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1. Unpacking and checking the device

Unpack all the individual parts. If any of the parts are missing, please notify your local sales representative immediately. Below is the list of included items.

■ Head Mounted Display

- Head Mounted Display main unit
  (A strap is attached to the battery cap)

- Quick Start Guide
- Safety manual

- Display cushion x1
- Knurled screw x4
  (Use a flat blade screwdriver or a coin to turn)

■ Fitting belt

These are used when wearing HMD on your head.

- Left head adjuster
- Right head adjuster
**Clip to a helmet**
These are used when attaching HMD to a helmet.

- Left helmet clip
- Right helmet clip

**Battery pack**

- Battery pack x1 FPB0325 (CP688161-xx)

**Battery charger**

- Battery charger x1
- AC adapter
- Power cable (EU & UK)
■ Wearable keyboard

- wearable keyboard  
- wearable keyboard belt  
- 2x AAA alkaline battery

■ USB Cables

- USB MicroA to MicroB

- OTG cable (adapter for USB devices)

■ In-Ear Phone

- In-Ear phone with cushion
2. Before using this product

2.1. About the limited-life components
・ The battery pack and dry cell batteries are consumable parts, so they need to be replaced on a timely basis in order to maintain performance. Furthermore, purchasing and replacing batteries must be done by yourself regardless of warranty period.
・ The battery pack typically has a lifespan of between 300 and 500 cycles. Battery pack’s service life will depend on the environment temperature and usage.

2.2. About the terms "power plug" and "power outlet"
The power plug of the AC adapter that comes with the product is a 2-pole plug. The manual refers to such a plug as "power plug." The manual refers a power outlet, where this power plug will be inserted as "outlet."

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(2) Even if the Software includes software developed by a third party, the third party developer makes no guarantees whatsoever about the software.

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Fujitsu America, Inc.

6. Open Source Software
This product uses Open Source Software under the licenses such as Apache License V2.0, GNU General Public License (GPL) and so on.
You can see details of Open Source Software license used in the product according to below operation,
go [Settings] → [Other settings] → [About phone] → [Legal information] → [Open source licenses] from HMD Home.
We provide the source codes under the license on the following web site:
http://support.ts.fujitsu.com/Download/
2.5. **Wireless LAN (WLAN)**
(Compliant with IEEE 802.11 a/b/g/n)

- The product uses the 2.4 GHz band. DS-SS and OFDM are used as the modulation schemes. The interference distance is about 131.2 ft. (40 m) or less. All bandwidths can be used, and that bands of mobile unit identification devices can be avoided.

- In the frequency band used by WLAN devices, in addition to home electric appliances such as a microwave oven and industrial/scientific/medical devices, in-plant radio stations for identification of mobile objects used in production lines of a factory, etc., specified low power radio stations, or amateur radio stations can be in operation.

1. Before using this device, confirm that in-plant radio stations for identification of mobile objects, specified low power radio stations or amateur radio stations are not in operation in your neighborhood.
2. If this device generates harmful radio wave interference against in-plant radio stations for identification of mobile objects, change the using frequency promptly or stop using wireless LAN function.

- The Wi-Fi function of the product conforms to domestic electrical equipment technical standards. Available channels vary by countries. To use WLAN, check the conditions such as available frequency, regulation, etc. for the country.
- The 2.4 GHz band used by Wi-Fi device is shared by various other devices. For this reason, the communication speed and connectable range may be decreased, or disconnection may occur, due to interference by other devices.
- To use in airplane, confirm with airline company in advance.

**Cautions on using 5GHz band**

Wi-Fi functions of this product use the 5 GHz band.

- W52 (5.2GHz band/ 36,38,40,42,44,46,48ch)
- W53 (5.3GHz band/ 52,54,56,58,60,62,64ch)
2.6. Using Bluetooth function

- The product uses the 2.4 GHz band. FH-SS and other schemes are used as the modulation schemes. The interference distance is about 32.8 ft. (10 m) or less. All bandwidths can be used, and that bands of mobile unit identification devices cannot be avoided.
- In the frequency band used by Bluetooth devices, in addition to home electric appliances such as a microwave oven and industrial/scientific/medical devices, in-plant radio stations for identification of mobile objects used in production lines of a factory, etc, specified low power radio stations, or amateur radio stations can be in operation.

1. Before using this device, confirm that in-plant radio stations for identification of mobile objects, specified low power radio stations or amateur radio stations are not in operation in your neighborhood.
2. If this device generates harmful radio wave interference with in-plant radio stations for identification of mobile objects, change the frequency promptly or stop using the Bluetooth function.

The Bluetooth function of the product conforms to domestic electrical equipment technical standards.

- The 2.4 GHz band used by Bluetooth device is shared by various other devices. For this reason, the communication speed and connectable range may be decreased, or disconnection may occur, due to interference by other devices.
- To use in airplane, confirm with airline company in advance.

2.7. About this product

- Display is manufactured by taking advantage of highly advanced technology but some dots may always or never be lit. Note that, this shows characteristics of liquid crystal displays and not defects in the products.
- The date and time settings will be cleared if the battery pack’s power level reaches 0%.
Perform the operation below to set the current time and date.
On the HMD home screen: → [Settings] → [other settings] → [Date & Time]
Moreover, when this product is connected to a smartphone by using Miracast, the
date and time on this product will be synchronized to the one on the smartphone.
・Fujitsu does not guarantee the compatibility of any commercially available
accessories.

**Warning:**
This is a class A product of Electromagnetic Interference standard. Operation of this
equipment in a residential area is likely to cause harmful interference in which case
the user will be required to correct the interference at his own expense.
3. Notational conventions

The meaning of the signs in this manual are described below.

| IMPORTANT | Indicates precaution and things you should NOT do. Please be sure to read the information. |
| POINT     | Indicates information related to operational points. Read when needed. |
| →         | Indicates reference page |

Name of items and notations

<table>
<thead>
<tr>
<th>Name of item</th>
<th>Notation in this manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Mounted Display</td>
<td>product, HMD, terminal, device</td>
</tr>
<tr>
<td>Smartphone/Tablet</td>
<td>Smartphone</td>
</tr>
<tr>
<td>Wearable keyboard</td>
<td>keyboard</td>
</tr>
<tr>
<td>Mono earphone</td>
<td>earphone</td>
</tr>
<tr>
<td>microUSB cable, power cable</td>
<td>cable</td>
</tr>
<tr>
<td>microUSB connection cap, diopter adjustment cap, microSD card slot cap, battery cap, external audio connection jack cap</td>
<td>cap</td>
</tr>
<tr>
<td>Android™</td>
<td>Android</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>Bluetooth</td>
</tr>
</tbody>
</table>

The images or illustrations used in this manual

The images or illustrations used in this manual are examples. They may differ from the actual image, illustration or file name.
Moreover, cables may be omitted or simplified in the illustration.

Key notation and operation procedures

The key notation in this manual is not the actual key image on the keyboard but description of the key.
For example, [BackSpace] key, [Bluetooth] key, [Power] key, etc.
Notation of continuous operations
Continuous operations in this manual are shown using ‘→’ notation.
For example, to change “Date and Time” by tapping “Settings” in the Android home screen is shown below.
  Change by tapping “Settings” → ”Date and Time”

Warning and caution labels
There are warning and caution labels on the product. Do not remove or damage them.

Safety Precautions
Before using this product, thoroughly read these safety precautions for proper use. These "Safety Precautions" describe instructions that should be observed to prevent damage to property or injury to the customer or others using the product. These instructions are divided into the following categories.

Explanation of indications used in this manual

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="danger.png" alt="Danger Symbol" /></td>
<td>This symbol indicates the potential and imminent danger of death or serious injury (*1) to a person.</td>
</tr>
<tr>
<td><img src="warning.png" alt="Warning Symbol" /></td>
<td>This symbol indicates the possibility of death or serious injury (*1) to a person.</td>
</tr>
<tr>
<td><img src="caution.png" alt="Caution Symbol" /></td>
<td>This symbol indicates the possibility of personal injury (*2) to a person or physical damage (*3).</td>
</tr>
</tbody>
</table>

※1: Serious injury: This refers to loss of sight, injury, burns (high- and low temperature), electric shock, broken bones, injuries with residual aftereffects from poisoning, etc. and injuries requiring hospital admission for treatment or long-term hospital attendance as an outpatient.

※2: Injury: This refers to injuries, burns (high- and low-temperature), electric shock, etc. that do not require hospital admission for treatment or long-term hospital attendance as an outpatient.

※3: Physical damage: This refers to extended damage to buildings, furniture, livestock, or pets.

The symbols below show specific directions.

- ![Important Symbol](important.png) Indicates an action that must be done.
- ![Warning Symbol](warning.png) Don’t This symbol denotes that the action is prohibited.
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4. Precautions

Before using the product, or when necessary, read the precautions below to ensure safe use and handling.

4.1. Common precautions of HMD, keyboard, battery charger, AC adapter and battery pack

⚠️ DANGER

⚠️ CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

⚠️ Be sure to use only the specified peripheral devices. Failure to do so may cause overheating ignition, rupture, fault or leakage.

⚠️ Do not short-circuit the connection terminal, earphone terminal, charging terminal, etc. Do not allow conductive foreign objects (metal fragments, pencil leads, etc.) to come into the contact with or get inside of these items. Doing so may cause fire or a fault.

⚠️ Before entering an area where flammable gas is generated or stored, be sure to turn off the product. Do not charge the battery. Failure to do so may cause the gas to catch fire.

⚠️ Do not puncture the product with a nail, hit it with a hammer or step on it. Doing so may cause ignition, damage or injury.

⚠️ WARNING
Do not throw the product into fire, apply heat to the product or short-circuit the product. Doing so might cause ignition, rupture or fire.

When abnormal symptoms occur such as overheating, smoke, strange odor or strange noise, please remove the product from your head and turn off the power. Remove the power plug from wall outlet if it is occurring from the battery charger or the AC adapter. Continue to use the product in such abnormal state may cause fire or electric shock.

Turn off the product if any liquid or a metal fragment gets inside the product. If it is the AC adapter, remove the power plug from wall outlet. Continue to use the product in this state may cause fire or electric shock.

Turn off the product if dropped the product or the cover breaks and repair service is requested. Continuing to use the product in this state may cause fire or electric shock.

If you hear thunder, do not touch the power plug or connect cables until you are safe. If there is a chance of a lightning strike, take off and turn off the product. If it is the AC adapter, remove the power plug from wall outlet and disconnect cables. Lightning may cause fire, a fault or damage the product as well as you receiving a serious electric shock.
Do not allow metal objects or burnable items to get inside any of opening such as slots. Doing so may cause fire or electric shock.

The customer is not allowed to disassemble, modify or repair the product. Doing so may cause a fault, ignition, electric shock or injury.

Do not operate the product while driving a car, motorbike or riding a bicycle. May distract from driving and cause an accident. Park the vehicle in a safe area before using the product.

Do not cover or wrap the product with bedding, place it near the heater or on an electric carpet, etc. while using the product. Doing so may cause fire because of the heat is being accumulated within the product.

Do not use other than the AC adapter included in the product or designated AC adapter. Do not use the AC adapter included in the product for other devices. Doing so may cause fire or electric shock.

Do not use a cleaning spray that contains flammable chemicals to clean. Doing so may cause fire or a fault.
Although the product has waterproof properties, stop use if liquid such as water gets inside the product through the cap or the battery cover. Continue to use the product in this state may cause overheating, ignition or a fault.

Never change the battery or plug in an earphone if the product is wet. Doing so may cause electric shock or short-circuit resulting in a fault or fire.

If the product is damaged because it was dropped or other reason and its internal parts are exposed, do not touch the exposed parts with your hands. Doing so may cause electric shock or injury.

**CAUTION**

Do not place heavy objects on the product. Doing so may cause injury or a fault.

Do not use or store the product in places subject to direct sunlight, extreme heat (e.g. in automobiles) or places with high humidity. Doing so may cause electric shock, fire, damage or a fault.

Follow the instructions on the manual to dispose the product. Check with local codes for possible special disposal instructions. A Lithium-ion battery is used in the product. The keyboard uses dry cell batteries. Do not dispose of batteries in a fire. They may explode.
4.2. Precautions to HMD

⚠️ CAUTION

🚫 Do not bring the product close to magnetized objects such as cash cards, floppy disks, credit cards and prepaid cards. Doing so may result in loss of recorded information.

⚠️ If you notice any abnormality with your skin, immediately consult a doctor for medical treatment. Itching, rashes, eczema, etc. sometimes occurs if you use the product for a long time or depending on your physical constitution and condition. See “4.7 Material List for materials used in the product.

⚠️ Use the product with the cap and the battery cover closed. If the covers are open, dirt or water may get inside causing a fault.

🚫 Do not place the product directly on sand at a beach etc. Sand or other small particles may get inside the earphone, microphone or receiver/speaker, causing the volume to drop. If sand gets inside the product, it may cause overheating or a fault.
4.3. **Precautions to earphone**

⚠️ **CAUTION**

- Adjust the volume moderately when using the earphone. May cause a hearing loss if the volume is too high.

- Permanent hearing loss may occur if earphones or headphones are used at high volume for prolonged period of time.

4.4. **Precautions to wireless**

⚠️ **WARNING**

- **Warnings for Wi-Fi and Bluetooth technologies.** The product should be switched off wherever you are requested to do so in:
  - Hospitals, clinics or health care facilities—especially in the operating room for surgery, ICU, CCU, etc.
  - Airplanes, if it is prohibited to use wireless technologies.
  - Around fire alarms, automatic doors and other automatic control equipment.
  - Around users wearing implanted pacemakers or defibrillators or other electronic medical equipment.

These requests are designed to prevent possible interference with sensitive equipment using low-power signals.

- Switch off the radio components when you let the device get near flammable gases or into hazardous environments (e.g. petrol station, paint shops), as the transmitted radio waves can cause an explosion or a fire.
4.5. **Precautions of battery pack FPB0325 (CP688161-xx)**

The battery pack of the product is a lithium-ion battery. The battery pack is not fully charged at the time of purchase. Charge the battery pack before using the product.

⚠️ **DANGER**

- Do not short-circuit the battery pack’s plus(+) and minus(-)
- **CAUTION:** Risk of Explosion if Battery is replaced by Incorrect Type. Dispose of Used Batteries According to the Instructions.
- Do not carry or store the product with objects like a metal necklace. May cause battery pack to ignite, burst or a fault by short-circuit.
- Do not disassemble, remodel or solder.
- Battery pack is not waterproof. If water or seawater gets on the product, it may cause overheating, ignite, cause damage, electric shock or a fault. Do not charge if the battery pack is wet.
- If the battery pack's fluid contacts the eyes, clothes, etc., flush with clean water immediately. If the battery pack’s fluid contacts the eyes, see a doctor right away. Do not rub the eyes. May cause loss of sight and injuries. If battery pack’s fluid is on the product, wipe it off without touching the fluid directly.
Do not use the battery pack if it was dropped, stepped on, damaged or any liquid is leaking from it. Keep the battery pack away from fire if any liquid was leaking or odor coming out from it. Doing so may cause ignition or explosion.

Insert the battery pack into the HMD in correct direction. Connecting incorrectly might cause an explosion, ignition or overheating. Do not force the battery pack into the product. If it cannot insert, check the connecting part of the battery and the product.

The battery pack is a consumable item. If the performance of a battery pack does not recover after charge, the battery pack is at the end of its service life. Failure to do so may cause overheating, ignition, rupture or leakage. Note that the length of service life varies depending on the usage condition.

Stop charging if charging takes a very long time compared to usual. Failure to do so may cause overheating, ignition, rupture or leakage.

**WARNING**

Follow the instructions in the manual to dispose the product. Check with local codes for possible special disposal instructions. A Lithium-ion battery is used in the product. Do not dispose of batteries in a fire. They may explode.
4.6. Precautions of battery charger, AC adapter and cables

⚠️ WARNING

🚫 Do not use at other voltages than the specified power supply voltage. Doing so might cause fire, overheating or electric shock.
- Battery charger
  DC-IN connector: DC12V
  microUSB connector: DC5V
- AC adapter: AC100V to 240V

⚠️ Insert the power plug of into the wall outlet all the way. Incomplete insertion of the power plug might result in electric shock or fire caused by overheating and ignition. Do not use when specified charging equipment is damaged, or a power outlet is loose.

⚠️ Do not overload an electrical circuit. Do not use power outlets or wiring apparatus beyond their rating. Also, exceeding rating, for example, by connecting multiple devices to a single power strip may result an electric shock, injuries, damage or fire.

🚫 Do not short the charging jack while it is connected to the outlet. Do not touch the charging jack with a part of your body such as your hand or finger. May cause an electric shock, short, fire, injury or fault.

🚫 Do not touch the battery charger for a long time while power is being supplied from an external source. Doing so may cause a low-temperature burn.
When disconnecting the power plug from the outlet, do not pull the AC adapter or cord with an excessive force. Pull the AC adapter or cord horizontally to disconnect. Failure to do so may cause a fire, burns, injury or electric shock.

When disconnecting the power plug from the outlet, do not pull the cord. Instead, hold the adapter to disconnect. Pulling the cord may damage the cord and cause a fire or electric shock.

Do not touch the adapter cord or power plug with wet hands. May cause an electric shock.

Do not strain the base of the cable by tightly wrapping the cord around the AC adapter. Cable core may be exposed or disconnected. Doing so may result in an electric shock or fire.

Do not apply excessive force while disconnecting the AC adapter from the outlet. May cause injury or a fault.

Do not drop or use excessive force or apply a hard shock to it. Internal substrate might be damaged. Moreover, do not use if the AC adapter or cable if deformed, cracked or damaged. May cause a fault, electric shock or fire.
Wipe off any dust or particles that accumulated on the power plug or the connection between the AC adapter and a cable by using a dry clean cloth. Failure to clean the dust may cause a fire, burns or electric shock. Do a cleaning inspection once a year.

Always remove the power plug from the outlet when cleaning the equipment. May cause fire, damage or electric shock.

Battery charger is not waterproof. Avoid areas where any fluid (e.g. water, seawater, etc.) will splash on it. Doing so may cause overheating, fire, electric shock or short-circuit resulting in a fault. If the fluid is on the battery charger, remove the power plug from wall outlet immediately.

Never use the battery charger in humid places such as bathrooms. Doing so may cause electric shock or a fault.

Always remove the power plug of the battery charger from the outlet when not using it for an extended period of time. Moreover, remove AC adapter from the battery charger. Failure to do so may cause a fire.

Do not use the AC adapter, cable or power plug if it gets damaged. May cause an electric shock or fire.
When you insert and remove the power plug of the AC adapter from power outlet, do not contact a metal strap or other metal objects with the jack. May cause fire, burns or electric shock.

Do not place heavy objects on the cable. Doing so may cause injury, fire or electric shock.

Do not damage, modify, heat, twist, pull or place a heavy object on the cable of the specified charging equipment. Do not use a damaged cable. Doing so may cause an electric shock, short circuit or fire.

### 4.7. Material List

<table>
<thead>
<tr>
<th>Part</th>
<th>Material</th>
<th>Surface treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Mounted Display</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display panel</td>
<td>Acrylate resin</td>
<td>AR coating</td>
</tr>
<tr>
<td>Display cushion</td>
<td>Synthetic leather</td>
<td>-</td>
</tr>
<tr>
<td>Power key, home key</td>
<td>PC resin</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>Exterior case</td>
<td>PC resin + ABS resin</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>microUSB connection cap</td>
<td>PC resin + Polyester elastomer resin + silicon resin</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>microSD card slot cap</td>
<td>PC resin + Polyester elastomer resin + silicon resin</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>Earphone connection jack cap</td>
<td>PC resin + Polyester elastomer resin + silicon resin</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>Diopter adjuster cap</td>
<td>PC resin + Polyester</td>
<td>Acrylic UV curable coating</td>
</tr>
<tr>
<td>Component</td>
<td>Material</td>
<td></td>
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<tr>
<td>---------------------------------</td>
<td>---------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Hook-and-loop fastener</td>
<td>nylon</td>
<td></td>
</tr>
<tr>
<td>screw</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>label</td>
<td>polyester</td>
<td></td>
</tr>
<tr>
<td>Fitting belt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head adjuster</td>
<td>polyethylene</td>
<td></td>
</tr>
<tr>
<td>Belt attachment</td>
<td>polypropylene</td>
<td></td>
</tr>
<tr>
<td>Side cushion</td>
<td>polyester</td>
<td></td>
</tr>
<tr>
<td>Top band(clip)</td>
<td>Polypropylene(POM resin)</td>
<td></td>
</tr>
<tr>
<td>Front band</td>
<td>synthetic rubber</td>
<td></td>
</tr>
<tr>
<td>Helmet clip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>body</td>
<td>PC resin + ABS resin</td>
<td></td>
</tr>
<tr>
<td>Shaft &amp; shaft lock</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>Screw</td>
<td>POM resin + Stainless steel</td>
<td></td>
</tr>
<tr>
<td>Knurling screw</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>Battery pack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td>PC resin</td>
<td></td>
</tr>
<tr>
<td>contacts</td>
<td>Nickel</td>
<td></td>
</tr>
<tr>
<td>Label</td>
<td>polyester</td>
<td></td>
</tr>
<tr>
<td>Battery charger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td>PC resin + ABS resin</td>
<td></td>
</tr>
<tr>
<td>contacts</td>
<td>Beryllium copper</td>
<td></td>
</tr>
<tr>
<td>Wearable Keyboard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>body</td>
<td>PC resin + ABS resin</td>
<td></td>
</tr>
<tr>
<td>key</td>
<td>urethane acrylate</td>
<td></td>
</tr>
<tr>
<td>wearable keyboard belt</td>
<td>Styrene/ Butadiene rubber</td>
<td></td>
</tr>
<tr>
<td>microUSB connection cap</td>
<td>thermoplastic elastomer</td>
<td></td>
</tr>
<tr>
<td>Screw</td>
<td>steel</td>
<td></td>
</tr>
<tr>
<td>screw</td>
<td>Stainless steel/ trivalent chromate coating</td>
<td></td>
</tr>
</tbody>
</table>
4.8. Handling precautions

This product is designed to wear on your head and requires extra motion space. Please be careful to have a sufficient distance so that you will not get caught in a machine such as robot arms while wearing this product.

- Do not put conductive materials (metal pieces, pencil lead, etc.) inside the product, keyboard and battery charger.
- Do not drop the product, keyboard, battery charger, AC adapter or subject it to shocks when carrying. Protect from excessive force or vibration by placing it in a bag.
- Adjust the arm of the product so that the display will be about 1.18 in. (3cm) away from and in front of your eye.
- Adjust the display to left, right, up or down in order to visually recognize the four corners of displayed image.
- When the display is placed in front of an eye, the eye is blocked by the display. When it's necessary to secure the sight, move the display to below your eye. If you are not looking at the display, shift the arm to the side.
- Do not operate the product while walking, running, driving a car, motorbike or riding a bicycle. May cause an accident.
- Do not use the product in an intensely shaky or unstable environment. May cause dizziness, nausea, headache or motion sickness.
- When you do some work while looking at the screen, be mindful of any objects in the areas around your feet, hands and overhead. Please be careful to avoid an injury by falling or a falling object.
- Observing an image that is excessively shaking, is intensely blinking or has intensive movement may cause dizziness, nausea, headache or motion sickness.
- May cause harm to your eyes if there is a big difference between brightness of a display and ambient light.
- Be careful with obstacles and other people when there are many vehicles or people in a crowded or narrow place.
- Seeing the display continuously for a long period of time may cause eyes to fatigue. Please get moderate rest periodically.
- It is recommended to get rest since peripheral visual field narrows by fatigue after use. Drive or ride safely when driving a car, a motorcycle or a
bicycle after use.

● Those who are 15-year-old or younger should not use the product since there may be an adverse effect on their visual function.
● Do not use this product if a person had a convulsion, epileptic attack or loss of consciousness by flashing lights. This product may cause similar symptoms.
● Do not use this product if you are in a poor physical condition. Using this product may worsen your physical condition.
● Do not use this product if you have a disorder or deficiency in your eyes. May aggravate squint, weak eyesight or an isometropia.
● Stop using the product immediately and rest until you feel better when you are not feeling well or feel uncomfortable during use.
● People around you may hear your conversation when you talk on the phone using speakers. If it is not desirable, please use earphones.

4.9. Bluetooth/Wireless LAN (Wi-Fi) function

● This product supports security features for wireless communications that are compliant with the Bluetooth and Wi-Fi standard specifications, but the security may not be sufficient depending on the usage environment and configuration. Be careful when making data communication using Bluetooth or wireless LAN (Wi-Fi) function.
● Wi-Fi has the advantage because it can be freely connected anywhere within the radio wave range, since it uses radio waves for exchanging information. At the same time, there is a risk that a malicious third party may obtain unauthorized access if security settings have not been configured. You are recommended to configure security settings before using wireless LAN under your direction and responsibility.
● The Company assumes no responsibility for leakage of data or information that may occur during Bluetooth/ Wi-Fi communication.
4.10. **Notes on waterproof/dustproof properties**
Before using the product, thoroughly read below to ensure correct use. Failure to follow the contents described in these sections may cause intrusion of water, sand or other foreign material, resulting in overheating, ignition, electric shock, injury or a fault.

■ **Waterproof/Dustproof**
There is a microUSB connector cap, a diopter adjustment cap, a microSD card slot cap, a battery cap and an external audio connection jack cap on this product. Moreover, there is a microUSB connector cap and a battery cover on the keyboard.
The product provides the waterproofing of IPX5, IPX7 end dustproofing of IP5X with firmly closing all the caps and a battery cover (based on in-house testing).

**[Equivalent to IPX5]**
IPX5 equivalent means that the product will maintain its operability as HMD even if it is sprayed with water from a 0.25 in. (6.3 mm) diameter nozzle at a distance of about 9.8 ft. (3 meters) for more than 3 minutes at a rate of about 3.3 gallons (12.5 liters) per minute from any direction.

**[Equivalent to IPX7]**
IPX7 equivalent means that the product will maintain its performance as HMD with no water getting inside the main unit when the main unit is gently submerged in a tank of still tap water at room temperature to a depth of 3.3 feet (1.0 meters) and left for about 30 minutes.

**[Equivalent to IP5X]**
IP5X means a protection degree that HMD keeps functioning and safety after it is placed in a device with dust in diameter 75μ or less for 8 hours, agitated and then taken out.

However, proper operation of the product in every possible condition during actual use is not guaranteed. Malfunctions determined to be caused by mishandling by the customer are not covered by the warranty.
**Important items to remember before use**

- Do not place the product directly on sand at a beach etc. Sand or other small particles might get inside the receiver/speaker, microphone, etc. causing the volume to drop. If sand gets inside the product, it might cause overheating or a fault.
- Close all the caps and battery cover firmly and make sure that there are no spaces between them and the product.
- Waterproof properties are only effective when all the caps and the cover are securely closed.
- Even a small particle (a hair, a grain of sand, fine fiber, etc.) between the product and the caps or the battery cover and the keyboard could cause water leakage.
- Do not poke the microphone and the speaker holes shown below with a sharp object. Damaging waterproof membrane may result in water leakage.

- Do not open/close the cap and the battery cover if the product or your hands are wet.
- Do not use the product underwater (including button operations).
- Do not leave the product in a humid place for an extended period of time.
- The product main unit is waterproof only against fresh water and tap water (41°F to 95°F). Do not splash or soak the product in the following liquids: soapy water, detergent water, seawater, pool water, hot spring water or boiled water. Do not get mud or sand on the product.
**Tips for comfortable use**

- Once the product gets wet, water may remain in gaps of the product. Shake the product well to drain water. Especially make sure to drain the water remaining inside the buttons.
- Water may remain on the product after draining. Although you can use the product, do not place it near things that should not get wet. It may get your clothes, bag or contents of the bag wet.
- Drain water if it becomes temporarily hard to hear sound due to water remaining in the microphone. Please see draining section for more details. (→P.36)
- Although you can hold the product with wet hands, do not immerse the product into water.
- Do not use the product underwater. Doing so may cause a fault.
- Extreme changes in temperature cause condensation. Wait until the product reaches room temperature before you bring the product from a cold place into a warm place.
- Do not splash the product with hot water. The product is not resistant to hot temperatures.
- Use within an ambient temperature range of 41°F to 95°F and humidity range of 20% to 80%.
- Do not apply a strong water flow (more than 6 liters per minute).
- Do not use or leave the product under direct sunlight or in a hot place.
- You can wash the product under a mild flow (up to 1.6 gallons or 6 liters per minute) of tap water at room temperature (41°F to 95°F) at a distance of about 10 cm from the faucet or showerhead. Do not spray the product with high-pressure water or submerge it in water for extended period of time, as the product is not designed to withstand high water pressure.
- Make sure to hold the caps or the cover so that it does not open. Wash the product with your hands. Do not use a brush or sponge.
- Do not wash the product in a washing machine or ultrasound bath.

**To maintain waterproof/dustproof properties**

Note the following points to maintain waterproof/dustproof properties.
- To insert/remove the microSD card, use your fingertip to pull the indent of the microSD card slot cap to open. For more details, please see procedure 1 in “Inserting/removing microSD card”. (→P.84)
- To use microUSB on the product or the keyboard, use your fingertip to pull the indent of the microUSB connector cap to open.
  - For the product
    Please see “8.8 Connecting a microUSB cable” for more details. (→P.85)
  - For the keyboard
    Use your fingertip to pull the indent of the microUSB connector cap to open shown below.

![indent](image1)

- When adjusting visibility, use your fingertip to pull the indent of the diopter adjustment cap to open. Please see procedure 3 in “7.1 Adjusting visibility/position” for more details. (→P.64)

- To insert/remove the battery pack, turn the battery cap counterclockwise direction to open. Please see procedure 1 in “6.2 Attaching/Removing battery pack” for more details. (→P.47)

- To attach an earphone, use your fingertip to pull the indent of the earphone connection jack cap to open shown below.

![indent](image2)

- To change the dry batteries of the keyboard, unlock the locks and place a fingertip on a tab of the battery cover on each side to open.
  Please see procedure 1 and 2 in “6.8 Attach the keyboard” for more details. (→P.59)
Moreover, close the caps and the battery cover by pushing firmly and make sure that there are no spaces between them.

The caps (microUSB connector cap, Diopter adjuster cap, microSD card slot cap and Earphone connection jack cap on the product and microUSB connector cap on the keyboard) are designed to be removed. If the cap is removed, place it back to the original position and push it in.

Example: microUSB connector

■Rubber seals
The rubber seals around the caps are important to maintain waterproof/dustproof properties. Note the following points.

● Do not remove or damage the rubber seals.
● When closing the cap, be careful not to let the rubber seals get caught. Forcibly closing the cover with the rubber seals caught may damage them resulting in loss of waterproof/dustproof properties.
● If any liquid other than fresh water and tap water (hot water, seawater, detergent, chemical, sweat, etc.) at room temperature (41°F to 95°F) gets on the product, it may cause deterioration in waterproofing/dustproofing.
● Do not open/close the cap with gloved hands. Do not get dust on the product. A small particle (a hair, a grain of sand, fine fiber, etc.) on the seals could cause water leakage. If small particles are attached to the product, make sure to remove them with a clean dry cloth.
● Do not insert sharp objects into gaps of the cap. Doing so may damage the rubber seals, causing water leakage.
● It is recommended to replace the rubber seals (charged service) for maintaining waterproof/dustproof properties once every two years regardless of whether any abnormality is present. For information on rubber seals replacement, contact your local sales representative.
■ When liquid other than water gets on the product
If any liquid other than plain water (e.g. seawater, detergent, sand or mud) gets on the product, immediately rinse it with plain water.

■ After the product gets wet
If the product gets wet, drain water and wipe off water drops with a clean dry cloth.
* Do not leave water on the product without wiping it off. Doing so may short-circuit the connector.
* Do not leave water on the connection jack without wiping it off.
* In cold climates, water on the product may turn to frost. Using the product with frost may cause a fault. Do not leave water on the product without wiping it off.

If the product gets wet with water or snow, wipe off with a clean dry cloth. Be careful not to get your clothes or bag wet with water that could not be wiped off or water remaining in the product gaps.

■ Draining
If you use the product with water drops on its surface, the volume of the speaker may be lower or may get your clothes or bag wet.
Also, if water seeped into the product through gaps on the button, etc., follow the steps indicated below to remove water from the product and the keyboard.

□ For the product
Water could be collected in the speaker, the microphones(MIC), Home button and Power button shown below with arrows.
Firmly hold the product and shake it until there is no water as shown below.

For the keyboard
Water may have collected in the microUSB connector. Open the microUSB connector cap, firmly holding the keyboard and shake it until there is no water as shown below.
■ Charging precaution
The battery charger is not waterproof or dustproof. Be sure to check the following points before and after charging.

● Never charge the wet battery pack. If you charge the battery pack just after the product gets wet, drain water well and wipe remaining water off with a clean dry cloth before placing it in the charger.
● Do not touch the battery pack and battery charger with wet hands. Doing so may cause electric shock.
● Do not splash water over the battery pack and battery charger when using them. Doing so may cause fire or electric shock.
● Do not use the battery pack and battery charger near water. Doing so may cause fire or electric shock.

■ Cable connecting precaution
● Do not connect microUSB connector and microUSB cable if water is inside the connector. Doing so may cause fire or electric shock.
● Do not connect the power cable if water drops are on it. Doing so may cause fire or electric shock.
5. Part names and functions

5.1. Head mounted display

1 Hook-and-loop fastener
   Attach hook-and-loop fastener comes with belt attachment.

2 Display

3 Microphone
   four microphones all together.

4 Camera

5 Home button
   Shows the home screen

6 microUSB connector cap, microUSB (USB)
   Connect a microUSB cable. Please see “8.8 Connecting a microUSB cable” for more details. (→P.85)

POINT

The battery pack cannot be charged with microUSB connected to the product.
7 Power Indicator light
When the power is on after pressing the power button, the green light will light up but lights off after a period of time.

8 Power button (ô)

Following can be done by pressing the power button.

<table>
<thead>
<tr>
<th>Power button operation</th>
<th>Detail of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press the power button once</td>
<td>Turn ON/OFF screen</td>
</tr>
<tr>
<td>Hold down the power button for few seconds</td>
<td>Power ON/OFF</td>
</tr>
<tr>
<td>Hold down the power button for more than 13 seconds</td>
<td>Reboot</td>
</tr>
</tbody>
</table>

Note: When there is not enough battery power, the product will not boot even with the power button pressed. Red power indicator light will flash 3 times.

1 microSD card slot cap, microSD card (û)
Please see 8.7 microSD card for more details. (→P.83)

2 Hook-and-loop fastener
Attach hook-and-loop fastener comes with belt attachment.
3 Microphone
4 microphones all together.

4 Diopter adjustment cap, diopter adjustment screw
Diopter adjustment is used when the display is hard to see.
Please see “adjusting visibility” when the display is hard to see. (→P.65)

5 Battery Pack Rechargeable battery pack.
Please see “6.1 Charging the battery pack”. (→P.44)

6 Battery cap

7 Strap

8 Strap hole

9 Earphone connection jack cap, Earphone connection jack (イヤホンジャック)

10 Speaker

5.2. Keyboard

■ Front

1 microUSB connector cap, microUSB connector

2 [BackSpace] (削除キー)

3 [Bluetooth] key (Bluetooth)

4 [Power] key (電源キー)
The following can be done by pressing the power key.
### [Power] key operation

<table>
<thead>
<tr>
<th>[Power] key operation</th>
<th>Detail of operation</th>
</tr>
</thead>
</table>
| Press the power key once | Confirm remaining dry batteries level  
  - If the power is ON,  
    Bluetooth/Power indicator light will be on.  
  - If the power is OFF,  
    Bluetooth/Power indicator light will NOT be on. |
| Hold down the power key for few seconds | Power ON/OFF.  
  When the power is ON, Bluetooth/Power indicator light will be on. |

### IMPORTANT

Keyboard cannot be turned ON if the microUSB is connected. Make sure to remove the cord out before turning ON.

5. **Bluetooth/Power indicator light (.bluetooth)**  
   Displays status of connection or remaining of dry batteries level.  
   Please see (→ P.82)

6. **One-touch button([F1]to[F3])**  
   You can launch apps with a single action by pressing a button with pre-assigned apps.

7. **[Back]**  
   Move cursor to up/down/left/right

8. **cursor key**

9. **[MENU] key**

10. **[Enter] key**
1 Lock button
   Slide to open/close the battery box
2 Battery box, battery cover
   Use two (2) AAA dry alkaline batteries. Please see “6.8 Attach the keyboard” to change the batteries. (→P.59)
6. Get started

Please follow the instructions on how to prepare the product to be worn.

6.1. Charging the battery pack

The battery pack is not fully charged at the time of purchase. Charge the battery pack before using the product.

The explanation below is using the AC adapter to charge.

**Parts name of the battery charger**

1. Attach the battery pack to the battery charger.
   Align the metal contacts of the battery pack with those of the battery charger.

2. Insert the power cable into the AC adapter.

3. Insert the power cable into the battery charger’s DC-IN connector.
4 Insert the AC adapter’s power plug into an outlet.

For microUSB, with the B engraved side facing upwards, insert the microUSB plug of the microUSB cable straight into the battery charger. Be careful not to connect the microUSB in wrong direction. It may damage the connector.

**IMPORTANT**

- When using the DC-IN connector to charge, you may charge either 2 batteries at the same time or one battery at a time using either slot A or B.
- When using microUSB connector to charge, you may charge only 1 battery at a time using the below equipment.
  - notebook
  - tablet
  - smartphone
To check the charging status
The state of the battery charger indicator light will be as follows.

<table>
<thead>
<tr>
<th>Indicator light</th>
<th>Status of the battery pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights red</td>
<td>Charging</td>
</tr>
<tr>
<td>Lights flashing</td>
<td>• Charging timer expired</td>
</tr>
<tr>
<td></td>
<td>If charging is not completed after the specified charging</td>
</tr>
<tr>
<td></td>
<td>time, the indicator light flashes. Remove the battery pack</td>
</tr>
<tr>
<td></td>
<td>and recharge it.</td>
</tr>
<tr>
<td></td>
<td>• Abnormal power voltage of the battery pack</td>
</tr>
<tr>
<td></td>
<td>When power voltage of the battery pack is abnormal, a</td>
</tr>
<tr>
<td></td>
<td>charging error occurs and the indicator light flashes.</td>
</tr>
<tr>
<td></td>
<td>Remove the battery pack and recharge it.</td>
</tr>
<tr>
<td></td>
<td>If it continues to flash when trying to charge for several</td>
</tr>
<tr>
<td></td>
<td>times, please contact your local sales representative.</td>
</tr>
<tr>
<td>Light turns off</td>
<td>Charge complete</td>
</tr>
</tbody>
</table>

**IMPORTANT**

- Charge battery in a place where the ambient temperature is in a range of 41°F to 95°F
- Indicator light goes off and charging may stop temporarily when the temperature of the battery pack is out of temperature range. If the battery pack is hot, wait until it cools down and recharge the battery.
- The battery is a consumable item. If the performance of a battery pack does not recover (e.g. the usable time after each charge has become extremely short), the battery pack is at the end of its service life. Stop using it and replace it with a new battery pack.
6.2. Attaching/Removing battery pack

1 Turn the battery cap in a counterclockwise direction to open. Line-up marks on the cap and on the product.

2 Insert the battery pack into the product.
Align the metal contacts of the battery pack with those of the product.

POINT
- To remove a battery pack from the product, slowly tilt the product. If tilted too fast, the battery pack may pop out.
3 Align and push the battery cap as shown below.

4 Turn the battery cap clockwise direction to close.
   Line-up a mark on the cap and a mark on the product.
6.3. Decide the orientation of the product
This product can be used on both left and right eyes. Please decide which eye to see the display. The explanation in this manual is the right eye case.

- Use on the right eye
- Use on the left eye

![Diagram showing product setup for right and left eyes]

**POINT**
To use on the left eye,
1. Move the joint with dotted-circles shown below and reverse the camera and the display positions.

![Diagram showing joint movement]

2. Turn the product upside down to use on the left eye.
   To adjust the view, move the joint with dotted-circles shown below.
6.4. **Wearing the product**
This product is designed to be worn either directly on the head or on a helmet. The procedures are different depending on how it’s worn.

- **Worn on the head**
  Please see “6.5 Assemble the fitting belt” (→P.50)

- **Worn on a helmet**
  Please see “6.7 Attach to a helmet” (→P.56)

6.5. **Assemble the fitting belt (for display on right eye)**
Assemble the fitting belt to be attached to the inner side of this product.
The length of the belt can be adjusted at the end so please assemble it first as explained below.

1. **Attach belt attachments and head adjusters to the product.** Attach to the place where circled below.

   <Below image shows how the belt attachments and head adjusters are attached.>

The following explanation is how to attach the belt on this side (right side).

1. A single hook-and-loop fastener on the right belt attachment should be touching the product and align the positioning holes.
   Check to see if the positioning holes are aligned correctly.
   If they are not aligned, unstick the hook-and-loop fastener on the back of the belt attachment by pulling and align the holes.
   After the holes are aligned, stick the hook-and-loop fastener.
Hook-and-loop fastener on the back of the belt attachment by pulling and aligning the holes.

2. Stack the right head adjuster and right belt attachment and align the positioning holes. Check to see if the positioning holes are aligned correctly. Head adjuster has an orientation so make sure the ratchet part will be on the back side.

3. Two places will be set with knurling screws. Use a flat blade screwdriver or a coin to turn and tighten the screws.
4. Attach left belt attachment and left head adjuster to the left side as you did to the right side.

2 Attach the top band to the belt attachments.

POINT

You may attach the top band to either side but it will be easier to adjust if the hook-and-loop fastener is on your dominant hand side.

1. After the side of the top band (that is cut roundly) is put into a hole on the belt attachment, the top band is inserted into the adjuster from the outside to the inside.
2. The top band is inserted into the adjuster as shown in the figure and fixed.
3. After opposite side of the top band is inserted into a hole on the belt attachment, pass the top band into a rubber band and attach the fixed hook-and-loop fastener.
3 Attach the front band to the belt attachments.
   1. The front band goes into a hole on the belt attachment shown below.
   2. Do the same for the other side.

4 Insert the head adjuster.

<Below image illustrates how the fitting belt is attached.>
5 Attach the side cushions to the inner sides of the fitting belt.
   1. Attach the hook-and-loop fastener on the side cushion to the belt attachment.
   2. Do the same for the other side.

6 Attach the display cushion to the display.
Start attaching the display cushion (in the dotted-circle shown below).
Wrap the projecting part of the display with the cap part and cover with the display cushion.
When covering, please don't insert the cap part inside.

This is the end of assembly.
6.6. **Adjust/wear HMD on your head**

If you wear glasses regularly, you may keep the glasses on while using the HMD. Please adjust the length of the band to fit the HMD comfortably on your head.

1. **Put HMD on your head.**
2. **Adjust the head band first and adjust the front band by setting the hook-and-loop fastener.**
   
   - [Diagram showing the hook-and-loop fastener on the head band]

3. **Adjust the ratchet on the head adjuster**
   
   Adjust so that the speaker will be on top of your ear.

   - [Diagram showing the ratchet and its adjustments]

Continue to wear the keyboard on your arm. Please see “6.8 Attach the keyboard”. (→P.59)
4 Positioning of the display and the camera
The display pod is equipped with microphones, and the distance of the user's mouth from the microphones changes when the display is moved. In addition, the distance of the user's ear from the speaker varies depending on whether or not a helmet is worn. As it is only possible to set one type of call parameter, the standard position has been predefined and the parameter has been adjusted so as to work optimally from the standard position. Therefore, make sure that the microphones and speaker are positioned for calls in the ranges shown below.
Microphones: Eye to display: 1.18 in. (3 cm), Angle: Upper 40 degrees - lower 50 degrees (standard: lower 40 degrees)
When the HMD is to be used in noisy conditions, we recommend that the near standard position be used.
6.7. **Attach to a helmet**

You may install and use HMD on a commercially available helmet. However, some of the helmets may not be compatible with the product.

1 **Attach the left and right helmet clips to the product.**
   1. Stack the helmet clip and the product and align the positioning holes. 2 places will be set with knurling screws.

   ![Diagram of clipping process]

   2. Do the same for the other side. Use a flat blade screwdriver or a coin to turn and tighten the screws.
2 Loosen the screws attached to the helmet clips.

3 Decide where to place the product on the helmet and attach the **product**. If the helmet has a chin strap, put the strap inside the helmet before attaching the product.
   
   If the place to attach the product is decided, place the product into the gap of the helmet clips and tighten the screws.
   
   If the product isn't attached in the proper location of the helmet, the product may touch your ears when wearing the helmet.
4 **Attach the display cushion to the display.**
Start attaching the display cushion (in the dotted-circle shown below). Wrap the projecting part of the display with the cap part and cover with the display cushion. When covering, please don't insert the cap part inside.

5 **Wear the helmet**
6.8. Attach the keyboard

How to insert batteries and wear the keyboard to your arm is explained below.

1. Slide to unlock the battery box.

2. Open the battery box cover.
   Place fingertips on the battery cover tabs on the battery cover on each side and pull with an angle to open.
3 Two (2) AAA alkaline batteries are placed inside from the right side. When putting the first battery, put it from the left side and slide it to the right side since there is a metal piece on the right side of the battery box.

![Diagram of battery installation]

- **IMPORTANT**
  - Be careful with the orientation of the battery.
  - Don't mix battery types and don't mix old batteries with new batteries.

4 Close the battery cover by joining tabs and tab holes. Make sure the lock is unlocked and set it firmly.
5 Slide the lock buttons in the arrow direction shown below and close the cover.

6 Attach the keyboard belt to back of the **keyboard**. The hook-and-loop fastener should face down.
7 Wear the keyboard on your arm.
Wrap the keyboard belt around your arm and attach the hook-and-loop fastener.
Tighten the belt so that the keyboard will not fall off.

POINT
You may adjust the length of the keyboard belt by the hook-and-loop fastener shown below.
When changing the batteries for the second time, you don’t need to take the keyboard belt off. You can change the batteries as shown in the illustration below.
7. Initial settings

Before you can use the HMD, you need to perform the initial settings by the following procedure.

“7.1 Adjusting visibility/position” (→P.64)
↓
“7.2 Launch”HMD home” screen” (→P.66)
↓
“7.4 Decide the orientation of the product” (→P.68)
↓
“7.5 Paring (connecting)” (→P.69)

7.1. Adjusting visibility/position

1 Hold down the power button on the product for few seconds A screen will be displayed.

2 Position the display in front of the eye.
   Adjust the arm of the product so that the display will be about 1.18 in. (3cm) away from and in front of your eye.

   ![Diagram of adjusting visibility/position](image)
3 Adjusting visibility

1. Use your fingertip to pull the indent of the diopter adjustment cap to open.

2. Turn the screw for visibility adjustments and adjust the focus of the screen. Put your nail on a slit and turn the screw for visibility adjustments.

- If it is hard to adjust the screw while wearing, take the product off from your head.

3. Close the diopter adjustment cap
7.2. Launch”HMD home” screen

1 Select “HMD home” in the screen. Voice command: “Number one”

You may select an item by speaking "Number [actual number]"(e.g. "Number one") when there is a number with a balloon. Please see “Terminology list of voice commands” for words used in voice command. (→P.78)

If voice commands cannot be used, you may use the keyboard. In this case, please connect the keyboard to the microUSB cable. Please see “8.8 connecting a microUSB cable” for more details. (→P.85)

This screen will not appear a second time. If you wish to display this screen, go to “settings”→”other settings”→”home”→”launcher” in the “HMD home” screen. If you selected “Android home” instead of “HMD home”, this screen will appear again.

“HMD home” screen will appear.
7.3. **Menu in “HMD home” screen**

1. **Camera**: Launch camera on the product
2. **Select file**: Launch file viewer
3. **Bluetooth**: Connect this product and a smartphone with Bluetooth (HFP)
4. **Volume**: Set volume for video and notice alarms (→ P.76)
5. **Settings**: Brightness of the screen, set left or right eye to see the display, etc. (→ P.77)
6. **SWITCH SCREEN**: Switch screen between the product and a gateway device (e.g., tablet or smartphone) during Miracast video connection.
7.4. Decide the orientation of the product

1. Select “settings” in “HMD home” screen. Voice command: “Number five”

You may select by using the keyboard if the keyboard is connected.

2. Select “Switch eye”
   Voice command: “Number two”
3 Select depending on your situation
Voice command: “Number one”, “Number two” or “Number three”. “Automatic” will rotate the screen automatically depending on your situation.

4 Select “OK”
Voice command: “Number five”

7.5. Pairing (connecting)
You may connect the Head Mounted Display and the wireless keyboard to a tablet or smartphone.

Configuration
7.5.1. Connecting the product and a smartphone (Bluetooth)

1. Turn on the smartphone Hold down the power button.

2. In “HMD home” screen, select “Bluetooth” → “OK”.
   Voice command: “Number three” → “Number two”

3. Display menu from the home screen of the smartphone and tap “system settings”.

4. Tap “Bluetooth”
   Turn “ON” “Bluetooth” if it’s “OFF”.
   Wait until the product is recognized.

5. Tap “FHMD001”

6. In “Bluetooth pairing request” screen, confirm the passkey is the same as the product and tap “pair”.
   Below screen will be displayed on HMD and screen will switch if connected.
7. Select “OK” on “HMD home” screen. 
   Voice command: “number one”

![Pairing completed]

Bluetooth connection is complete.

**IMPORTANT**

- Supported profile is HFP only.
- The product will not be reconnected automatically to the smartphone once the power is off or the communication is lost, even if the connection became available again. It's necessary to operate from procedure 3 above.

### 7.5.2. Connecting the product and a smartphone (Miracast)

Please note: Miracast functionality is supported on a limited number of smartphones and tablets only. Please consult with your Fujitsu contact for additional information.

1. Hold down the home button until “Waiting for connection from smartphone/tablet” displays on “HMD home” screen.
2. Turn on the smartphone Hold down the power button.
3. Display menu from the home screen of the smartphone and tap “system settings”.
4 Tap “Display” → “Miracast”. Turn “ON” “Miracast” if it's “OFF”.

5 Tap the device name.
The device name is displayed in “HMD home” screen.

The smartphone screen will change to “connected” and smartphone’s screen will be displayed on the HMD screen.

Miracast connection is complete.

**IMPORTANT**
- The product will not be reconnected automatically to the smartphone once the power is off or communication is lost, even if the connection becomes available again. It’s necessary to operate from procedure 3 above.
- Miracast connection uses 2.4GHz band wireless LAN. If you are unable to use 2.4GHz band wireless LAN or have radio wave interference, use microUSB cable for wired connection. See page “8.8 Connecting a microUSB cable” for how to connect. (→P.85)

**POINT**
When the product is connected to a smartphone by using Miracast,
the time and date on the product will be synchronized to the time and date on the smartphone.

7.5.3. Connecting the keyboard and a smartphone (Bluetooth)
1. Turn on the keyboard.
   Hold down the [Power] key until Bluetooth/power indicator light turns on.
   Hold down the key until Bluetooth/power indicator light starts flashing. It will change to pairing standby state.
3. Display the menu from the home screen of the smartphone and tap “system settings”.
4. Tap “Bluetooth”
   Turn “ON” “Bluetooth” if it’s “OFF”. Wait until the keyboard is recognized.
5. Tap the address of the Bluetooth keyboard.
   It will say “connected” under the device name.
Once the keyboard is connected to the smartphone, device name will be shown as “FHMD-WKB****” from the next time.

Bluetooth connection is complete.

Some applications cannot be operated with the keyboard.
8. How to use HMD

8.1. Turning the power on
The product will not be reconnected automatically to the smartphone once the power is off or communication is lost, even if the connection becomes available again. For this reason, reconnection is needed before use.

- Pairing is only needed during the initial settings.

1. Turn on the product, the smartphone and the keyboard.
2. Display menu from the home screen of the smartphone and tap “system settings”.
3. Tap “Bluetooth”
   Turn “ON” “Bluetooth” if it’s “OFF”.
   Wait until the product is recognized.
4. Tap “FHMD001”
5. Tap “pair”.
   Bluetooth connection is complete.
6. Tap “system settings” again on the smartphone.
7. Tap “Display” → “Miracast”.
   Turn “ON” “Miracast” if it’s “OFF”.
8 Tap the device name.
   The device name is displayed in the “HMD home” screen.

   The smartphone screen will change to “connected” and smartphone’s screen
   will be displayed on the HMD screen. Miracast connection is complete.

8.2. Volumes/Brightness settings

- Volume settings
  1 Select “Volumes” in “HMD home”
     screen. Voice command: “Number four”

     You may select by using the keyboard if the keyboard is connected.

  2 Select item and change the volume.
     Select an item by voice command “number one”, “number two” or
     “number three” and use voice command “Volume up” and “Volume
down” to change the volume.
You may change the volume by pressing the left or right key if the keyboard is connected.

3 Select “OK”.
   Voice command: “Number five”

■Brightness settings

1 Select “Settings” in “HMD home” screen. Voice command: “Number one”

You may select by using the keyboard if the keyboard is connected.

2 Select “brightness”
   Voice command: “Number one”

3 Select an item and change the brightness.
   Select an item by voice command “number one”, “number two” or “number three” and use voice command “Dark” or ”Bright” to change the brightness.
You may change the brightness by pressing left or right key if the keyboard is connected.

4 Select “OK”.
Voice command: “Number five”

8.3. Terminology list of voice commands
You may select an item by voice command when there is a balloon displayed on the screen of the product. Please see voice commands listed below.

<table>
<thead>
<tr>
<th>Displayed on the screen</th>
<th>Voice command</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number one</td>
</tr>
<tr>
<td>2</td>
<td>Number two</td>
</tr>
<tr>
<td>3</td>
<td>Number three</td>
</tr>
<tr>
<td>4</td>
<td>Number four</td>
</tr>
<tr>
<td>5</td>
<td>Number five</td>
</tr>
<tr>
<td>6</td>
<td>Number six</td>
</tr>
<tr>
<td>7</td>
<td>Number seven</td>
</tr>
<tr>
<td>8</td>
<td>Number eight</td>
</tr>
<tr>
<td>9</td>
<td>Number nine</td>
</tr>
<tr>
<td>0</td>
<td>Number zero</td>
</tr>
<tr>
<td>Settings</td>
<td>Settings</td>
</tr>
<tr>
<td>Volume down</td>
<td>Volume down</td>
</tr>
<tr>
<td>Volume up</td>
<td>Volume up</td>
</tr>
<tr>
<td>Dark</td>
<td>Dark</td>
</tr>
<tr>
<td>Bright</td>
<td>Bright</td>
</tr>
</tbody>
</table>
### Below commands are used in camera

<table>
<thead>
<tr>
<th>Function</th>
<th>Voice command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same function as [Back] key on the keyboard</td>
<td>Go Back</td>
</tr>
<tr>
<td>Show settings screen</td>
<td>Menu</td>
</tr>
<tr>
<td>Move focus up</td>
<td>Up</td>
</tr>
<tr>
<td>Move focus down</td>
<td>Down</td>
</tr>
<tr>
<td>Move focus, screen or operation of a control bar.</td>
<td>Left</td>
</tr>
<tr>
<td></td>
<td>Right</td>
</tr>
<tr>
<td>Activate a function where the cursor is located.</td>
<td>Enter</td>
</tr>
</tbody>
</table>
Below commands are used in File viewer

<table>
<thead>
<tr>
<th>Command</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display previous page</td>
<td>Previous</td>
</tr>
<tr>
<td>Display next page</td>
<td>Next</td>
</tr>
<tr>
<td>End File viewer</td>
<td>Close</td>
</tr>
<tr>
<td>Close a file</td>
<td>Close file</td>
</tr>
<tr>
<td>Expand the view</td>
<td>Expand</td>
</tr>
<tr>
<td>Reduce the view</td>
<td>Reduce</td>
</tr>
<tr>
<td>Return to the first page</td>
<td>Top</td>
</tr>
<tr>
<td>Go to the last page</td>
<td>Bottom</td>
</tr>
</tbody>
</table>

For following languages selected for HMD OS the voice commands will be available only in this selected language: English, German, French, Italian and Spanish. Please find a list of voice commands in these languages in the software development kit [www.fujitsu.com/fts/support/manuals](http://www.fujitsu.com/fts/support/manuals). For all other OS languages the English voice commands as shown above are active as default.

### 8.4. Android home screen

When this product is booted and "Android home" is chosen instead of “HMD home”, a home screen of the Android device will be displayed.
The home screen has a total of five pages. You can create app shortcuts and or widgets.

Status Area
Showing icons that can be used to check the status and setup. Sliding the screen from the top to bottom opens a panel that can be used to modify settings.

App/Widget menu
Tapping displays a list of apps and widgets.

- Back: Returns to the previous operation or exits the app
- Home: Display the home screen
- History: History of apps that recently used

The screen may be different depending on your conditions of use.

POINT
This is not a smartphone’s home screen.

8.5. Moving the display
If you want to move the display out of your sight temporarily, you can move the display unit up, down/left or right as shown in following figures.

- Up and down
- Left and right

hold here and move the display
If you would like to move the display left or right, it’s better to move it with the holding component A rather than B since it’s easier to put it back to the original position.

### 8.6. An Indicator light on the keyboard

<table>
<thead>
<tr>
<th>Status of the keyboard</th>
<th>Key operation</th>
<th>Bluetooth/Power indicator light</th>
<th>Status/handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Hold down [Power] key (3 sec or more)</td>
<td>Lights red</td>
<td>Low battery or internal error. Turn off the power and change 2 batteries. If this problem continues, please contact your local sales representative</td>
</tr>
<tr>
<td>OFF</td>
<td>Hold down [Power] key</td>
<td>Lights green (3 sec)</td>
<td>Enough battery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lights orange (3 sec)</td>
<td>Battery is getting low Almost empty</td>
</tr>
<tr>
<td>ON</td>
<td>Press [Power] key</td>
<td>Lights red (3 sec)</td>
<td>Low battery or internal error. Turn off the power and change 2 batteries. If this problem continues, please contact your local sales representative</td>
</tr>
<tr>
<td>ON</td>
<td>Press [Power] key or while using the</td>
<td>Lights red</td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td>Hold down [Bluetooth] key (3 sec or more)</td>
<td>Blue light flashing (every second for up to 120 second)</td>
<td>Waiting to pair status. If pairing completes, lights for 5 sec and turns off.</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------</td>
<td>---------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Lights red</td>
<td></td>
<td>Low battery or internal error. Turn off the power and change 2 batteries. If this problem continues, please contact your local sales representative</td>
</tr>
<tr>
<td>ON</td>
<td>Press [Bluetooth] key</td>
<td>Lights blue (5 sec)</td>
<td>Bluetooth connecting</td>
</tr>
<tr>
<td></td>
<td>Light turns off</td>
<td></td>
<td>Bluetooth unconnected</td>
</tr>
</tbody>
</table>

POINT

Please see “6.8 Attach the keyboard” to change the batteries. (→P.59)

Please switch the keyboard off by pressing the power button for (5 sec), if not used in order to save battery.

8.7. microSD card

■ Supported microSD cards

<table>
<thead>
<tr>
<th>type of microSD card</th>
<th>capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>microSD card</td>
<td>Up to 2GB</td>
</tr>
<tr>
<td>microSDHC card</td>
<td>Up to 32GB</td>
</tr>
<tr>
<td>microSDHC UHS-I card</td>
<td>Up to 32GB</td>
</tr>
</tbody>
</table>
Inserting/removing microSD card

1 Insert your fingertip into the indent of the microSD card slot cap to open.

2 Use your fingertip to pull the indent of the microSD card slot cap to open. Insert a microSD card into the microSD card slot until it clicks. When removing, push the microSD card lightly and release it, then pull the microSD card straight out.

⚠️ IMPORTANT

When removing the microSD card, follow the procedure below to unmount it.
On “HMD home” screen: → [Settings] → [Other settings] → [Storage] → [Unmount SD card]

3 Close the microSD card slot cap.
8.8. Connecting a microUSB cable
This is used when connecting the keyboard or a smartphone directly to the product.

1. Use your fingertip to pull the indent of the microUSB connector cap to open in the direction shown below.

2. Connect attached microUSB cable (TypeA connector) to the microUSB connector.
   There are TypeA and TypeB. Please check the engraved letter.

   **IMPORTANT**
   Be careful not to connect the microUSB in the wrong direction. It may damage the connector.
3  Connect the other side of the microUSB cable to the keyboard. Use your fingertip to pull the indent of the microUSB connector cap to open, insert the microUSB cable in the correct direction.

POINT

In order to connect a mouse or a keyboard with standard USB type A connector, please use the On-The-Go adapter (OTG cable).

here you can connect
standard USB HID device

microUSB TypeB

=> connect to HMD
9. Troubleshooting Information

If you have any problems when using this device, check the following. If this does not resolve the matter, contact the service desk.

9.1. Common problems and their solutions

■ At startup/shutdown

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The device will not start up when the power button is pressed.</td>
<td>The remaining battery level may be zero. Charge the battery pack with the battery charger. Make sure that the battery has been fully charged before using it. If the date and time setting has been reset, set the date and time by selecting [Settings], [Other Settings], and then [Date and Time] on the [HMD Home] screen.</td>
</tr>
<tr>
<td>The device loses power suddenly during operation.</td>
<td>The remaining battery level may be zero. Charge the battery.</td>
</tr>
<tr>
<td>The device has not been used for one year or more, and now the battery cannot be charged.</td>
<td>Charge the battery pack every few months if the device is not used for a long time. Replace the battery pack with a new one if it cannot be recharged.</td>
</tr>
<tr>
<td>The screen is inverted if the device is started up when it is mounted on the left eye.</td>
<td>When starting the HMD, the screen for viewing with right eye is always displayed until displaying &quot;HMD Home&quot;. After displaying &quot;HMD Home&quot;, the display will be rotated according to &quot;Switch eye&quot; setting.</td>
</tr>
</tbody>
</table>

■ Screen

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The screen is dark and poorly visible.</td>
<td>Adjust the screen brightness by selecting [Settings] and then [Brightness].</td>
</tr>
<tr>
<td>The screen rotates.</td>
<td>Right/left eye switching is set to automatic. You can change the setting by selecting [Settings] and then [Switch eye].</td>
</tr>
</tbody>
</table>
# Operation

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The device does not respond.</td>
<td>Restart the device.</td>
</tr>
<tr>
<td></td>
<td>Perform the following operation. This operation should be performed only when the device is inoperative. Otherwise, unsaved data will be lost.</td>
</tr>
<tr>
<td></td>
<td>1. Press and hold the power button for more than about 13 seconds.</td>
</tr>
<tr>
<td></td>
<td>The device is forcibly powered off in about 13 seconds, but keep the button held down.</td>
</tr>
<tr>
<td></td>
<td>2. Release the button once the device is powered on again.</td>
</tr>
<tr>
<td>The problem persists after the device is powered on again.</td>
<td>If the problem has occurred after the installation of a specific application, that application may contain a problem. Uninstall the application.</td>
</tr>
<tr>
<td></td>
<td>To uninstall the application, on the [HMD Home] screen, select [Settings], [Other Settings], and then [Apps]. Select the name of the application to be uninstalled, select [Uninstall], and then [OK].</td>
</tr>
<tr>
<td></td>
<td>If the problem appeared after cables were connected, they may be the cause.</td>
</tr>
<tr>
<td></td>
<td>Disconnect the cables.</td>
</tr>
<tr>
<td></td>
<td>If the problem persists after you take the above actions, reset the device to the factory settings (initialization).</td>
</tr>
<tr>
<td></td>
<td>On the [HMD Home] screen, select [Settings], [Other Settings], [Backup and Reset], and then [Factory data reset]. Follow the instructions shown on the screen.</td>
</tr>
<tr>
<td></td>
<td>Note that resetting to the factory settings will cause all of installed applications and other settings to be lost.</td>
</tr>
</tbody>
</table>
### Others

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
</table>
| Abnormal smell or overheating has occurred. | The device may be malfunctioning. Power off the device, remove the battery pack, disconnect the cables from the device, and contact the service desk. Give the service desk the following information:  
  • Serial number of the device  
  • Date of purchase  
  • Failure state (with as many details as possible) |

### 9.2. Questions and answers about the hardware

#### Head Mounted Display

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any precautions to be observed during data initialization?</td>
<td>Always use fully charged battery packs in order to avoid the interruption of initialization.</td>
</tr>
</tbody>
</table>

#### Keyboard

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The keyboard is not recognized.</td>
<td>Check that the keyboard is powered on (press the [Power] button momentarily to check that the Bluetooth/power indicator light goes on). If the keyboard is turned off, press and hold the [Power] button to power on the keyboard.</td>
</tr>
<tr>
<td>Problems/Questions</td>
<td>Solutions/Answers</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The keyboard is not recognized (Bluetooth connection).</td>
<td>Power the keyboard off and then back on again. Connect the keyboard again after canceling the smart phone keyboard pairing by following the steps below.</td>
</tr>
</tbody>
</table>
|                                                                                  | 1. On the smart phone home screen, tap [ ], [Settings], and then [Bluetooth].  
2. Find the keyboard in the Bluetooth items and tap the icon to the right of the keyboard.  
3. Tap [Cancel Pairing].                                                                 |
|                                                                                  | Toggle the Bluetooth setting for the smart phone between [ON] and [OFF] by following the steps below.                                                                                                               |
|                                                                                  | 1. On the smart phone home screen, tap [ ], [Settings], and then [Bluetooth].  
2. Toggle [Bluetooth] between [ON] and [OFF].  
If [ON], set it to [OFF] and then back [ON] again.  
If [OFF], set it to [ON].                                                                 |
| The keyboard is not recognized (microUSB cable connection).                      | Before connecting the device to the keyboard through a microUSB cable, make sure that the microUSB cable Type B connector is connected to the keyboard.  
If the microUSB cable is connected in reverse, the keyboard will not be recognized. |
| The keyboard does not power on.                                                  | Disconnect the microUSB cable from the keyboard.  
After removing and then remounting its batteries, power on the keyboard again.  
Replace the batteries with new ones.                                                                 |
### External memory

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any precautions to be observed when removing a microSD card?</td>
<td>Always follow the steps below to unmount a card. On the [HMD Home] screen, select [Settings], [Other Settings], [Storage], and then [Unmount SD Card].</td>
</tr>
</tbody>
</table>

### 9.3. Questions and answers about communication

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the device have a telephone function?</td>
<td>No.</td>
</tr>
<tr>
<td>Does the device have a 3G or other data communication function?</td>
<td>No.</td>
</tr>
<tr>
<td>Can I install an additional root CA certificate?</td>
<td>If you need an additional root CA certificate, install it from a microSD card.</td>
</tr>
<tr>
<td>Can I use a proxy server?</td>
<td>Yes. While making Wi-Fi settings, tap and check [Detailed options] to set a proxy server.</td>
</tr>
<tr>
<td>How can the device connect to Wi-Fi access points?</td>
<td>On the [HMD Home] screen, select [Settings], [Other Settings], and then [Wi-Fi].</td>
</tr>
</tbody>
</table>
### 9.4. Other questions and answers

<table>
<thead>
<tr>
<th>Problems/Questions</th>
<th>Solutions/Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection with Miracast is not established.</td>
<td>Make sure that the message &quot;Waiting for connection from smartphone/tablet&quot; appears in the [HMD Home] screen. If any other message appears, follow the instructions given on the screen.</td>
</tr>
<tr>
<td></td>
<td>Make sure that the device name on the smart phone display settings (Miracast) is the same as that on the [HMD Home] screen.</td>
</tr>
<tr>
<td></td>
<td>Check to see if:</td>
</tr>
<tr>
<td></td>
<td>• The device's Wi-Fi function is turned ON.</td>
</tr>
<tr>
<td></td>
<td>• Connection to a smart phone access point has been established.</td>
</tr>
<tr>
<td></td>
<td>Miracast's effective range is 164 feet (10 meters) or less in a space with good visibility. Use within a range of 10 meters.</td>
</tr>
<tr>
<td></td>
<td>Perform the following operation.</td>
</tr>
<tr>
<td></td>
<td>• Power off the device and then remove the battery pack. Install the battery pack again and then power on the device.</td>
</tr>
<tr>
<td></td>
<td>• Restart the smart phone.</td>
</tr>
<tr>
<td></td>
<td>• Reconfigure settings for both the device and the smart phone.</td>
</tr>
<tr>
<td>No camera image appears on the smart phone.</td>
<td>Check the status area to make sure that SPWiFiCameraService is active on the smart phone.</td>
</tr>
<tr>
<td></td>
<td>Perform the following operation.</td>
</tr>
<tr>
<td></td>
<td>• Restart the device.</td>
</tr>
<tr>
<td></td>
<td>• Restart the smart phone.</td>
</tr>
<tr>
<td></td>
<td>• Reconfigure settings for both the device and the smart phone.</td>
</tr>
<tr>
<td>No video appears on the smart phone.</td>
<td>This is a normal operation following the specifications applicable when the device is Miracast-connected to a smart phone. When you play a video on the smart phone, the video appears on the head-mounted display, but not on the smart phone screen.</td>
</tr>
<tr>
<td>A video played on the smart phone does not appear on the device.</td>
<td>Miracast connection may be malfunctioning. Disconnect the Miracast connection and then connect it again. If the same problem recurs, restart the smart phone before connecting again.</td>
</tr>
</tbody>
</table>
Appendix

Motion range of the display
The display can be moved in the following ranges.
Motion range of the camera

■ Camera arm
There are three levels of height. You may adjust to 0 degree, about 20 degrees or about 40 degrees.

■ Camera tip
about 5 degrees inside | about 20 degrees outside
(from the top)

about 20 degrees
(from the side)

about 5 levels to adjust
about 80 degrees
## Specification

<table>
<thead>
<tr>
<th>Product name</th>
<th>Head Mounted Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Android 4.4.4</td>
</tr>
<tr>
<td>CPU</td>
<td>1.2GHz Quad Core CPU(APQ8026)</td>
</tr>
<tr>
<td>Memory(RAM/ROM)</td>
<td>2GB/8GB</td>
</tr>
<tr>
<td>Display</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.4 inches</td>
</tr>
<tr>
<td>Virtual screen size</td>
<td>Equals to 15 inches in 80cm viewing distance</td>
</tr>
<tr>
<td>Resolution</td>
<td>854 x 480(FWVGA)</td>
</tr>
<tr>
<td>Number of colors</td>
<td>24 bit color(Approx. 16,770,000 colors)</td>
</tr>
<tr>
<td>Diopter</td>
<td>+1~ -2D</td>
</tr>
<tr>
<td>Luminance(min~max)</td>
<td>10~1200cd/㎡</td>
</tr>
<tr>
<td>Distance from an eye</td>
<td>1.21 in.</td>
</tr>
<tr>
<td>Audio</td>
<td></td>
</tr>
<tr>
<td>Speaker</td>
<td>Mono speaker</td>
</tr>
<tr>
<td>Microphone</td>
<td>built-in microphone</td>
</tr>
<tr>
<td>Camera</td>
<td>Approx. 8.1M effective pixels</td>
</tr>
<tr>
<td>Communication function</td>
<td></td>
</tr>
<tr>
<td>Wireless LAN</td>
<td>IEEE802.11 a/b/g/n(single), 2.4GHz/5GHz</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>Bluetooth Version 3.0 compliant, Class2</td>
</tr>
<tr>
<td>Interface</td>
<td></td>
</tr>
<tr>
<td>microSD card slot</td>
<td>x1 slot</td>
</tr>
<tr>
<td>Audio</td>
<td>Headset connection terminal 3.5φ x1</td>
</tr>
<tr>
<td>microUSB connector</td>
<td>x1 (Type A/B)</td>
</tr>
<tr>
<td>Water-resistant, dust-resistant</td>
<td>IPX5 / IPX7, IP5X *1</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>Battery pack Lithium ion 3,300mAh</td>
</tr>
<tr>
<td>Battery life (when using an application that is connected with Wi-Fi Miracast)</td>
<td>Approx. 4 hours *2 FPB0325 (CP688161-xx)</td>
</tr>
<tr>
<td>Temperature and humidity conditions</td>
<td>Temperature: 41 to 95°F Humidity: 20-80%</td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>20 to 80% RH (no condensation)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>Chemical resistance (ethanol, IPA, sodium hypochlorite)*3</td>
</tr>
<tr>
<td>Dimensions (W×D×H)</td>
<td>MIN (arm fold)</td>
</tr>
<tr>
<td>(This is a reference since the shape is variable. Values are approx.)</td>
<td>WxDxH = 11.42 in. x 7.09 in. x 2.36 in.</td>
</tr>
<tr>
<td></td>
<td>MAX (arm extended)</td>
</tr>
<tr>
<td></td>
<td>WxDxH = 15.75 in. x 13.78 in. x 1.46 in.</td>
</tr>
<tr>
<td>Weight</td>
<td>HMD : 11.11 oz.</td>
</tr>
<tr>
<td>(Values are approx.)</td>
<td>Fitting belt : 2.47 oz.</td>
</tr>
<tr>
<td></td>
<td>knurled screws : .14 oz. (4 pcs)</td>
</tr>
<tr>
<td></td>
<td>display cushion : .14 oz.</td>
</tr>
<tr>
<td></td>
<td>helmet clips : 1.59 oz. (2 pcs)</td>
</tr>
</tbody>
</table>

*1: MIL-STD-810G test results are not a guarantee of future performance under identified test conditions, nor does it imply that it will meet the contract requirements of Department of Defense. Accidental damage is not covered under standard international limited warranty.

*2: Based on Fujitsu measurement standards. May differ according to usage environment.

*3: Assumed using an anti-bacterial sheet. This test does not guarantee that a chemical will not cause discoloration, paint peeling, deformation, etc.
Manufacturer’s notes

Disposal and recycling Notes
You can find information on this subject on your notebook or on our website (“http://solutions.us.fujitsu.com/www/content/products/trade-in_program/”).

Recycling your battery
Over time, the batteries that run your mobile computer will begin to hold a charge for a shorter amount of time; this is a natural occurrence for all batteries. When this occurs, you may want to replace the battery with a brand new one*. If you replace it, it is important that you dispose of the old battery properly because batteries contain materials that could cause environmental damage if disposed of improperly.

Fujitsu is very concerned with environmental protection, and has enlisted the services of the Rechargeable Battery Recycling Corporation (RBRC)**, a nonprofit public service organization dedicated to protecting our environment by recycling old batteries at no cost to you.

RBRC has drop-off points at many convenient locations throughout the United States and Canada. To find the location nearest you, go to "www.RBRC.org" or call 1-800-822-8837.

If there are no convenient RBRC locations near you, you can also go to the EIA Consumer Education Initiative website "http://EIAE.org/ " and search for a convenient disposal location.

Remember – protecting the environment is a cooperative effort, and you should make every effort to protect it for current and future generations.

* To order a new battery for your Fujitsu mobile computer, go to the Fujitsu shopping site at "www.shopfujitsu.com" in the US or "www.fujitsu.ca/products/notebooks" in Canada.

** RBRC is an independent third party to which Fujitsu provides funding for battery recycling; RBRC is in no way affiliated with Fujitsu.
FCC Information:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada IC Information:

This Class A digital apparatus meets all requirements of Canadian Interference-Causing Equipment Regulations.

CET appareil numérique de la class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas causer d’interférence nuisible; (2) cet appareil doit accepter toutes les interférences reçues, y compris celles pouvant causer un mauvais fonctionnement de l’appareil.