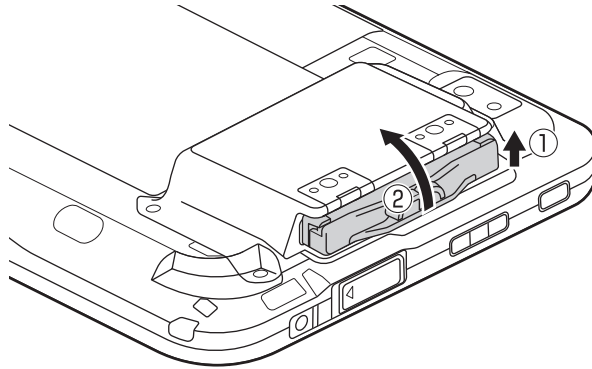
Smart card reader (equipped models only)

IMPORTANT

- Do not insert objects other than the smart card.
- Do not insert a wet card.
- Do not insert a cracked card.
- Wipe dirt off the contact part of the card before use.
- Observe the following to ensure the waterproof and dustproof performance of the unit.
 - Make sure the cover is securely closed and locked.
 - When closing the cover, make sure there is no debris around the cover.
 - Make sure the rubber part of the cover is not damaged, deformed, or peeled off.

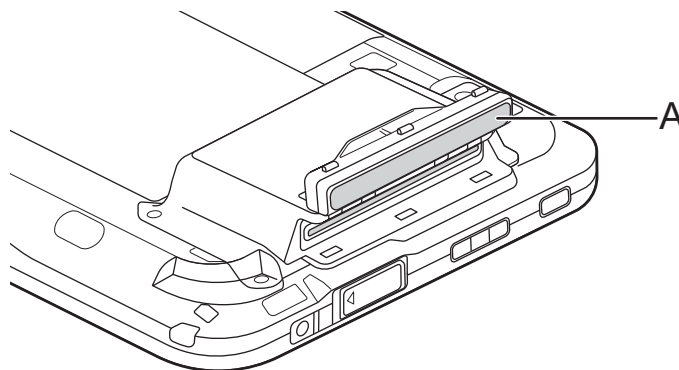
Inserting the smart card

1. Slide the cover upward until you hear a click (①), and then lift the cover (②).

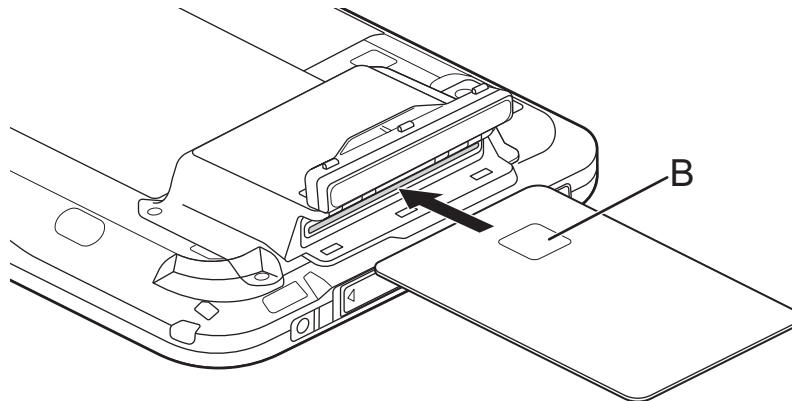


IMPORTANT

- When lifting the cover, make sure that your finger does not rub against the rubber part (A) of the cover. Doing so may damage the rubber part.



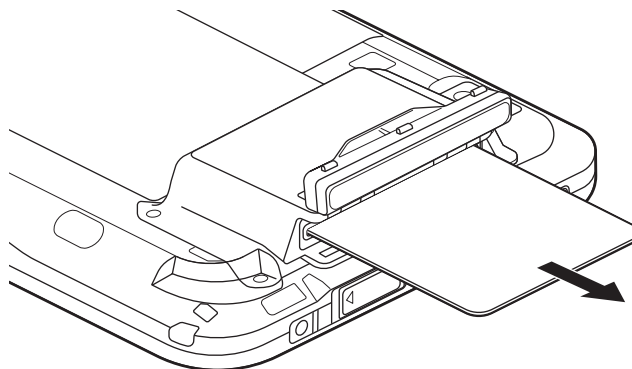
2. Face up the contact part (B), then insert the smart card into the slot.



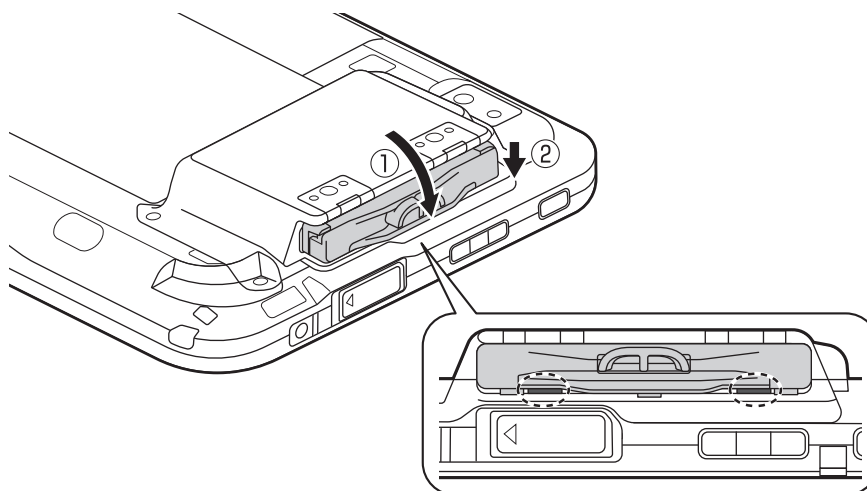
- Insert the card all the way in.

Removing the smart card

1. Pull the card straight out.



2. Close the cover (①), and then slide it down until you hear a click (②).



- Close the cover firmly until the red area (circled in the illustration) of the cover is no longer visible.

Hardware diagnostics

About hardware diagnostics

If you suspect that the unit's hardware is not operating correctly, you can use the **[Hardware Diagnostic]** app to check if there are problems with the hardware. If there is a hardware problem, contact your technical support representative. This app cannot check for software problems.

Diagnosable hardware

Automatic Test

Wi-Fi, Bluetooth, Wireless WAN (WWAN) (models with wireless WAN only), GPS, microSD card (external SD), USB storage, Ethernet

Manual Test

Touchscreen (Multi-touch, Single-touch), LCD, Sound, Battery Health

Running hardware diagnostics

A result icon is displayed on the left of the diagnosed device.

 : Pass

 : Fail

Diagnosing with the automatic test

1. Swipe up the home screen, and then in the app list, tap  **[Hardware Diagnostic]**.
2. Turn on the checkbox by tapping the device name ([**1. Wi-Fi**], [**2. Bluetooth**], [**3. WWAN**] (models with wireless WAN only), [**4. GPS**], [**5. External SD**], [**6. USB storage**], [**7. Ethernet**]) that you want to diagnose.
 - To diagnose a microSD card or USB storage device, insert the microSD card or USB storage device into the unit. Back up any important data in the microSD card or USB storage device before diagnosis.
3. Tap **[RUN]** to start diagnosis.
4. When a message indicating that diagnosis is finished is displayed, tap **[FINISH]**.

Diagnosing the touchscreen (multi-touch)

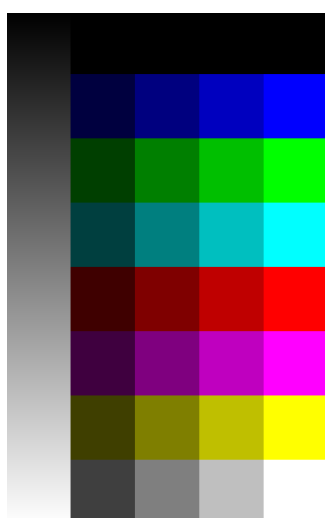
1. Swipe up the home screen, and then in the app list, tap  **[Hardware Diagnostic]** → [**8. Touchscreen (Multi-touch:5points)**].
2. Touch the screen with five fingers.
3. When you remove your fingers from the screen and a message indicating that diagnosis is finished is displayed, tap **[PASS]**, **[FAIL]**, or **[RETRY]**.

Diagnosing the touchscreen (single-touch)

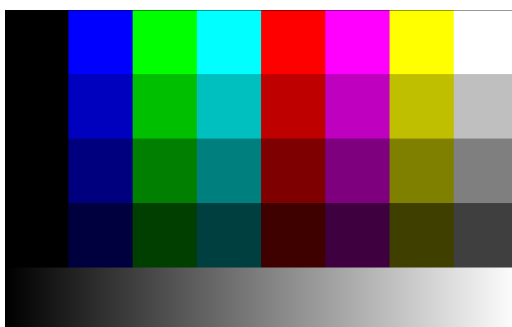
1. Swipe up the home screen, and then in the app list, tap  **[Hardware Diagnostic]** → [**9. Touchscreen (Single-touch)**].
2. Touch ① with your finger and trace the screen in order to ⑤.
3. When a message indicating that diagnosis is finished is displayed, tap **[PASS]**, **[FAIL]**, or **[RETRY]**.

Diagnosing the LCD

1. Swipe up the home screen, and then in the app list, tap  **[Hardware Diagnostic]** → **[10. LCD]**.
2. Rotate the unit and check that the screen is displayed as follows.



<Horizontal>



3. Tap the screen, and go back one screen.
 - To go back one screen, flick from the right/left edge of the screen toward the center.
4. When the confirmation items are displayed, tap the test result items to turn on the checkboxes, and then tap **[OK]**.

Diagnosing the sound

1. Swipe up the home screen, and then in the app list, tap  **[Hardware Diagnostic]** → **[11. Sound]**.
2. Tap , speak into the unit's microphone, and then tap  to stop recording.
3. Tap **[SAVE]**.
4. Tap the saved file to check the sound.
5. Go back two screens, and the confirmation items are displayed. Tap the test result items to turn on the checkboxes, and then tap **[OK]**.
 - To go back one screen, flick from the right/left edge of the screen toward the center.

Diagnosing the battery health

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] → [12. Battery Health].
2. Check the details and then tap [OK].

Saving or checking the system log and diagnosis results

Checking the system information

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] → [System Information].
2. Check the details and then tap [OK].

Checking the system log

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] → [System Log].
2. Check the details and then tap [OK].

Saving the test results

1. After running hardware diagnostics, tap  → [Save test result to the internal storage].

Note

- The test results are saved to:
From the home screen, tap  [Settings] → [Storage] → ([Internal shared storage] →) [Files] → [DiagnosticResults].

Checking saved test results

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] → [Test Result].
2. Select the XML file of a saved test result, and then tap [OK].

Sharing saved test results

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] →  → [Attach test result to mail].
2. Select the zip file of a saved test result, and then tap [OK].
3. Select an app with which to share, and follow the on-screen instructions.

Saving the background Logcat (system log) to the internal storage

1. Swipe up the home screen, and then in the app list, tap  [Hardware Diagnostic] →  → [Save Logcat in background].
2. Check the details and then tap [OK].
 - To stop saving, tap [Save Logcat in background] again to turn off the checkbox, and then tap [OK].

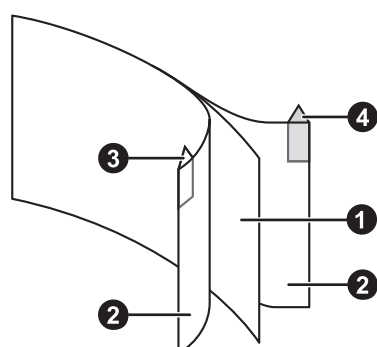
Supplementary items

Protective Film (FZ-VPFS11)

Included accessories

- Spatula × 1

Description of parts

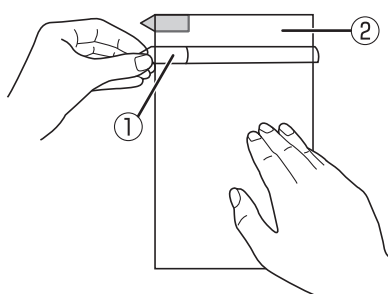


- ① Protective Film
- ② Peel-off sheet
- ③ White tape
- ④ Blue tape

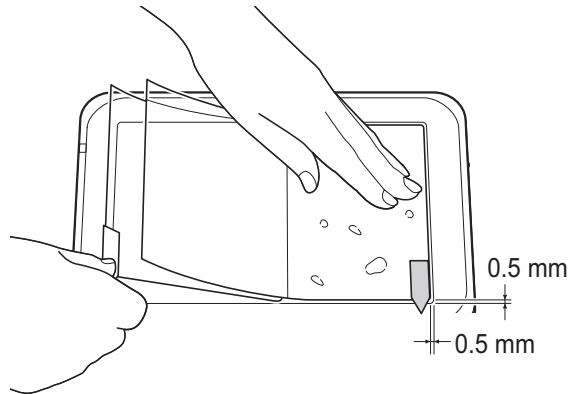
How to apply the Protective Film

Note

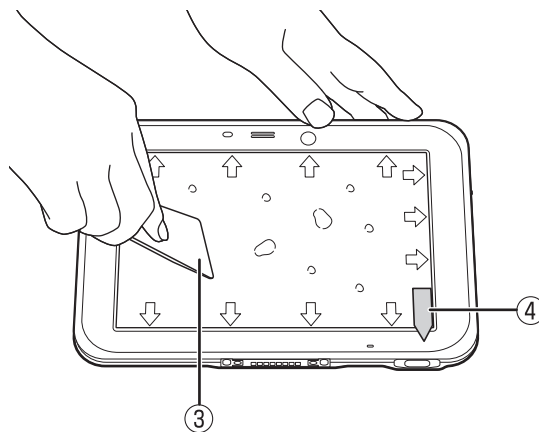
- Do not bend the Protective Film. Creases may prevent the Film from being applied smoothly to the screen, and may make the screen difficult to see.
1. Use a soft, dry cloth to remove dirt, dust, fingerprints, etc., from the screen surface.
 - If the Protective Film is applied while foreign matter remains on the screen surface, air bubbles or abrasions may result.
 2. Hold the white tape of the peel-off sheet (①), and peel back about 3 cm of the sheet from the Protective Film.
 - At this time, do not touch the adhesive side (②), or leave the Film lying around, as dust or other foreign matter might settle on it.



3. Align the adhesive side of the Protective Film (the side of the Film with the peel-off sheet with the white tape) with the screen, and carefully attach the Film to the screen while peeling off the peel-off sheet.
 - If the Film is positioned incorrectly, or if large air bubbles are visible, peel off the Film and re-apply. If dust or other foreign matter settle on the adhesive side of the Protective Film, remove it with cellophane tape.



4. Use the spatula provided (③) to remove any remaining air bubbles.
 - Remove air bubbles by pushing them toward the outer edge of the screen, as shown in the figure. Do not apply too much force, as damage to the screen may result. Also, be careful not to scratch the surface of the Protective Film with the corner of the spatula.



5. Hold the blue tape of the peel-off sheet (④), and peel away the entire sheet from the Protective Film.

Note

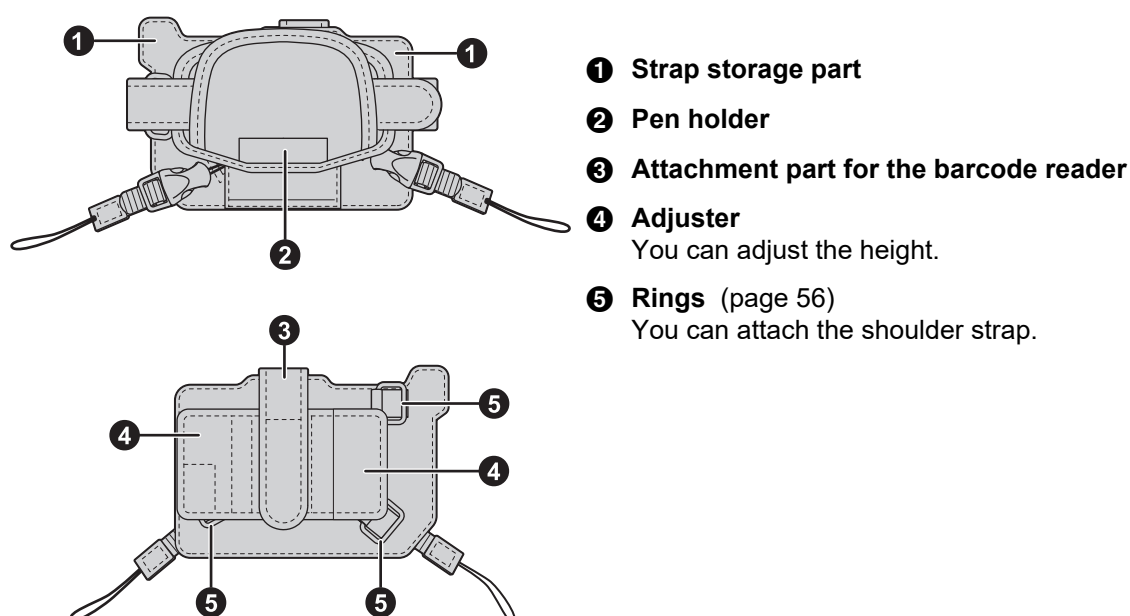
- If the surface of the Protective Film becomes dirty, wipe it with a soft, dry cloth.
- When removing the Protective Film, be careful not to scratch the screen with your fingernails, etc.
- Peel off the Protective Film slowly and carefully.

Hand Strap (FZ-VSTS11)

Handling and maintenance

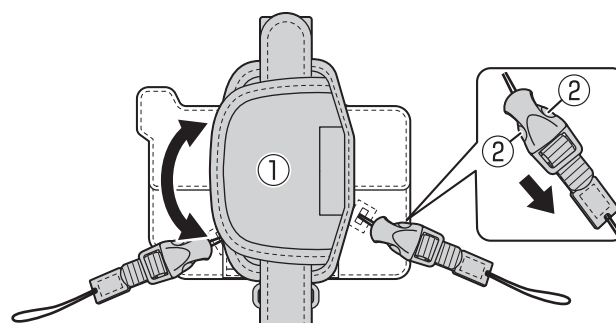
- Take care as there is a risk of the unit dropping when the hand strap is loose.
- Do not use the hand strap if it is worn out or damaged.
- Your hand, hand strap, etc. may appear in the shooting range of the camera depending on the way you hold or the direction of the hand strap. When shooting with the camera, adjust the position of the hand strap so that the hand strap does not enter the shooting range of the camera.
- For typical cleaning, wipe the hand strap with a soft, dry cloth.
 - If the hand strap becomes dirty, wet a soft cloth with water and wring it thoroughly before wiping the hand strap.
 - Do not clean the hand strap with benzene, thinner, alcohol, household cleansers, etc., as these may damage the hand strap.

Description of parts

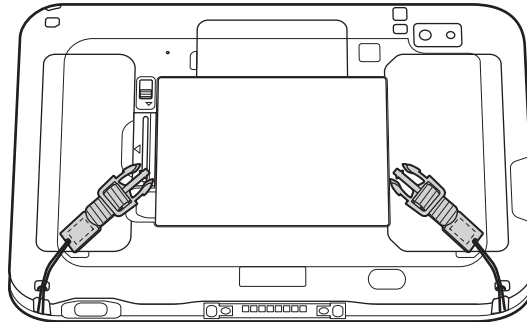


Attaching

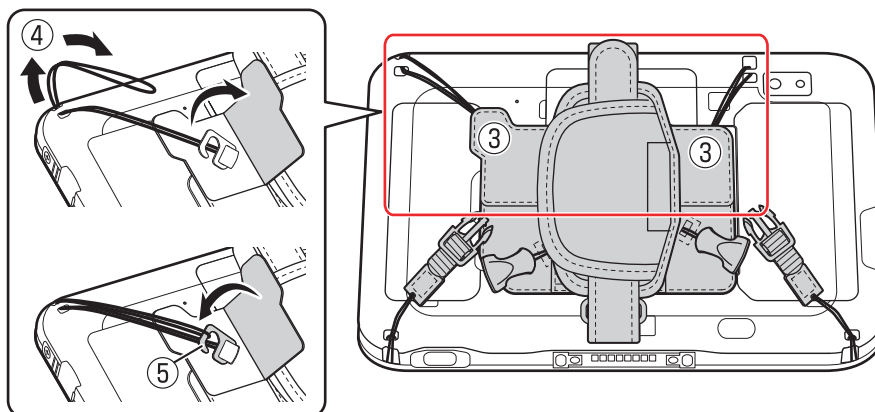
1. Rotate the belt part of the hand strap vertically (①), then detach the two buckles.
 - Press the protrusions (②) of the buckle to detach it.



2. Place the unit on a flat surface such as a desk with the screen facing down, then attach the buckles to the strap attachment holes at the lower part of the unit.
 - Make sure there are no foreign objects under the unit.



3. **[If the barcode reader (landscape type) is not attached]**
Place the hand strap on the back side of the unit in the direction illustrated below, and attach the straps.
 - Open the strap storage parts (③), take out the straps, pass them through the attachment holes (④) at the upper part of the unit, hook them (⑤), and close the strap storage parts.
 - If you want to attach the shoulder strap, do so now (page 56).

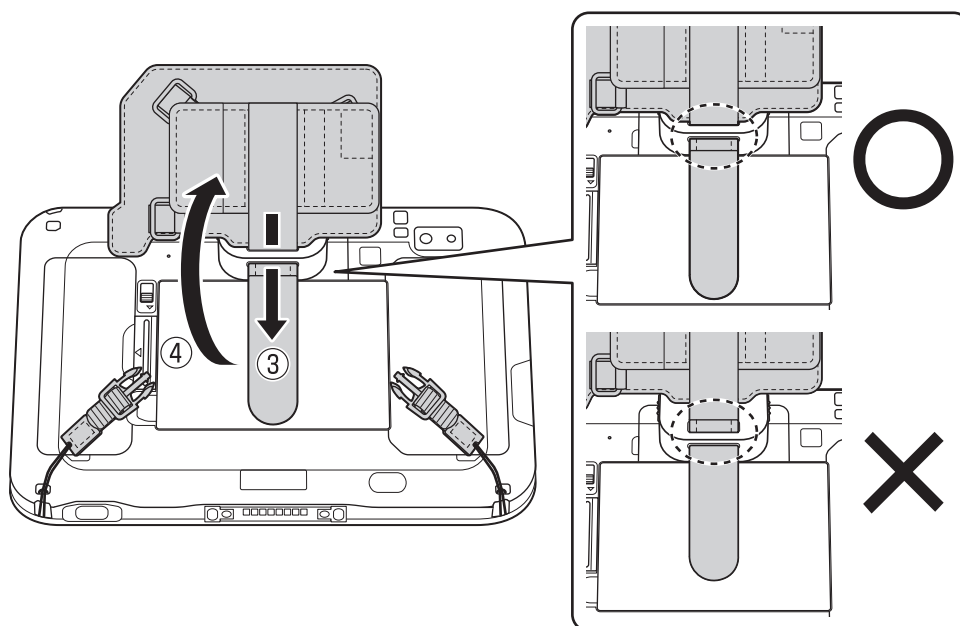


[If the barcode reader (landscape type) is attached]

Insert the hand strap into the unit in the direction illustrated below (③), fold the belt and firmly fasten it (④).

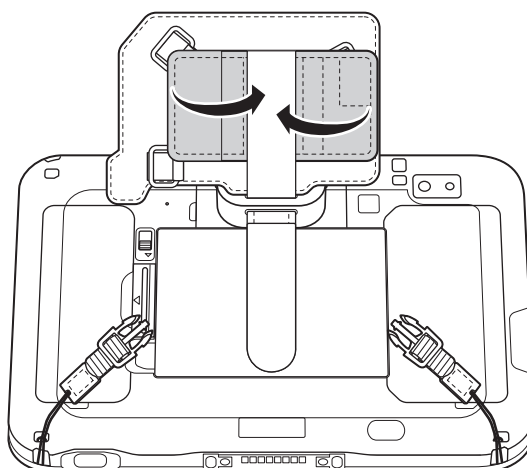
- Insert the hand strap up to the base as illustrated below.

- If you want to attach the shoulder strap, do so now (page 56).

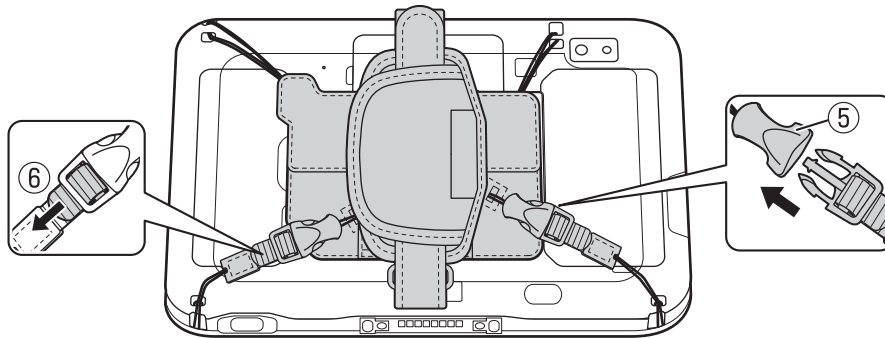


4. If the battery pack (FZ-VSUT10) and the optional equipment are attached, fold the adjuster.
 - If the extended life battery pack (FZ-VZSUT11) is attached or the optional equipment is not attached to the unit, this step is unnecessary. Use the adjuster while open rather than folded.

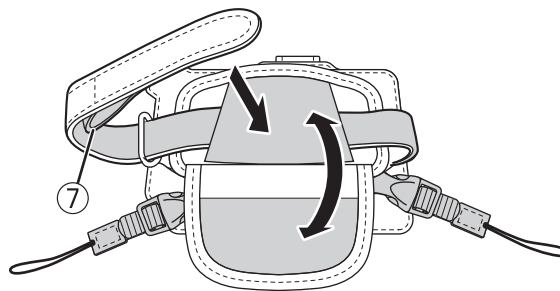
<Example> If the battery pack (FZ-VSUT10) and the barcode reader (landscape type) are attached



5. Attach the buckles (⑤), and adjust the buckle belts so that the hand strap is not loose (⑥).
- Insert the buckles until you hear a click.



6. Open the cover, adjust the hand strap to fit your hand, fold back and fasten the belt, and then fold the cover.
- Make sure that the ring does not go past the stopper (⑦). If it does, the belt may get detached from the ring and the unit may fall.



Replacing the battery

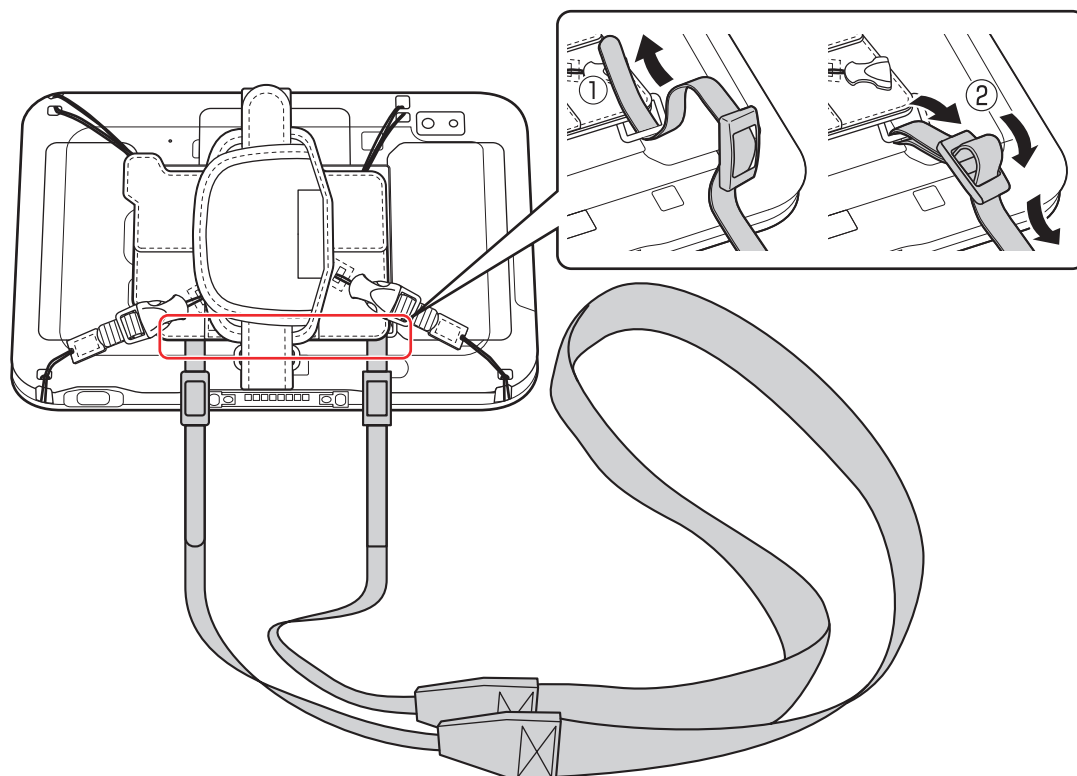
To replace the battery, detach the buckles.

Attaching the shoulder strap

After step 3 above, attach the shoulder strap to the rings of the hand strap.

- You can hang the unit horizontally or vertically.
- Pass the strap through the rings as shown in the figure (①), pass it through the buckles (②), and then adjust it to the desired length.

<Attachment example> When hanging the unit horizontally



Shoulder Case (FZ-VNSS11)

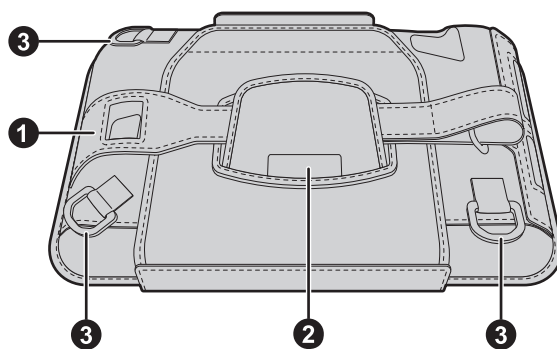
Handling and maintenance

- Take care as there is a risk of the unit dropping when the hand strap is loose.
- Do not use the shoulder case if it is worn out or damaged.
- Your hand may appear in the shooting range of the camera depending on the way you hold the shoulder case. When shooting with the camera, adjust the position of the shoulder case so that the shoulder case does not enter the shooting range of the camera.
- For typical cleaning, wipe the shoulder case with a soft, dry cloth.
 - If the shoulder case becomes dirty, wet a soft cloth with water and wring it thoroughly before wiping the shoulder case.
 - Do not clean the shoulder case with benzene, thinner, alcohol, household cleansers, etc., as these may damage the shoulder case.

Included accessories

- Shoulder strap × 1

Description of parts



❶ Hand strap

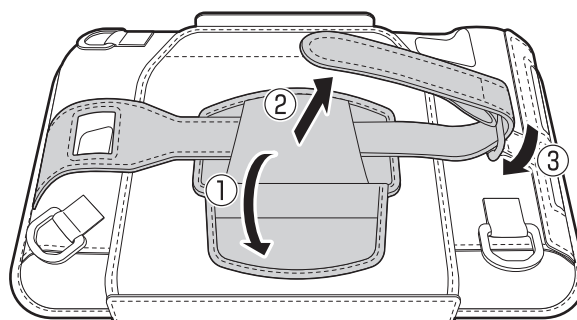
❷ Pen holder

❸ Rings

You can attach the shoulder strap.

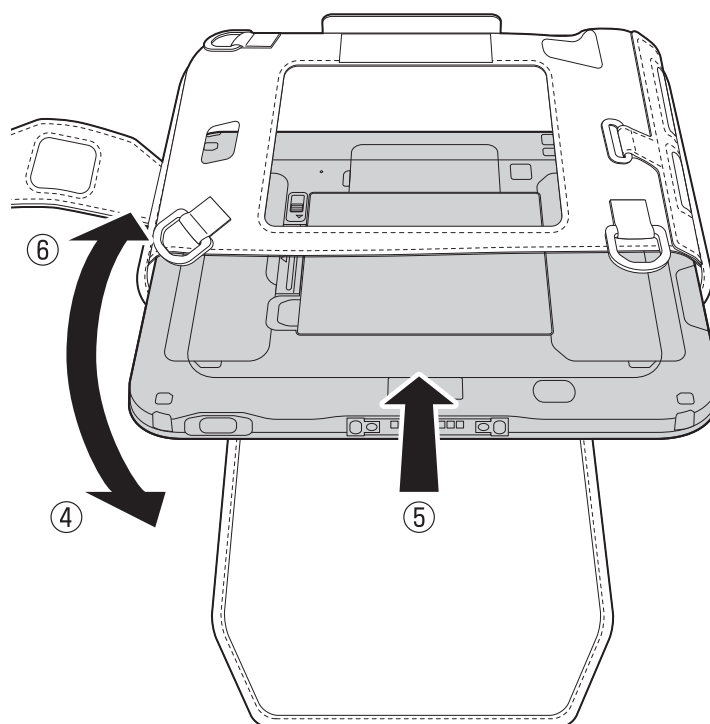
Attaching

1. Remove the cover and the belt on the hand strap part of the shoulder case (❶❷), and then pull out the belt (❸).



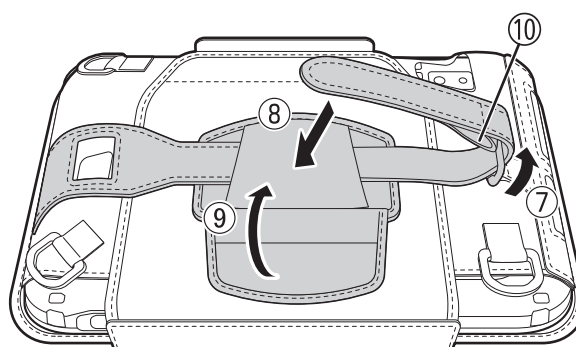
2. Open the flap (❹), insert the unit into the case from the top in the direction illustrated below with the screen facing down (❺), and then close the flap (❻).
 - Insert the unit all the way in securely.

- Inserting the unit in the reverse direction may damage the headset terminal cover.



3. Attach the belt of the hand strap part.

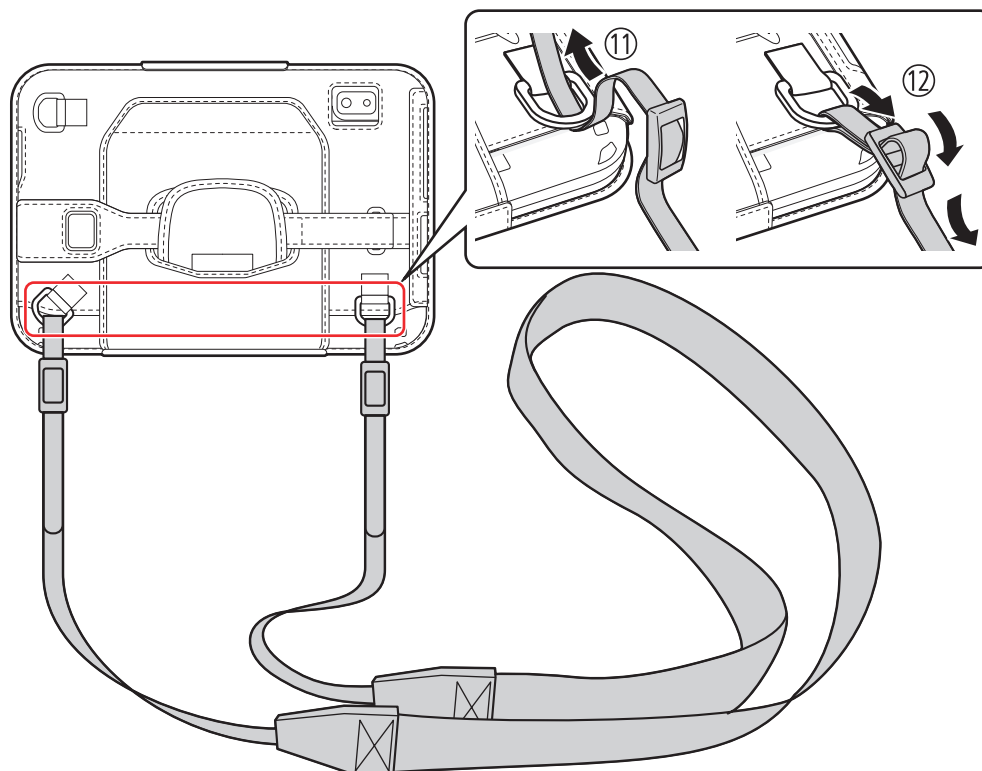
- Pass the belt through the ring (7), adjust the hand strap to fit on your hand, fold back and fasten the belt (8), and then fold the cover (9).
- Make sure that the ring does not go past the stopper (10). If it does, the belt may get detached from the ring and the unit may fall.



4. Attach the shoulder strap.

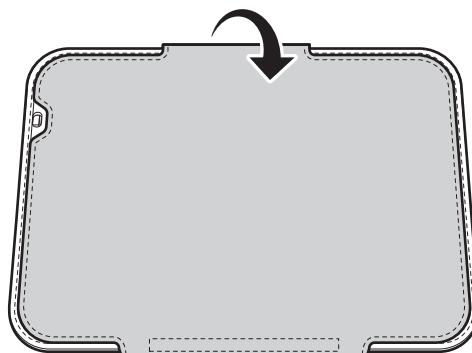
- You can hang the unit horizontally or vertically.
- Pass the strap through the rings as shown in the figure (11), pass it through the buckles (12), and then adjust it to the desired length.

<Attachment example> When hanging the unit horizontally



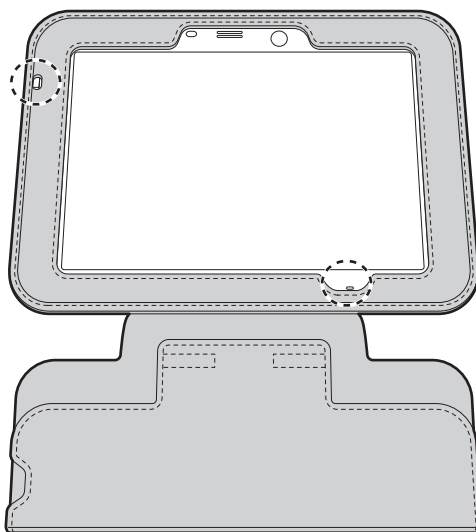
Using the shoulder case

To use the unit, open the front cover.



- Make sure that you can see the microphone and the indicator of the unit (circled in the illustration). If they are hidden, reinsert the unit all the way in.

- Fold the front cover as shown below.



Troubleshooting

General information

If you experience any trouble while using the unit, refer to the information in this section for troubleshooting. If the problem persists, contact your technical support representative.

Starting up

The unit does not turn on.

- To turn the unit on, press and hold  (power button) for more than 2 seconds.
- The battery level may be low or completely discharged. Charge the battery or replace with fully-charged one.
- The unit may be too hot or too cold. Leave the unit in an environment of 10 °C to 35 °C (50 °F to 95 °F) for about an hour, and then try again.
- Install the battery correctly.

Other startup problems

- Disconnect and remove all peripheral devices.

Shutting down

The unit does not turn off.

- It may take one or two minutes for the unit to turn off. This is not a malfunction.
- Press and hold  (power button) for at least 10 seconds to force the unit to restart, and then try again.
- Disconnect and remove all peripheral devices.

Screen

Nothing appears on the screen.

- The screen turned off automatically (sleep) because the unit has not been used for a certain period of time. Press  (power button).
- The battery may have become completely discharged while the screen was off. In this case, any data which has not been saved will be lost. Charge the battery or replace with fully-charged one.
- The unit may be too hot or too cold. Leave the unit in an environment of 10 °C to 35 °C (50 °F to 95 °F) for about an hour, and then try again.
- The cover latch may be unlocked. Lock the cover latch properly.

The screen is too dark.

- The **[Adaptive brightness]** setting reduced the brightness according to the ambient brightness. Manually adjust the screen brightness.
 1. From the home screen, tap  **[Settings]** → **[Display]** → **[Adaptive brightness]**.
 2. Tap **[Adaptive brightness]** switch to turn it off.
 3. Go back one screen, and then tap **[Brightness level]** and adjust the slider.
- The **[Minimum limit brightness]** setting of customized silent mode was turned on. Turn off the setting.
 1. From the home screen, tap  **[Settings]** → **[Sound]** → **[Customized silent mode]**.

2. Tap the **[Customized silent mode]** switch to turn it off, then tap the **[Minimum limit brightness]** switch to turn it off.
3. Tap the **[Customized silent mode]** switch to turn it on.

There are red, green, or blue dots on the screen, or there is unevenness in screen colors or brightness.

- The following are not malfunctions.
 - Although advanced high-precision technologies are used in the production of color LCD screens, a very small number of the screen pixels may be dark or remain constantly lit.
 - Due to the natural characteristics of LCD screens, you may notice unevenness in colors and brightness depending on your angle of view. Hues may also vary by product.

Residual images are displayed.

- Residual images may be displayed if the same screen is displayed for a long time. Display a different screen.

I cannot operate the touchscreen.

The touchscreen operates involuntarily.

- Temporarily press  (power button) to turn off the screen and then turn it on again.

Indicator

The indicator flashes in orange.

- The battery cannot be charged temporarily because the ambient temperature is too low or too high. Leave the unit in an environment of 10 °C to 35 °C (50 °F to 95 °F) for about an hour, then charge again.

The indicator lights in red.

- The remaining battery level is 15 % or less of a full charge. Charge the battery.

The indicator flashes in red.

- Battery authentication failed. Use only a specified battery.
- There may be debris lodged in the battery charge terminals. Remove the battery and remove any debris found.
- Charging may have stopped automatically. Disconnect the charger and then reconnect it.

The indicator does not light during charging.

Battery charging ends quickly, or the battery cannot be charged at all.

- The charger is not connected properly. Confirm all connections.
- There may be debris lodged in the battery charge terminals. Remove the battery and remove any debris found.
- Replace the battery with a new one.

The screen is dim and the indicator flashes in red or lights in green.

- The cover latch may be unlocked. Lock the cover latch properly.

Touch screen operation

The settings described below are explained in “Touch operation settings” (page 33).

I cannot operate the screen while wearing gloves.

Select **[Glove mode]**.

The screen responds before I have touched the screen.

Select **[Normal mode]**.

The screen responds incorrectly when it is wet.

Select **[Rain mode]**.

The screen seems slightly unresponsive to touches.

Select **[Normal mode]**.

I cannot operate the unit with a stylus.

Select **[Pen mode]**.

Connectivity

The microSD card or other external device does not work.

The unit cannot connect to a network.

- The corresponding hardware feature may be disabled by the **[DeviceManagement]** app (see “Enabling and disabling certain hardware features” (page 30)).

The unit is not recognized as a mass storage device when connected to a computer (models with wireless WAN only).

- Make sure that USB tethering is turned off.
 1. From the home screen, tap  **[Settings]** → **[Network & internet]** → **[Hotspot & tethering]**.
 2. Tap the **[USB tethering]** switch to turn it off.

I want to confirm the unit's MAC address.

- Follow the procedure below.
 1. From the home screen, tap  **[Settings]** → **[About tablet]**.
 2. Confirm the address.

Sound

No sound is heard.

- Customized silent mode was turned on. Turn off customized silent mode (see “Turning customized silent mode on and off” (page 33)) or configure customized silent mode to not mute the unit's sounds (see “Configuring customized silent mode” (page 33)).
- Do not disturb was turned on. Open the notifications panel, and then turn off Do not disturb mode or configure Do not disturb settings to not mute the unit's sounds. To configure Do not disturb settings, from the home screen, tap  **[Settings]** → **[Sound]** → **[Do Not Disturb]**.

Sound stops or is distorted.

- It is normal for the sound to stop or be distorted in the following situations.
 - When connecting or disconnecting a headset or headphones
 - When rotating the screen

Sounds are heard from the speaker even when a headset or headphones are connected.

- Notification sounds and alarms are played using the speaker even when a headset or headphones are connected to the unit. This is normal.
- From the home screen, tap  **[Settings]** → **[Sound]** → **[Advanced]**, and then tap the **[Speaker off during earphone use]** switch to turn it on.

Other

The date and time are incorrect.

- Confirm the date and time settings. From the home screen, tap  **[Settings]** → **[System]** → **[Date & time]**.
- Set the date and time automatically.
 1. From the home screen, tap  **[Settings]** → **[System]** → **[Date & time]**.

2. Tap the **[Use network-provided time]** and **[Use network-provided time zone]** (models with wireless WAN only) switches to turn them on.
 3. Make sure the unit is in an area with good wireless reception, turn the unit off, and then turn it on again.
- The unit will not recognize dates after December 31, 2037.

The unit's operation is slow.

- Ambient temperature may be too low or too high. Leave the unit in an environment of 10 °C to 35 °C (50 °F to 95 °F) for about an hour and then try again.

The unit does not respond.

- Turn the unit off and then on again.
- If an app does not work normally, follow the instructions below to force quit or uninstall the problematic app or process.

1. From the home screen, tap  **[Settings]** → **[Apps & notifications]**.
2. Select the desired app or process and then tap **[UNINSTALL]** or **[FORCE STOP]**.

The screen freezes and no operations can be performed.

- Press and hold  (power button) for at least 10 seconds to force the unit to restart, and then try again.

I cannot enter text using voice recognition.

- An Internet connection is needed to enter text using your voice. Make sure the unit can connect to the Internet.

Some apps do not function after updating the unit's software.

- The apps may not be compatible with the newest version of the unit's software. To return the unit to the previous version of the software, contact your technical support representative.

The unit cannot connect to external services (Google services, mobile networks, etc.).

- Confirm all relevant settings and contact the service provider. If the trouble persists, contact your technical support representative.

Location information is incorrect.

- Mobile networks (models with wireless WAN only) and radio waves from satellites are used to acquire location information.
Positioning may take time, or location information may be less accurate under the following conditions because radio wave signal reception is poor.
 - Immediately after turning on the unit
 - When acquiring location information for the first time
 - When out of the mobile network range
 - When you are in the following places:
 - Inside a building
 - Inside a vehicle such as car or train
 - Inside a tunnel or underground
 - Under an elevated bridge
 - In a city with skyscrapers
 - In an area dense with trees
 - In a mountainous region

The unit does not wake up after warm swapping the battery.

- The battery level of the warm swapped battery may be low. Replace it with a sufficiently charged battery, or turn off the unit before replacing the battery.

The unit turns off during use.

- Scanning barcodes and taking pictures can be dependent upon the battery charge level especially under extremely cold temperatures. Replace the battery or charge the device until sufficient charge is available.

Troubleshooting

- If the total power consumption of the connected USB device increases, the unit may turn off due to insufficient power. Reduce the number of USB devices to be connected, or connect a different USB device. If the unit turns off, remove all USB devices, reattach the battery pack, and then turn the power on again.

Appendix

Factory data reset

CAUTION

- The following procedure resets all settings and erases any data you have stored in the unit. Back up important data before performing this procedure.

1. From the home screen, tap  [Settings] → [System] → [Advanced] → [Reset options] → [Erase all data (factory reset)].
2. Tap [Erase all data] → [Erase all data].
 - The unit restarts when the factory data reset is complete.
 - Data stored in the microSD card will not be erased.

Tips for battery usage

Minimizing battery deterioration

The battery is a consumable and the deterioration of its performance and battery life is accelerated under the following conditions.

- Repeatedly charging the battery
- Using, charging, or storing the battery in a high-temperature environment

To minimize battery deterioration and ensure longer battery life, keep the following tips in mind.

- **Charge in an environment between 10 °C and 35 °C (50 °F to 95 °F)**
If the surrounding temperature is too high or too low, the unit's indicator flashes in orange and the battery cannot be charged temporarily.
- **Avoid charging more than once per day**
Charging the battery too often will cause the battery performance to deteriorate. Therefore, the unit will not charge the battery immediately after it is fully charged unless the remaining charge is reduced at a certain extent to avoid overcharging.

Maximizing battery operation time

To maximize the battery operation time, keep the following tips in mind.

- **Reduce the screen's power consumption**
Reduce power consumption by pressing  (power button) to turn off the screen when not in use, or by reducing the screen's brightness level.
- **Turn off wireless devices when not in use**
You can also turn on airplane mode to quickly turn off wireless connections.
- **Reduce the time taken to automatically turn off the screen (sleep)**
From the home screen, tap  [Settings] → [Display] → [Advanced] → [Screen timeout], and select a shorter amount of time taken for the unit to turn off the screen automatically.

Updating the software

You can update the software when a system update is released.

IMPORTANT

- Check the following before starting the update.
 - The remaining battery level is sufficient

- The unit has available storage space (from the home screen, tap  [Settings] → [Storage], and if there is no storage space, make some room for the update)
 - The date and time are correct
1. From the home screen, tap  [Settings] → [System] → [Advanced] → [System updates].
 2. Follow the on-screen instructions.

License agreement for the system update service

1. Service introduction

The system update service (“this service”) is offered as a way to keep the product’s software¹ up to date after purchase, for feature and performance enhancement.

Without visiting a customer service center, you can take advantage of convenient software updating to check for any required product updates and wirelessly² download and replace outdated software with the latest version.

This service is managed by Panasonic Connect Co., Ltd. and/or its affiliates, hereafter referred to collectively as “we” or “Panasonic”.

Read the following terms of use carefully and make sure you understand them before use. By using this service, you agree to accept all terms of use.

2. Disclaimer

Panasonic is not liable for any loss or damage of data with user-installed software from use of this service. Nor are we liable for any malfunction or damage to the product due to user error. For details, see “Precautions” below. No guarantee is made that this service will be suitable for specific purposes, and we are not liable in any way for indirect, incidental, or consequential loss or lost profit to you or third parties arising from or related to use of this service.

Panasonic reserves the right to change or discontinue this service, terms of use, and other matters without prior notice. Check the latest terms of use before using this service. Similarly, we reserve the right to interrupt or discontinue this service without prior notice.

3. Prohibited actions

The following actions are prohibited when using this service. If you violate the terms of use by taking the following actions, Panasonic may interrupt or discontinue this service or terminate the agreement without prior notice, and seek compensation.

- Action that disadvantages Panasonic or third parties, or that causes or poses a risk of loss
- Action that infringes on or may infringe on intellectual property rights (such as copyrights or trademark rights) of Panasonic or third parties
- Action that undermines or may undermine the credibility or dignity of Panasonic, such as action offensive to public order and morals
- Action that is illegal or linked to criminal acts, or which poses a risk of same
- Action that violates or may violate laws, regulations, or ordinances
- Other action that we have deemed inappropriate and have requested you to cease

4. Privacy policy

As this service is used, information identifying the product (such as model or serial numbers) is sent to our software update servers. We use this information only to provide service or support, and not for any other purposes.

5. Limitation on liability

Regarding liability borne by Panasonic in providing this service, and in the context of this license agreement, in the event of willful or gross negligence on our part in providing this service, regardless of the reason, users will be compensated only for an amount equivalent to the value of this service.

6. Precautions

Although user data such as photos, email messages, and downloaded files remain on the product during software updates, in some cases it may not be possible to safeguard this data, depending on the condition of the product. We therefore recommend backing up important data. However, please understand that some data (e.g., downloaded files) cannot be backed up.

Never turn off the product, reset it, or perform similar operations while a download is in progress, or during updates.

If the product's software is already up to date, no update is necessary. Note that updating the software may take some time, as data is being downloaded and uploaded.

Thank you for understanding that you cannot specify the timing of file distribution to the product or the period for which updates will be valid.

This service is not available under the following conditions.

- When the product is not turned on, or when it is in sleep mode
- When the product is not connected to a wireless network
- When the product is in international roaming mode
- When the product is in airplane mode
- When tethering mode is enabled
- When the correct date and time is not set
- When the remaining battery level is less than 50 %
- When the server polling interval of the update application is set to "00"
- While the battery is being replaced

7. Intellectual property rights

Data provided to you for this service is licensed to you under the same conditions as in the license agreement of the software for which the data is used. Unless otherwise indicated, use of this service does not constitute licensing or transfer of any intellectual property rights from Panasonic to you.

8. Governing law and court of jurisdiction

Japanese law forms the basis for use of this service and interpretation and application of this license agreement. In the case of any disputes over this service, the Tokyo District Court will serve as the competent court of first instance.

9. Service inquiries

For any inquiries regarding this service, please contact the Panasonic customer service center.

^{*1} Only applies to software provided by Panasonic.

^{*2} A fee may be incurred for users enrolled in pay-per-use data plans, as data transmission for this service will be added to the user's other data consumption.

Regulatory information

For USA models

FCC RF exposure information

The highest SAR value for this product as reported to the FCC is listed below:

Highest value (W/kg)
1.40

<Only for models with an external antenna connector>

External antenna

This product is provided with external antenna connectors for connection to optional Vehicle Dock or Port Replicator for mobile external mounted antennas.

The maximum allowable antenna gains for wireless WAN external antenna are listed below.

User must maintain minimum 20 cm spacing between the external antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

Antenna list

Model	Usage	Manufacturer	Type	Frequency range (MHz)	Gain ^{*1} (dBi)
AP-PAN-MMF C-Q-BL	WWAN	Airgain	Monopole	698 - 960	1.4
				1710 - 2700	4.1

*1 Loss of cable permanently attached to the antenna is included.

For Canada models / Pour les modèles du Canada

RF exposure information

The highest SAR value for this product as reported to the ISED is listed below:

Highest value (W/kg)
1.40

Information sur l'exposition aux radiofréquences (RF)

La valeur de DAS la plus élevée obtenue pour ce produit, telle que rapportée à l'ISDE lors des essais pour une utilisation près de l'oreille, est telle que décrite ci-dessous :

Valeur la plus élevée (W/kg)
1,40

<Only for models with an external antenna connector>

External antenna

This product has been approved by ISED to operate with the wireless WAN antenna types listed below, with the maximum permissible gain indicated.

Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this product.

User must maintain minimum 20 cm spacing between the external antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

Antenna list

Model	Manufacturer	Type	Frequency range (MHz)	Gain ^{*1} (dBi)	Impedance (Ohm)
AP-PAN-MMF C-Q-BL	Airgain	Monopole	698 - 960	1.4	50
			1710 - 2700	4.1	

^{*1} Loss of cable permanently attached to the antenna is included.

<Uniquement pour les modèles équipés d'un connecteur d'antenne externe>

Antenne externe

L'utilisation de ce produit avec les types d'antennes WAN sans fil répertoriés ci-dessous, avec le gain maximal autorisé indiqué, a été approuvée par l'ISDE.

L'utilisation de ce produit avec des types d'antennes non inclus dans cette liste dont le gain est supérieur au gain maximal indiqué pour n'importe quel type répertorié est strictement interdite.

L'utilisateur doit maintenir une distance minimale de 20 cm entre l'antenne externe et le corps de toute personne (à l'exception de l'extrémité des mains, des poignets et des pieds) lors du fonctionnement en mode sans fil.

Liste d'antennes

Modèle	Fabricant	Type	Plage de fréquences (MHz)	Gain ^{*1} (dBi)	Impédance (Ohms)
AP-PAN-MMF C-Q-BL	Airgain	Monopole	698 - 960	1,4	50
			1710 - 2700	4,1	

^{*1} La perte du câble fixé de manière permanente à l'antenne est incluse.

For Europe models

SAR (Specific Absorption Rates)

For body-worn operation, the highest SAR value for this product is 1.054 W/kg (for models with wireless WAN) and 0.143 W/kg (for models without wireless WAN only)^{*1}.

^{*1} The tests are carried out in accordance with international guidelines for testing.

Disposal of Old Equipment

Only for European Union and countries with recycling systems



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment. For more information about collection and recycling, please contact your local authority.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

<Only for models with an external antenna connector>

External antenna

Wireless WAN external antenna and feeder cable shall be chosen so that the overall gain is 1.4 dBi or less at the 698 - 960 MHz frequency range and is 4.1 dBi or less at the 1710 - 2700 MHz frequency range. Use of wireless WAN external antenna and feeder cable with a higher overall gain can lead to the device being non-compliant with European standards and the Radio Equipment Directive.

Users must maintain a minimum of 20 cm spacing between the external antenna and all people (excluding extremities) during wireless modes of operation.

For Australia, New Zealand models

<Only for models with an external antenna connector>

External antenna

Wireless WAN external antenna and feeder cable shall be chosen so that the overall gain is 1.4 dBi or less at the 698 - 960 MHz frequency range and is 4.1 dBi or less at the 1710 - 2700 MHz frequency range.

Users must maintain a minimum of 20 cm spacing between the external antenna and all people (excluding extremities) during wireless modes of operation.

Specifications

Typical unit specifications and certain options are described below.

Unit configuration may vary.

Main specifications

CPU	Qualcomm® SDM660
Memory	4 GB ^{*1}
Storage	64 GB ^{*2}
Display	Internal LCD 7.0 in. WXGA (1280 × 800 dots)
Touchscreen	10-finger touch (capacitive): Glove mode ^{*3} Rain mode ^{*4} Pen mode (Passive type)
Wi-Fi (for North America models)	Standards supported IEEE 802.11a/b/g/n/ac/d/h/i/r/k/v/w Wireless channels used IEEE 802.11a / IEEE 802.11n (5 GHz) / IEEE 802.11ac • W52 (36, 40, 44, 48 ch) • W53 (52, 56, 60, 64 ch) • W56 (100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144 ch) • W58 (149, 153, 157, 161, 165 ch) IEEE 802.11b / IEEE 802.11g / IEEE 802.11n (2.4 GHz): 1 ch - 11 ch RF frequency band 2.4 GHz Band: 2.412 GHz - 2.462 GHz 5 GHz Band: 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.72 GHz, 5.745 GHz - 5.825 GHz
Wi-Fi (for Europe models)	Standards supported IEEE 802.11a/b/g/n/ac/d/h/i/r/k/v/w Wireless channels used IEEE 802.11a / IEEE 802.11n (5 GHz) / IEEE 802.11ac • W52 (36, 40, 44, 48 ch) • W53 (52, 56, 60, 64 ch) • W56 (100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 ch) IEEE 802.11b / IEEE 802.11g / IEEE 802.11n (2.4 GHz): 1 ch - 13 ch RF frequency band 2.4 GHz Band: 2.412 GHz - 2.472 GHz 5 GHz Band: 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.7 GHz

Wi-Fi (for Asia-Pacific models)	Standards supported IEEE 802.11a/b/g/n/ac/d/h/i/r/k/v/w Wireless channels used IEEE 802.11a / IEEE 802.11n (5 GHz) / IEEE 802.11ac • W52 (36, 40, 44, 48 ch) • W53 (52, 56, 60, 64 ch) • W56 (100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 ch) • W58 (149, 153, 157, 161, 165 ch) IEEE 802.11b / IEEE 802.11g / IEEE 802.11n (2.4 GHz): 1 ch - 13 ch RF frequency band 2.4 GHz Band: 2.412 GHz - 2.472 GHz 5 GHz Band: 5.18 GHz - 5.32 GHz, 5.5 GHz - 5.7 GHz, 5.745 GHz - 5.825 GHz
Bluetooth	Bluetooth v5.1 Class 1 ⁵
Camera	Front 5 megapixels Video: 1920 × 1080 pixels Still: 2592 × 1944 pixels Rear 13 megapixels Video: 4096 × 2160 pixels Still: 4160 × 3120 pixels
GNSS	GPS/GLONASS/Galileo/Beidou/QZSS CEP50 (±2 to 4 m)
Sensors	Ambient light sensor, Digital compass, Gyro sensor, Acceleration sensor
NFC	ISO/IEC 21481 (Type A, Type B, FeliCa, ISO/IEC 15693)
Card slots	microSD card slot ×1 ⁶ (microSDXC compatible)
Interfaces	USB Type-C® (USB 3.0) port ×1 ⁷ , Headset jack ×1, Expansion bus connector (USB 2.0 Host only) (lower part of the unit) ⁷
Power supply	Battery Pack
AC adaptor	FZ-AAE184E1 series Input 110 V to 240 V AC, 50 Hz/60 Hz Output 5.0 V DC, 1.8 A

Battery	<Battery Pack (FZ-VZSUT10)> Lithium-ion 3200 mAh (typ.) / 3100 mAh (min.) Rated Voltage 3.8 V Operating time (approx.)⁸ 8 hours Charging time (approx.)⁹ 3 hours (when using the specified AC adaptor) 3 hours (when using the optional cradle) <Extended Life Battery Pack (FZ-VZSUT11)> Lithium-ion 5580 mAh (typ.) / 5380 mAh (min.) Rated Voltage 3.7 V Operating time (approx.)⁸ 14 hours Charging time (approx.)⁹ 4.5 hours (when using the specified AC adaptor) 4.5 hours (when using the optional cradle)
Dimensions (W × D × H) ^{*10}	Approx. 193 mm × 131 mm × 16.1 mm / 18.9 mm (Grip section) [7.6 in. × 5.16 in. × 0.64 in. / 0.75 in. (Grip section)] without protrusions (with FZ-VZSUT10, excluding the optional devices) Approx. 193 mm × 131 mm × 23.1 mm / 18.9 mm (Grip section) [7.6 in. × 5.16 in. × 0.91 in. / 0.75 in. (Grip section)] without protrusions (with FZ-VZSUT11, excluding the optional devices)
Weight ^{*11}	Approx. 426 g (0.94 lb) (with FZ-VZSUT10, excluding the optional devices) Approx. 506 g (1.12 lb) (with FZ-VZSUT11, excluding the optional devices)
Operating environment ^{*12}	Temperature -20 °C to 50 °C (-4 °F to 122 °F) Humidity 30 % to 80 % RH
Storage environment	Temperature -30 °C to 70 °C (-22 °F to 158 °F) Humidity 30 % to 90 % RH
Operating system ^{*13}	Android 10
Water and dust resistance	IP65, IP67

Wireless WAN^{*14}

Mobile networking	LTE with C.A., HSPA+, UMTS
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SIM card slot	Nano SIM card slot ×1 <For models with dual SIM card slots> Nano SIM card slot ×2
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Optional devices

Barcode reader	1D, 2D support
Expansion USB port^{*7}	USB Type-A port (USB 2.0 Host only)
Smart card reader	ISO/IEC 7816

Specifications are subject to change without notice.

^{*1} 1 GB = 1 073 741 824 bytes

^{*2} 1 GB = 1,000,000,000 bytes. The OS or some apps may display GB as a lower number.

^{*3} This mode may not operate properly depending on the type of glove.

^{*4} Depending on the amount and condition of water droplets, the product may not operate properly or at all.

^{*5} Does not guarantee operation of all Bluetooth peripherals.

^{*6} Does not guarantee operation of all SD devices.

^{*7} Does not guarantee operation of all USB-compatible devices. When the total power consumption of the connected USB device is high, you may not be able to use the USB device due to insufficient power.

^{*8} Measurement results are based on Panasonic testing methods. Varies depending on the usage conditions, or when an optional device is attached.

^{*9} Varies depending on usage conditions.

^{*10} Actual size may vary by unit configuration.

^{*11} Actual weight may vary by unit configuration.

^{*12} Product or application booting can dependent upon the battery charge level.

Do not expose the skin to this product when using the product in a hot or cold environment.

When using the product in hot or cold environments, some peripherals may not perform properly. Confirm the recommended operation environment of the peripherals.

Using the product continuously in hot environments will shorten the product life. Avoid continuous use in these types of environments.

When using the product in cold environments, the product may take longer to start up and battery operation time may be reduced.

Even when using the product within the temperature and humidity ranges listed here, using the product continuously in extreme environments will result in product deterioration and will shorten the life of the product.

^{*13} Product functionality cannot be guaranteed if the operating system is modified or replaced by the user or a third party.

^{*14} Only for models with wireless WAN

Accessories

- For the latest information about optional products, refer to the product catalogs, etc.

Product name	Model number
AC Adaptor	FZ-AAE184E1
Battery Pack	FZ-VZSUT10 FZ-VZSUT11
Cradle	FZ-VEH1L1AA
5-Bay Cradle	FZ-VEH5L1AA
5-Bay Charge only Cradle	FZ-VCH5L1AA
5-Bay Battery Charger	FZ-VCBT131
Protective Film	FZ-VPFS11
Hand Strap	FZ-VSTS11

Shoulder Strap	CF-VNS331
Shoulder Case	FZ-VNSS11
Stylus	CF-VNP025

WARRANTY for U.S.A

**Panasonic Connect North America
Division of Panasonic Corporation of North America
FZ-S1/T1/L1 Products - Warranties**

Section 1: Limited Warranty - Hardware

Panasonic Connect North America, referred to hereinafter as "Panasonic", will repair OR replace, at Panasonic's sole discretion, the Panasonic products listed below ("Product(s)") with new or rebuilt parts, free of charge in a Panasonic Authorized Service Center for the period specified below from the date of original purchase in the event of a defect in materials or workmanship. These warranties are extended solely to the original purchaser and cannot be transferred. A purchase receipt or other proof of date of original purchase will be required before warranty performance is rendered.

- Panasonic Toughbook FZ-S1 / FZ-T1 / FZ-L1 product models – **1 Year**

Panasonic will retain replacement parts for the following product warranty service for 5 years from the Product end of life date.

Original Battery Warranty

Batteries supplied with the Product are covered under the warranty for **6 months** from the date of purchase. Batteries purchased separately are covered under the warranty for **6 months** from the date of purchase. A replacement battery furnished under the product warranty is covered for the remaining period of the **6 months** warranty on the original or purchased battery.

Optional: Extended Warranty Program

If this Extended warranty program coverage is purchased, the serial numbered Product is entitled to the same manufacturer's warranty coverage on the Product with the exception of the battery. The cost of labor, parts, and shipping are included in the price of the Extended Warranty Program.

Optional: Panasonic "Ultimate Care" Warranty Program

Any Product for which the Panasonic "Ultimate Care" warranty program has been purchased will receive additional coverage as specified in that program, for any failure that occurs due to accidental damage. All other terms and conditions of the standard warranty will apply, and this additional warranty coverage will exist for the duration of the standard warranty period of the applicable Product. If Ultimate Care warranty program coverage is purchased, the warranty term will be extended to the end of the last year of the purchased Ultimate Care warranty period.

The Ultimate Care warranty will cover any hardware failures occurring due to accidental damage of the Product with an exclusion only of customer intentional acts and damage caused by events beyond human control, with a total loss replacement limit of a maximum of 2 % of the total number of Products deployed for a specific customer.

This includes unlimited replacement of major sub-assemblies and components of the Product during the standard warranty term and any extended warranty program term that has been purchased by the customer. This also includes cosmetic damages that result from exposure of the internal components of the Product to the environmental conditions.

- Additional exclusions apply – please refer to limited warranty exclusions section below.

Options and Accessories Warranties

The below listed Panasonic branded or Panasonic supplied options and accessories are covered under this limited warranty for the period specified from the date of purchase or as specifically stated below:

- AC Adaptor / Power Cord – **1 Year**
- Desktop Port Replicator, I-O Box, Docking Cradle – **1 Year**
- Integrated Panasonic supplied options and kits including, but not limited to, Smartcard Reader, Magnetic Card Reader, Barcode Scanner, and Fingerprint Reader – **1 Year** or assumes warranty period of the unit in which it is installed provided the integration was performed by Panasonic.
- Optional Battery – **90 Days**
- Battery Charger / Multi-Bay Battery Charger – **1 Year**
- Stylus Pens, Digitizer & Standard – **90 Days** (physical damage excluded)
- SIM cards (Hardware Only) – **90 Days**

Section 3 - Limited Warranty Exclusions - Specifically excluded from the warranty are:

- All consumable items; such as screen protection films, logo badges, labels, cleaning cloths, carry cases, manuals, cables, straps, belts, holsters, tethers, and harnesses and any other options and accessories not listed above or covered under a separate warranty.
- The Warranty excludes 3 or less faulty pixels on the LCD screen.
- Failures related to the product operating system, solid state drive image, software setup, software program, virus, other program(s) or file(s) on any drive or in any computer memory location.
- Failures due to BIOS settings or changes, as well as any cosmetic or physical damage to the unit.
- Any unit or device with a missing or altered model number or serial number label.
- Cosmetic damage or any damage which occurs in shipment.
- Failures which are caused by products not supplied by Panasonic or not certified by Panasonic (as Toughbook Certified) will not be covered under standard, Protection Plus or Ultimate Care warranties.
- Failures which result from alteration, accident, misuse, introduction of liquid or other foreign matter into the unit, abuse, neglect, installation, maladjustment of consumer controls, improper maintenance or modification, use not in accordance with product use instructions.
- Failures due to service by anyone other than a Panasonic Authorized Service Provider.
- Failures caused by improper installation of options or accessories or due to integration performed by any company other than Panasonic or a Panasonic Authorized Service Center.
- Damage, failure, or loss due to the unit being stolen, lost, misplaced, or used by anyone other than the original purchaser.
- Damage that is attributable to acts of God.
- * Protection Plus and Ultimate Care warranty program provide protection against accidental damage. Neither program is intended to provide product refurbishment due to normal wear and tear through normal use.
- * Customers who have twenty (20) or more units requiring service are required to contact Panasonic at 800-527-8675 and request Field Engineering assistance to coordinate higher volume repairs.

This limited warranty only covers failures due to defects in materials or workmanship which occur during normal use of the Product. If a Product unit is sent to a Panasonic Authorized Service Center and no hardware failure is found, the customer will be billed for labor to correct a software issue or reimage the applicable Hard Disk, or Solid State Drive plus shipping and applicable administrative fees at the current rates set by Panasonic.

While we anticipate use of our products in certain environments such as nuclear equipment/systems, air traffic control equipment/systems, aircraft equipment/systems (as defined in ^{*1}), medical devices or accessories (as defined in ^{*2}), medical treatment diagnosis image display, life-support system, or other equipment/devices/ systems that are involved with ensuring human life or safety, we do not allow users to integrate our product such that it becomes an integral part of the systems found in these environments. Panasonic will not be responsible for any liability resulting, and in any way for any damages or loss resulting from the use of this product arising out of the foregoing uses.

^{*1} Aircraft equipment/systems include Electric Flight Bag (EFB) systems are defined by FAA AC120-76D or EASA Commission Regulation (EU) No 965/2012.

^{*2} As defined by the Regulation (EU) 2017/745 Medical Device Regulation.

Panasonic cannot guarantee any specifications, technologies, reliability, safety (e.g. flammability/smoke/toxicity/ radio frequency emission, etc.) requirement related to aviation standards that exceed the specifications of our COTS products.

Other Limits and Exclusions: There are no other express warranties except as listed above.

PANASONIC SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF DATA, LOSS OF PROFIT, LOSS OF REVENUE, OR LOSS OF BUSINESS OR GOODWILL, SUFFERED BY ANY PERSON, AND RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS WARRANTIES SPECIFIED ABOVE ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. For technical support or to arrange for service on your Panasonic computer product, call our toll-free hotline at 1-800-LAPTOP5 [option 1] (800-527-8675).

WARRANTY for Canada

For Canada

PANASONIC COMPUTER AND PERIPHERALS LIMITED WARRANTY

Coverage – Panasonic Canada Inc. ("PCI") warrants to you, the first end user customer, this computer product (excluding software media), when purchased from PCI or from a PCI authorized reseller, to be free from defects in materials and workmanship under normal use, subject to the terms set forth below, during the period of warranty coverage specified.

Scope of Coverage	Period of Coverage	Type of Failure Coverage
- Laptop Computers (except Battery) and AC Adaptor - Factory/PCI installed options including Wireless WAN, GPS, Bluetooth, Finger print reader, Backlit keyboard, Memory Card, Optical Drives, Cameras, Smart card Readers, Magnetic Card Readers and Barcode Scanners - Ultra-Mobile PC - Tablet PC - PDRC – LCD and Keyboard Assemblies - Port Replicator - Cradle - Charging Cup	One (1) Year from Date of Original End User Customer Purchase	Defective Materials or Workmanship
- Battery - Battery charger - AC Adaptor and Power Cord - Car Adaptor and Power Cord - External USB Drives	One (1) Year from Date of Original End User Customer Purchase	Defective Materials or Workmanship
Standard or Digitizer Stylus Pen	Ninety (90) Days from Date of Original End User Customer Purchase	Defective Materials or Workmanship
All consumable items including protection film, cleaning cloth, carry case, tether and harness	No Coverage	

Remedy – In the event of a warranty claim, contact PCI's representatives within the applicable warranty period, identifying the nature of the defect claimed, at 1-800-668-8386 between 9:00 A.M. and 5:00 P.M., Eastern Time Zone, Mon. – Fri. (excluding holidays) for instructions on how to obtain service. A purchase receipt or other proof of date of original purchase is required before warranty service is performed. Defective parts covered by this Limited Warranty will be repaired or replaced with new or comparable rebuilt parts on an exchange basis. Warranty replacement or repair is subject to the terms of this Limited Warranty for the balance of the original period of warranty coverage.

No Coverage – This Limited Warranty does not cover products purchased outside Canada. Neither does it cover damage to, failure of, or defects in a product or accessory through mishandling, improper installation, abnormal use, misuse, neglect, accident, introduction of liquid or other foreign matter into the product, alteration or servicing by anyone not authorized by PCI, or act of God.

While we anticipate use of our products in certain environments such as nuclear equipment/systems, air traffic control equipment/systems, aircraft equipment/systems (as defined in "I"), medical devices or

accessories (as defined in ^{*2}), medical treatment diagnosis image display, life-support system, or other equipment/devices/systems that are involved with ensuring human life or safety, we do not allow users to integrate our product such that it becomes an integral part of the systems found in these environments. Panasonic will not be responsible for any liability resulting, and in any way for any damages or loss resulting from the use of this product arising out of the foregoing uses.

^{*1} Aircraft equipment/systems include Electric Flight Bag (EFB) systems are defined by FAA AC120-76D or EASA Commission Regulation (EU) No 965/2012.

^{*2} As defined by the Regulation (EU) 2017/745 Medical Device Regulation.

Panasonic cannot guarantee any specifications, technologies, reliability, safety (e.g. flammability/smoke/toxicity/radio frequency emission, etc.) requirement related to aviation standards that exceed the specifications of our COTS products.

IF YOU SHIP THE PRODUCT FOR WARRANTY SERVICE

Carefully pack the product, preferably in the original carton. Include details of defect claimed and proof of date of original purchase. No liability is assumed for loss or damage to the product while in transit, if you chose your own transportation carrier.

SOFTWARE MEDIA LIMITED WARRANTY

Coverage – PCI warrants to you, the first end user customer, that the disk(s) or other media on which software program(s) is/are supplied will be free from defects in materials and workmanship under normal use in Canada for a period of sixty (60) days from date of receipt as evidenced by your purchase receipt for your Panasonic Computer product.

THIS IS THE ONLY WARRANTY THAT PCI MAKES RESPECTING THE SOFTWARE MEDIA. PCI does not warrant the software. Please refer to the software licensor's written warranty (accompanying the copy of the software) for any software warranty claim.

Claim Procedure – In the event of a defect in material or workmanship in the media during the sixty (60) day warranty period, and you return it, transportation costs prepaid, to Panasonic Canada Inc., Computer Products Marketing, 5770 Ambler Drive, Mississauga, Ontario L4W 2T3, within the warranty period, together with a copy of your purchase receipt, and an explanation of the suspected defect, PCI will replace in Canada the defective disk(s) or other media.

Remedy – PCI's entire liability, and your only remedy for any breach of this software media warranty is limited to replacement of the media only. It does not cover any other damages, including, but not limited to, loss of use or profit loss, or special, indirect or consequential damages, or other claims, whether or not of similar character.

No Coverage – This limited warranty does not apply if the disk(s) or other media has been used in other than a Panasonic product, or in environmental conditions other than those specified by PCI or the manufacturer, or if subjected to misuse, neglect, mishandling, modification or attempted modification of the program, or if damaged by accident or act of God. PCI is not responsible for damage to or loss of any program, data or removable storage media.

GENERAL

NO OTHER WARRANTIES – PCI DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SOFTWARE, SOFTWARE MEDIA, COMPUTER PRODUCT, OPTIONS AND ACCESSORIES.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES – IN NO EVENT SHALL PCI BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM ANY BREACH OF THE LIMITED WARRANTIES SET OUT IN THIS DOCUMENT, OR FROM THE USE OF THE COMPUTER PRODUCT, INCLUDING, WITHOUT LIMITATION, LOSS OF DATA, BUSINESS, PROFIT OR GOODWILL.

IN ANY EVENT, PCI'S MAXIMUM LIABILITY FOR ANY BREACH SHALL NOT EXCEED THE AMOUNT ACTUALLY PAID BY YOU FOR THE COMPUTER PRODUCT.

NO ACTION, REGARDLESS OF ITS BASIS, MAY BE BEGUN AGAINST PCI MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION AROSE.

Statutory Warranties – Some jurisdictions do not allow these limitations or exclusions, so they may not apply to you.

Pour le Canada**GARANTIE LIMITÉE – ORDINATEURS ET PÉRIPHÉRIQUES PANASONIC**

Couverture – Panasonic Canada Inc. (« PCI ») garantit à l'acheteur original que ce produit informatique (à l'exclusion des supports des logiciels) est, au moment de sa vente par PCI ou d'un revendeur agréé par PCI, exempt de défauts de pièces et de fabrication dans les conditions normales d'utilisation, et ce, pendant la période de couverture de la garantie, sous réserve des modalités décrites ci-dessous.

Éléments couverts	Durée de couverture	Type de couverture
• Ordinateurs blocs-notes (sauf batteries) et adaptateur secteur • Options installées en usine/par PCI incluant : WAN sans fil, GPS, Bluetooth, lecteur d'empreintes digitales, clavier rétroéclairé, carte mémoire, lecteurs optiques, caméras, lecteurs de carte à puce, lecteurs de carte magnétique et scanners de code-barres • Ordinateurs personnels ultra-portables • Ordinateurs tablettes • Ensembles PDRC – ACL et clavier • Duplicateur de port • Station d'accueil • Coque de charge	Un (1) an à partir de la date d'achat original.	Défauts de pièces et de fabrication
• Batterie • Chargeur de batterie • Adaptateur secteur et cordon d'alimentation • Adaptateur automobile et cordon d'alimentation • Périphériques USB	Un (1) an à partir de la date d'achat original.	Défauts de pièces et de fabrication
• Stylo pointe standard ou pour numériseur graphique	Quatre-vingt-dix (90) jours à partir de la date d'achat original.	Défauts de pièces et de fabrication
• Tous les articles consommables incluant les pellicules protectrices, chiffons de nettoyage, étuis de transport, longues et sangles	Aucune couverture	

Recours – Pour obtenir des informations sur la marche à suivre dans le cas où une réclamation en vertu de la garantie deviendrait nécessaire, communiquez par téléphone avec un représentant de PCI au 1-800-668-8386, entre 9h00 et 17h00 (heure de l'Est) du lundi au vendredi (sauf les jours fériés), avant l'échéance de la garantie applicable, en prenant soin d'identifier la nature de la défaillance. Un reçu ou toute autre pièce justificative de la date d'achat original sera exigé avant toute réparation. Toute pièce défectueuse couverte par la présente garantie limitée sera réparée ou remplacée par une pièce neuve ou remise à neuf. Le remplacement ou la réparation sera fait conformément aux modalités de la présente garantie limitée pendant la durée restante de la période originale de la garantie.

Produits non couverts – La présente garantie limitée ne couvre pas les produits achetés à l'extérieur du Canada. Elle ne couvre pas non plus les dommages, la défaillance ou les défauts attribuables à une manutention inadéquate, une mauvaise installation, une utilisation anormale ou abusive, de la négligence, un accident, un déversement ou la pénétration d'un objet étranger, une modification, un cas fortuit ou une réparation effectuée par une personne non agréée par PCI.

Bien que nous anticipions l'utilisation de nos produits dans certains environnements tels que les systèmes/équipements nucléaires, systèmes/équipements de contrôle du trafic aérien ou systèmes/équipements d'avions (comme défini dans ^{*1}), dispositifs ou accessoires médicaux (comme défini dans ^{*2}), affichages d'images de diagnostic pour traitement médical, systèmes d'assistance de vie artificielle ou tout autre équipement/dispositif/système lié à la vie ou la sécurité humaine, nous n'autorisons pas les utilisateurs à intégrer nos produits de telle sorte qu'ils fassent partie intégrante des systèmes trouvés dans ces environnements.

^{*1} Les systèmes/équipements d'avion incluent les systèmes à Sac de vol électronique (EFB) sont définis par l'AA AC120-76D ou le Règlement de la Commission de l'AESA (UE) N° 965/2012.

^{*2} Comme prescrit par la Règlement (UE) 2017/745 concernant les dispositifs médicaux.

Panasonic ne donne aucune garantie en ce qui concerne les spécifications, les technologies, la fiabilité et la sécurité (par exemple, l'inflammabilité, la fumée, la toxicité, l'émission de fréquences radio, etc.) relatives aux normes de l'aviation qui ont dépassent les spécifications de nos produits produits COTS.

EXPÉDITION DU PRODUIT POUR SERVICE SOUS GARANTIE

Emballer soigneusement le produit, de préférence dans son emballage d'origine. Joignez une description de la défaillance de même qu'une pièce justificative de la date d'achat. Panasonic Canada Inc. ne peut être tenue responsable pour tout dommage ou perte subi pendant le transport si vous avez choisi le transporteur.

GARANTIE LIMITÉE – SUPPORTS DES LOGICIELS

Couverture – Panasonic Canada Inc. (« PCI ») garantit à l'acheteur original que le ou les disques ou tout autre support sur lequel le ou les programmes sont fournis sont exempts de défauts de pièces et de fabrication dans des conditions normales d'utilisation au Canada, et ce, pour une période de soixante (60) jours suivant la date de réception indiquée sur la preuve d'achat.

LA PRÉSENTE GARANTIE EST LA SEULE OFFERTE PAR PCI COUVRANT LES SUPPORTS DE LOGICIELS. PCI ne garantit pas les logiciels. Reportez-vous à la garantie écrite du concédant de licence d'utilisation du logiciel (qui accompagne la copie du logiciel) pour toute réclamation en vertu de la garantie.

Réclamation – marche à suivre – Panasonic Canada Inc. remplacera tout disque ou support défectueux si l'article en question est retourné, port payé, à son service de Marketing – produits informatiques, 5770 Ambler Drive, Mississauga (Ontario) L4W 2T3, dans les soixante (60) jours suivant la date d'achat original. Joignez à votre envoi une pièce justificative de votre achat et une description du problème.

Recours – La responsabilité de PCI - et votre seul recours - dans le cas de toute défaillance couverte par la garantie sur ce support de logiciel est limitée au seul remplacement du support. Elle ne couvre aucun autre dommage, y compris, mais non exclusivement, la perte d'usage ou de profits, ni aucun dommage spécial, indirect ou consécutif, ni aucune autre réclamation de nature similaire ou autre.

Produits non couverts – La présente garantie limitée ne s'applique pas si le ou les disques ou autre support ont été utilisés dans un produit d'une marque autre que Panasonic ou dans des conditions environnementales autres que celles spécifiées par PCI ou le fabricant, ou soumis à une mauvaise utilisation, à la négligence, à une manutention inadéquate ou encore si le programme a été modifié ou subi une tentative de modification ou des dommages attribuables à un accident ou à un cas fortuit. De plus, PCI n'assume aucune responsabilité pour toute perte de, ou tout dommage à, un programme, des données ou un support de sauvegarde amovible.

GÉNÉRALITÉS

PCI NE RECONNAÎT AUCUNE AUTRE GARANTIE, EXPLICITE OU IMPLICITE, Y COMPRIS, MAIS NON EXCLUSIVEMENT, LES GARANTIES IMPLICITES DE VALEUR COMMERCIALE ET D'UTILITÉ À UNE FIN QUELCONQUE, À L'ÉGARD DU LOGICIEL, SUPPORTS DE LOGICIELS, PRODUITS INFORMATIQUES, PÉRIPHÉRIQUES ET ACCESSOIRES.

SOUS AUCUNE CIRCONSTANCE PCI NE POURRA ÊTRE TENUE RESPONSABLE DES DOMMAGES SPÉCIAUX, INDIRECTS OU CONSÉCUTIFS ATTRIBUABLES À UN MANQUEMENT AUX GARANTIES LIMITÉES DÉCRITES DANS LE PRÉSENT DOCUMENT OU À L'UTILISATION DU PRODUIT INFORMATIQUE, Y COMPRIS, SANS RESTRICTION, LA PERTE DE DONNÉES, D'AFFAIRES, D'ACHALANDAGE OU DE PROFIT.

DANS TOUS LES CAS, LA RESPONSABILITÉ MAXIMALE DE PCI POUR TOUT MANQUEMENT NE POURRA EXCÉDER LE PRIX DE VENTE DU PRODUIT INFORMATIQUE.

AUCUNE RÉCLAMATION, SANS ÉGARD À SES MOTIFS, NE POURRA ÊTRE FAITE AUPRÈS DE PCI PLUS DE DEUX (2) ANS APRÈS LES FAITS INVOQUÉS À LA BASE D'UNE TELLE RÉCLAMATION.

Garantie statutaires – Certaines juridictions interdisent de telles limitations ou exclusions ; aussi, pourraient-elles ne pas s'appliquer.

WARRANTY for Europe

Panasonic Connect Europe (referred to as "Panasonic") will repair this product (other than software, which is treated in a different section of this warranty) with new or refurbished parts, from the date of original purchase in the event of a defect in materials or workmanship. This warranty only applies to new Panasonic Toughbooks or Toughpads purchased in the EEA and Switzerland and Turkey.

Panasonic (or its authorised Service Provider) target to repair your equipment within 48 hours from its receipt in our service centre.

Additional charges may apply for shipment to countries outside of the European Union. Panasonic will use all reasonable endeavours to ensure this service.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use for the applicable Service Agreement Period listed below. In the event that any product (or part thereof) is replaced, Panasonic shall transfer ownership of the replacement product (or part) to the customer and the customer shall transfer ownership of the replaced product (or part) to Panasonic.

Service Agreement Period - from original date of purchase

- Toughbooks (and every accessory included in the original packaging except the battery) - 3 years
- Toughpads (and every accessory included in the original packaging except the battery) - 3 years
- Additional peripherals manufactured by Panasonic (AC Adaptor and Power Cord, Car Adaptor and Power Cord, Cradle, Battery Charger) - 1 year
- Batteries - 6 months. Panasonic Warranty covers the battery for six months. A battery is considered good if it maintains 50 % of its charge capacity during the warranty period. If a battery is returned under this contract and testing determines that it has charge capacity greater than 50 %, the battery will be returned with an invoice for the retail purchase price of a new battery.

This warranty is extended solely to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty performance is rendered.

Limits and Exclusions:

This warranty does not cover and shall be void for:

- Broken or cracked LCD screen.
- Defective pixel in notebook displays and LCD screens within 0.002 %
- Damage that is attributable to fire, theft or acts of God.
- Damage caused by environmental influences (electrical storms, magnetic fields etc.).
- Damage which has not been caused during normal operation
- Repair of damage that is cosmetic only or does not affect product functionality such as wear and tear, scratches and dents.
- Failures caused by products not supplied by Panasonic.
- Failures resulting from alteration, accidental damage, casualty, misuse, abuse or neglect.
- Introduction of liquid or other foreign matter into the unit.
- Improper installation, operation or maintenance.
- Improper connections with peripherals.
- Maladjustment of consumer controls such as function settings.
- Modification or service by anyone other than Panasonic or its approved Service Providers.
- Products used as short term rental or leased equipment.
- Products whose serial number has been removed making the unit warranty condition impossible to clearly determine.

The product is not intended for use as, or as part of nuclear equipment/systems, air traffic control equipment/systems, aircraft equipment/systems (as defined in ⁽¹⁾), medical devices or accessories (as defined in ⁽²⁾), medical treatment diagnosis image display, life-support system, or other equipment/devices/systems that are involved with ensuring human life or safety. Our products are not intended to be utilised as an integral component of the systems used in such environments and, as such, the use of our products in such

environments is not recommended. Panasonic can not be held responsible in any way for any damage or loss resulting from the use of this unit in these types of equipment, devices or systems, etc.

^{*1} Aircraft equipment/systems include Electric Flight Bag (EFB) systems are defined by FAA AC120-76D or EASA Commission Regulation (EU) No 965/2012.

^{*2} As defined by the Regulation (EU) 2017/745 Medical Device Regulation.

Panasonic cannot guarantee any specifications, technologies, reliability, safety (e.g. flammability/smoke/toxicity/radio frequency emission, etc.) requirement related to aviation standards that exceed the specifications of our COTS products.

There are no other express warranties except as listed above.

We strongly recommend that customers backup their data before sending back their unit to an Authorised Service Provider.

Panasonic shall not be liable for loss of data or other incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty. All express and implied warranties, including the warranties of satisfactory quality and fitness for a particular purpose are limited to the applicable warranty period set forth above. Panasonic shall not be liable for any indirect, special or consequential loss or damage (including without limitation any loss of profits) arising from the use of this product or for any breach of this warranty.

This limited warranty gives you specific legal rights, and you may have other rights that vary from country to country. You must consult the applicable country laws for a full determination of your rights. This limited warranty is in addition to, and does not affect any rights arising out of any contract of sale or by statute.

Panasonic Connect Europe

Data Storage Media

Data Storage Media is the media on which the Operating System, drivers and programs originally installed by Panasonic on the main unit are stored. This media is originally provided with the unit.

Panasonic warrants to you only that the disc(s) or other media on which the Programs are furnished will be free from defects in material and workmanship under normal use for a period of sixty (60) days from the date of delivery thereof to you, as evidenced by your purchase receipt.

This is the only warranty Panasonic offers to you. Panasonic does not warrant that the functions contained in the Programs will meet your requirements or that the operation of the Programs will be uninterrupted or error free.

Panasonic's entire liability and your exclusive remedy under this warranty shall be limited to the replacement of any defective disk or other media which is returned to Panasonic's authorized Service Centre, together with a copy of the purchase receipt, within the aforesaid warranty period.

Panasonic shall have no obligation for any defects in the disk(s) or other media on which the Programs are furnished resulting from your storage thereof, or for defects that have been caused by operation of the disk(s) or other media otherwise than on the Product or in the environment conditions other than those specified by Panasonic by alteration, accident, misuse, abuse, neglect, mishandling, misapplication, installation, maladjustment of consumer controls, improper maintenance, modification or damage that is attributable to acts of God. In addition, Panasonic shall have no obligation for any defects in the disk(s) or other media if you have modified, or attempted to modify any Program.

Duration of implied warranties, if any is limited to sixty (60) days.

Pre-installed software

Pre-installed software means the software shipped pre-loaded by Panasonic, not that loaded by any third party or selling agent.

Panasonic and its suppliers makes no warranty, either express, implied or statutory, with respect to software provided with the Product and licensed to Purchaser, its quality, performance, merchantability, or fitness for a particular purpose. Panasonic does not warrant that the functions contained in the software will be uninterrupted or error free. Panasonic assumes no risk of and shall not in any case be liable for any damages, including, without limitation, any special, incidental, consequential, or punitive damages arising from breach

of warranty or contract, negligence or any other legal theory, including, without limitation loss of goodwill, profits or revenue, loss of use of the Programs or Products or any associated equipment, cost of capital, cost of any substitute equipment, facilities, or services, downtime costs, or claims of any party dealing with such damages.

Some countries do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights and you may also have other rights that vary from country to country. You must consult applicable country laws for a full determination of your rights.

Contacts

Address	TOUGHBOOK European Service Centre Panasonic Manufacturing (UK) Ltd Wharfedale Road Pentwyn Industrial Estate Cardiff CF23 7XB United Kingdom
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Web page	http://www.toughbook.eu
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TOUGHBOOK Service Cloud	https://toughbook.custhelp.com/app/home
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Help desk phone numbers:

English	+44 (0) 8000884324
French	+33 (0) 805636449
German	+49 (0) 8007235211
Italian	+39 (0) 800986915
Spanish	+34 (0) 900997990
Switzerland ITF	+41(0) 800002429 (German)
Switzerland ITF	+41(0) 800588017 (French)

E-mail address:	toughbooksupport@eu.panasonic.com
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Full Terms and Conditions are available on the Knowledge Base at <https://toughbook.custhelp.com/app/home> in English, French, Spanish, German and Italian.