| Model | | | 2D Code Model | |
|---|---|---|---|---|
| | | | Wireless LAN connection | Wireless LAN+Wireless WAN |
| | | | BHT-M80-QW | BHT-M80-QWG |
| Operating System | | | Android™ 10 | |
| CPU | | | Qualcomm® SDM660 64 bit 2.20 GHz (Octa-Core) | |
| Memory | RAM | | 4 GB | |
| | Flash memory | | 64 GB | |
| Display | Screen size and resolution*1 | | 5.0-inch high-definition (720×1,280 dots) | |
| | Display device | | Dot matrix liquid crystal display (color) | |
| | Backlight | | White LED | |
| Reader | Reading method | | Area sensor | |
| | Supported code | 2D code | QR code®, Micro QR code, SQRC®, PDF417, Micro PDF417, Maxi code, Data Matrix (ECC200), and GS1 Composite | |
| | | Barcode | EAN-13/8 (JAN-13/8), UPC-A/E, UPC/EAN (with add-on), and Interleaved 2 of 5 (ITF)、Codabar (NW-7), CODE39, CODE93, CODE128, GS1-128 (EAN-128), and Standard 2 of 5 (STF)、GS1 DataBar (RSS) | |
| | | OCR*2 | Supported | |
| | Minimum resolution | 2D code | 0.127 mm | |
| | | Barcode | 0.076 mm | |
| | Marker | | Cross guide marker | |
| | Confirmation of reading | | Blue LED, speaker, and vibrator | |
| Key Entry | Number of keys | | 5 keys (including the power key) and 2 trigger keys | |
| Touch screen | | | Dragontrail® Pro*3 Capacitive multi-touch screen with glove touch support and water droplet false touch prevention | |
| Communication | Wireless LAN | Applicable standard | Compliant with IEEE802.11a/b/g/n/ac and MU-MIMO 2x2 | |
| | | Frequency | 5 GHz-band (W52, W53, W56 and W58)   2.4 GHz-band (1 to 13 channels *USA, Canada and Taiwan(1 to 11 channels)) | |
| | | Security | Encryption : WEP (40/128), TKIP and AES   WPA authentication : WPA, WPA2 and  WPA3   User authentication : PSK, EAP-TLS, and PEAP | |
| | Wireless WAN applicable standard | | — | Supported: GSM/W-CDMA/LTE,VoLTE FDD-LTE (4G) - Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 19, 20, 25, 26, 28 W-CDMA/UMTS/HSPA/HSPA+ (3G) - Bands 1, 2, 5, 6, 8, 19 GSM/GPRS/EDGE (2G) - Bands 850, 900, 1800, 1900MHz |
| | GPS | | — | A-GPS/GLONASS/QZSS/BeiDou/Galileo |
| | Bluetooth® connection | | Bluetooth® Ver5.1+EDR/LE(Supported Profile: RFCOMM/A2DP/AVCTP/ACDTP/GVDP/AVRCP/DUN/DI/HFP/HID/HSP/IOP/MAP/OPP/BNEP/PAN/PBAP/SAP/SPP/HOGP/SCPP) | |
| | Wired connection | | USB Ver.2.0(USB Type-C) | |
| | NFC*4 | | ISO/IEC14443A&B, FeliCa, ISO/IEC15693(RFID) | |
| Camera | Rear | | 13-megapixel auto-focusing with a LED light | |
| | Front | | 5-megapixel auto-focusing | |
| Card Slot | Memory | | microSD (SDHC and SDXC (up to128 GB)) SDHC Speed class 4 support | |
| | SIM | | — | nanoSIM×2  DSDV (4G x 4G) |
| Microphone receiver | | | Attached *5 | |
| Speaker | | | 90dB or more at 10 cm away (at 2.8kHz) | |
| Sensor | | | G-sensor, gyro sensor, proximity sensor, light intensity sensor, and geomagnetic sensor | |
| Power Supply | Main battery | | Lithium-ion battery | |
| | Wireless charging | | Supported | |
| | USB charging | | Compliant with Qualcomm® Quick Charge™ 3.0 | |
| | Operating time*8 | | BT1S, BT1S-W(2900 mAh)    Approx. 14 hours *9 | |
| | | | BT1(4020 mAh)    Approx. 20 hours *9 | |
| | | | BT1L(5800 mAh)    Approx. 29 hours *9 | |
| Environmental Performance | Operating temperature*6 | | -20°C to 50°C | |
| | Operating humidity | | 5 to 95%RH (non-condensing and non-icing) | |
| | Protective class*7 | | IP65 and IP67 | |
| | Drop resistance *7 | | Above concrete floor, 3.0 m, 60 times or more from 1.5 m | |
| Weight (including the battery) | | | Approx. 345 g (including BT1S), approx. 365 g (including BT1), and approx. 395 g (including BT1L) | |

*1. The LCD display is manufactured with precise technology.The rate of non-defective pixels is 99.99% or more, which means that 0.01% or less pixels could be stuck or dead.
*2. Chargeable license is required.
*3. Dragontrail® Pro is a registered trademark of AGC Inc.
*4. Before using the NFC function, perform test reading sufficiently using the target NFC card.
*5. A headset or headphone can be connected through the USB Type-C cable. A USB Type-C-to-audio jack (3.5 mm) conversion cable is optional.
*6. 0°C to 40°C during charging.
*7. These are the values tested at a room temperature, and not guaranteed values.
*8. The operating time is a reference value at a room temperature and may differ depending on the operating conditions.
*9. This is a result of measurement based on the JEITA HT Standard Operation Mode G, and may change depending on the operating environment and system settings.

Dimensions | unit : mm（All reference values）

BHT-M80-QW   BHT-M80-QWG
84   40
167
25

**Package includes :**
●Terminal ●Hand strap (HSBHT-300/800) ●Operation manual ●User's Manual（Can be downloaded from the DENSO WAVE website. ）

**Options**

■ Battery
・2900mAh battery : BT1S
・4020mAh battery : BT1
・5800mAh battery : BT1L
・Wireless 2900mAh battery :
  BT1S-W

■ Others
・Waist case : WHBHT-M80
・Hand belt : HBBHT-M80

■ Charger
・Wireless charger : CH-M80W*1
・4-slot main unit charger : CH-M80-4*1
・4-slot battery charger : CH-BT1-4*1
・USB power adaptor
 (Quick Charge™ 3.0 supported) : AD8

・Stylus pen: PNBHT-1700
・USB Type-C - Type-A  conversion cable
 (1.5m): CB00-US1500/4A-4C
・USB Type-C - Audio Jack conversion cable
 (3.5mm): CB00-US100/3-4C*2

■ Communication unit
・USB type :
 With a spare battery charger :
 CU-M80U*1
 Without a spare battery charger :
 CU-M80UQ (Quick Charge™3.0 supported)*1
・LAN type
 With a spare battery charger : CU-M80L*1

*1 AC adaptor sold separately
*2 You also need the conversion cable to equip the BHT terminal with earphones and other devices.

HAND-HELD TERMINAL
# BHT-M80

**DENSO**

## Equipped with Android™ 10

Outstanding multifunctionality and unprecedented robustness

CREATE YOUR NEW WORKSTYLE
NEW BHT®

# A larger screen makes for easy use in any environment, improving your new way of working.
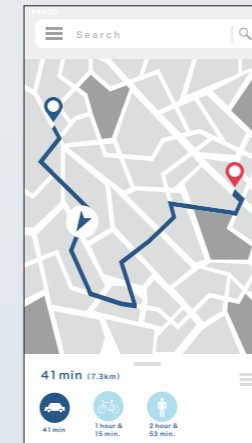
5.0 inches (Actual size)

## CREATE YOUR NEW WORKSTYLE
### NEW BHT®

### STYLE 01 Logistics

**Navigation map displayed on the screen for direct and speedy delivery**
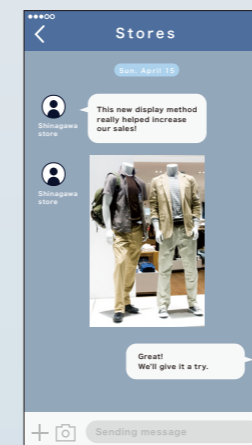
The navigation function provided by the BHT-M80 helps the driver quickly reach the destination to meet an urgent request for cargo pickup.

### STYLE 02 Retailing

**Real-time sharing of sales information**

Stores can quickly share sales know-how, such as information about a product display strategy that helped boost sales, by making use of the chat app and camera.

### STYLE 03 Manufacturing & logistics

**Prompt troubleshooting by video call**

On-site workers can promptly make an inquiry to service staff if they face a device problem, mitigating their stress and increase their productivity.

# Outstanding robustness.

## Greatest robustness in its product class*

Highest-level resistance against 3.0-meter drops in in its product class.
Has passed the drop durability test of 1meter x 2,000,
making it robust enough for daily use.

### Designed to provide high resistance against shocks

Uniquely designed to provide high resistance against drops on
concrete floors with a light and rigid magnesium frame
and an elastomer bumper to absorb shocks.

### Lasting clear visibility with a tempered glass screen

For the display, AGC's Dragontrail® Pro is adopted
for resistance against scratching and to provide high visibility
on a long-term basis.

### Able to withstand harsh environments

With IP67-compliant resistance against water and dust,
the terminal can be used outdoors in rainy weather
and in dust-filled factories alike with peace of mind.

## User-friendly screen for greater work efficiency

### Operable with gloves on

The capacitive touch panel can be operated comfortably even while
wearing gloves. Moreover, the sensitivity is automatically adjusted
according to the thickness of the gloves, thereby substantially
reducing the time required for setting.

### Reducing eye stress imposed on the user due to the performance of screen-based tasks, thereby increasing productivity

Equipped with a new function to automatically adjust the screen
brightness according to the environment, thereby reducing
the user's stress and helping increase their operational efficiency.

### Reliable quality developed by a leading automotive component supplier for its own manufacturing facilities

DENSO supplies automotive components to automakers across the world.
In the 1970s, the company developed unique automatic recognition technology to
increase efficiency at its own manufacturing facilities. DENSO's commitment to
providing high-quality and high-reliability automotive components has been passed
down to DENSO WAVE for the provision of the BHT series.

World's first mobile barcode terminal, the "BHT-1"

# Scan faster, works harder.

Equipped with a new decode engine and high-density sensor,
BHT-M80 provides outstanding scanning performance.
The Qualcomm® SDM660, which is an industry top-level CPU
(2.2GHz, Octa-Core CPU), enables high-speed processing.
Comfort in scanning helps increase the efficiency of your daily operations.

## Just "trace" for serial scanning

By adopting the industry's top-level CPU, we have tripled
the scanning speed compared with that of conventional
products to about 30 labels per second. With the terminal,
you do not need to scan the labels one by one. Instead,
just trace the labels of items on the shelves and those of
stacked items for serial scanning. Perform a full day's worth
of inventory work in half the time, maximizing efficiency.

| | |
| --- | --- |
| Conventional product | About 30 labels per second |
| BHT-M80 | |

Note: When labels specified by the company are
used and are scanned sequentially at a fixed distance

For details of scanning,
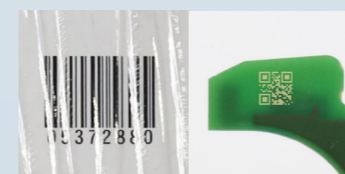please refer to
the page.

## Just "aim" for easy scanning

### Can easily scan the label (code) from a distance of 1meter.

We have adopted a high-density sensor so that codes can be scanned without fail even from a
distance. Scan codes easily while holding the terminal in a comfortable position without the need to
stand up or crouch down repeatedly. Codes can be scan easily even through glass.

Indoors

Under the sun

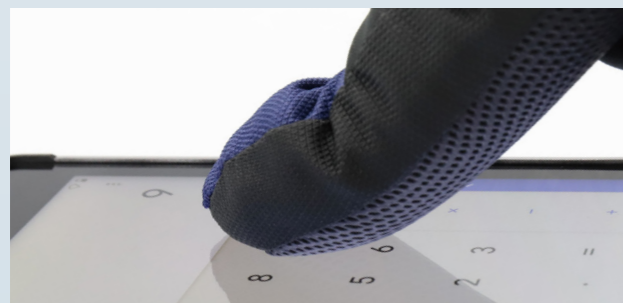### Needs no skills for scanning

The laser marker, which provides high visibility even under the sun, eliminates the need to acquire
skills to read labels covered with wrapping film and enables reading labels outdoors.
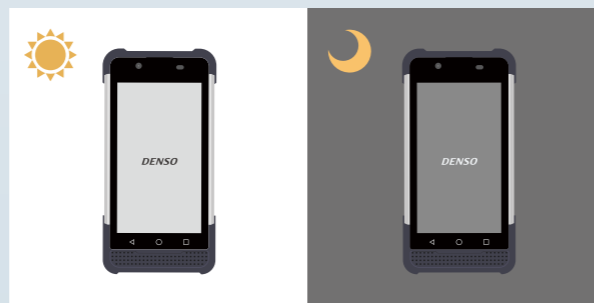
### Can scan even difficult-to-read labels

We have adopted a new decode engine and high-density sensor and designed the optimal angle
for operability in a comfortable position with no specular reflection effect. As a result,
even labels covered by wrapping film, blurred/stained/deformed labels, and DPM codes
can be scanned by the terminal.

Covered by wrapping film

DPM

### Advanced OCR

With the newly adopted OCR engine, even blurred
and stained labels and labels with different
character heights can be scanned correctly.

ABCD12345

### NFC supported

The scanner is equipped with an NFC
antenna to read ID data.

Can scan data on driver's
licenses and employee ID cards

# Stress-free and comfortable operation

## Providing more work method options by offering an alternative charging method

Type-C cable

Qualcomm®
Quick Charge™ 3.0
adaptor

*This picture is a representation

Wireless charger

2900mAh battery
/ Operating time Approx. 14 hours*

Wireless 2900mAh battery
/ Operating time Approx. 14 hours*

4020mAh battery
/ Operating time Approx. 20 hours*

5800mAh battery
/ Operating time Approx. 29hours*

### Direct charging supported

Widely used Type-C cable supported, allowing recharging with mobile batteries. You can recharge and forward files from PC at once.Qualcomm® Quick Charge™ 3.0 adaptor is also supported for quick charging.

### Wireless charging supported.

With the custom wireless charger, you can prevent charging issues due to misaligned contacts.  It can be used safely in rough and dusty environments such as a warehouse.

### Easy-to-replace battery

You can easily replace the battery, even if it runs out while you are using the terminal. We offer four types of batteries that can be used according to the usage.

*The operating time is a reference value at a room temperature and may differ depending on the operating conditions.  *This is a result of measurement based on the JEITA HT Standard Operation Mode G, and may change depending on the operating environment and system.

### Detection of battery deterioration to prevent related incidents

The terminal detects battery deterioration and warns you when to replace.

## Substancial communication features

### High-speed 4G

4G LTE-compatible BHT allowing voice calls and high-speed data communication while working outdoors.

### Precise communication with Dual SIM

BHT-M80 supports use of two SIM cards depending on the situation.
It enables you to use networks that are available for specific area like mountain regions.
You can also separate networks between voice calls and  high-speed data communication.

### Acquirable the highly precise location

GPS + satellite navigation system supported, allowing getting the highly precise location.
Status of works can be managed precisely in real time.
(Supported: A-GPS/GLONASS/QZSS/BeiDou/Galileo)

Quasi-Zenith Satellite System(QZSS) "Michibiki"

### Higher communication speed for higher operational efficiency

As the terminal is usable in an IEEE802.11 ac high-speed communication environment, you can comfortably conduct operations even with a heavy data load, including using a browser, uploading data to the server, and downloading software applications.

# Full support from introduction to operation

DENSO WAVE provides opportunities for new work methods through its products, support for introduction and after-sale service.

## DENSO WAVE specialists support introduction and transition

Our special BHT team helps customers introduce the products by capitalizing on its long-accumulated experience, know-how and expertise in BHT products. DENSO WAVE team will make proposals, including options for software, to meet the customers' requests, such as "But we don't want to make any changes to our current operations," and "We want to increase our operational efficiency."

【Examples of support provided by the BHT team】

■ Support for selection of devices    ■ Support for change of OS
■ Developing apps and making proposals to help customers solve their respective problems
■ Communication environment optimization service (addition cost)
    We can conduct a survey to select the most appropriate locations for access points and optimize channel
    design to propose the optimal wireless environment for customers.

## Extensive lineup of software products

We provide our own software products developed in-house to help customers increase their operational efficiency throughout the development, kitting, operation and maintenance processes.
We can also develop new software products to help customers solve their respective problems.
In addition, we introduce our partner companies' apps that can be used with BHT products.

【Examples of software products that support work method reforms】

■ Central management software that will change the work style of system managers [BHT DMS/BHT Remote]
■ Security software suitable for your busines terminals
■ Software that helps you easily create and customize operational apps
    [BHT Booster]

For software details:
BHT- M80 product page

## After the start of operation

### ■Speedy support for the solution of problems
For questions and problems related to daily operations, our engineers will provide prompt responses in each area across the world and our local customer service staff will deal with issues with speed and integrity.

### ■3-year warranty for hardware    *Prior reservation needed
We provide a 3-year free-of-charge post-purchase repair service. We offer a quick response both in Japan and across our bases in the world.

### ■Ongoing OS support    *Prior reservation needed
For Android™, even after Google support for the version indicated on the BHT is ended, we will continue to provide security patches that we have developed ourselves as part of our OS support service to customers.